

LITTLE WONDER®

OPTIMAX

Maximum Output Blower

MODELS: 9160-02-01
GC160 HONDA

9170-03-01
EX170 SUBARU

91270-03-01
EX270 SUBARU CLASSIC



MAN 4166180

Rev. C

Original Language Instructions

**Owners Manual and Safety Instructions for
OPTIMAX BLOWER**

OPERATORS / PARTS MANUAL

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

⚠ WARNING

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

CALIFORNIA

Proposition 65 Warning

Battery posts, terminals, wiring insulation, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

WASH HANDS AFTER HANDLING.

LITTLE WONDER BLOWER

IMPORTANT MESSAGE

On behalf of everyone at Little Wonder, we would like to thank you for your purchase of a Little Wonder Gasoline Powered Optimax Blower. This professional blower was designed to the highest standards to ensure you many hours of uninterrupted service.

This manual provides the information necessary for safe and efficient operation and service. For your safety, it is critically important that you read and understand this entire manual before operating your blower.

LITTLE WONDER
SCHILLER GROUNDS CARE, INC.
1028 STREET ROAD, P.O. BOX 38
SOUTHAMPTON, PA 18966

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WARRANTY		BACK COVER

MANY USES:

The extreme versatility offered by Little Wonder's line of blowers makes them ideally suited for a wide variety of jobs; blowing leaves, grass clippings, thatch, blowing tennis courts dry, cleaning large driveways, stadiums, parking lots and other hard surfaces, precleaning roofs before repair and countless other jobs.



This Operator's Manual is part of the machine. Suppliers of both new and second-hand machines must make sure that this manual is provided with the machine.

Specifications, descriptions, and illustrative material in this literature are as accurate as known at the time of publication, but are subject to change without notice.

NOTICE !!!

Unauthorized modifications may present **extreme** safety hazards to operators and bystanders and could also result in product damage.

Schiller Grounds Care, Inc. strongly warns against, rejects and disclaims any modifications, add-on accessories or product alterations that are not designed, developed, tested and approved by Schiller Grounds Care, Inc. Engineering Department. Any Schiller Grounds Care, Inc. product that is altered, modified or changed in any manner not specifically authorized after original manufacture-including the addition of "after-market" accessories or component parts not specifically approved by Schiller Grounds Care, Inc. will result in the Schiller Grounds Care, Inc. Warranty being voided.

Any and all liability for personal injury and/or property damage caused by any unauthorized modifications, add-on accessories or products not approved by Schiller Grounds Care, Inc. will be considered the responsibility of the individual(s) or company designing and/or making such changes. Schiller Grounds Care Inc. will vigorously pursue full indemnification and costs from any party responsible for such unauthorized post-manufacture modifications and/or accessories should personal injury and/or property damage result.



This symbol means:
ATTENTION!
BECOME ALERT!

Your safety and the safety of others is involved.

Signal word definitions:

The signal words below are used to identify levels of hazard seriousness. These words appear in this manual and on the safety labels attached to Schiller Grounds Care, Inc. machines. For your safety and the safety of others, read and follow the information given with these signal words and/or the symbol shown above.

DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices or property damage.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, **MAY** result in property damage.

Schiller Grounds Care, Inc.

1028 Street Road
Southampton, PA 18966 U.S.A
Phone: 215-357-5110
Fax: 215-357-8045

MODEL NUMBER

SERIAL NUMBER

MODEL NUMBER: This number appears on sales literature, technical manuals and price lists.

SERIAL NUMBER: This number appears only on your unit. It contains the model number followed consecutively by the serial number. Use this number when ordering parts or seeking warranty information.

MACHINE PREPARATION

Operator preparation and training

Read the Operation & Safety Manual

- If an operator or mechanic cannot read English, it is the owner's responsibility to explain this material to them. If any portion of this material is unclear, contact your factory representative for clarification.
- Become familiar with the safe operation of the equipment, operator controls and safety signs. Be prepared to stop the engine quickly in an emergency. Do not operate or allow another person to operate this machine if there are any questions about safety.
- All operators and mechanics should be trained. The owner is responsible for training the users.
- Wear appropriate clothing, including safety goggles or safety glasses with side shields when operating. Wear substantial footwear. Do not operate barefoot or wearing open sandals. Long hair, loose clothing or jewelry may get tangled in moving parts.
- Wear appropriate hearing protection.
- Wear dust mask to avoid breathing dust.
- Wear safety glasses.
- Never allow children, unskilled or improperly trained people to operate this equipment. Local regulations can restrict the age of the operator.
- Keep warning labels and this operator's manual legible and intact. Replacement labels and manuals are available from the factory.
- Do not operate machine while under the influence of drugs or alcohol, or any other condition of impairment.
- The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.



SITE PREPARATION AND CIRCUMSTANCES

- Evaluate the terrain to determine how to safely perform the job. Only use accessories and attachments approved by the manufacturer.
- Be sure the area is clear of pets and people, especially young children. Never assume they will remain where you last saw them. Stop the machine if any enter the area.

MULTIPLE OPERATORS

- Keep a safe distance between operators when working together.

MACHINE PREPARATION

- Do not tamper with or defeat safety devices. Keep guards, shields and interlock safety devices in place and in proper working condition. They are for your protection.
- Keep all fasteners such as nuts, bolts and pins well secured.
- Verify that machine and attachments, if any, are in good operating condition.

OPERATING SAFELY

IN GENERAL

- Use extra care when loading or unloading the machine into a trailer or truck.
- Do not run the engine in an enclosed area where dangerous carbon monoxide fumes can collect.
- Never leave a running machine unattended. Always stop engine when leaving the operator position.
- Do not blow towards people, cars, windows, or other items which could be injured or damaged by the blown debris.
- Keep hands away from the blower air intake and outlet.

STARTING

- Start according to instructions in this manual or on the machine.
- Do not change engine governor settings or overspeed the engine. Operating the engine at excessive speed can increase the hazard of personal injury.



OPERATING ON SLOPES

USE EXTRACARE WHEN OPERATING ON SLOPES. EVALUATE THE RISKS INVOLVED BEFORE OPERATING ON A SLOPE

- Slopes are a major factor related to slip and fall accidents that sometimes lead to severe injury or death. All slopes require extra caution.
- Do not operate on slopes if uneasy or uncertain. Ultimate responsibility for safe operation on slopes rests with the operator.
- Do not operate on steep slopes. Poor footing could cause a slip and fall accident.
- Keep all movement on slopes slow and gradual.
- Do not operate near drop-offs, ditches or embankments. You could lose your footing or balance.
- Do not turn on slopes unless necessary, and then turn slowly and downhill when possible.
- Be sure of your footing on slopes.
- Watch for holes, ruts, bumps, rocks and other hidden objects. Uneven terrain could cause a slip and fall accident. Tall grass can hide objects.

INTERRUPTING OPERATION

- Before leaving the operator's position:
 - Park on level ground.
 - Shut off the engine.
- Stop the engine, and wait until the fan stops moving:
 - before refueling;
- Stop the engine, and disconnect the spark plug wire(s):
 - before clearing blockages;
 - before checking, cleaning or working on the machine;
 - if the machine begins to vibrate abnormally: shut off machine immediately. Inspect and have repairs made as needed before restarting;
 - except for repairs or adjustments as specifically noted, such as for carburetor adjustment, where the engine must be running. Keep hands and feet clear of moving parts in these circumstances.
- Allow the fan to come to a complete stop when stopping operation to clear blockages, unclog, inspect the machine, do maintenance or repair.
- Reduce the throttle setting during engine shut-down and, if the engine is provided with a shut-off valve, turn the fuel off at the conclusion of operation.

LITTLE WONDER BLOWER

MAINTENANCE SAFETY

In general

- Maintain machine according to manufacturer's schedule and instructions for maximum safety and best results.
- Park machine on level ground.
- Never allow untrained personnel to service machine.
- Guards should only be removed by a qualified technician for maintenance or service.
- Adjust or repair only after the engine has been stopped and the fan has stopped moving.
- Disconnect spark plug wire(s) before doing any maintenance.
- Replace parts if worn, damaged or faulty. For best results, always replace with parts recommended by the manufacturer.
- Do not dismantle the machine without releasing or restraining forces which may cause parts to move suddenly.
- Provide adequate support, e.g. jack stands for lifted machine or parts if working beneath.
- Do not put hands or feet near or under rotating parts.
- Clean up spilled oil or fuel thoroughly.
- Replace faulty mufflers.
- To reduce fire hazards, keep the engine, muffler, and fuel storage area free of grass, leaves, debris buildup or grease.

Fans

Do not straighten or weld fans. Replace damaged or failed fans..

Fuel

- Gasoline (petrol) and diesel fuels are flammable; gasoline (petrol) vapors are explosive. Use extra care when handling.
- Store only in containers specifically designed for fuel.



- When refueling or checking fuel level:
 - Stop the engine and allow to cool;
 - Do not smoke;
 - Refuel outdoors only;
 - Use a funnel;
 - Do not overfill;
 - If fuel is spilled, do not attempt to start the engine until the spill is cleaned up and vapors have cleared.
- Replace caps on fuel containers and tanks securely.

Sparks from static electricity can start fires or cause explosions. Flowing fuel can generate static electricity. To prevent static electricity sparks:





- Keep containers electrically grounded. Do not fill containers in a vehicle or on a truck or trailer bed with a plastic liner. Fill containers on the ground away from the vehicle.
- When practical, remove petrol (gasoline) powered equipment from the truck or trailer and refuel it on the ground. If equipment must be refueled on the truck or trailer, refuel from a portable container rather than a dispenser nozzle.
- Keep the dispenser nozzle in contact with the rim of the fuel tank or container opening until fueling is complete. Do not use a nozzle lock-open device.
- If fuel is spilled on clothing change it immediately.

STORAGE SAFETY

- Stop the engine and allow to cool before storing.
- Drain the fuel tank outdoors only.
- Store fuel in an approved container in a cool, dry place.
- Keep the machine and fuel containers in a locked storage place to prevent tampering and to keep children from playing with them.
- Do not store the machine or fuel container near an open flame, spark, or appliance, such as a water heater, or a pilot light.
- Keep petrol (gasoline) storage area free of grass, leaves and excessive grease to reduce fire hazard.
- Clean grass and debris from cutting units, drives, mufflers and engine to help prevent fires.

SAFETY DECALS

An important part of the safety system incorporated in this blower are the warning labels found on the blower. Replace labels if damaged or illegible.

 WARNING	 ADVERTENCIA
 	<p>Antes de comenzar:</p> <ul style="list-style-type: none"> -Lea y entienda el manual del operador y las etiquetas. -Pide que alguien lea y explique el manual y las etiquetas a usted si usted no lee Inglés. -Use protección ocular y auditiva. -No haga funcionar sin los protectores en su lugar. -Pare el motor antes de dar servicio -La gente a más durante la operación.
<p>BEFORE STARTING:</p> <ul style="list-style-type: none"> -Read and understand Operator manual and labels. -Wear hearing and eye protection. -Replace labels and Operator manual if lost or damaged. 	<small>4165977</small>

 DANGER

<p>Fan blades can cut/crush.</p> <ul style="list-style-type: none"> -Keep hands and feet away. -Stop engine and remove spark plug wire before servicing. -Do not operate without guards in place.
 WARNING

<p>Thrown objects</p> <ul style="list-style-type: none"> -Keep bystanders away. -Do not blow toward people or pets. -Do not blow toward items that may be damaged by flying debris.
<small>4165975</small>

LITTLE WONDER BLOWER

SET-UP INSTRUCTIONS

SET-UP INSTRUCTIONS

1. Open box. Remove upper handle and cardboard insert.
2. Lay box down with blower housing up. Use lower handle to roll unit out of the box.
3. Locate hardware package.
4. Install upper handle to lower handle with (4) 3/8-16 x 1-3/4 carriage bolts and (4) 3/8-16 flanged nylon insert nuts from the hardware package. Tighten the nuts securely but not so much as to crush the tube. (Figure 1)
5. **If equipped with a Throttle Cable:** Route the throttle cable in front of lower handle crossbar. Install to the left side of the upper handle with (2) 10-32 x 1/2 thread forming screws from the hardware package. (Figure 2)
6. **If equipped with a Throttle Cable:** Secure the throttle cables to the handle tubes with cable ties from the hardware package. Trim off excess. (Figure 3)
7. Fill the engine with oil to the level indicated on the dipstick. Fill the fuel tank with clean, fresh regular grade unleaded gasoline.



FIGURE 2



FIGURE 1

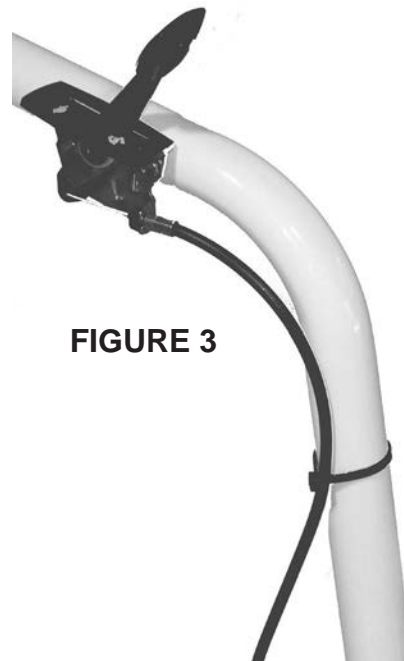


FIGURE 3

(BLOWER SHOWN WITH HONDA GC160 ENGINE.
OTHER ENGINES ARE SIMILAR.)

SWITCH (A)-SUBARU ONLY (not shown)

Move to the "OFF" position to stop the engine.
Move to the "ON" position before starting engine.

THROTTLE (B)

Controls engine speed and the amount of air
being blown.

91270-03-01 model has an engine mounted
throttle control.

CHOKE (C)



Move to the "CHOKE" position to apply the
choke. Move to the "RUN" position to remove
the choke.

FUEL SHUT OFF (D) SUBARU ONLY (not shown)

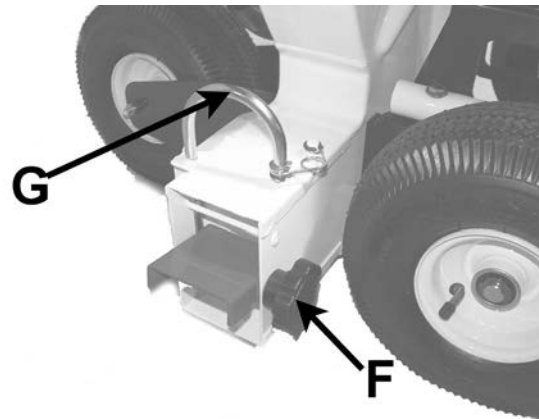
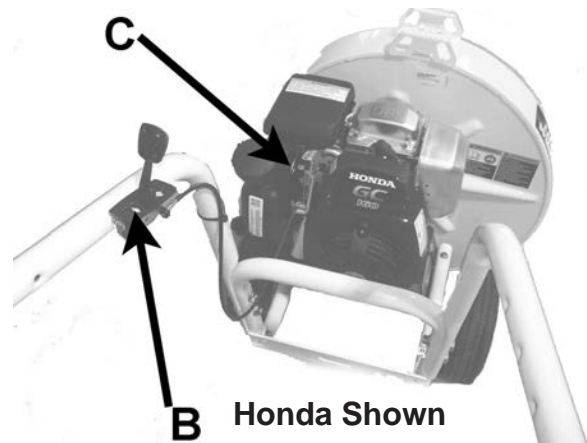
Move to the "OFF" position to shut off the fuel
whenever transporting the machine by trailer
or truck or during storage. Move to the "ON"
position before starting the engine.

LOCKING KNOB (F)

Tighten the knob to lock the horizontal deflector
in the desired position. Loosen to allow the
deflector to be rotated with remote horizontal
deflector levelr.

VERTICAL DEFLECTOR (G)

Rotate the deflector to direct air discharge
forward or to the side.



BEFORE STARTING THE ENGINE

1. Read the Operator Manual and Engine Manual. Become familiar with the controls, how each functions, and what it operates.
2. Check the engine oil level and add if necessary.
3. Fill the fuel tank with good quality, clean, unleaded regular gasoline (petrol). Use a funnel to avoid spilling.

OPERATING INSTRUCTIONS

Air flow can be directed to the side or front by the two-position vertical deflector. The front discharge position is used to remove debris from along walls, fences, etc. The side discharge position is used to form windrows or piles. The horizontal deflector directs air downward to "chisel" under wet, heavy leaves and litter. Air velocity is regulated by the throttle setting.

To reduce windrowing or to blow over an obstacle, point deflector upward.

To avoid blowing in an area, close deflector and reduce throttle setting.

Slight changes in deflector position will have a big effect on air flow. Experiment until you find the best position for your needs.

When clearing a yard or parking lot, a little time spent planning how to blow it off can greatly reduce the total clearing time.

To stop the engine, move the throttle control to the slow position and switch the engine off.

Stop the engine when moving from work site to work site. This will save fuel and prevent inadvertently blowing debris where you don't want to.

NOTE: When transporting the machine by truck or trailer, close the fuel valve. This avoids the possibility of flooding should any dirt get under the carburetor float needle. Leaving the valve open can allow severe flooding which may ruin the engine by diluting the oil.

MAINTENANCE INSTRUCTIONS

Stop engine and remove the spark plug wire before performing any maintenance.

Keep blower air intake clear of debris for best performance.

Clear air discharge area of any debris accumulation. Ensure machine has been shut off and fan is no longer moving before clearing.

Keep all hardware tight.

Check oil level daily. Top off as needed.

Change engine oil after the first 5 hours of operation. Then change as recommended by the engine manufacturer.

1. Remove drain plug and drain oil while engine is warm.
2. Replace drain plug, remove fill plug and fill with new oil. See engine manual for oil specification.
3. Start and run engine for 30 seconds. Stop engine.
4. Wait 30 seconds, then re-check oil level.
5. Top off if necessary. See engine manual for details.

STORAGE / TORQUE SPECIFICATIONS

LITTLE WONDER BLOWER

STORAGE

To prevent possible explosion or ignition of vaporized fuel, do not store equipment with fuel in tank or carburetor in an enclosure with open flame (for example, a furnace or water heater pilot).

Before the equipment is put into storage for any period exceeding 30 days.

1. Drain all fuel from the fuel tank and fuel lines.
2. Start the engine and run until all the fuel is used from the carburetor float bowl and the engine stops.
3. While the engine is still warm, drain the crankcase oil and replace with the proper weight oil corresponding to the season the equipment will be next used.
4. Remove the spark plug and squirt a small amount of engine oil into the cylinder. Slowly pull the starter a few times to distribute oil in the cylinder and reinstall the spark plug.
5. Top off if necessary. See engine manual for

details.

To put the equipment into service after an extended period of storage.

1. Check for loose parts and tighten if necessary.
2. Fill the fuel tank and then check the engine oil level.
3. Start the engine and check for fuel leaks. Repair any leaks before operating the unit.

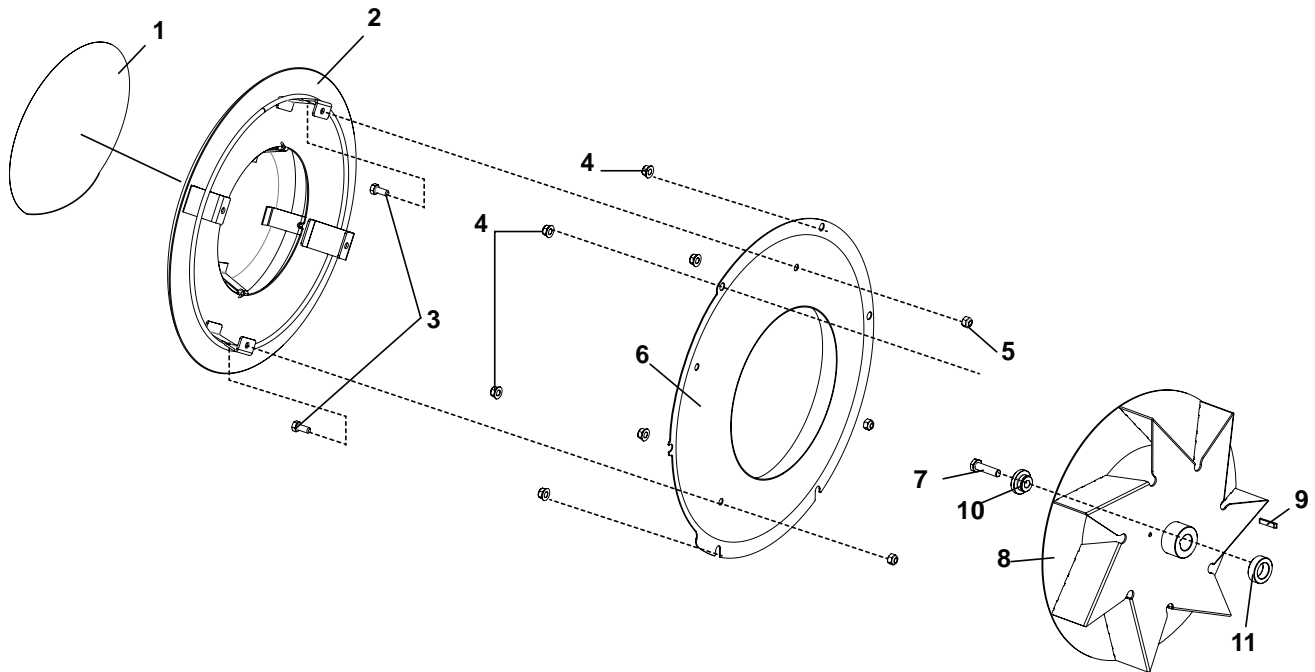
TORQUE SPECIFICATIONS

Location	Description	P/N	Min. Torque Ft-lbs (In-lbs)	Max. Torque Ft-lbs (In-lbs)
Housing to engine face	BLT-W LF 5/16-24 x 1-3/8 (USED ON 91270 MODELS)	910517	22	28
	BLT-W LF 5/16-24 x 3/4 (USED ON 9160 AND 9170 MODELS)	910503	22	28
Engine to deck	BLT 5/16-18 X 1-1/2	64262-009	19	25
Fan to Crankshaft	BLT-HEX 7/16-20 x 1-3/4 GR8 (USED ON 91270 MODELS)	64123-253	50	90
	BLT-HEX 5/16-24 x 1-3/4 GR8 (USED ON 9160 AND 9170 MODELS)	64123-254	19	25

LITTLE WONDER BLOWER

INTAKE GUARD ASSY

FIGURE 1

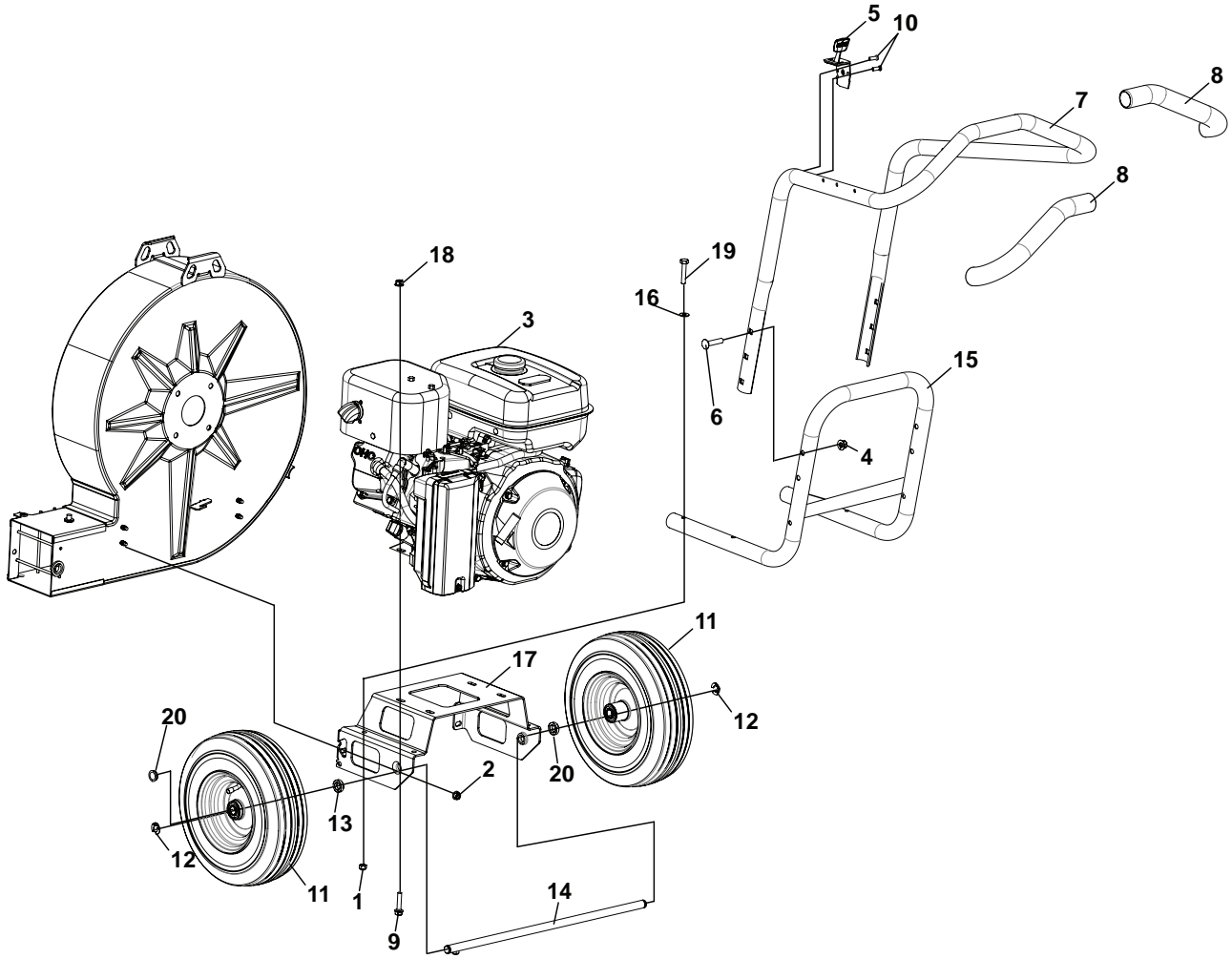


ITEM	PART NO.	DESCRIPTION	QTY
1	4166183	LABEL-INTAKE GUARD	1
2	4165218.7	ASSY-INTAKE GUARD	1
3	64123-54	BLT-HEX 5/16-18 X .75	4
4	64268-02	NUT-FL NYLON LOCK 5/16-18	6
5	64229-02	NUT 5/16-18	4
6	4165926.10	INTAKE PANEL-CENTER	1
7	64123-253	BLT-HEX 7/16-20 x 1-3/4 GR8 (USED ON 91270 MODELS)	1
	64123-254	BLT-HEX 5/16-24 x 1-3/4 GR8 (USED ON 9160 AND 9170 MODELS)	
8	4166730	WLDMT-FAN 7 BLADE 2.75 (USED ON 91270 MODELS)	1
	4166729	WLDMT-FAN, 7BL 1.50 (USED ON 9160 AND 9170 MODELS)	
9	64164-13	KEY 1/4 X 2 SQ (USED ON 91270 MODELS)	1
	64164-33	KEY 3/16 X 1-3/4 SQ (USED ON 9160 AND 9170 MODELS)	1
10	4163424	PLUG-FAN 3/8 X 1 (USED ON 91270 MODELS)	1
	4165139	PLUG-FAN HUB 5/16 X 3/4 (USED ON 9160 AND 9170 MODELS)	
11	4165169	SPACER-FAN .53 (USED ON 91270 MODELS)	1

ENGINE ASSY

LITTLE WONDER BLOWER

FIGURE 2

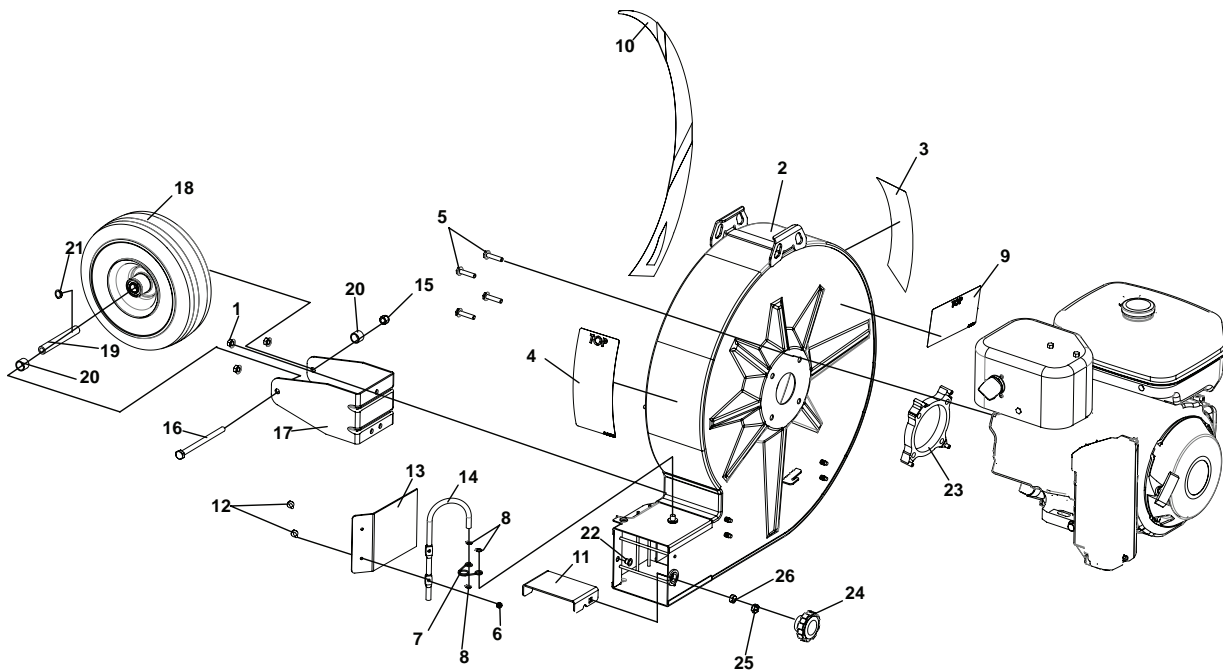


ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	64229-02	LOCKNUT-NYL 5/16-18	4	12	64144-36	SNAP RING.625	2
2	64141-6	NUT 5/16-18	4	13	4164192-01	SPACER-PDR MTL 35X1.0X.25	2
3	910916	ENGINE 5HP HONDA (USED ON 9160 MODEL)	1	14	4164178	AXLE	1
	4165990	ENG-SUBARU EX27 (USED ON 91270 MODEL)	1	15	4167557.10	HANDLE-LOWER	1
	4163472	ENG-6HP SUBARU (USED ON 9170 MODEL)	1	16	64163-55	WASHER-5/16 FLAT	4
4	64268-03	NUT-FL NYLON LOCK 3/8-16	4	17	4166399.7	DECK-ENGINE,BLR LG (USED ON 91270 MODEL)	1
5	4166170-02	CABLE-THROTTLE (USED ON SUBARU ENGINES)	1		4164593.7	DECK-ENGINE, BLR, SM (USED ON 9160 & 9170 MODELS)	
	4166170-01	CABLE-THROTTLE (USED ON HONDA ENGINES)		18	64268-02	NUT-FL NYLON LOCK 5/16-18	4
6	64018-5	BLT-CRG 3/8-16X1-3/4	4	19	64123-61	BLT-HEX 5/16-18X1-3/4	4
7	4166779	S-HANDLE UPPER W/ GRIPS (INCLUDES ITEM 8 QTY 2)	1	20	4164204-01	BEARING-WHL	4
8	4164632	GRIP-1-1/4 X 14	2				
9	64262-009	BLT-FLGHD 5/16-18X1-1/2	4				
10	64139-26	BLT-WLF 10-32 X 5/8	2				
11	4165974	WHEEL	2				

LITTLE WONDER BLOWER

HOUSING ASSEMBLY

FIGURE 3



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	64141-6	NUT 5/16-18	3	14	910132	HANDLE-DEFLECTOR	1
2	4166329	S-HOUSING LG BLOWER (USED ON 91270 MODEL)	1	15	64229-03	NUT-NYLON LOCK 3/8-16	1
	4166328	S-HOUSING SM BLOWER (USED ON 9160 & 9170 MODELS)		16	64123-252	BLT-HEX 3/8-16 X 5-1/2	1
3	4166187	LABEL-BLOWER SIDE	1	17	4165178.7	BRKT-FRT WHL	1
4	4165975	LABEL-WARNING/DANGER	1	18	4164205	WHEEL-PNEUMATIC	1
5	910517	BLT-WLF 5/16-24 X 1-3/8 (USED ON 91270 MODEL)	4	19	900404	SLEEVE-WHEEL	1
	910503	BLT-WLF 5/16-24 X 3/4 (USED ON 9160 & 9170 MODELS)	4	20	900405	SPACER-FRT WHL BRKT	2
6	64151-31	LOCKNUT-10-32	2	21	4164204-01	BRG-PNEUMATIC WHL	2
7	910130	SPRING-DEFLECTOR	1	22	38304-06	BEARING-FL PLASTIC .31 ID	1
8	8-18	RING-RETAINING	3	23	4166181	SPACER-ENG HOUSING (USED ON 91270 MODEL)	1
9	4165977	LABEL-READ MANUAL	1	24	910131	KNOB-SM BLOWER (USED ON 9160 & 9170 MODELS)	1
10	4167331	LABEL-SCROLL	1		4166654	KNOB-LG BLOWER (USED ON 91270 MODEL)	
11	4166476.17	DEFLECTOR-SIDE (USED ON 91270 MODEL)	1	25	64002-04	LOCKWASHER EXT. 5/16 (USED ON 9160 & 9170 MODELS)	1
	4166009.17	DEFLECTOR-SIDE SM (USED ON 9160 & 9170 MODELS)		26	4166653	BEARING-SLEEVE (USED ON 91270 MODEL)	1
12	64197-008	BLT-TDFM 10-32X1/2	2			*NOT ILLUSTRATED	
13	910123.10	DEFLECTOR-INT (USED ON 91270 MODEL)	1				
	910106.10	DEFLECTOR-INT, SM (USED ON 9160 & 9170)					