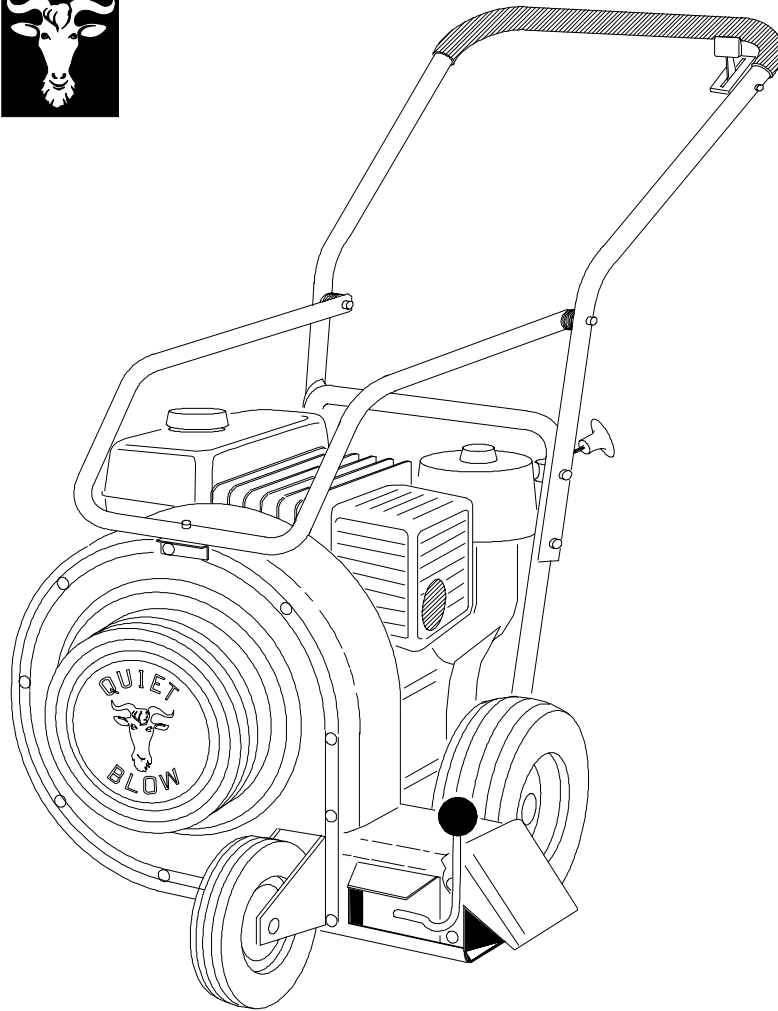


1

**BILLY
GOAT**
INDUSTRIES, INC.



CE



*Thank You for Selecting
The Powerful **QUIET BLOW®** BLOWER*

Operator Owner's Manual

For Models:

**QB882, QB882IC, QB882H, QB882CARB, QB1102IC,
QB1102H**

3

Specifications

	QB882	QB882IC	QB882H	Q B882CARB	QB1102IC	QB1102H
ENGINE: HP	8.0 HP (5.97 kW)	8.0 (5.97kW)	8.0 (5.97 kW)	11.0 HP (8. kW)	11.0 HP (8.2kW)	11.0HP(8.2kW)
ENGINE:TYPE	B & S	B & S IC	HONDA OHV	B & S IN. PLUS	B & S IC	HONDA OHV
ENGINE: FUEL CAP.	4.0 qt. (3.8 L)	4.0 qt.(3.8 L)	6.4 qt. (6.1 L)	4.0 qt. (6.1L)	6.0 qt. (5.7 L)	7.4 qt. (7.0 L)
ENGINE: OIL CAP.	1.38 qt. (1.3 L)	1.38 qt. (1.3 L)	1.16 qt. (1.1 L)	1.16 pt. (1.1L)	1.5 qt. (1.4 L)	1.2 qt.(1.13L)
WEIGHT: UNIT	124 # (56.3 Kg)	126 # (57.2 Kg)	136 # (61.7 Kg)	126 # (57.2 Kg)	150 # (68.0 Kg)	152 # (68.9 Kg)
WEIGHT: SHIPPING	141 # (63.97 Kg)	143 # (64.9Kg)	153 # (69.4 Kq)	143 # (64.9 Kg)	167 # (75.8 Kg)	169 # (76.7 Kg)
ENGINE WEIGHT:	46 # (20.8 Kg)	49 # (22.2 Kg)	48.5 # (22.0 Kg)	49 # (22.2 Kg)	64.25 # (29.1 Kg)	68.4 # (31.0 Kg)

UNIT SIZE: OVERALL LENGTH: 51.75"(1.31m) OVERALL WIDTH 28.5" (0.72m) OVERALL HEIGHT 39" (0.99m)

5

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.

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

WARNING: DO NOT

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.

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

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.

21. **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.

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WARRANTY PROCEDURE	8

Part No. 430187

7

SOUND

SOUND TESTS

ξ L_{WA}

89

3 L_{pA}

96

OPERATOR

Sound tests were conducted on model QB882IC in accordance with 79/113/EEC and were performed on 1/12/1996 under the conditions listed:

GENERAL CONDITION: SUNNY

TEMPERATURE: 47

WIND SPEED: 9

WIND DIRECTION: W

HUMIDITY: 58%

BAROMETRIC PRESSURE: 30.04

8

VIBRATION

VIBRATION LEVELS 1.9g

Vibration levels at the operators handles were measured in the vertical, lateral, and longitudinal directions using calibrated vibration test equipment. Tests were performed on 2/9/1996 under the conditions listed:

GENERAL CONDITION: SUNNY

TEMPERATURE: 63

WIND SPEED: 18


WIND DIRECTION: SW

HUMIDITY: 32%


BAROMETRIC PRESSURE: 29.8

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 work area.
- 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.

ASSEMBLY

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

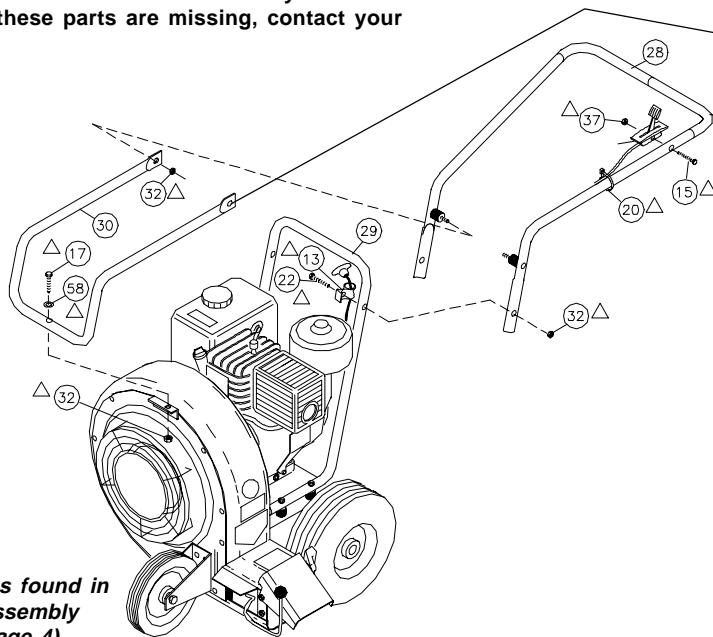
 PUT OIL IN ENGINE BEFORE STARTING

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 upper handle (Item 28), to preassembled lower handle (item 29), using two screws (Item 17), and two lock nuts, (Item 32). Hand tighten only.
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.
3. Securely tighten all hardware listed above in steps 1 thru 2.
4. Attach throttle control assembly to inside of upper handle using screw (item 15), lock nut (item 37) and clamp cables (item 20).
5. Connect spark plug wire.

PACKING CHECKLIST

These items should be included in your carton. If any of these parts are missing, contact your dealer.



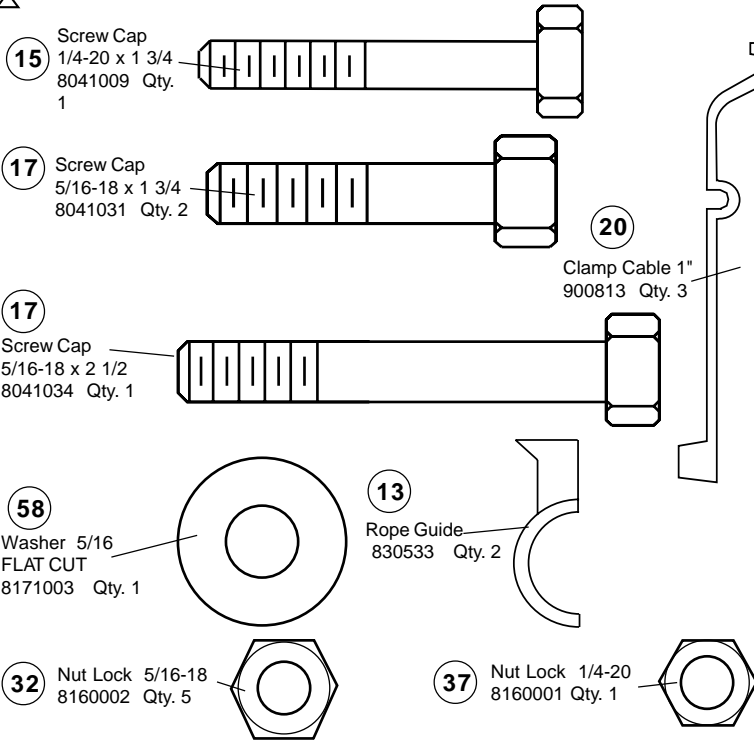
△ Denotes parts found in Parts Bag Assembly (shown on page 4).

Boxing Checklist	
Check <input type="checkbox"/>	Handle Brace 400951
Check <input type="checkbox"/>	Handle Upper Assembly 400957 <i>Per Model</i>
Check <input type="checkbox"/>	Parts Bag & Literature Assy 430186 <i>Per Model</i>
Check <input type="checkbox"/>	Briggs & Stratton 8 HP <i>Multi-Language MS2558</i>
Check <input type="checkbox"/>	Briggs & Stratton 11 HP <i>Multi-Language MS2558</i>
Check <input type="checkbox"/>	Honda 8 & 11 HP <i>P/N 31ZH9602 00X31-ZH9-6020 English</i>
Check <input type="checkbox"/>	Briggs & Stratton 8 HP <i>Industrial Plus P/N 270367</i>

△ Parts Bag & Literature Assy

Engine Manual Per Model

PARTS BAG ASSEMBLY CHECKLIST P/N 430194

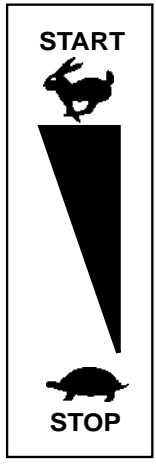


	Literature Checklist
Owner's Manual	<input type="checkbox"/> Check Owner's Manual 430187
Literature Parts Bag	<input type="checkbox"/> Check Literature Parts Bag 430195
Warranty Card	<input type="checkbox"/> Check Warranty Card 400972
EU Declaration of Conformity & EU Distributor List	<input type="checkbox"/> Check EU Declaration of Conformity & EU Distributor List 430189

Throttle Control

Stop position

Briggs and HONDA engines have a choke type carburetor that is operated by moving the throttle control to the full fast position.



Start position

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.



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



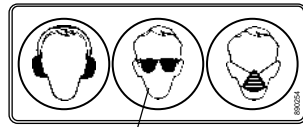
Label Danger Keep Hands and Feet Away Item 41 Part No.400424



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



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



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

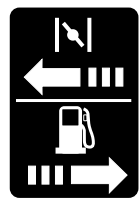
Briggs & Stratton

Read Owner's Manual Before Operating.
 Lire le manuel d'utilisation avant la mise en route.
 Vor Inbetriebnahme Bedienungs- und Wartungsanleitung lesen
 Favor leer las instrucciones de operacion antes de operar el motor.
 Consultare il Manuale Uso e Manutenzione prima dell'utilizzo.
 Las Skotselinstruktionen Innan Start.

Honda

■ READ OWNER'S MANUAL BEFORE OPERATION.
 ■ LIRE LE MANUEL D'UTILISATEUR AVANT USAGE.
 ■ VOR INBETRIEBNAHME UNBEDINGT BETRIENUNGSANLEITUNG DURCHLESEN.
 ■ NO UTILIZAR SINANTES NO HABER LEIDO EL MANUAL

HONDA MOTOR CO., LTD. MADE IN JAPAN



OIL ALERT

■ WHEN OIL LEVEL LOW, ENGINE STOPS IMMEDIATELY.

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 8).



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

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.

ENGINE SPEED: Controlled by throttle lever on the handle. Under normal conditions, operate at minimum throttle to accomplish your current cleaning task.

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

CHOKE: Operated with choke lever on side of engine.

THROTTLE: Move remote throttle control to fast position. Pull starting rope to start engine.

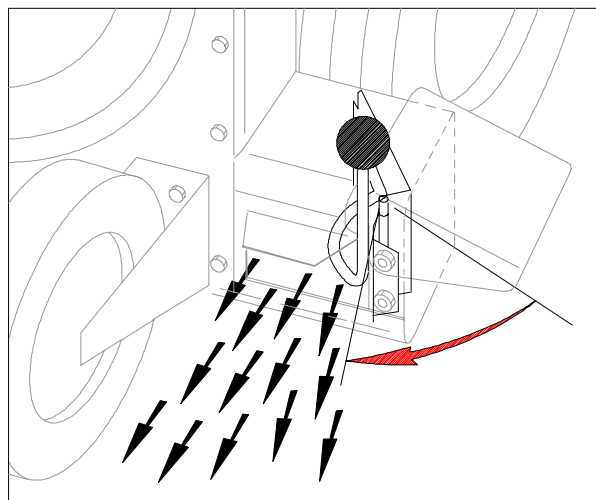
IF YOUR UNIT FAILS TO START:

See Troubleshooting on page 8.

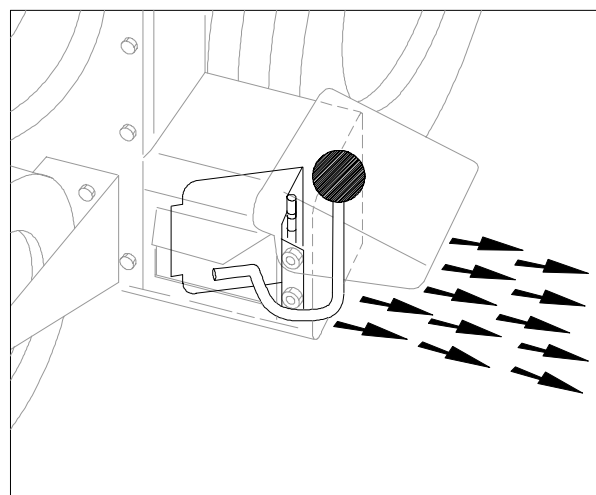
16.2

BLOWING OPERATION

Adjust diverter rod to side discharge for normal blowing or to forward discharge for blowing along walls, fences or hard-to-reach areas (see right).



Front Discharge



Side Discharge

16.4

HANDLING & TRANSPORTING:

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

16.5

STORAGE

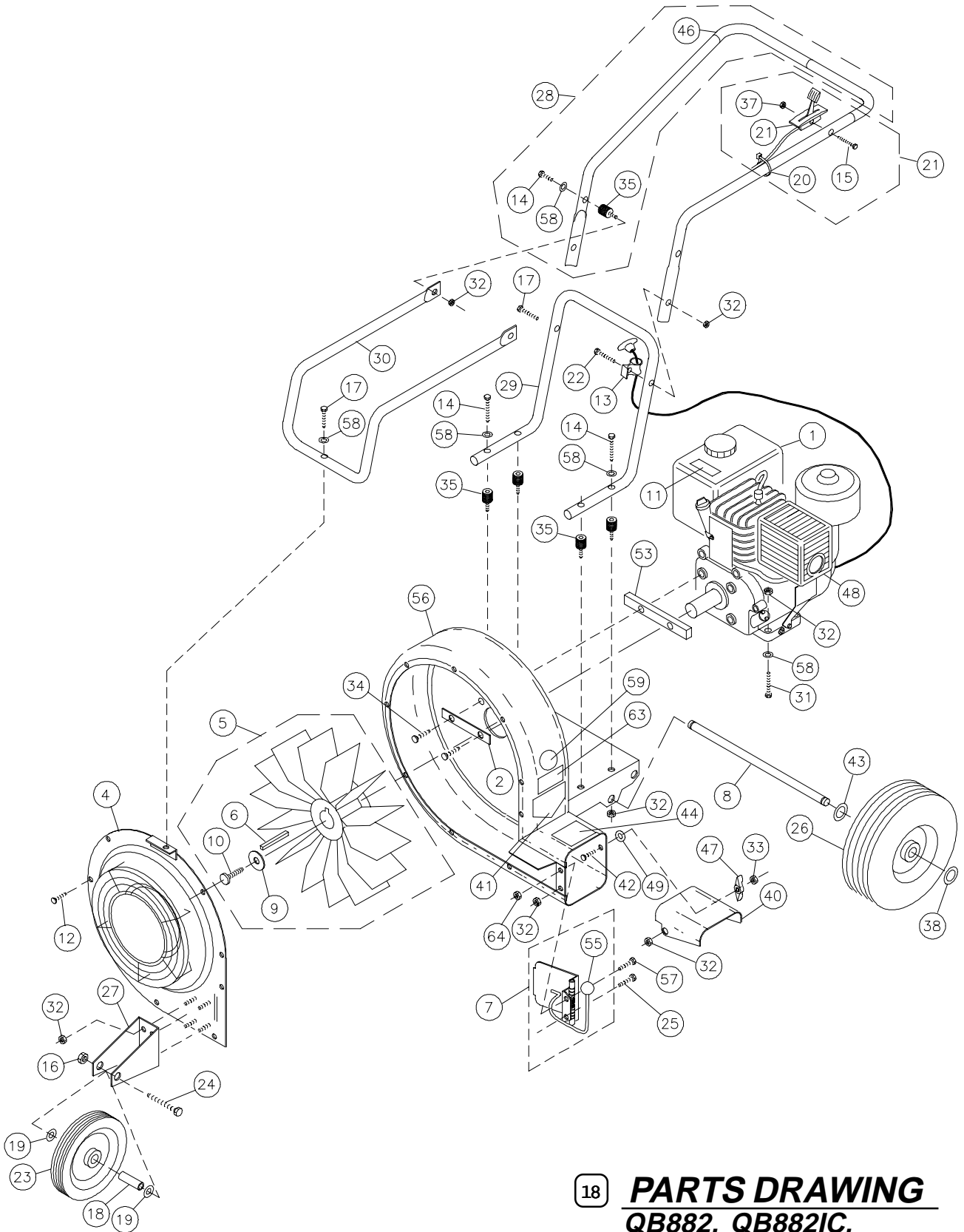
Warning: Never store engine indoors or in enclosed poorly ventilated areas with fuel in tank, where fuel fumes may reach an open flame, spark or pilot light, as on a furnace, water heater, clothes dryer or other gas appliance.

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

Warning:

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.



18 PARTS DRAWING
QB882, QB882IC,
QB882H, QB882CARB,
QB1102IC, QB1102H



ITEM	DESCRIPTION	QB882		QB882C		QB882CARB		QB882H		QB1102C		QB1102H	
		PART NO	QTY	PART NO	QTY	PART NO	QTY	PART NO	QTY	PART NO	QTY	PART NO	QTY
1	ENGINE - 11 HP HONDA	-	-	-	-	-	-	-	-	-	-	400931	1
	ENGINE - 11 HP BRIGGS & STRATTON IC	-	-	-	-	-	-	-	-	400466	1	-	-
	ENGINE - 8 HP HONDA	-	-	-	-	-	-	400937	1	-	-	-	-
	ENGINE - 8 HP BRIGGS & STRATTON	800136	1	-	-	-	-	-	-	-	-	-	-
	ENGINE - 8 HP BRIGGS & STRATTON IC	-	-	800880	1	-	-	-	-	-	-	-	-
	ENGINE- 8 HP BRIGGS & STRATTON INDUSTRIAL PLUS	-	-	-	-	430163	1	-	-	-	-	-	-
2	LOCK CLIP	400591	1	400591	1	400591	1	400591	1	400591	1	400591	1
3													
4	PLATE FRONT W.A. & GRILL	430183	1	430183	1	430183	1	430183	1	430183	1	430183	1
5	IMPELLER ASSY	400965	1	400965	1	400965	1	400965	1	400965	1	400965	1
6	KEY SQUARE 1/4 X 2 1/4	*9201123	1	*9201123	1	*9201123	1	*9201123	1	*9201123	1	*9201123	1
7	DOOR DVERTER ASSEMBLY	430170	1	430170	1	430170	1	430170	1	430170	1	430170	1
8	AXLE	430181	1	430181	1	430181	1	430181	1	430181	1	430181	1
9	WASHER LOCK 7/16 TWSTED TOOTH	850132	1	850132	1	850132	1	850132	1	850132	1	-	-
	WASHER LOCK 3/8 TWSTED TOOTH	-	-	-	-	-	-	-	-	-	-	400502	1
10	SCREW CAP 7/16-20 x 1-1/4 HEX. HD GR. 5 (TORQUE 60 FT LBS)(81.4N.m)	800554	1	800554	1	800554	1	800554	1	800554	1	-	-
	SCREW CAP 3/8 -24 x 1-1/2 HEX. HD GR. 8 (TORQUE 50 FT LBS)(68N.m)	-	-	-	-	-	-	-	-	-	-	900344	-
11	LABEL DO NOT FILL WHEN ENGINE IS HOT	400268	1	400268	1	400268	1	400268	1	400268	1	400268	1
12	SHEET METAL SCREW 1/4 x 3/4 DRILL POINT	430208	9	430208	9	430208	9	430208	9	430208	9	430208	9
13	GUIDE ROPE	830533	2	830533	2	830533	2	830533	2	830533	2	830533	2
14	SCREW CAP 5/16-18 x 1 - 1/4	*8041029	6	*8041029	6	*8041029	6	*8041029	6	*8041029	6	*8041029	6
15	SCREW CAP 1/4 -20 x 1-3/4	*8041009	1	*8041009	1	*8041009	1	*8041009	1	*8041009	1	*8041009	1
16	NUT LOCK 3/8 -16	*8160003	1	*8160003	1	*8160003	1	*8160003	1	*8160003	1	*8160003	1
17	SCREW CAP 5/16-18 x 1 1/4	*8041031	2	*8041031	2	*8041031	2	*8041031	2	*8041031	2	*8041031	2
18	SPACER WHEEL	400302	1	400302	1	400302	1	400302	1	400302	1	400302	1
19	WASHER 1/2 SAE	8172011	2	8172011	2	8172011	2	8172011	2	8172011	2	8172011	2
20	CLAMP CABLE PLASTIC 1"	900813	3	900813	3	900813	3	900813	3	900813	3	900813	3
21	THROTTLE CONTROL ASSY (INCL. ITEMS 15, 37, 20)	430207	1	430207	1	430207	1	430207	1	430207	1	430207	1
22	SCREW CAP 5/16-18 X 2 1/2	*8041034	1	*8041034	1	*8041034	1	*8041034	1	*8041034	1	*8041034	1
23	WHEEL FRONT 8"	900816	1	900816	1	900816	1	900816	1	900816	1	900816	1
24	SCREW CAP, (FRONT AXLE) 3/8-16 x 3"	*8041058	1	*8041058	1	*8041058	1	*8041058	1	*8041058	1	*8041058	1
25	SCREW CAP 5/16-18 x 3/4	*8041026	1	*8041026	1	*8041026	1	*8041026	1	*8041026	1	*8041026	1
26	WHEEL REAR	400295	2	400295	2	400295	2	400295	2	400295	2	400295	2
27	BRACKET (FRONT WHEEL)	430192	1	430192	1	430192	1	430192	1	430192	1	430192	1
28	HANDLE UPPER ASSY (incl. items 14(2), 35(2), 46, 58(2))	400957	1	400957	1	400957	1	400957	1	400957	1	400957	1
29	HANDLE LOWER	400950	1	400950	1	400950	1	400950	1	400950	1	400950	1
30	HANDLE BRACE	400951	1	400951	1	400951	1	400951	1	400951	1	400951	1
31	SCREW CAP 5/16 -18 x 1 1/4	*8041031	4	*8041031	4	*8041031	4	*8041031	4	*8041031	4	*8041031	4
32	NUT LOCK, 5/16-18 HEX	*8160002	19	*8160002	19	*8160002	19	*8160002	19	*8160002	19	*8160002	19
33	NUT LOCK 5/16-18 THIN HT	*8161041	1	*8161041	1	*8161041	1	*8161041	1	*8161041	1	*8161041	1
34	SCREW CAP 5/16 -24 NF x 1 1/2	*8042030	2	*8042030	2	*8042030	2	*8042030	2	-	-	*8042030	2
	SCREW CAP 5/16 -24 NF x 3/4	-	-	-	-	-	-	-	-	*8042026	2	-	-
35	VIBRATION MOUNT	400173	6	400173	6	400173	6	400173	6	400173	6	400173	6
36	LOOSE PARTS ASSY (INCL ITEMS 32(5), 58 (1), 15(1), 37(1), 20(3), 17(3))	430185	1	430185	1	430185	1	430185	1	430185	1	430185	1
37	NUT LOCK 1/4 - 20 HEX	*8160001	1	*8160001	1	*8160001	1	*8160001	1	*8160001	1	*8160001	1
38	RING RETAINING 3/4	850230	2	850230	2	850230	2	850230	2	850230	2	850230	2
39													
40	DEFLECTOR	430193	1	430193	1	430193	1	430193	1	430193	1	430193	1
41	LABEL DANGER HANDS & FEET	400424	1	400424	1	400424	1	400424	1	400424	1	400424	1
42	BOLT CARRIAGE 5/16 -18 x 1-3/4	*8024043	1	*8024043	1	*8024043	1	*8024043	1	*8024043	1	*8024043	1
43	WASHER - FLAT 3/4 S.A.E. (3/16 x 1-1/2 x 1/8)	*8172015	2	*8172015	2	*8172015	2	*8172015	2	*8172015	2	*8172015	2
44	LABEL DANGER FLYING MATERIAL	810736	1	810736	1	810736	1	810736	1	810736	1	810736	1
45													
46	GRIP	400570	2	400570	2	400570	2	400570	2	400570	2	400570	2
47	KNOB	400339	1	400339	1	400339	1	400339	1	400339	1	400339	1
48	GUARD MUFFLER (COMES W/ ITEM 1)	400010	1	400010	1	400010	1	YES	-	YES	-	400933	1
49	WASHER 3/8 FLAT CUT	8171004	1	8171004	1	8171004	1	8171004	1	8171004	1	8171004	1
50													
51													
52													
53													
54													
55	KNOB DIVERTER	430198	1	430198	1	430198	1	430198	1	430198	1	430198	1
56	FRAME ASSY (INCLUDES 41, 44, 63)	430171	1	430171	1	430171	1	430171	1	430171	1	430171	1
57	SCREW CAP 5/16 - 18 X 1"	*8041028	1	*8041028	1	*8041028	1	*8041028	1	*8041028	1	*8041028	1
58	WASHER FLAT CUT 5/16 (3/8 ID x 7/8 OD x 1/16)	*8171003	11	*8171003	11	*8171003	11	*8171003	15	*8171003	11	*8171003	15
59	LABEL READ OWNER'S MANUAL	890301	1	890301	1	890301	1	890301	1	890301	1	890301	1
60													
61													
62													
63	LABEL EAR EYE BREATHING	890254	1	890254	1	890254	1	890254	1	890254	1	890254	1
64	NUT 5/16-18	*8143002	1	*8143002	1	*8143002	1	*8143002	1	*8143002	1	*8143002	1

△ Denotes parts found in parts bag assembly.

* Notes standard hardware that may be purchased locally.

17 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

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.**
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 impeller 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).
- TIRE/AIR PRESSURE:** Check at regular intervals and maintain.

Rear Tires only - 30 Psi. (21 kPa).

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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 (Honda only). Throttle in off position. Engine not in full choke position (Honda only). 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.

22.1

Engine Service and Warranty
Contact your nearest engine manufacturer's authorized servicing dealer.

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Serial Plate Record your machine model, serial number and date-of-purchase and where purchased

	1803 S. Jefferson P.O. Box 308 Lee's Summit, MO 64063 / USA Tel (816) 524-9666 Fax (816) 524-6983	
	Model <input type="text"/> Serial No. <input type="text"/> Unit(Weight) <input type="text"/> lbs. <input type="text"/> kg Engine Power <input type="text"/> kW <input type="text"/> rpm	

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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 who are printed on the Billy Goat Serial Plate.



BILLY GOAT INDUSTRIES INC.
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