

# **BILLY GOAT FORCE BLOWER Owners' Manual**





Patent Pending  
**BILLY GOAT FORCE BLOWER**  
**Owner's Manual**

**Specifications**                      **F900S**                      **F900H**                      **F1300H**

Engine: HP	9.0 HP (6.6kW)	9.0 HP (6.6kW)	13.0 HP (9.6kW)
Engine: Model	EX270D50021	GX270K1QA2	GX390K1QAA2
Engine: Type	SUBARU OHC	HONDA OHV	HONDA OHV
Engine: Fuel Capacity	6.4 qt. (6.1L)	6.3 qt. (6.0L)	6.5 qt. (6.1L)
Engine: Oil Capacity	1.05 qt. (1.0L)	1.16 qt. (1.1L)	1.16 qt. (1.1L)
Total Unit Weight:	138 # (62.6Kg)	143 # (64.8Kg)	160 # (72.6Kg)
Overall Length:	58"(1.43m)	58"(1.43m)	58"(1.43m)
Overall Width	29.25" (0.74m)	29.25" (0.74m)	28" (0.71m)
Overall Height	45" (1.14m)	45" (1.14m)	45" (1.14m)
In compliance with 2000/14/EEC standards	107dB(a) @3340 rpm	109dB(a) @ 3660 rpm	110dB(a) @ 3640 rpm
Sound at Operator's ears	87dB(a) @ 3340 rpm	89dB(a) @ 3660 rpm	90dB(a) @ 3640 rpm
Vibration at operator position	.96 g (9.44 m/s <sup>2</sup> )	1.05 g (10.30 m/s <sup>2</sup> )	.81 g (7.96 m/s <sup>2</sup> )



**GENERAL SAFETY INSTRUCTIONS and SYMBOLS**

The safety symbols shown below are used throughout this manual. You should become familiar with them before assembling, operating, or servicing this equipment.



**WARNING:** This symbol indicates important information that will prevent injury to yourself or others.



This symbol indicates ear protection is recommended when operating this equipment.



This symbol indicates eye protection is recommended when operating this equipment.



This symbol indicates gloves should be worn when servicing this equipment.



This symbol indicates that this manual and the engine manufacturer's manual should be read carefully before assembling, operation, or servicing this equipment.



**CAUTION:** This symbol indicates important information that will prevent damage to your BILLY GOAT® FORCE Blower.



This symbol indicates the engine oil level should be checked before operating this equipment.

Read and make sure you thoroughly understand the following safety precautions before assembling, operating or servicing this equipment:



**READ** this manual and the engine manufacturer's manual carefully before assembling, operating, or servicing this equipment.



**EAR PROTECTION** is recommended when operating this equipment.



**EYE PROTECTION** is recommended when operating this equipment.



**BREATHING PROTECTION** is recommended when operating this equipment.



**WARNING:** **EXHAUST** from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.



















**DO NOT** operate this equipment on any unimproved forested, brushy, or grass covered land unless a spark arrester is installed on the muffler as required by Section 4442 of the California Public Resources Code. The arrester must be maintained in good working order. Other states may have similar laws. Federal laws apply on federal lands.

**DO NOT** run engine in an enclosed area. Exhaust gases contain carbon monoxide, an odorless and possibly fatal poison.



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- WARNING:**  **DO NOT** run this equipment indoors or in any poorly ventilated area. Refueling outdoors is recommended.
-  **DO NOT** refuel this equipment while the engine is running. Allow engine to cool for at least two minutes before refueling.
-  **DO NOT** store gasoline near an open flame.
-  **DO NOT** remove gas cap while engine is running.
-  **DO NOT** start or operate engine if strong odor of gasoline is present.
-  **DO NOT** start or operate engine if gasoline is spilled. Move equipment away from spill until gasoline has completely evaporated.
-  **DO NOT** smoke while filling the fuel tank.
-  **DO NOT** check for spark with spark plug or spark plug wire removed. Use an approved spark tester.
-  **DO NOT** operate engine without a muffler. Inspect muffler periodically and replace if necessary. If equipped with muffler deflector, inspect deflector periodically and replace if necessary.
-  **DO NOT** operate engine with grass, leaves or other combustible material near the muffler.
-  **DO NOT** touch muffler, cylinder, or cooling fins when hot. Contact with hot surfaces may cause severe burns.
-  **DO NOT** leave equipment unattended while in operation.
-  **DO NOT** park equipment on a steep grade or slope.
-  **DO NOT** operate equipment with bystanders in or near the work area.
-  **DO NOT** allow children to operate this equipment.
-  **DO NOT** operate equipment with guards removed.
-  **DO NOT** operate equipment near hot or burning debris or any toxic or explosive materials.
-  **DO NOT** operate equipment on slopes greater than specified in Specifications section of this manual.

**ALWAYS** remove spark plug wire when servicing equipment to prevent accidental starting.

**ALWAYS** check fuel lines and fittings frequently for cracks or leaks. Replace if necessary.

**ALWAYS** keep hands and feet away from moving or rotating parts.

**ALWAYS** store fuel in approved safety containers.



**WARNING: Important**

Do not run this machine without director cone attached or with improper air director cone.




**DO NOT** run this machine with a cracked or damaged impeller under any circumstances.



**SOUND**

 **L<sub>wA</sub>** SOUND LEVEL 90 Db(a) at Operators Position  
**110 dB**

Sound tests were conducted in accordance with 2000/14/EC, as well as ISO 11094, and were performed on 5-17-2006 under the conditions listed below.

 Sound power level listed is the highest value for any model covered in this manual. Please refer to serial plate on the unit for the sound power level for your model.

General Conditions:	Sunny
Temperature:	79.7°F (26.5°C)
Wind Speed:	1.7 mph (2.8kph)
Wind Direction:	South Southwest
Humidity:	31.2%
Barometric Pressure:	29.9Hg (101.25kpa)

**VIBRATION DATA**

VIBRATION LEVEL 1.05g (10.30m/s<sup>2</sup>)

Vibration levels at the operator's handles were measured in the vertical, lateral and longitudinal directions using calibrated vibration test equipment. Tests were performed on 5-17-2006 under the conditions listed below.

General Conditions:	Sunny
Temperature:	86.5°F (30.3°C)
Wind Speed:	2.5 mph (4.1kph)
Wind Direction:	South Southwest
Humidity:	56.4%
Barometric Pressure:	29.9Hg (101.25kpa)

**INTENDED USE**

This machine is designed for cleaning outdoor surfaces, where the debris can be effectively blown into a consolidated area for convenient pickup and removal. Do not operate if excessive vibration occurs. If excessive vibration occurs, shut engine off immediately and check for damaged or worn impeller, loose impeller bolt, loose impeller key, loose engine or lodged foreign objects. Note: See parts list for proper impeller bolt torque specifications. (See trouble shooting section on page 13).

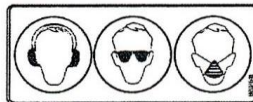


INSTRUCTION LABELS

The labels shown below were installed on your BILLY GOAT® FORCE Blower. If any labels are damaged or missing, replace them before operating this equipment. Item numbers from the Illustrated Parts List and part numbers are provided for convenience in ordering replacement labels. The correct position for each label may be determined by referring to the Figure and Item numbers shown.



LABEL READ OWNERS MANUAL  
ITEM #44 P/N890301



LABEL EAR EYE BREATHING  
ITEM# 45 P/N890254



DANGER FLYING DEBRIS  
ITEM # 46 P/N 810736



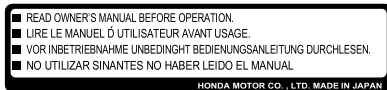
LABEL EXPLOSIVE FUEL  
ITEM # 43 P/N 400268



LABEL THROTTLE CONTROL  
ITEM # 42 P/N 810656

ENGINE LABELS

HONDA




SUBARU






## OPERATION

 Like all mechanical tools, reasonable care must be used when operating machine.

**Inspect machine work area and machine before operating. Make sure that all operators of this equipment are trained in general machine use and safety.**

 **PUT OIL IN ENGINE BEFORE STARTING**

### STARTING

 **ENGINE:** See engine manufacturer's instructions for type and amount of oil and gasoline used. Engine must be level when checking and filling oil and gasoline.

**FUEL VALVE:** Move fuel valve to "ON" position (when provided on engine).

**STOP SWITCH:** Located on the engine. "ON" position.

**CHOKE:** Operated with choke lever on side of engine.

**THROTTLE:** Controlled by throttle lever on the handle. Move remote throttle control to fast position. Pull starting rope to start engine.


**ENGINE SPEED:** Under normal conditions, operate at minimum throttle to accomplish your current cleaning task.


**IF YOUR UNIT FAILS TO START:**

See Troubleshooting on page 13.

### HANDLING & TRANSPORTING:

Using two people to lift machine is recommended. Lift holding the handle and handle brace. Secure in place during transportation. See F900 and F1300 series specifications on page 3 for unit weight.

 Do not use the front grill as an anchor point when securing the unit for transport.

 Never lift the machine while the engine is running.

### BLOWING OPERATION

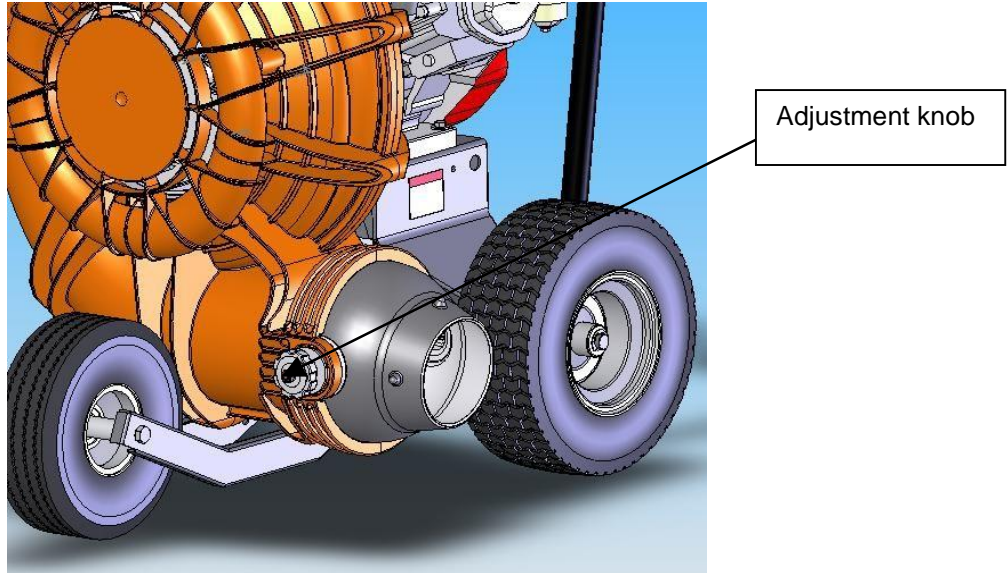
Your Billy Goat Force blower is equipped with an air director cone to allow the operator to direct the air stream up or down as required to assist in moving debris. This feature is extremely useful when debris has piled up to the point that it cannot be blown any farther. The air stream can be directed upward to blow the top of the debris pile over and allow the operator to continue moving more debris farther.





**ADJUSTING AIR DIRECTOR**

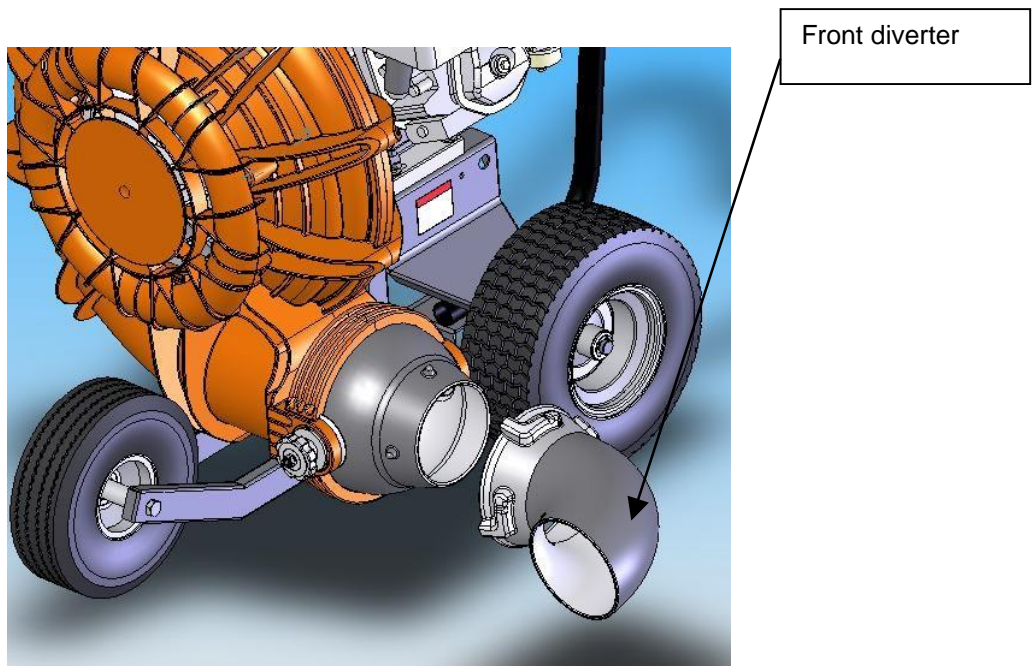
To adjust air direction, first loosen knob and then position air director cone to desired angle. When the cone is at a suitable position tighten knob to secure. **DO NOT** position director cone to where it will blow debris towards people, vehicles or other objects in vicinity. Flying debris may damage, harm, or cause injury to people or objects in air flow range.



**FRONT DIVERTER POSITIONING**

The removable front diverter adapter can be slipped on to direct the air stream forward. First turn off engine, and then simply slide diverter onto cone following guide points and twist till locked in position. This option is extremely useful for cleaning out long cracks in pavement or for cleaning under bushes, building overhangs or along curbs.

**⚠WARNING:** Unit will be hard to handle and be pushed backward by the force of the air pushing against the unit. Keep hands on the unit at all times when using the front diverter. To reduce resistance when attaching the diverter, use a silicone lubricant spray on the locking grooves. This should allow the diverter to slide into position with more ease.





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### TROUBLESHOOTING

Problem	Possible Cause	Solution
Abnormal vibration.	<ul style="list-style-type: none"><li>· Loose or out of balance impeller.</li><li>· Loose engine.</li></ul>	<ul style="list-style-type: none"><li>· Check impeller and replace if required.</li><li>· Check engine.</li></ul>
Engine will not start.	<ul style="list-style-type: none"><li>· Engine not in full choke position.</li><li>· Out of gasoline or bad, old gasoline.</li><li>· Spark Plug wire disconnected.</li><li>· Gas valve off.</li><li>· Dirty air cleaner.</li></ul>	<ul style="list-style-type: none"><li>· Check choke position.</li><li>· Check gasoline.</li><li>· Connect spark plug wire.</li><li>· Turn on gas valve.</li><li>· Clean or replace air cleaner. Contact a qualified service person.</li></ul>
Engine is locked, will not pull over.	<ul style="list-style-type: none"><li>· Engine problem.</li></ul>	<ul style="list-style-type: none"><li>· Contact an engine servicing dealer for engine problems.</li></ul>