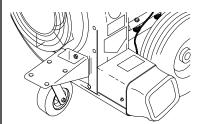


#### **CASTER KIT**

P/N 430291

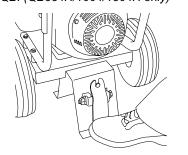
To improve maneuverability on hard paved surfaces.



### **HOLD DOWN KIT**

P/N 430299

For use on truck or trailer to provide quick hold down for your QB. (QB884H/1004/1304H only)





Thank You for Selecting
The Powerful QUIET BLOW® BLOWER
Patent No. 6253416

# **Operator Owner's Manual**

For Models:

QB554HC, QB654, QB884H, QB994S, QB1004, QB1304H,QB1304HBW

3 **Specifications** QB554HC QB654 QB994S QB1004 QB1304H QB1304HBW QB884H 5.0 HP (3.73 kW) 6.5 HP (4.85 kW) 8.0 HP (5.97 kW) 9.0 HP (6.7 kW) 10.0HP (7.45kW) 13.0HP (9.69kW) 13.0HP (9.69kW) Engine: HP Engine:Type HONDA OHC B&S OHV HONDA OHV SUBARU OHV B & S INTEK I/C HONDA OHV HONDA OHV Engine: Fuel cap. 2.1 qt. (2.0 L) 3.0 qt. (2.9 L) 6.4 qt. (6.1 L) 6.4 qt. (6.1 L) 4.0 qt. (3.8 L) 7.4 qt. (7.0 L) 7.4 qt. (7.0 L) Engine: Oil Cap. 0.63 qt. (0.6 L) 0.63 qt. (0.6 L) 1.16 qt. (1.1 L) 1.05 qt. (1.0 L) 0.875 qt.(0.8L) 1.2 qt.(1.13L) 1.2 qt.(1.13L) 98 # (44.5 Kg) 104 # (47.3 Kg) 129 # (58.6 Kg) 152 # (68.9 Kg) Weight: Unit 136 # (61.7 Kg) 136 # (61.7 Kg) 162 # (73.6 Kg) Weight: Shipping 115 # (52.3 Kq) 121 # (55.0 Kq) 155 # (70.3 Kq) 148 # (67.3 Kq) 155 # (70.3 Kq) 169 # (76.7 Kg) 179 # (81.4 Kg) (International only) UNIT SIZE: OVERALL LENGTH: 51.75"(1.31m) OVERALL WIDTH 28.5" (0.72m) **OVERALL HEIGHT** 39" (0.99m)

## IN THE INTEREST OF SAFETY



BEFORE STARTING ENGINE, READ AND UNDERSTAND THE "ENTIRE OPERATOR'S MANUAL & **ENGINE MANUAL.**"



THIS SYMBOL MEANS WARNING OR CAUTION. DEATH, PERSONAL INJURY AND/OR PROPERTY DAMAGE MAY OCCUR UNLESS INSTRUCTIONS ARE FOLLOWED CAREFULLY.

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

### WARNING: DO NOT A



- 1. DO NOT run engine in an enclosed area. Exhaust gases contain carbon monoxide, an odorless and deadly poison.
- 2. DO NOT place hands or feet near moving or rotating parts.
- 3. DO NOT store, spill or use gasoline near an open flame, or devices such as a stove, furnace, or water heater which use a pilot light or devices which can create a spark.
- 4. **DO NOT** refuel indoors where area is not well ventilated. Outdoor refueling is recommended.
- 5. DO NOT fill fuel tank while engine is running. Allow engine to cool for 2 minutes before refueling. Store fuel in approved safety containers.
- 6. DO NOT remove fuel tank cap while engine is running.
- 7. **DO NOT** operate engine when smell of gasoline is present or other explosive conditions exist.
- 8. **DO NOT** operate engine if gasoline is spilled. Move machine away from the spill and avoid creating any ignition until the gasoline has evaporated.
- 9. **DO NOT** transport unit with fuel in tank.
- 10. **DO NOT** smoke when filling fuel tank.
- 11. **DO NOT** choke carburetor to stop engine. Whenever possible, gradually reduce engine speed before stopping.

- 13. **DO NOT** tamper with governor springs, governor links or other parts which may change the governed engine speed.
- 14. **DO NOT** tamper with the engine speed selected by the engine manufacturer.
- 15. DO NOT check for spark with spark plug or spark plug wire removed. Use an approved tester.
- 16. **DO NOT** crank engine with spark plug removed. If engine is flooded, place throttle in "FAST" position and crank until engine starts.
- 17. DO NOT strike flywheel with a hard object or metal tool as this may cause flywheel to shatter in operation. Use proper tools to service engine.
- 18. **DO NOT** operate engine without a muffler. Inspect periodically and replace, if necessary. If engine is equipped with muffler deflector, inspect periodically and replace, if necessary, with correct deflector.
- 19. **DO NOT** operate engine with an accumulation of grass, leaves, dirt or other combustible material in the muffler area.
- 20. DO NOT use this engine on any forest covered, brush covered, or grass covered unimproved land unless a spark arrester is installed on the muffler. The arrester must be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands.

- DO NOT touch hot muffler, cylinder, or fins because contact may cause burns.
- 22. **DO NOT** run engine without air cleaner or air cleaner cover.
- 23. **DO NOT** operate during excessive vibration!
- 24. DO NOT leave machine unattended while in operation.
- 25. DO NOT park machine on a steep grade or slope.

### **WARNING: DO**



- 1. ALWAYS DO remove the wire from the spark plug when servicing the engine or equipment TO PREVENT ACCIDENTAL STARTING.
- 2. **DO** keep cylinder fins and governor parts free of grass and other debris which can affect engine speed.
- 3. DO pull starter cord slowly until resistance is felt. Then pull cord rapidly to avoid kickback and prevent hand or arm injury.
- 4. DO examine muffler periodically to be sure it is functioning effectively. A worn or leaking muffler should be repaired or replaced as necessary.
- 5. DO use fresh gasoline. Stale fuel can gum carburetor and cause leakage.
- 6. DO check fuel lines and fittings frequently for cracks or leaks. Replace if necessary
- 7. Follow engine manufacturer operating and maintenance instructions.
- 8. Inspect machine and work area before starting unit.

12. DO NOT run engine at excessive speeds. This may result in injury & /or damage

7

to unit.

#### **TABLE OF CONTENTS SAFETY INSTRUCTIONS** 2 **GENERAL SAFETY** 3 **ASSEMBLY** 3 I ARFI S **PARTS BAG & CONTROLS** 4 **OPERATION** 5-6 **MAINTENANCE** 7-9 **PARTS DRAWING & LIST** 10-11 **TROUBLESHOOTING** 12 WARRANTY PROCEDURE 12

#### SOUND

Sound tests conducted were in accordance with 2000/14/EEC and were performed on 2/16/2002 under the conditions listed:

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

Sound level of 97 dBA at operator position

**GENERAL CONDITION:** Sunny TEMPERATURE: 60° F (15.6° C) WIND SPEED: 10 MPH (16.1 kmh) 112 dB WIND DIRECTION: North (QB1304 MODEL) 32 % HUMIDITY: BAROMETRIC PRESSURE: 29.95" Hg (761mm Hg)

#### **VIBRATION** 8

VIBRATION LEVELS 3.2 g

Vibration levels at the operators handles were measured in the vertical, lateral, and longitudinal directions using calibrated vibration test equipment. Tests were performed on 04/10/2000 under the conditions listed:

GENERAL CONDITION:_	Sunny	
TEMPERATURE:_	60° F (15.6° C)	
WIND SPEED:	9 MPH (14.5 kmh)	
WIND DIRECTION:	South East	
HUMIDITY:	49 %	
 AROMETRIC PRESSURE:	29.94" Hg (760mm Hg)	

### 9

### **GENERAL SAFETY**

For your safety and the safety of others, these directions should be followed:



Do not operate this machine without first reading owner's manual and engine manufacturer's manual.



Use of Ear Protection is recommended while operating this machine.





Use of Eye and breathing protection is recommended when using this machine, especially in dry and dusty conditions.

- ·DO NOT place hands or feet inside air intake opening, near exhaust outlet or near any moving parts.
- •DO NOT start engine without deflector attached to exhaust outlet.
- DO NOT direct exhaust outlet toward any bystanders.
- **DO NOT** operate this equipment without first inspecting
- •DO NOT operate this equipment during excessive vibration.
- **DO NOT** start engine without housing front plate attached.
- **DO NOT** operate this machine on slopes greater than 20%.
- DO NOT blow any hot or burning debris, or any toxic or explosive material.
- •DO NOT allow children to operate this equipment.

### 10

### **ASSEMBLY**



Read all safety and operating instructions before assembling or starting this unit.

### PUT OIL IN ENGINE BEFORE STARTING

Your Billy Goat is shipped from the factory in one carton. completely assembled except for the upper handle assembly. handle brace, plate deflector and throttle control.

1.Install front exhaust wire loop(Item 55) across upper handle and slide wire loop to lowest possible position on upper handle. Install upper handle (Item 28), to preassembled lower handle (item 29) by sliding the upper over and down the outside of the lower handle. Pull recoil handle from the engine and place it between rope guides (Item 13). Using screw (Item 22) & lock nut (Item 32) to install upper handle to lower handle. NOTE: Install rope guide on the left hand side for the Honda unit and right hand side for the Briggs & Stratton unit (See fig below for the pictorial

example). Finish installing the other side of the upper handle assembly using screw (Item 17) and lock nut (Item 32).

- 2. Install front of handle brace (Item 30), to blower housing using one screw (Item 17), one washer (Item 58) and one lock nut (item 32). Install rear of handle brace (item 30) to upper handle vibration mounts using two lock nuts (item 32). Hand tighten only. NOTE: 13 hp Honda models will have an offset bracket (item 65) installed at the front of the housing. Connect the handle brace (Item 30) to the bracket (Item 65) on 13 hp models.
- 3. Securely tighten all hardware listed above in steps 1 thru 2.
- 4. Remove four lock nuts from the front plate and use them to attach the front wheel bracket (Item 27). Using spacer (Item 18), washer (Item 19), and Lock Nut (Item 16) to attach Front wheel (Item 23) onto the front wheel bracket.
- 5. (QB1304HBW only) Your unit was shipped with the rear wheels removed. To complete assembly of your unit you must remove the clip at each end of the rear axle and slide the rear wheel onto the axle, leaving all spacers and washers in place between the frame and wheel. Re-install the clip at the end of the axle to secure the wheel in place.
- Connect spark plug wire.



### **PACKING CHECKLIST**

**Boxing Checklist** Front Exhaust These items should be included in your carton. If Director any of these parts are missing, contact your dealer. 430315 (8/10/13 hp) 430370 (5/6.5 hp) Wire Director Mount 430391 Check Handle Upper Assembly 400957 Check (30) **Handle Brace** 400951 Δ Parts Bag & Parts Bag Literature Assy & Literature 430334 Mount the rope guide on the other side for the B&S Engine model Assy Per Model **Briggs & Stratton** 6.5 or 10 HP Honda 5, 8, or 13 hp **Engine** Chec Manual Per Model Subaru 9 hp △(16)^ **Bracket Front** Wheel 430270 Front Wheel 430271

△ Denotes parts found in Parts Bag Assembly (shown on page 4).

#### 12 PARTS BAG & LITERATURE ASSY 13 CONTROLS △ PARTS BAG ASSEMBLY CHECKLIST Throttle Control / Screw Cap Literature Checklist 19 **Gust Control** (14) 5/16-18 x 1 1/4 8041029 Qty. 1 Owner's Manual Screw Cap Washer 1/2 SAF 430316 (17) 5/16-18 x 1 3/4 ~ 8172011 Qty. 1 8041031 Start Qty. 1 (8/10/13 hp) Quiet Blow fi Series Blower (58) Qty. 2 (5/6.5 hp) (22) Literature Washer 5/16 FLAT CUT Parts Bag Screw Cap 5/16-18 x 2 1/2 8171003 Qty. 1 430341 8041034 Qty. 1 (8/10/13 hp) ONLY

(32)

55

(16)

Spacer 1/2 OD x

3.062" Qty. 1

Wire Mount

430391 Qty. 1

Director

Nut Lock 5/16-18

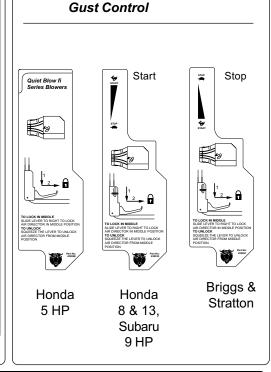
Nut Lock 5/16-18 Thin

8161041 Qty. 1

Nut Lock 3/8-16

8161042 Qty. 1

8160002 Qty. 4





These labels should be included on your Blower. If any of these labels are damaged, replace them before putting this equipment into operation. Item and part numbers are given to help in ordering replacement labels.



Screw Cap 3/8-16 x 3 3/4

Rope Guide

(8/10/13 hp)

ONLY

Cable Ty 1"

900407 Qty. 3

830533 Qty. 2

8041061 Qty. 1

Label Do Not Fill While Engine Is Hot Item 11 Part No.400268

(24)

(18)

(13)

(20)



Label Read Owner's Manual Item No. 59 Part No. 890301



Label Danger Flying Material Item No. 44 Part No. 810736



Label Danger Keep Hands and Feet Away Item 41 Part No.400424



Label Ear Eye Breathing Item No. 63 Part No. 890254

US PATENT NO: 6253416

Label Patent QB Air Director Part No. 430400

PULL THEN SLIDE TO LOCK

Label Lever QB Item No. 46 Part No. 430363

## 15 ENGINE LABELS

Warranty

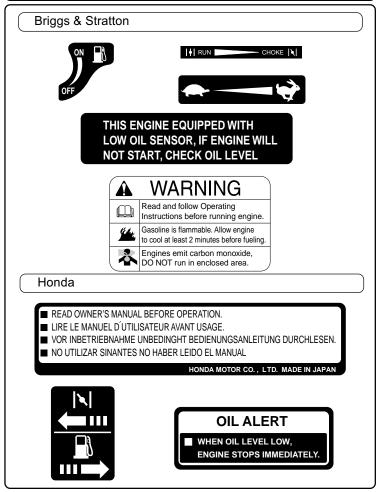
Card

400972

**EU Declaration** 

of Conformity & FU Distributor

List 430189



### **(16**)

### **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.

**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 12).



#### **PUT OIL IN ENGINE BEFORE STARTING**

### (16.1) 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 12.

#### (16.2) HANDLING & TRANSPORTING:

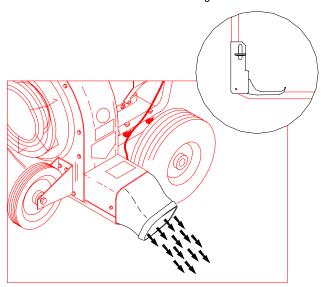
Using two people to lift machine is recommended. Lift holding the handle and handle brace. Secure in place during transport.

#### (16.3) BLOWING OPERATION

Your Billy Goat blower is equipped with a remote exhaust director 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.

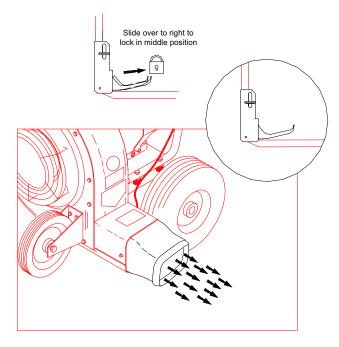
#### Side Discharge Up Position

This position allows air to be directed upward during use to avoid blowing debris into cars or other structures, or to avoid blowing landscaped areas that would be damaged by the high speed air. This position also allows operator to maneuver the machine relative to the work area without disturbing the debris.



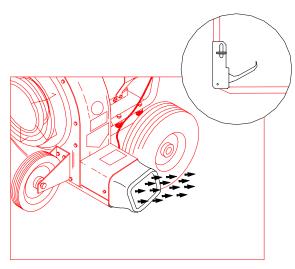
#### **Side Discharge Straight Position**

This position directs the air parallel to the ground for the majority of blowing operations. The hand control allows the operator to lock the air stream in this straight out position. To **LOCK** the air in position simply pull back on the lever and pull the lever sideways to the right until the lock engages. See instruction label on the control.



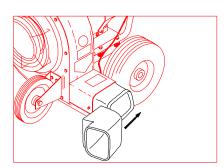
#### **Side Discharge Down Position**

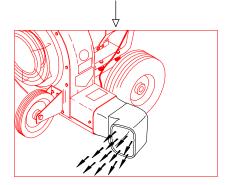
This position directs the air stream down at the ground to allow the operator to deliver the maximum power to debris that is stuck or difficult to remove. This position is also very useful for cleaning out cracks and expansion joints in pavement.



#### **Front Discharge Position**

The removable front discharge adapter can be slipped on to direct the air stream forward. This option is extremely useful for cleaning out long cracks in pavement or for cleaning under bushes or building overhangs.





#### 16.4 ADJUSTING AIR DIRECTOR

When you lock the lever, the default position of air director is in the middle or straight out. If you want to raise or lower air director lock position you must adjust the threaded fitting on the cable.

**Note:** You will not get full range of motion of air director If you raise or lower default locking postion.

#### **Raise Lock Position**



- 1. Lock the air director in place at the handle by pulling on the lever then slide it over to right.
- 2. Loosen the top nut on the threaded cable fitting until the air director position is satisfactory.
- 3. Tighten the bottom nut.

#### **Lower Lock Position**



- 1. Lock the lever at the handle by pulling on the lever then slide it over to right.
- 2. Loosen the bottom nut on the threaded cable fitting and back it off 1/4 inch.
- 3. Pull the threaded cable fitting up while pushing down on the air director then check for air director position.
- 4. Loosen or tighten the same bottom nut then repeat step 3 until the air director position is satisfactory.
- 5. Tighten the top nut.

#### 16.5 STORAGE

Never store engine indoors or in enclosed poorly ventilated areas with fuel in tank, where fuel fumes may reach an open flame, spark or pilot light, as on a furnace, water heater, clothes dryer or other gas appliance.

#### If engine is to be unused for 30 days or more, prepare as follows:

Remove all gasoline from carburetor and fuel tank to prevent gum deposits from forming on these parts and causing possible malfunction of engine. Drain fuel outdoors, into an approved container, away from open flame. Be sure engine is cool. Do not smoke. Run engine until fuel tank is empty and engine runs out of gasoline.

**NOTE:** Fuel stabilizer (such as Sta-Bil) is an acceptable alternative in minimizing the formation of fuel gum deposits during storage. Add stabilizer to gasoline in fuel tank or storage container. Always follow mix ratio found on stabilizer container. Run engine at least 10 min. after adding stabilizer to allow it to reach the carburetor.



### **MAINTENANCE**



Use only a qualified mechanic for any adjustments, disassembly or any kind of repair.



WARNING: TO AVOID PERSONAL INJURY, ALWAYS TURN MACHINE OFF, MAKE SURE ALL MOVING PARTS COME TO A COMPLETE STOP.



DISCONNECT SPARK PLUG WIRE BEFORE SERVICING UNIT.



ENGINE: See engine manufacturer operator's instructions.



RECONNECT SPARK PLUG WIRE AND GUARDS BEFORE STARTING ENGINE.

17.1

#### **MAINTENANCE SCHEDULE**

Follow these hourly maintenance intervals.				
Maintenance Operation	Every Use	Every 5 hrs. or (Daily)	Every 25 hrs.	
Engine (See Engine Manual)				
Check for excessive vibration	•			
Inspect for loose parts		•		
Inspect for worn or damaged parts		•		
Lubricate wheels			•	

17.2 ENGINE

When servicing engine refer to specific manufacturers engine owner's manual. All engine warranty is covered by the specific engine manufacturer. If your engine requires warranty or other repair work contact your local servicing engine dealer. When contacting a dealer for service it is a good idea to have your engine model number available for reference(See table page 11). If you can not locate a servicing dealer in your area you can contact the manufacturers national service organization.

To reach:

**Briggs & Stratton**: 800-233-3723 **American Honda**: 800-426-7701 **Subaru America**: 800-277-6246

#### [17.3] IMPELLER REMOVAL

- 1. Wait for engine to cool and disconnect spark plug.
- 2. Remove front wheel (item 23),and front wheel bracket (item 27).
- **3.** Remove housing front plate (item 4), by removing nine (9) screws (item 12), around outside of front plate.
- 4. Remove impeller bolt and lock washer.

**Note: DO NOT** pull or pry on impeller blades. Also, **DO NOT** remove the 3 nuts securing the impeller to the hub.The complete impeller assembly must be removed as a nut.

- **5.** Pull on center hub backplate area only of impeller. If impeller slides off freely, proceed to (step 8).
- **6.** Place two crowbars between center hub backplate area of impeller and housing on opposite sides. Carefully pry impeller away from engine until it loosens. *Using a penetrating oil can help loosen a stuck impeller.*
- 7. If the impelier does not loosen, obtain a 1" (25.4mm) longer bolt of the same diameter and thread type as the impeller bolt. Thread longer bolt by hand into the crankshaft until bolt bottoms. Using a suitable gear or wheel puller against the bolt head and the impeller back-plate (near the blades), remove impeller from shaft.
- 8. Reinstall new impeller in reverse order of removal.
- **9.** Tighten impeller bolt. Torque impeller bolt (see parts list on page 7 for proper impeller bolt torque specifications).

#### (17.4) TIRE AIR PRESSURE

Check at regular intervals and maintain.

Rear Tires - 24 Psi (17 kPa). Front Tire - 50 Psi (35 kPa).

### AIR FILTER COVER REMOVAL INSTRUCTION (BRIGGS AND STRATTON)

Removing the air filter cover (for air filter change and throttle control installation)

- 1. Disconnect spark plug wire.
- 2. Remove the locknut and the screwcap holding the front part of the handle brace.
- 3. Remove the screw from the front of the air filter cover (fig 1).
- 4. Remove the air filter cover by leaning the top of the cover back towards the lower handle and lifting it up (fig 2).





Figure 1 Figure 2

#### Installing the air filter cover

- 1. Install air filter on the engine. (fig 3).
- 2. Slide the bottom of the air filter cover in place and tilt the cover towards the engine (fig 4 & 5)

  Note: You must line up the tabs on bottom of the cover to the slots on the air filter housing.
- 3. Attach the screw (fig 6)
- 4. Reconnect the front part of the handle brace.
- 5. Reconnect spark plug wire.



Figure 3



Figure 5



Figure 4

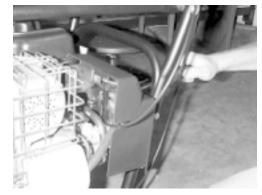


Figure 6

Part No. 430316 Page 8 of 12 Form No. F012203A

### AIR FILTER COVER REMOVAL INSTRUCTION (HONDA 8 and 13 H.P.)

Removing the air filter cover (for air filter change and throttle control installation)

- 1. Disconnect spark plug wire.
- 2. Remove the wingnut on the top of the air cleaner cover (fig. 1).
- 3. Remove the air filter cover by leaning the air cleaner cover towards the left side of the machine then remove (fig 2).





Figure 1 Figure 2

### THROTTLE CONTROL CABLE INSTALLATION

#### **Briggs & Stratton Engine**

- 1. Remove clamp screw and cable clamp from front of engine (clamp must be on the left side on engine control lever. if clamp is on the right side, change to the left).
- 2. Insert "z" end of throttle cable into hole in engine lever, then secure cable with clamp screw and cable clamp on the left side of the engine control lever (DO not tighten the screw) (Fig 3).
- 3. Route throttle cable behind cover through the slots provided(Fig 4).
- 4. Put throttle lever in the "fast" position at the handle.
- 6. Pull throttle control wire and casing back then tighten clamp screw. DO not over tighten (Fig 5).



Figure 4



Figure 3



Figure 5

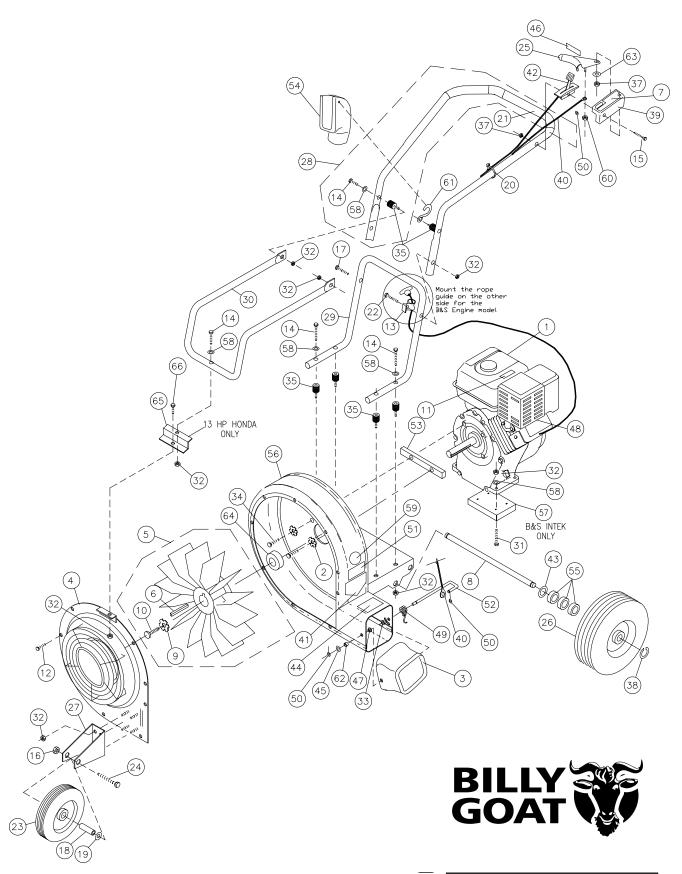
### **Honda Engine**

- 1. Remove air cleaner cover by removing wing nut at the top of cover.
- 2. Remove cable clamp and screw from engine control lever.
- 3. Attach "z" end of throttle cable through hole in engine control lever.
- 4. Replace cable clamp and screw but do not tighten.
- 5. Put throttle lever in "stop" position at the handle.
- 6. Pull throttle control wire and casing back then tighten clamp screw. DO not over tighten.

NOTE: If throttle control seems stiff, it may be necessary to loosen the 10mm locknut on the engine control lever about 1/2 turn

7. Replace air cleaner and wing nut.





QB554HC, QB654, QB884H, QB994S, QB1004, QB1304H, QB1304HBW PARTS LIST

(International only) OB554HC QB654 QB884H QB994S QB1004 QB1304H QB1304HBW ITEM DESCRIPTION PART NO QTY NGINE - 13HP HONDA ENGINE - 10 HP BRIGGS & STRATTON INTEK NGINE - 8 HP HONDA ENGINE - 5.0 HP HONDA ENGINE - 9.0 HP SUBARU OHV ENGINE - 6.5 HP BRIGGS & STRATTON WASHER LOCK 5/16 TWISTED TOOTH GUST DIRECTOR QB PLATE FRONT & GRILL ASSY IMPELLER ASS'Y KEY SQUARE 1/4 X 2 1/4 \*9201123 KEY SQUARE 3/16 x 1 3/4 ABEL CONTROL QB HON LABEL CONTROL QB B&S WASHER LOCK 7/16 TWISTED TOOTH VASHER LOCK 3/8 TWISTED TOOTH) SCREW CAP 7/16-20 x 1-1/4 HEX. HD GR. 5 (TORQUE 58 FT LBS)(78 N.m) CREW CAP 3/8 -24 x 2-3/4 HEX. HD GR. 8 (TORQUE 50 FT LBS)(68 N.m) SCREW CAP 5/16-24 x 1-1/4 GR. 8 (TORQUE 31 FT LBS)(42 N.m) SCREWCAP 3/8-24 x 1" GR. 8 (TORQUE 50 FT LBS)(68 N.m) LABEL DO NOT FILL WHEN ENGINE IS HOT SHEET METAL SCREW 1/4 x 3/4 DRILL POINT GUIDE ROPE SCREW CAP 5/16-18 x 1 - 1/4 \*8041029 \*8041029 \*8041029 \*8041029 \*8041029 \*8041029 \*8041029 \*8041010 \*8041010 \*8041010 \*8041010 \*8041010 \*8041010 \*8041010 NUT LOCK 3/8 -16 THN HEIGHT \*8161042 \*8161042 \*8161042 \*8161042 \*8161042 \*8161042 \*8161042 CREW CAP 5/16 -18 x 1¾ WASHER 1/2 SAE GRIF \*8041034 \*804103 \*8041034 \*8041034 \*8041034 \*8041034 \*8041034 CREW CAP 5/16-18 X 21/2 WHEEL &TIRE ASSY 8" PNEU SCREW CAP, (FRONT AXLE) 3/8-16 x 3 3/4 \*804106 \*804106 CONTROL LEVER QB WHEEL, REAR BRACKET (FRONT WHEEL) HANDLE UPPER ASS'Y (incl. items 14(2), 25, 35(2), 46, 58(2) HANDLE LOWER HANDLE- BRACE \*8041031 \*804103 \*8041031 \*8041031 \*8041031 \*8041031 SCREW CAP 5/16 -18 x 13/4 SCREW CAP 5/16 -18 x 2 1/2 \*8041034 \*8160002 BUSHING PIVOT BACK SCREW CAP 5/16 -24 NF x 3/4" GR. 5 \*8042026 \*8042026 CREW CAP 5/16 -24 NF x 1-3/4" GR. \*430412 SCREW CAP 5/16 -24 NF x 2 ¾ GR. 8 \*430411 VIBRATION MOUNT PARTS BAG ASS'Y (INCL ITEMS 32(5), 58 (1), 15(1), 37(1), 20(3), 17(3) NUT LOCK 1/4 - 20 HEX \*8160001 \*8160001 \*8160001 \*8160001 \*8160001 \*8160001 \*8160001 RING RETAINING ¾ BRACKET CONTROL BOX WA QB CABLE GUST CONTROL QB 



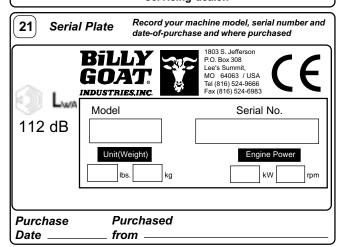
### **TROUBLESHOOTING**

Before Requesting Service Review These Suggestions

Problem	Possible Cause	Solution	
Poor air performance	Air intake or exhaust clogged.	Clear clog.	
Abnormal vibration.	Loose or out of balance impeller or loose engine.	Check impeller and replace if required. Check Engine.	
Engine will not start.	Stop switch off. Throttle in off position. Engine not in full choke position. Out of gasoline. Bad or old gasoline. Spark Plug wire disconnected. Dirty air cleaner.	Check stop switches, throttle, choke position and gasoline. Connect spark plug wire. Clean or replace air cleaner. Or contact a qualified service person.	
Engine is locked, will not pull over.	Engine problem.	Contact an engine servicing dealer for engine problems.	
Control Lever will not lock in middle position	Nut to secure lever is overtightened.	Loosen nut to allow play in control lever.	

Engine Service and Warranty

22.1 Contact your nearest engine manufacturer's authorized servicing dealer.



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#### **WARRANTY PROCEDURE**

Please fill in the WARRANTY CARD and send the upper part to Billy Goat. The WARRANTY terms are stated on the lower part which remains with the user. Whenever a Billy Goat Machine is faulty due to a defect in material and / or workmanship, the owner should make a warranty claim as follows:

The Machine should be taken to the dealer from whom it was purchased or to an authorized Billy Goat dealer.

The owner should present the remaining half of the Warranty Registration Card, or, if this is not available, the invoice or receipt.

The Warranty Claim will be filled in by the authorized Billy Goat Dealer, who will send it with the faulty part to Billy Goat headquarters.

The Quality / Service department at Billy Goat headquarters will study the claim and parts and will notify their conclusions.

The decision by the Quality / Service department at Billy Goat headquarters to approve or reject a Warranty claim is final and binding.

Note: To process a Warranty Claim, it is necessary to quote the Model & Serial number that are printed on the Billy Goat Serial Plate.



#### BILLY GOAT INDUSTRIES INC.

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