

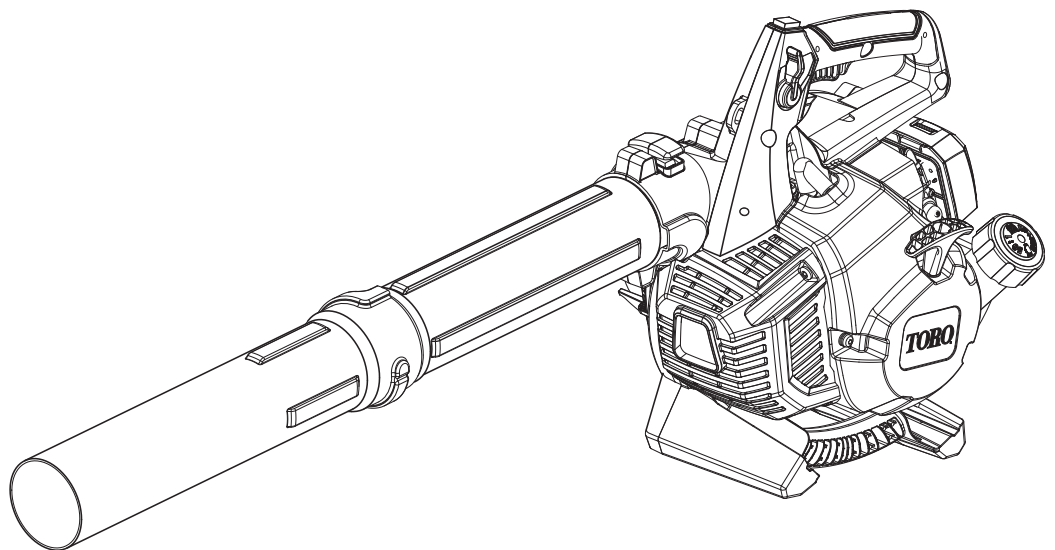


Count on it.

Operator's Manual

Powervac™

Item No. 51988—315000001 & Up



NOTICE



Do not use E15 or E85 fuel in this product. Only use unleaded gasoline containing up to 10% ethanol. It is a violation of federal law and will damage the unit and void your warranty.

STOP

If you have questions concerning your blower, please call us at 1-866-574-9242 (US) or 1-866-574-9243 (Canada).

WARNING:

To reduce the risk of injury, the user must read and understand the Operator's Manual. Save this manual.



READ THIS INFORMATION

Before you use your new Powervac™, read the following helpful hints to get you started.

Fueling



WARNING:

Gasoline and its vapors are highly flammable and explosive. To prevent serious personal injury and property damage, handle it with care. Keep away from ignition sources and open flames, handle outdoors only, do not smoke and wipe up spills immediately.

1. Obtain a clean container that is approved for use with gasoline.
2. Mix all of the 2-cycle oil provided with 1 US gallon of 87-octane, unleaded gasoline (50:1).
3. Fill the blower's fuel tank carefully.

Cold Starting vs. Warm Starting

When you restart the blower and you are not sure whether the engine is still warm, set the choke lever to **RUN**, lock the throttle wide open, and pull the starter grip and rope. If the engine does not start within 5 pulls, refer to "To Start a Cold Engine" later in this manual.

Flooded Engine

Will the engine start? If not, it may be flooded. Relax, this is easy to correct. Set the choke lever to **RUN**. Squeeze the trigger and pull the starter grip and rope quickly for 10 to 12 pulls. If the engine does not start, refer to *Troubleshooting* later in this manual or call toll-free at 866-574-9242 (US) or 866-574-9243 (Canada).



For questions concerning your blower, call us toll free at 1-866-574-9242 (US) or 1-866-574-9243 (Canada).

California Proposition 65



WARNING: This product, its exhaust, and other substances that may become airborne from its use may contain chemicals, including lead, known to the State of California to cause cancer, birth defects, or other reproductive harm. *Wash hands after handling.*

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Introduction

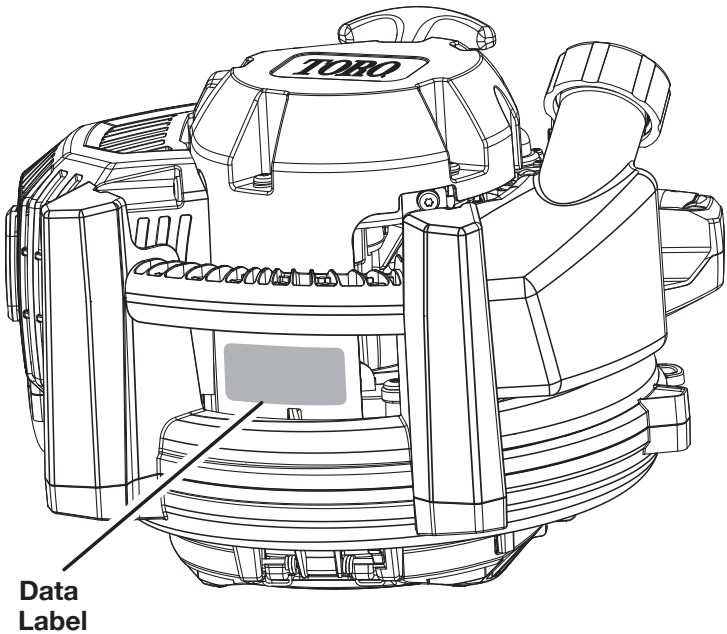
Thank you for purchasing a Toro product.

We would like for you to be completely satisfied with your new product, so feel free to contact a qualified service dealer for help with service, genuine Toro parts, or other information you may require.

Whenever you contact a qualified service dealer, always know the model and serial numbers of the product. These numbers will help the service representative provide exact information about your specific product. You will find the model and serial number data label located on the bottom of the housing.

For your convenience, write the product model and serial numbers in the space below.

Item No.	
Serial No.	
Manufacturing No.	



Bottom View

Read this manual carefully to learn how to operate and maintain your product correctly. Reading this manual will help you and others avoid personal injury and damage to the product. Although Toro designs, produces, and markets safe, state-of-the-art products, you are responsible for using the product properly and safely. You are also responsible for training persons you allow to use the product about safe operation.

The Toro warning system in this manual identifies potential hazards and has special safety messages that help you and others avoid personal injury, even death. DANGER, WARNING, and CAUTION are signal words that identify the level of hazard. However, regardless of the hazard, be extremely careful. Two other words, “Important” and “Note,” highlight information.

General Safety Rules



WARNING:

Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or carbon monoxide poisoning which will cause death or serious personal injury.

Read All Instructions

- Do not allow children or untrained individuals to use this unit.
- Do not start or operate the engine in a confined space, building, near open windows, or in other unventilated space where dangerous carbon monoxide fumes can collect. Carbon monoxide, a colorless, odorless, and extremely dangerous gas, can cause unconsciousness or death.
- Always wear eye protection with side shields marked to comply with ANSI Z87.1, along with hearing protection. Failure to do so could result in objects being thrown into your eyes and other possible serious injuries.
- Keep all bystanders, children, and pets at least 50 ft. away.
- Wear heavy long pants, long sleeves, boots, and gloves. Do not wear loose fitting clothing, short pants, sandals, jewelry of any kind, or go barefoot.
- To reduce the risk of injury associated with objects being drawn into rotating parts, do not wear loose clothing, scarves, neck chains, etc.
- Secure long hair so it is above shoulder level to prevent entanglement in any rotating parts.
- Do not operate this unit when you are tired, ill, upset, or under the influence of alcohol, drugs, or medication.
- Do not operate in poor lighting.
- Keep all parts of your body away from any moving parts and all hot surfaces of the unit.
- Wear a face filter mask in dusty conditions to reduce the risk of injury associated with the inhalation of dust.
- Check the work area before each use. Remove all objects such as rocks, broken glass, nails, wire, or string which can be thrown or become entangled in the machine.
- Keep firm footing and balance. Do not overreach. Overreaching can result in loss of balance or exposure to hot surfaces.
- Before storing, allow the engine to cool.
- Empty fuel tank into a container approved for gasoline and restrain the unit from moving before transporting in a vehicle.
- To reduce the risk of fire and burn injury, handle fuel with care. It is highly flammable.
- Do not smoke while handling fuel.
- Mix and store fuel in a container approved for gasoline.
- Mix fuel outdoors where there are no sparks or flames.
- Select bare ground, stop engine, and allow to cool before refueling.
- Loosen fuel cap slowly to release pressure and to keep fuel from escaping around the cap.
- Tighten the fuel cap securely after refueling.
- Wipe spilled fuel from the unit. Move 30 ft. away from refueling site before starting engine.
- Never attempt to burn off spilled fuel under any circumstances.
- Maintain the unit per maintenance instructions in this Operator's Manual.
- Inspect the unit before each use for loose fasteners, fuel leaks, etc. Replace damaged parts.
- Do not use on a ladder, rooftop, tree, or other unstable support. Stable footing on a solid surface enables better control of the blower in unexpected situations.

Service

- Before cleaning, repairing, or inspecting, shut off the engine and make certain all moving parts have stopped. Disconnect the spark plug wire, and keep the wire away from the plug to prevent starting.
- We recommend taking your equipment to a qualified service center for repair, as service performed by inexperienced or unqualified persons may damage the equipment, create unsafe conditions, injury to user and/or void your warranty.
- Use only recommended or equivalent replacement parts and accessories. Use of any other parts may create a hazard or cause product damage.

Specific Safety Rules




- Always hold the blower/vacuum in your right hand during blower operation. Refer to the *Operation* instructions later in this manual for proper position during vacuum operation and additional information.
- Never place objects inside the blower tubes.
- Use only as directed in this operator's manual.
- Do not operate vacuum without vacuum bag installed; flying debris could cause serious injury. Always close vacuum bag completely before operating.
- Rotating impeller blades can cause severe injury. Stop the engine and ensure impeller blades have stopped rotating before opening the vacuum door or installing/changing tubes. Do not put hands or any other object into the vacuum tubes while they are installed on the unit.
- Never run the unit without the proper equipment attached. When used as a blower, always install the blower tubes. When used as a vacuum, always install the vacuum tubes and vacuum bag. Make sure the vacuum bag is completely zipped when the unit is running to avoid flying debris.
- Avoid situations that could catch the vacuum bag on fire. Do not operate near an open flame. Do not vacuum warm ash from fireplaces, barbecue pits, brush piles, etc. Do not vacuum discarded cigars or cigarettes unless the cinders are completely cool.
- Never place blower on any surface, except a hard, clean surface when engine is running. Gravel, sand, and other debris can be picked up by the air inlet and thrown at the operator or bystanders, causing possible serious injuries.
- To reduce the risk of hearing loss associated with sound level(s), hearing protection is required.
- To reduce the risk of injury associated with contacting rotating parts, stop the engine before installing or removing attachments. Always disconnect the spark plug before performing maintenance or accessing any movable parts.
- Never use blower near fires, fireplaces, hot ashes, barbecue pits, etc., which may cause fire to spread.
- Do not point the blower nozzle in the direction of people or pets.
- Never run the unit without the proper equipment attached. Always ensure the blower tubes are installed.
- This product is intended for infrequent use by homeowners and other occasional users for such general applications as blowing leaves and lawn clippings, etc. It is not intended for prolonged use. Prolonged periods of operation can cause circulatory problems in the user's hands due to vibration. For such use, it may be appropriate to use a product having an anti-vibration feature.

Fueling












- Fuel is highly flammable. Take precautions when using to reduce the chance of serious personal injury.
- Store fuel in a cool, well-ventilated area, safely away from spark and/or flame-producing equipment.
- Store fuel in containers specifically designed for this purpose.
- Only refuel outdoors and do not smoke while refueling.
- Add fuel before starting the engine. Never remove the cap of the fuel tank or add fuel while the engine is running or when the engine is hot.
- Do not smoke while handling fuel.
- Mix and store fuel in a container approved for gasoline.
- Mix fuel outdoors where there are no sparks or flames.
- Loosen fuel cap slowly to release pressure and to keep fuel from escaping around the cap.
- Tighten the fuel cap securely after refueling.
- Wipe spilled fuel from the unit. Move 30 feet away from refueling site before starting engine.
- Never attempt to burn off spilled fuel under any circumstances.
- To reduce the risk of fire and burn injury, handle fuel with care. It is highly flammable.
- If fuel is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until fuel vapors have dissipated.
- Replace all fuel tank and container caps securely.
- Empty fuel tank into a container approved for gasoline and restrain the unit from moving before transporting in a vehicle.
- When draining the fuel tank, use an approved fuel storage container in a well-ventilated area.
- Select bare ground, stop engine, and allow to cool before refueling.
- Save these instructions. Refer to them frequently and use them to instruct others who may use this tool. If you loan someone this tool, loan them these instructions also.

Symbols

The following signal words and meanings are intended to explain the levels of risk associated with this product.

SYMBOL	SIGNAL	MEANING
	DANGER:	Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.
	WARNING:	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
	CAUTION:	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	NOTICE:	(Without Safety Alert Symbol) Indicates important information not related to an injury hazard, such as a situation that may result in property damage.

Some of the following symbols may be used on this product. Please study them and learn their meaning for safe operation of this product.

SYMBOL	NAME	EXPLANATION
	Safety Alert Symbol	Indicates a potential personal injury hazard.
	Read Operator's Manual	To reduce the risk of injury, user must read and understand operator's manual before using this product.
	Wear Eye and Hearing Protection	Always wear eye protection with side shields marked to comply with ANSI Z87.1 as well as hearing protection when operating this equipment.
	Keep Bystanders Away	Keep all bystanders at least 50 ft. away.
	Ricochet	Thrown objects can ricochet and result in personal injury or property damage.
	Vacuum Door	Do not run unit while vacuum door is unsecured.
	Long Hair	Risk of long hair being drawn into air inlet.
	Blower Tubes	Do not run unit without tubes in place.
	Loose Clothing	Risk of loose clothing being drawn into air intake.
	Gasoline and Lubricant	Use unleaded gasoline intended for motor vehicle use with an octane rating of 87 [(R + M) / 2] or higher. This product is powered by a 2-cycle engine and requires pre-mixing gasoline and 2-cycle lubricant.
	Stop Symbol	To stop the engine, press and hold the stop switch in the stop position

Product Labels

Product labels and instructions are easily visible to the operator and are located near any area of potential danger. Replace damaged or lost labels.

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Features

Product Specifications

Name	Specification
Engine	25.4cc Full Crank
Air Velocity	
MPH	Up to 150 (241.39 kph)
CFM	Up to 460 (13 m³/min)

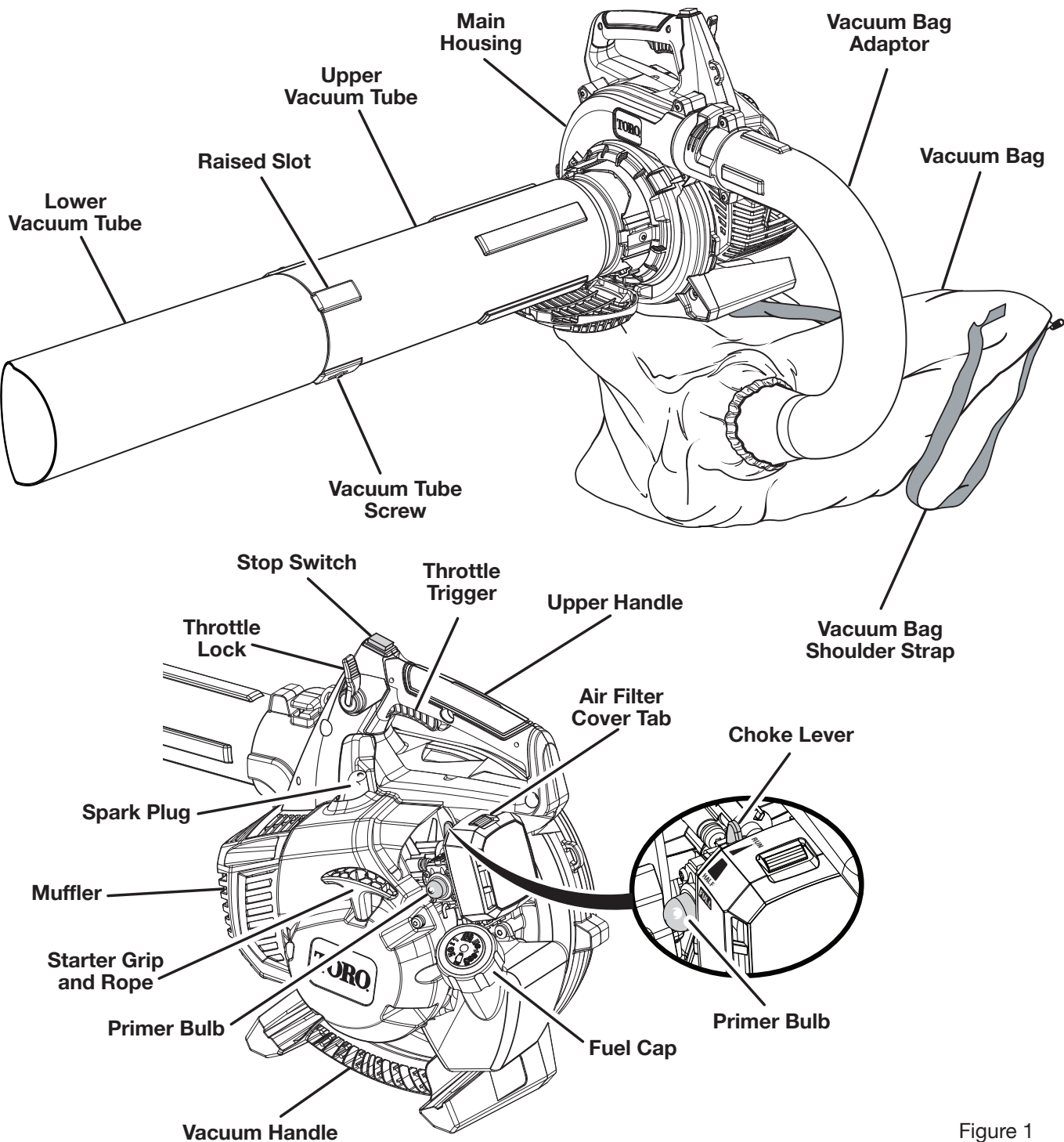


Figure 1

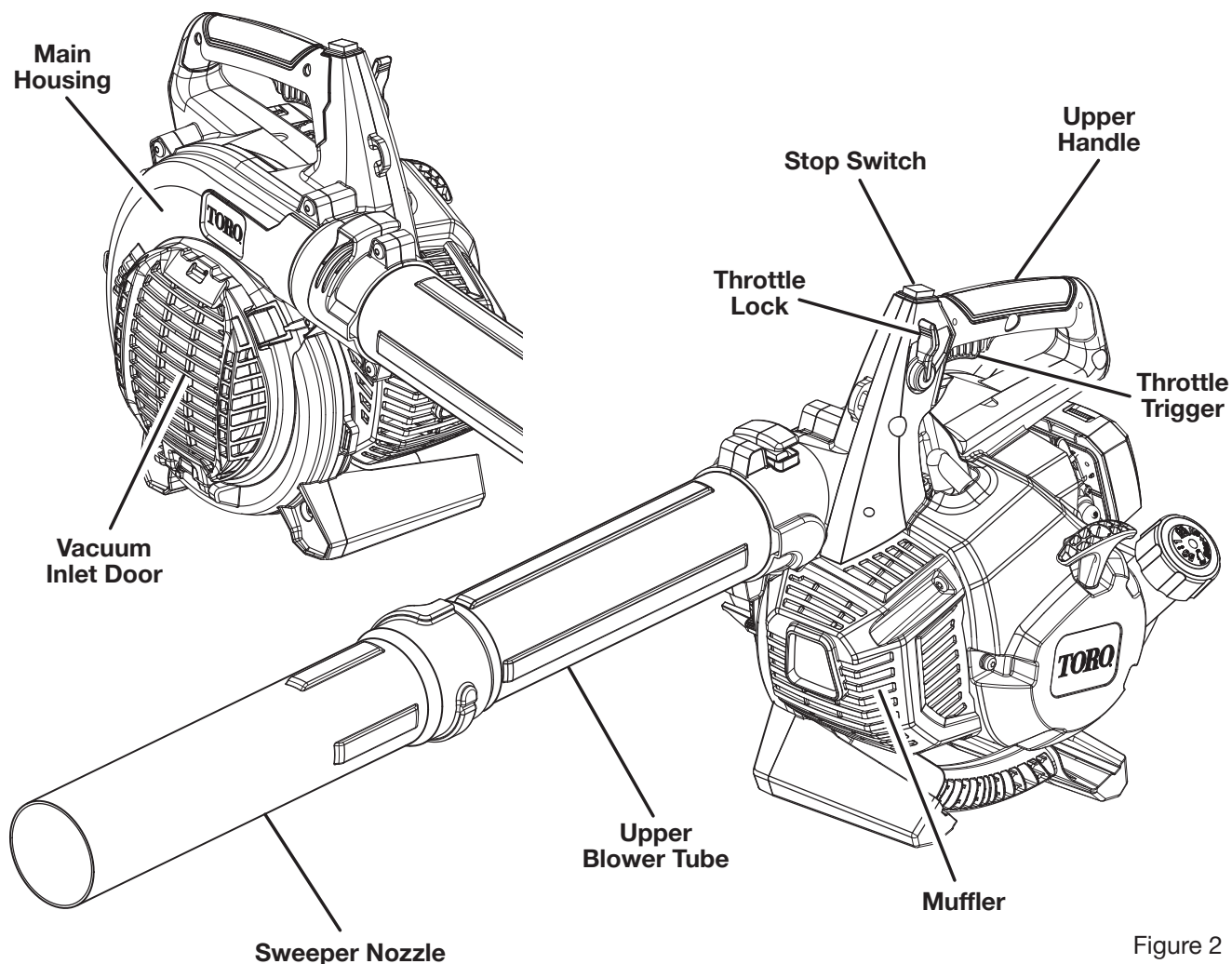


Figure 2

Know Your Blower/Vacuum

See Figures 1 - 2.

The safe use of this product requires an understanding of the information on the tool and in this operator's manual as well as a knowledge of the project you are attempting. Before use of this product, familiarize yourself with all operating features and safety rules.

Blower Tube and Sweeper Nozzle

The blower tubes and sweeper nozzle can be assembled and installed on the main housing using no tools.

Engine

The blower has a powerful 25.4cc engine with sufficient power to handle tough blowing and vacuuming jobs.

Mulcher

The blower is equipped with a metal mulching blade that efficiently reduces leaves at a 10:1 ratio.

Sweeper Nozzle

The sweeper nozzle allows for more area to be covered during blower operation.

Throttle Lock

The throttle lock feature allows the user to operate the blower without holding the throttle trigger. To slow the engine speed, simply push the throttle lock forward.

Throttle Trigger

The blower can be operated at any speed between idle and full throttle.

Vacuum/Mulcher

Converting the blower to a vacuum/mulcher is simple and can be done using a straight screwdriver.

Vacuum Bag

The vacuum bag attaches to the main housing easily by using the vacuum bag adaptor.

Vacuum Handle

This feature allows user to perform vacuuming duties comfortably.

Vacuum Tubes

The vacuum tubes can be installed on the main housing using a flat head screw driver.

Assembly

Unpacking

This product requires assembly.

- Carefully remove the product and any accessories from the box. Make sure that all items listed in the packing list are included.

WARNING:

Do not use this product if any parts on the Packing List are already assembled to your product when you unpack it. Parts on this list are not assembled to the product by the manufacturer and require customer installation. Use of a product that may have been improperly assembled could result in serious personal injury.

- Inspect the product carefully to make sure no breakage or damage occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated the product.
- If any parts are damaged or missing, please call 1-866-574-9242 (US) or 1-866-574-9243 (Canada) for assistance.

Packing List

Blower

Upper Blower Tube

Sweeper Nozzle

Upper and Lower Vacuum Tubes

Vacuum Tube Screws (2)

Vacuum Bag Assembly

Vacuum Bag Adaptor

2-Cycle Engine Lubricant

Operator's Manual

Note: Read and remove all hang tags and store with your Operator's Manual.

WARNING:

If any parts are damaged or missing do not operate this product until the parts are replaced. Use of this product with damaged or missing parts could result in serious personal injury.

WARNING:

Do not attempt to modify this product or create accessories not recommended for use with this product. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.

WARNING:

To prevent accidental starting that could cause serious personal injury, always disconnect the engine spark plug wire from the spark plug when assembling parts.

Tools Needed

The following tool (not included or drawn to scale) is needed for assembly:



Flat Head Screwdriver

Assembling and Disassembling the Upper Blower Tube and Sweeper Nozzle

See Figure 3 - 4.

1. Align raised tabs on main housing to the slots on upper tube; slide together and tighten securely by twisting. Check tightness after initial run and retighten if needed.
2. Secure the sweeper nozzle and upper blower tube together by aligning the raised locking tab on the upper blower tube with the raised slot on the sweeper nozzle.
3. To disassemble, raise the locking tab with a flat head screwdriver, rotate the tube and nozzle to unlock them and remove from the main housing outlet.

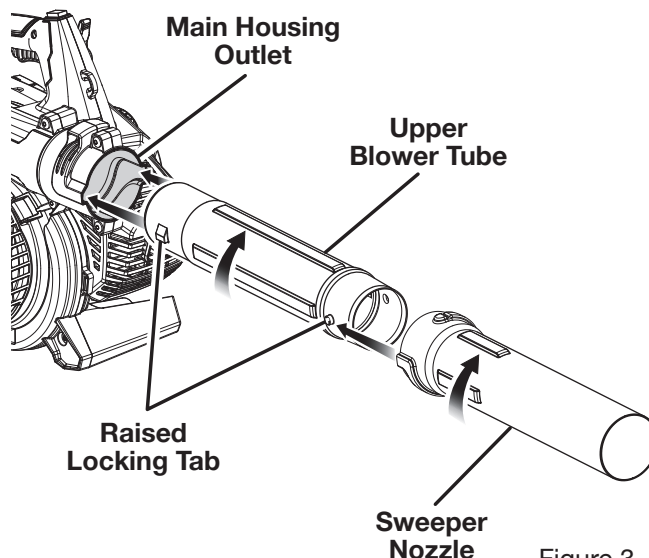


Figure 3

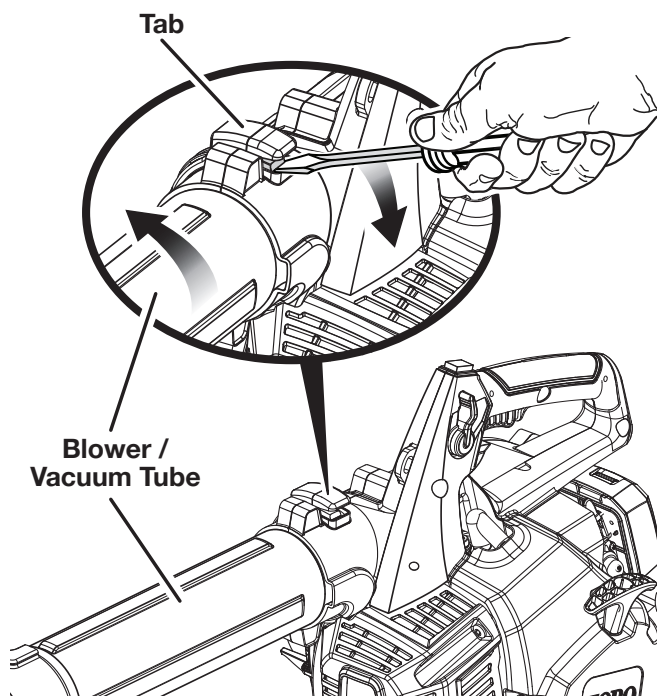


Figure 4

Installing the Vacuum Bag

See Figures 5 - 6.

1. Remove the sweeper nozzle and upper blower tube from the main housing by twisting and removing from main housing outlet.

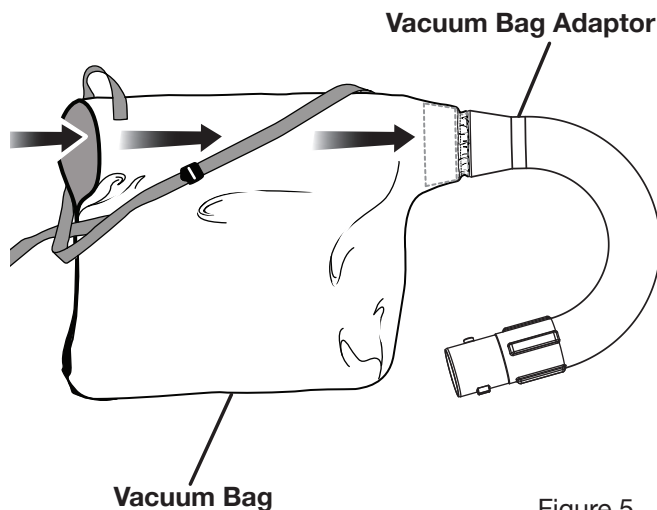


Figure 5

2. Unzip the vacuum bag and place the adaptor inside as shown. Push the vacuum bag adaptor through the opening opposite the zipper. The wider end of the adaptor will remain on the inside of the vacuum bag when installed properly.
3. Align the raised slots on the vacuum bag adaptor with the raised locking tabs on the main housing outlet; push the bag adaptor onto the housing. Twist to lock into place.
4. Rotate the vacuum bag until the shoulder strap is up-right.
5. Make sure the vacuum bag is zipped and closed before starting the unit.

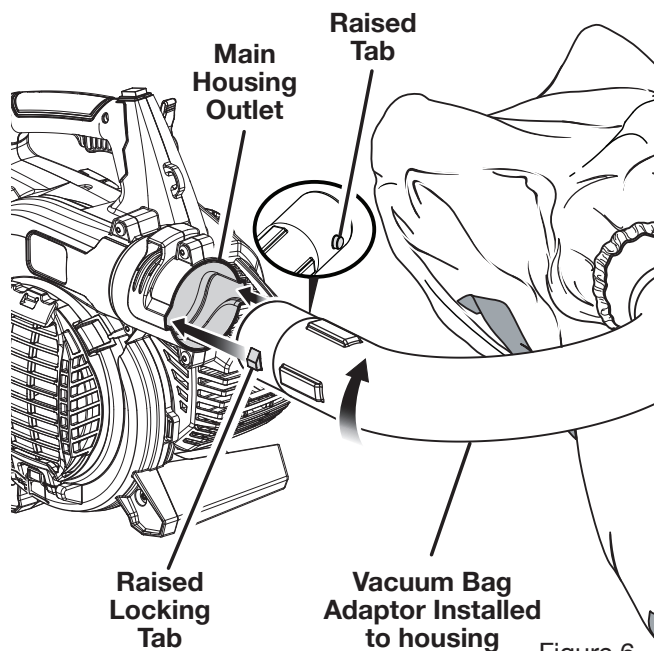


Figure 6

To remove the vacuum bag:

1. Remove the vacuum bag by using a flat head screw-driver to lift the locking tab.
2. Rotate counterclockwise to unlock the adaptor and remove.

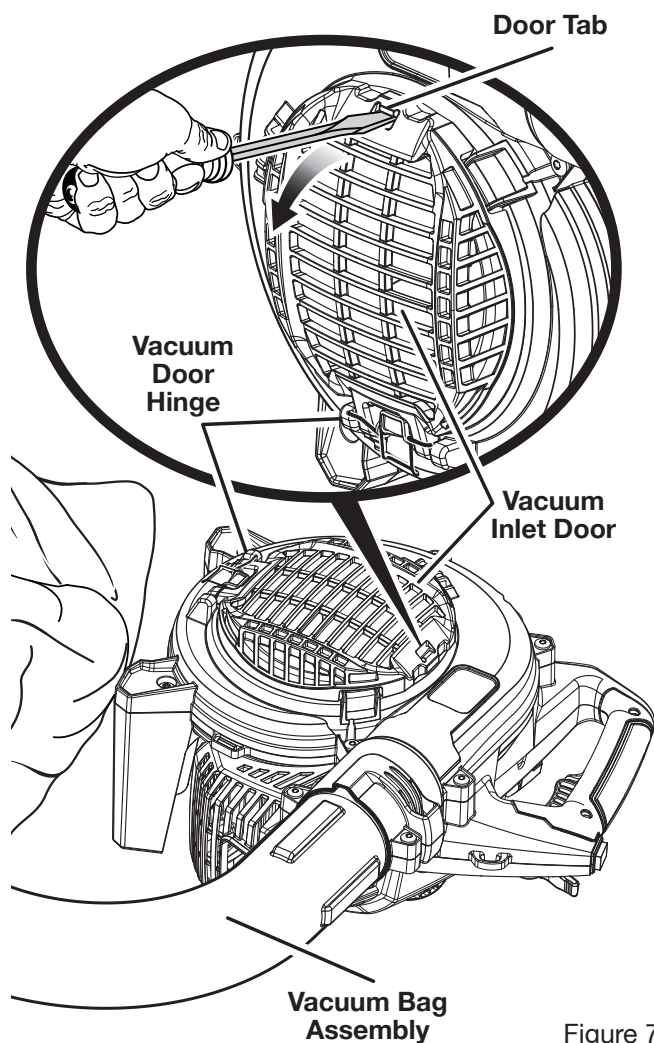


Figure 7

Installing the Vacuum Tubes

See Figures 7 - 9



WARNING:

Rotating impeller blades can cause severe injury. Always stop the engine and ensure impeller blades have stopped rotating before opening the vacuum door or installing/changing tubes. Do not put hands or any other object into the vacuum tubes while they are installed on the unit.

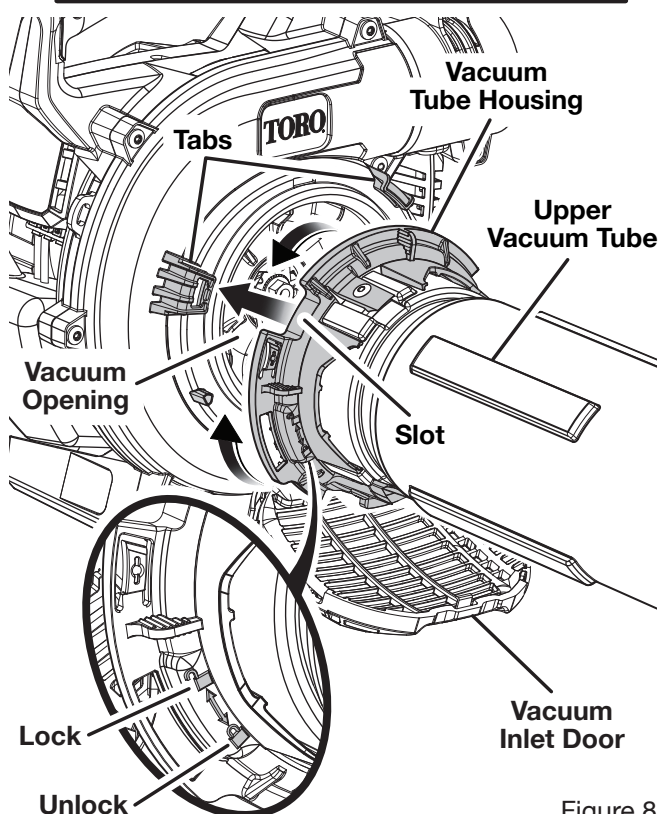
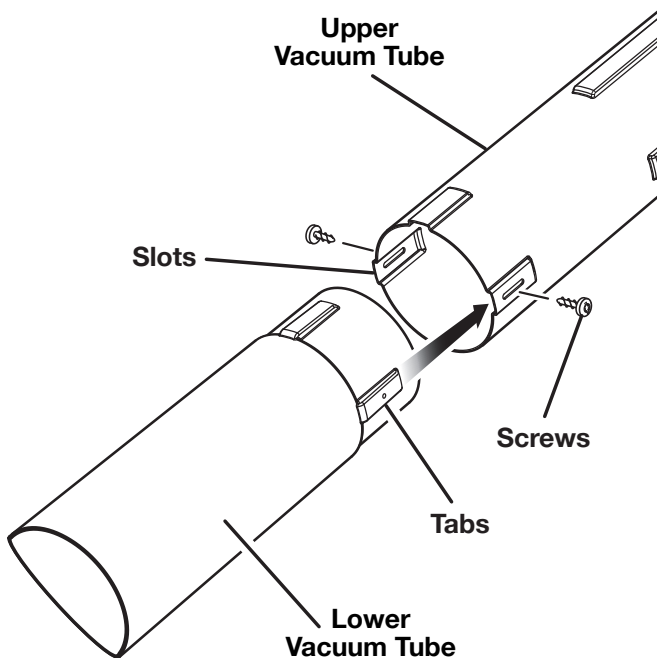


Figure 8

To install the vacuum tubes:

1. Secure the upper and lower vacuum tubes together by aligning the raised locking tabs with the raised slots.
2. Tap tube assembly on ground until the screw holes in lower tube are in the raised slot of the upper tube. Secure with supplied screws.
3. Depress door tabs using a straight screwdriver and open vacuum inlet door.
4. Align the slots on the vacuum tube housing with the tabs on the main housing.
5. Turn the vacuum tube housing clockwise to the locked position and secure to the main housing.

To remove the vacuum tubes:

1. Using a screwdriver, depress the tab on the blower/vacuum tube to unlock.
2. Turn the upper vacuum tube housing counterclockwise.
3. Remove the vacuum tube assembly from the main housing.
4. Close the inlet cover door securely.

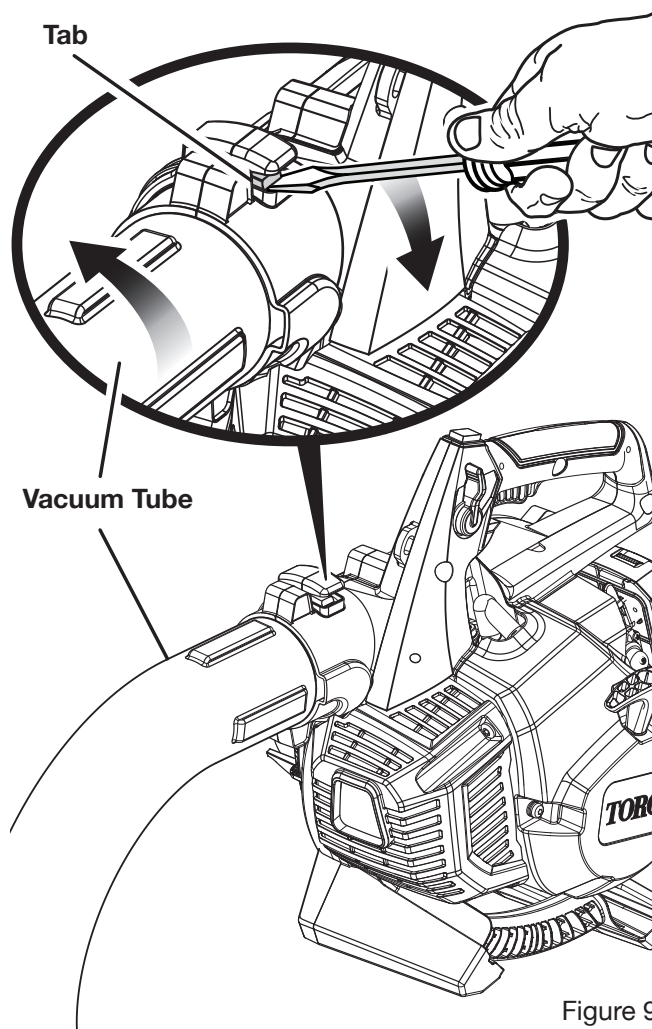


Figure 9

**WARNING:**

Do not allow familiarity with tools to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.

**WARNING:**

Always wear eye protection with side shields marked to comply with ANSI Z87.1, along with hearing protection. Failure to do so could result in objects being thrown into your eyes and other possible serious injuries.

NOTICE:

The spark arrestor on this product has not been evaluated by the USDA Forest Service and cannot be used on U.S. forest lands. In addition, product users must comply with Federal, State, and local fire prevention regulations. Check with appropriate authorities. Contact customer service or a qualified service center to purchase a replacement spark arrestor.

NOTICE:

Before each use, inspect the entire product for damaged, missing, or loose parts such as screws, nuts, bolts, caps, etc. Tighten securely all fasteners and caps and do not operate this product until all missing or damaged parts are replaced. Please contact customer service or a qualified service center for assistance.

Applications

You may use this tool for the purposes listed below:

- Clear leaves and other debris from your lawn
- Keep decks and driveways free from leaves and pine needles
- Vacuuming leaves from your lawn

Fueling and Refueling

**WARNING:**

Gasoline is extremely flammable and explosive. A fire or explosion from gasoline will burn you and others. Always shut off engine before fueling. Never add fuel to a machine with a running or hot engine. Move at least 30 ft. from refueling site before starting engine. Do not smoke and stay away from open flames and sparks. Failure to safely handle fuel could result in serious personal injury.

Fuel Mixture

This product is powered by a 2-cycle engine and requires pre-mixing gasoline and 2-cycle lubricant. Pre-mix unleaded gasoline and 2-cycle engine lubricant in a clean container approved for gasoline. DO NOT mix quantities larger than usable in a 30-day period.

Recommended fuel: This engine is certified to operate on unleaded gasoline intended for automotive use.

Ethanol. Gasoline containing up to 10% ethanol by volume (commonly referred to as E10) is acceptable. **E15 and E85 are not.**

Note: We recommend you use high-quality synthetic 2-cycle lubricant in this product. Mix at 2.6 oz. per gallon US (76 ml per 3,8 L).

Do not use automotive lubricant or 2-cycle outboard lubricant.

HIGH QUALITY 2-CYCLE ENGINE LUBRICANT**GASOLINE****LUBRICANT**

1.0 gal. (US) (3.8 liter)

2.6 oz. (76 ml)

2.5 gal. (US) (9.5 liter)

6.4 oz. (189 ml)

Filling the Tank

1. Clean the surface around the fuel cap to prevent contamination.
2. Loosen the fuel cap slowly, by turning it counterclockwise.
3. Pour the fuel mixture carefully into the tank.
4. Clean and inspect the fuel cap gasket before replacing the fuel cap.
5. Replace the fuel cap and tighten it by turning it clockwise.
6. Wipe spilled fuel from the product.
7. Move at least 30 ft. (9 m) away from refueling area before starting the product.

Note: It is normal for smoke to be emitted from a new engine during first use.

⚠ WARNING:

Always shut off engine before fueling. Never add fuel to a machine with a running or hot engine. Move at least 30 ft (9 m). from refueling site before starting engine. Do not smoke and stay away from open flames and sparks. Failure to safely handle fuel could result in serious personal injury.

Oxygenated Fuels

NOTICE:

Do not use E15 or E85 fuel in this product. Only use unleaded gasoline containing up to 10% ethanol. It is a violation of federal law and will damage the unit and void your warranty.

Fuel system damage or performance problems resulting from the use of an oxygenated fuel containing more than the percentage of oxygenates stated below **are not covered under warranty.**

Starting and Stopping

See Figures 10 - 11.

To start a cold engine:

1. Set the blower on a flat, bare surface.
2. Slowly press the primer bulb 8 times.

Note: After the 8th press, fuel should be visible in the primer bulb. If it is not, continue to press the primer until you see fuel in the bulb.

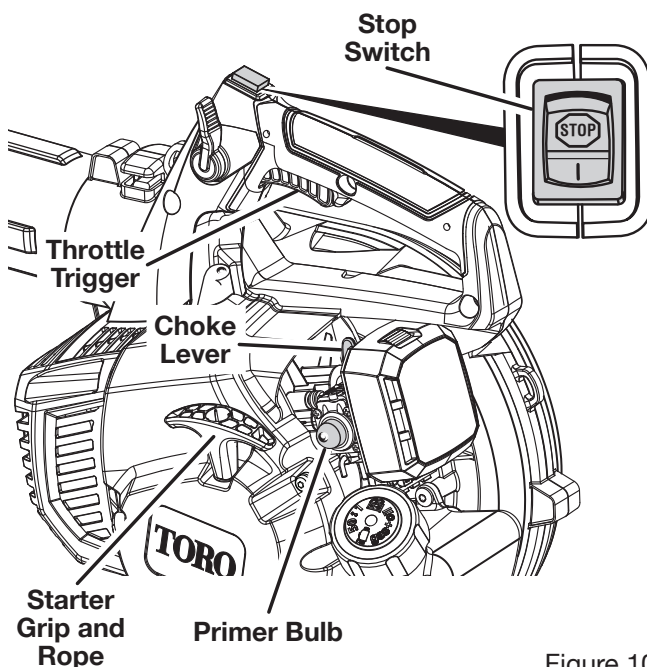


Figure 10

3. Place the choke lever in the **FULL CHOKE** position.
4. Pull throttle lock back to lock the throttle wide open.
5. Pull the starter grip and rope sharply until engine attempts to run. Do not pull the starter grip more than four (4) times.
6. Set the choke lever in the **HALF CHOKE** position.
7. Pull the starter grip and rope until the engine runs. Do not pull the starter grip more than six (6) times.
8. Allow the engine to run for 20 seconds, then place the choke lever in the **RUN** position.

Note: If the engine does not start, return to the **FULL CHOKE** position and repeat steps 3 through 6 again.

Note: In cooler environments, additional pulls of the starter handle may be required with the choke lever in the **FULL CHOKE** position.

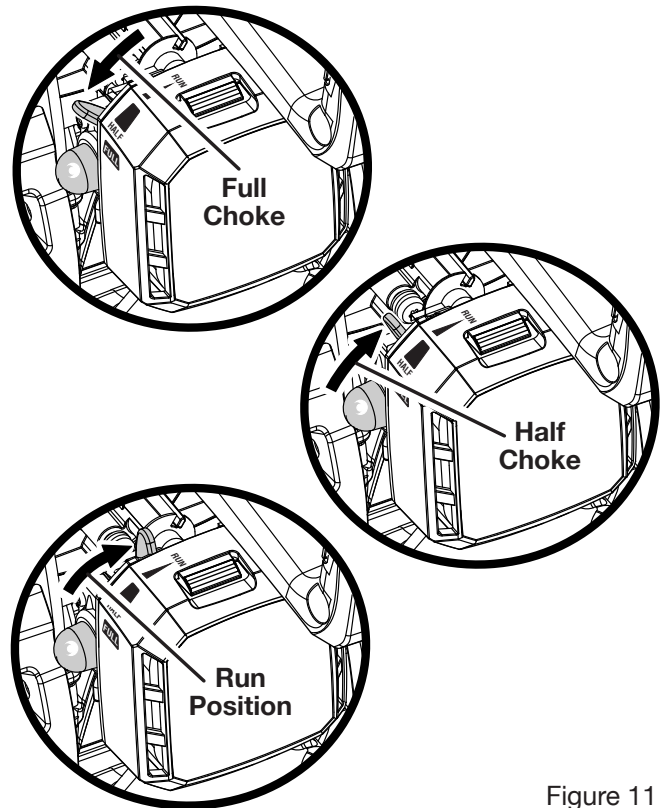


Figure 11

To start warm engine:

1. Place the choke lever in the **RUN** position.
2. Pull throttle lock back to lock the throttle wide open.
3. Pull the starter grip and rope until the engine runs.

Note: If the engine does not start, repeat steps 3 through 7 again.

To stop the engine:

1. Press the stop switch to the stop (⏻) position, the engine will stop. The switch will automatically return to the on (I) position when released.

Operating the Blower

See Figures 12 - 13.

WARNING:

Never run the unit without the blower tubes installed or the vacuum door securely closed. Failure to follow these steps could result in possible serious injuries.

WARNING:

Always wear eye protection with side shields marked to comply with ANSI Z87.1, along with hearing protection. Failure to do so could result in objects being thrown into your eyes and other possible serious injuries.

1. Start the blower. Refer to “Starting and Stopping” earlier in this manual. Hold the blower with the upper handle in your right hand.

WARNING:

Always hold the blower away from your body with the handle in your right hand when operating as a blower, keeping clearance between your body and the product. The muffler side of the blower should be away from your body. Any contact with the housing can result in burns and/or other serious personal injury.

Proper Operating Position



Figure 12

WARNING:

Do not place blower on top of or near loose debris or gravel. Debris may be sucked into blower intake vent resulting in possible damage to the unit and could result in serious personal injury.

2. To keep from scattering debris, blow around the outer edges of a debris pile. Never blow directly into the center of a pile.
3. Operate power equipment at reasonable hours only - not early in the morning or late at night when people might be disturbed. Comply with the times listed in local ordinances.

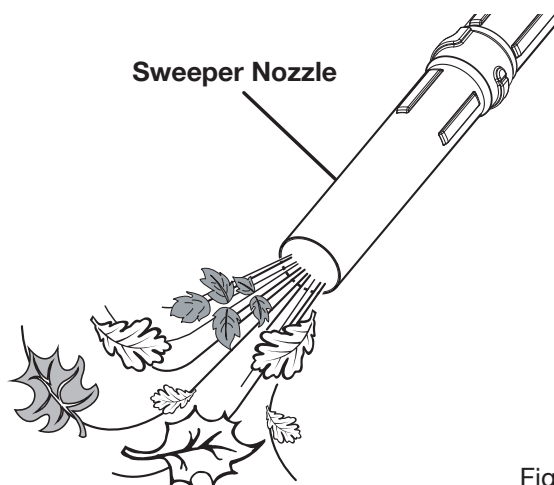


Figure 13

4. To reduce sound levels, limit the number of pieces of equipment used at any one time.
5. Conserve water by using power blowers instead of hoses for many lawn and garden applications, including areas such as gutters, screens, patios, grills, porches, and gardens.
6. Operate blower at the lowest possible throttle speed to do the job.
7. Check your equipment before operation, especially the muffler, air intakes, and air filters.
8. Use rakes and brooms to loosen debris before blowing.
9. In dusty conditions, slightly dampen surfaces when water is available.
10. Watch out for children, pets, open windows, or freshly washed cars, and blow debris safely away.
11. Use the sweeper nozzle so the air stream can work close to the ground.
12. After using blowers or other equipment, CLEAN UP! Dispose of debris properly.
13. Use the sweeper nozzle for the everyday blowing operation. This nozzle allows for more area to be covered during the blowing operation.

Throttle Lock

See Figure 14

The throttle lock can be used to operate the blower without holding the throttle trigger.

To engage the throttle lock:

1. Pull throttle lock back towards user, and stop at the desired throttle setting.
2. To release the throttle lock, push throttle lock all the way towards the front of unit.

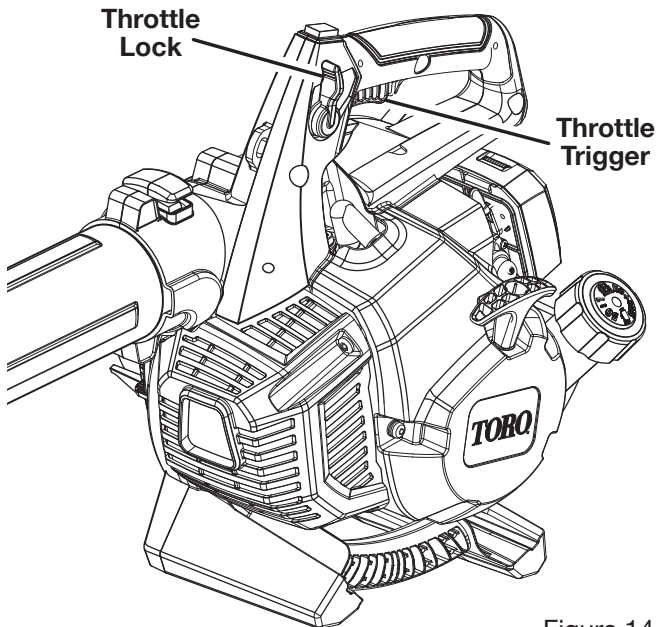


Figure 14

Proper Operating Position

Hold Muffler Away From Body And Clothing

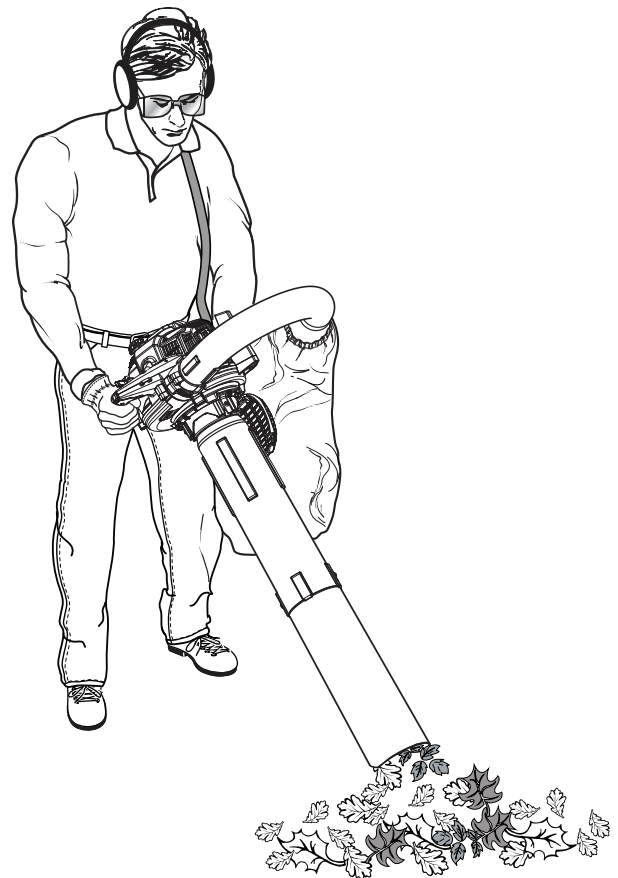


Figure 15

Vacuum Operation

See Figure 15.



WARNING:

Never run the unit without the vacuum tubes and vacuum bag installed. Failure to do so could result in serious personal injury.



WARNING:

Always wear eye protection with side shields marked to comply with ANSI Z87.1, along with hearing protection. Failure to do so could result in objects being thrown into your eyes and other possible serious injuries.



WARNING:

Keep the muffler and all hot surfaces of the blower/vacuum away from your body. Failure to do so could result in possible serious personal injury.

1. Install the vacuum tubes and bag. Refer to the Assembly section earlier in this manual.
2. Start the engine. Refer to Starting and Stopping earlier in this manual.
3. Place the vacuum bag strap over your left shoulder. Hold the upper handle in your right hand and the vacuum handle in your left hand.
4. Move the vacuum from side to side along outer edge of the debris. To avoid clogging, do not place the vacuum tube directly into the debris pile.
5. Hold the engine higher than the inlet end of the vacuum tube.
6. Always point vacuum tube downhill when working on a hillside.
7. To avoid injury to the operator or unit, do not pick up rocks, broken glass, bottles, or other similar objects.
8. If the vacuum tubes should clog, stop the engine and disconnect the spark plug wire before cleaning out the obstruction.
9. Remove the vacuum tubes and clear the debris from the blower fan housing. Remove the bag and clear the adaptor. A small rod or stick may be required to clear the entire tube length. Ensure that all debris has been cleared before reassembling the vacuum tubes.

Maintenance

Normal maintenance, replacement or repair of emission control devices and systems may be performed by any qualified repair establishment or individual with original or equivalent parts. Warranty and recall repairs must be performed by an authorized service center; please contact customer service for assistance

WARNING:

Use only Toro replacement parts when servicing this product. Use of any other parts could create a hazard or cause product damage.

WARNING:

Always wear eye protection with side shields marked to comply with ANSI Z87.1, along with hearing protection. Failure to do so could result in objects being thrown into your eyes and other possible serious injuries.

WARNING:

Before inspecting, cleaning, or servicing the machine, shut off engine, wait for all moving parts to stop, and disconnect spark plug wire and move it away from spark plug. Failure to follow these instructions can result in serious personal injury or property damage.

NOTICE:

Periodically inspect the entire product for damaged, missing, or loose parts such as screws, nuts, bolts, caps, etc. Tighten securely all fasteners and caps and do not operate this product until all missing or damaged parts are replaced. Please contact customer service or a qualified service center for assistance.

General Maintenance

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, dust, lubricant, grease, etc.

WARNING:

Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating lubricants, etc., come in contact with plastic parts. Chemicals can damage, weaken or destroy plastic which can result in serious personal injury.

Cleaning the Product

1. Stop the product before cleaning.
2. Clean the exterior of the product with a damp cloth.
3. Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use.
4. Scrape debris away from air intake vents on both sides of the motor housing.

NOTICE:

Keeping air intake vents free of grass and debris prevents motor overheating and possible failure.

Servicing the Product

Check and tighten all fasteners. If any part is damaged or lost, repair it or replace it.

Checking the Fuel Cap, Tank, and Lines

WARNING:

Check for fuel leaks. A leaking fuel cap, tank, or lines are a fire hazard and must be replaced immediately. If you find any leaks, correct the problem before using the product. Failure to do so could result in a fire that could cause serious personal injury.

The fuel cap contains a non-serviceable filter and check valve. A clogged fuel filter causes poor engine performance. If performance improves when the fuel cap is loosened, the check valve may be faulty or the filter may be clogged. Replace the fuel cap if necessary.

Cleaning Air Filter

See Figure 16.

A wet or dirty air filter can affect the way the engine starts, performs, and wears. The air filter should be checked and cleaned after 5 hours of operation. Inspect and clean more frequently if used in dusty dirty conditions.

For best performance, the air filter should be replaced every 25 hours or yearly.

To clean the air filter:

1. Depress air filter cover tab using a straight screwdriver to open the air filter cover.
2. Remove the cover.
3. Lift the edge of the air filter carefully and peel it out.
4. Wash the air filter with warm, soapy water.
5. Rinse and squeeze to dry.
6. To reinstall the air filter cover, insert the tabs into the notches and lock into place.

Note: Make sure the filter is seated properly inside the cover. Installing the filter incorrectly will allow dirt to enter the engine, causing rapid engine wear.

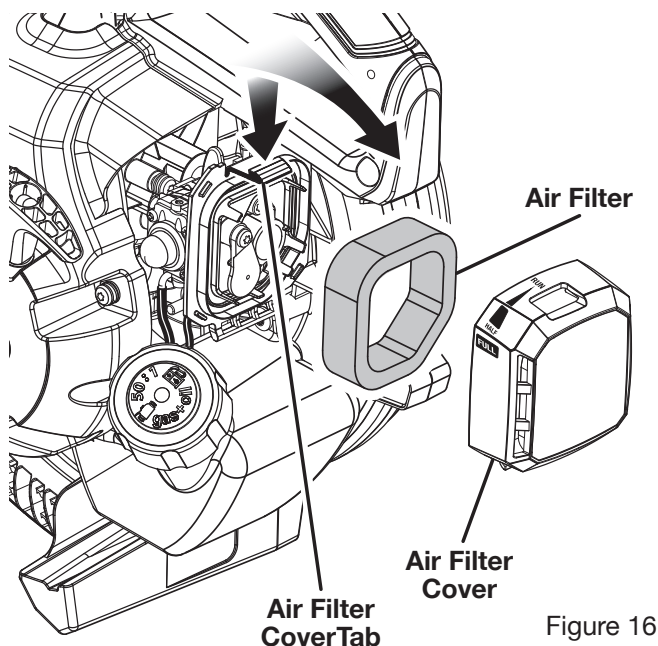


Figure 16

Cleaning the Exhaust Port, Muffler and Spark Arrestor

NOTICE:

The spark arrestor on this product has not been evaluated by the USDA Forest Service and cannot be used on U.S. forest lands. In addition, product users must comply with Federal, State, and local fire prevention regulations. Check with appropriate authorities. Contact customer service or a qualified service center to purchase a replacement spark arrestor.

Note: Depending on the type of fuel used, the type and amount of lubricant used, and/or your operating conditions, the exhaust port, muffler, and/or spark arrestor screen may become blocked with carbon deposits. If you notice a power loss with your gas powered tool, you may need to remove these deposits to restore performance. We highly recommend that only qualified service technicians perform this service.

Vacuum Bag

A dirty bag will reduce performance. To clean the bag, turn it inside out and shake. Wash the bag in soapy water at least once a year. Replacement parts available online at www.toro.com.

Spark Plug Replacement

See Figure 17.

This engine uses a Champion RCJ6Y spark plug. Use a recommended or equivalent replacement every 25 hours or annually.

1. Remove the spark plug boot.
2. Loosen the spark plug by turning it counterclockwise with a socket.

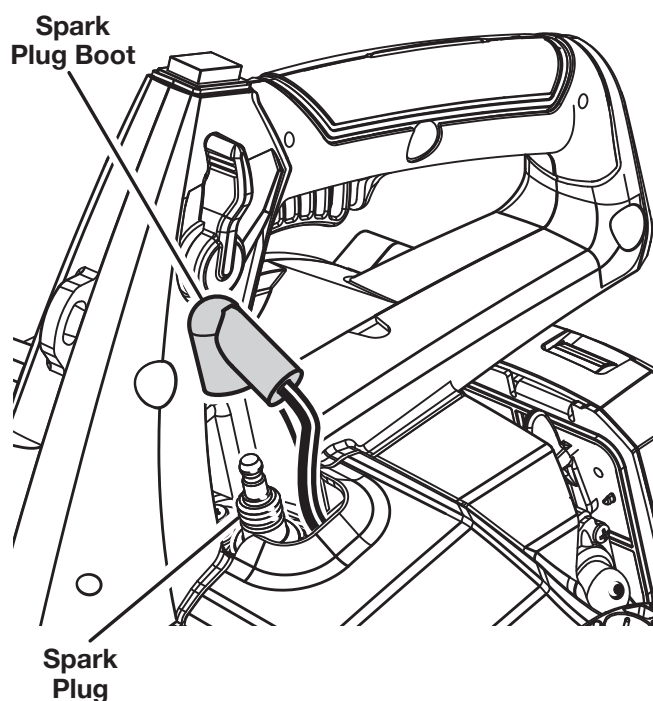


Figure 17

- 3. Remove the spark plug.
- 4. Inspect the new spark plug. The spark plug must be properly gapped and free of deposits in order to ensure proper engine operation. The correct gap is approximately 0.025 in. (0.64 mm). To widen gap, if necessary, carefully bend the ground (top) electrode. To lessen gap, gently tap ground electrode on a hard surface.
- 5. Hand thread the new spark plug into the cylinder , turning it clockwise.
- 6. Tighten with a socket. (torque to 216 in.lb. [24.40 Nm] minimum, 264 in.lb. [29.82 Nm] maximum.) **Do not over-tighten.**

NOTICE:
Be careful not to cross-thread the spark plug. Cross-threading will seriously damage the product.

Storing the Product

- 1. Clean all foreign material from the product. Store unit indoors in a dry, well-ventilated area that is inaccessible to children. Keep away from corrosive agents such as

garden chemicals, fertilizer, and de-icing salts.

- 2. Abide by all ISO and local regulations for the safe storage and handling of gasoline.

When storing 1 month or longer:

- 1. Drain all fuel from tank into a container approved for gasoline.
- 2. Run engine until it stops.
- 3. Place choke lever in the **FULL CHOKE** position.
- 4. Pull throttle lock back to lock the throttle.
- 5. Attempt to start the engine five (5) more times.

High Altitude Engine Operation:

Your engine is configured for operation below 2000 feet altitude at the factory. Your engine must be re-configured for operation above 2000 feet altitude. Operating the engine with the wrong engine configuration at a given altitude may increase its emissions, decrease fuel efficiency, degrade performance and cause irreversible damage. Engines configured for high altitude operation cannot be operated in standard altitude conditions. A qualified service center should ensure that your engine is properly configured for your location.

This Product Was Manufactured With A Catalyst Muffler

Congratulations! You have made an investment toward protecting the environment. In order to maintain this product’s original emission level, please refer to the maintenance section below.

MAINTENANCE SCHEDULE				
Maintenance Part	Inspect for Damage Before Each Use	Clean Every 5 Hours	Clean or Replace Every 25 Hours or Yearly	Replace Every 125 Hours
*CATALYTIC MUFFLER ASSEMBLY				X
*AIR FILTER ASSY				
includes:				
Filter				X
*CARBURETOR ASSY				
includes:				
Gaskets				X
*FUEL TANK ASSY				
includes:				
Fuel Lines				X
Fuel Cap				X
Fuel Filter				X
*IGNITION ASSY				
includes:				
Spark Plug				X
*NOTICE: THE USE OF EMISSION CONTROL COMPONENTS OTHER THAN THOSE DESIGNED FOR THIS UNIT IS A VIOLATION OF FEDERAL LAW.				

Troubleshooting

PROBLEM	POSSIBLE CAUSE	SOLUTION
Engine fails to start.	<ol style="list-style-type: none"> 1. No fuel in tank. 2. Spark plug shorted or fouled. 3. Spark plug is broken (cracked porcelain or electrodes broken). 4. Ignition lead wire shorted, broken, or disconnected from spark plug. 5. Ignition inoperative. 	<ol style="list-style-type: none"> 1. Fill tank with fresh fuel/oil mixture. 2. Replace spark plug. 3. Replace spark plug. 4. Replace lead wire or attach to spark plug. 5. Contact a qualified service center.
Engine hard to start.	<ol style="list-style-type: none"> 1. Water in gasoline or stale fuel mixture. 2. Too much oil in fuel mixture. 3. Engine is under or over-choked. 4. Weak spark at spark plug. 	<ol style="list-style-type: none"> 1. Drain entire system and refill with fresh fuel/oil mixture. 2. Drain and refill with correct fresh fuel/oil mixture. 3. Adjust choke as necessary. 4. Contact a qualified service center.
Engine lacks power.	<ol style="list-style-type: none"> 1. Air filter clogged. 2. Spark plug fouled. 3. Spark arrestor/muffler/exhaust port deposits. 	<ol style="list-style-type: none"> 1. Clean/replace the air filter. 2. Replace the spark plug. 3. Clean/replace spark arrestor /muffler parts as required.
Engine overheats.	<ol style="list-style-type: none"> 1. Insufficient oil in fuel mixture. 	<ol style="list-style-type: none"> 1. Mix fuel and oil as described in starting instructions.

If problem persists after trying the above solutions, contact customer service or a qualified service center for assistance.

NOTICE:

As the equipment owner, you are responsible for the performance of the required maintenance listed in the *Maintenance* section. It is recommended that you retain all receipts covering maintenance on your equipment. Neglecting or failing to perform the required maintenance may increase emissions, decrease fuel efficiency, degrade performance, cause irreversible engine damage and/or void your warranty.



CALL US FIRST

For any questions about operating or maintaining your product, call the Toro® Help Line!

Your product has been fully tested prior to shipment to ensure your complete satisfaction.



Count on it.

THIS PRODUCT IS MANUFACTURED UNDER LICENSE FROM THE TORO COMPANY BY TECHTRONIC INDUSTRIES NORTH AMERICA, INC.

Techtronic Industries North America, Inc. warrants to the original retail purchaser that this Blower/Vacuum Product is free from defects in material and workmanship and agrees to repair or replace, at our option, any defective Product free of charge within these time periods from the date of purchase:

- Four years for Blower/Vacuum Products, if the Product is used for personal, family, or household use;
- 90 days, if Blower/Vacuum Products are used for any other purpose, such as commercial or rental.

Except as provided in the Emission Control Warranty Statement, this warranty extends to the original retail purchaser only and commences on the date of original retail purchase.

Instructions for Obtaining Warranty Service

Any part of the Product manufactured or supplied by Techtronic Industries North America, Inc. and found in the reasonable judgement of Techtronic Industries North America, Inc. to be defective in material or workmanship will be repaired or replaced by an authorized service dealer for this product without charge for parts and labor. To locate your nearest authorized service dealer for this product, contact us Toll free at 1-866-574-9242 (US) or 1-866-574-9243 (Canada).

The Product including any defective part must be returned to an Authorized Service Dealer for this product within the warranty period. The expense of delivering the Blower/Vacuum Product to the service dealer for warranty work and the expense of returning it back to the owner after repair or replacement will be paid for by the owner. Techtronic Industries North America, Inc.'s responsibility in respect to claims is limited to making the required repairs or replacements and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Product. Proof of purchase will be required by the dealer to substantiate any warranty claim. All warranty work must be performed by a service dealer authorized by Techtronic Industries North America, Inc. to service this product.

This warranty does not cover any Blower/Vacuum Product that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the operator's manual. This warranty does not apply to any damage to the Blower/Vacuum Product that is the result of improper maintenance or to any Blower/Vacuum Product that has been altered or modified so as to adversely affect the products operation, performance or durability or that has been altered or modi-

fied so as to change its intended use. The warranty does not extend to repairs made necessary by normal wear or by the use of parts or accessories which are either incompatible with the Blower/Vacuum Product or adversely affect its operation, performance or durability.

In addition, this warranty does not cover the following (except to the extent covered by the emissions control warranty set forth below):

- A. Tune-ups – Spark Plugs, Carburetor Adjustments, Filters
- B. Wear Items – Starter Pulley, Starter Ropes, Mulching Blades, Blower Fans, Blower and Vacuum Tubes, Vacuum Bag and Straps

Techtronic Industries North America, Inc. reserves the right to change or improve the design of any Blower/Vacuum Product without assuming any obligation to modify any product previously manufactured.

ALL IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE STATED WARRANTY PERIOD. ACCORDINGLY, ANY SUCH IMPLIED WARRANTIES INCLUDING MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, ARE DISCLAIMED IN THEIR ENTIRETY AFTER THE EXPIRATION OF THE APPROPRIATE FOUR-YEAR OR NINETY DAY WARRANTY PERIOD. TECHTRONIC INDUSTRIES NORTH AMERICA, INC.'S OBLIGATION UNDER THIS WARRANTY IS STRICTLY AND EXCLUSIVELY LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS AND TECHTRONIC INDUSTRIES NORTH AMERICA, INC. DOES NOT ASSUME OR AUTHORIZE ANYONE TO ASSUME FOR THEM ANY OTHER OBLIGATION. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

TECHTRONIC INDUSTRIES NORTH AMERICA, INC. ASSUMES NO RESPONSIBILITY FOR INCIDENTAL, CONSEQUENTIAL, OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO EXPENSE OF RETURNING THE BLOWER/VACUUM PRODUCT TO A BLOWER/VACUUM AUTHORIZED SERVICE DEALER AND EXPENSE OF DELIVERING IT BACK TO THE OWNER, MECHANIC'S TRAVEL TIME, TELEPHONE, OR TELEGRAM CHARGES, RENTAL OF A LIKE PRODUCT DURING THE TIME WARRANTY SERVICE IS BEING PERFORMED, TRAVEL, LOSS, OR DAMAGE TO PERSONAL PROPERTY, LOSS OF REVENUE, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, OR INCONVENIENCE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

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

Notes



Customer Service Information

If your product requires service or maintenance, contact a qualified service center.
To locate a qualified service center for this product, contact us toll free at 1-866-574-9242
(US) or 1-866-574-9243 (Canada).

This product is manufactured under license from
The Toro Company by Techtronic Industries Power Equipment

Techtronic Industries Power Equipment

P.O. Box 35 Highway 8
Pickens, SC 29671
USA