BILLY GOAT KV VACUUM

Owner's Manual

KV600SP, KV650SPH, TKV650SPH, KV600SPFB, KV650SPHFB, TKV650SPHFB

Specifications

	KV600SP	KV650SPH	TKV650SPH	KV600SPFB	KV650SPHFB	TKV650SPHFB
Engine: HP	6.0 (4.47kW)	6.5 (4.85kW)	6.5 (4.85 kW)	6.0 (4.47kW)	6.5 (4.85kW)	6.5 (4.85 kW)
Engine: Type	B&S Quantum	HONDA	HONDA	B&S Quantum	HONDA	HONDA
Engine: Model	112K020124E1	GSV190AN1L	GSV190AN1L	112K020124E1	GSV190AN1L	GSV190AN1L
Engine: Fuel Capacity	1.5 qt. (1.4 L)	1.6 qt. (1.5 L)	1.6 qt. (1.5 L)	1.5 qt. (1.4 L)	1.6 qt. (1.5 L)	1.6 qt. (1.5 L)
Engine: Oil Capacity	0.63 qt. (0.6 L)	0.58 qt (0.54L)	0.58 qt (0.54L)	0.63 qt. (0.6 L)	0.58 qt (0.54L)	0.58 qt (0.54L)
Total Unit Weight:	#129 (58.5 kg)	#132 (58.9 kg)	141# (64 kg)	#129 (58.5 kg)	#132 (58.9 kg)	141# (64 kg)
Overall Length	59" (1.5m)	59" (1.5m)	59" (1.5 m)	59" (1.5m)	59" (1.5m)	59" (1.5 m)
Overall Width	25.5" (.6 m)	25.5" (.6 m)	25.5" (.6 m)	25.5" (.6 m)	25.5" (.6 m)	25.5" (.6 m)
Overall Height	42.75" (1.1m)	42.75" (1.1m)	42.75" (1.1 m)	42.75" (1.1m)	42.75" (1.1m)	42.75" (1.1 m)
Max. operating slope	20^0	20^0	20^0	20^0	20^0	20^0
Sound in accordance with 2000/14/EEC standards	109 dBa	109 dBa	112 dBa	109 dBa	109 dBa	112 dBa
Sound at operator's ear	88 dBa	89 dBa	91 dBa	88 dBa	89 dBa	91 dBa
Vibration at operator position	0.71 g (6.96m/s^2)	0.32 g (3.16m/s^2)	0.43 g (4.25m/s^2)	0.71 g (6.96m/s^2)	0.32 g (3.16m/s^2)	0.43 g (4.25m/s^2)

SOUND

L_{WA}

112 dB

SOUND LEVEL 92 dB(a) at Operator Position

Sound tests were conducted in accordance with 2000/14/EEC, and were performed on 7-25-07 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:	88°F (31.1°C)
Wind Speed:	2 mph (3.8 kmh)
Wind Direction:	South South East
Humidity:	44%
Barometric Pressure:	30.07"Hg (764 mm Hg)

VIBRATION DATA

VIBRATION LEVEL 0.34g (3.29m/s^2)

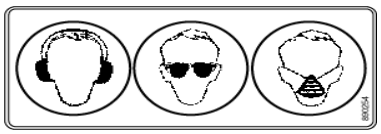
Vibration levels at the operator's handles were measured in the vertical, lateral and longitudinal directions using calibrated vibration test equipment. Tests were performed on 12-19-2007 under the conditions listed below.

General Conditions:	Sunny
Temperature:	50°F (10°C)
Wind Speed:	4 mph (6.4kph)
Wind Direction:	South Southeast
Humidity:	68%
Barometric Pressure:	30 Hg (101.6kpa)

INSTRUCTION LABELS

The labels shown below were installed on your BILLY GOAT ® KV Vacuum. 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 DANGER KEEP HANDS AND FEET AWAY ITEM #18 P/N 400424



LABEL EAR EYE BREATHING ITEM #20 P/N 890254

DANGER FLYING DEBRIS ITEM #19 P/N 810736

LABEL SPARK ARRESTOR P/N 100252

LABEL READ MANUAL ITEM #17 P/N 890301

LABEL EXPLOSIVE FUEL ITEM # 16 P/N 400268

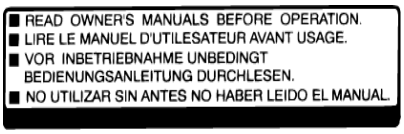
CHIPPER WARNING LABEL ITEM #82 P/N 890152 (TKV ONLY)

LABEL DANGER GUARD ITEM #39 P/N 900327

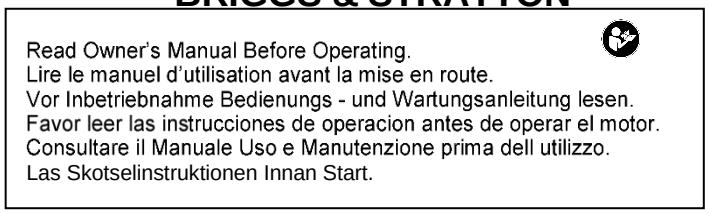
BAG FOLDING INSTRUCTIONS LOCATED ON BAG

ENGINE LABELS

HONDA



BRIGGS & STRATTON



ENGINE and Transmission CONTROLS

Honda Throttle Control

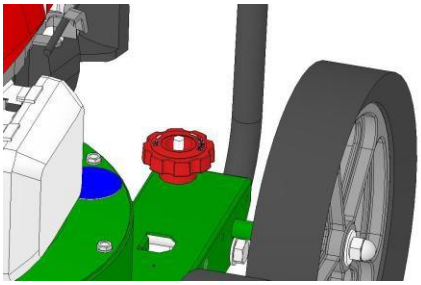
Briggs Throttle Control

Bail Drive Engage/Disengage label

OPERATION

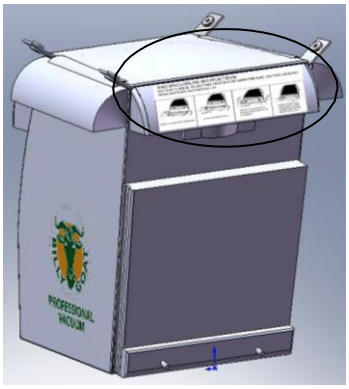
VACUUMING OPERATION

VACUUM NOZZLE HEIGHT ADJUSTMENT: Nozzle height is raised and lowered by rotating the red knob near the left rear wheel. Nozzle height should be adjusted based on the task being performed.



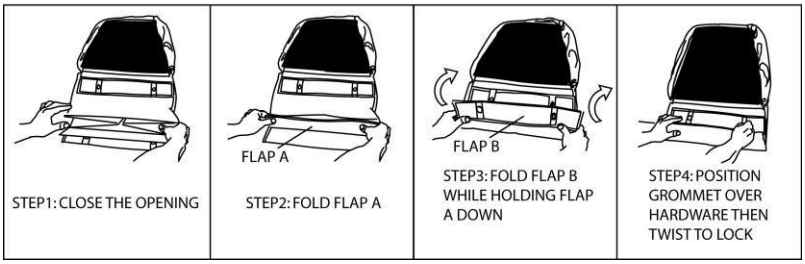
FOR MAXIMUM PICKUP: Adjust nozzle close to debris, but without blocking airflow into the nozzle. *NOTE*: Never bury nozzle into debris.

CLEARING A CLOGGED NOZZLE & EXHAUST: Turn engine off and wait for impeller to stop completely and disconnect spark plug wire. Wearing durable gloves, remove clog. **Danger**, the clog may contain sharp materials. Reconnect spark plug wire.



BAG ENCLOSURE INSTRUCTION:

NOTE: IT IS IDEAL TO DO THIS PROCEDURE WITH THE BAG ON THE GROUND WITH BOTTOM PAD FACING UP.



DEBRIS BAG

(OPTIONAL DEBRIS BAGS ARE AVAILABLE FOR CHANGING CONDITIONS)

Debris bags are normal replaceable wear items.

Note: *Frequently empty debris to prevent bag overloading with more weight than you can lift.*

An optional felt bag is available for use where debris will be vacuumed in dusty conditions **(see Optional Accessories shown on page 1)**.

DO NOT place bag on or near hot surface, such as engine. Be sure engine has come to a complete stop before removing or emptying bag.

This vacuum is designed for picking up trash, organic material and other similar debris (see Safety and General Operation manual)**.**

However, many vacuums are used where dust is mixed with trash. Your unit can intermittently vacuum in dusty areas. Dust is the greatest cause of lost vacuum performance. However, following these rules will help maintain your machine's ability to vacuum in dusty conditions:

• Run machine at idle to quarter throttle.

• The debris bag must be cleaned more frequently. A vacuum with a clean, pillow soft bag will have good pickup performance. One with a dirty, tight bag will have poor pickup performance. If dirty, empty debris and vigorously shake bag free of dust.

• Pressure-wash debris bag if normal cleaning does not fully clean bag. Bag should be thoroughly dry before use.

NOTE: *Having one or more spare debris bags is a good way to reduce down time while dirty bags are being cleaned.*

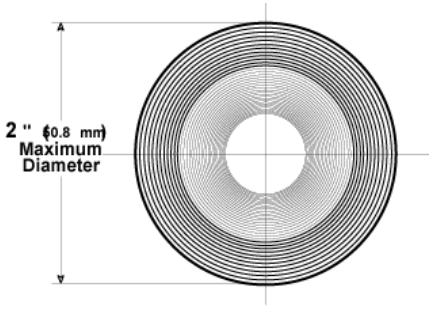
DO NOT leave debris in bag while in storage.

COMPOST

Vacuumed leaves, grass and other organic material from your own yard can be emptied into a pile or composter to provide enriched soil for later use as fertilizer in gardens and flower beds
NOTE: Allow green chips to dry before spreading around living plants.

MULCH

Wood chips made from branches in your own yard make excellent mulch. A thick blanket of wood chips around plants and flowers to keeps weeds out and moisture in.



CHIPPER OPERATION (TKV only)

Your ***TKV*** chipper is designed to process tree branches and limbs up to 2" (50.8mm) diameter.

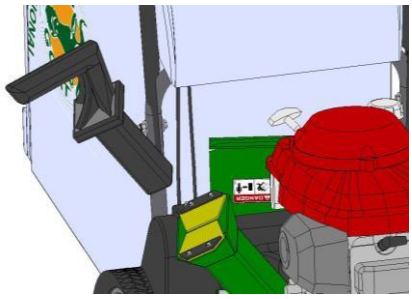
Several small branches can be grouped together and fed together into the chipper (see figure right).

When feeding forked branches, squeeze forks together and feed into chipper entrance (DO NOT overload). If forks are too large, use a pair of loppers to trim forks down to size. A lopper storage bracket is provided on every unit (loppers are not included)

Clearing a clogged chipper (TKV only)

Under normal circumstances, allow time for machine to clear all wood from chipper hopper before stopping engine. Otherwise, remaining pieces of wood will jam inside of chipper when engine stops. (See Tamper below).

Disconnect spark plug wire.
Remove debris bag quick disconnect from debris outlet on machine.
Wearing durable gloves, access impeller through debris outlet on fan housing and rotate impeller counter clock wise to dislodge and remove jam and remove debris from hopper with tongs or equivalent. Reconnect debris bag quick disconnect to machine.
Reconnect spark plug wire.



TAMPER (TKV only)

Before turning machine off, use the Tamper to slowly push remaining pieces of wood through the chipper. This can prevent any remaining wood from jamming in the chipper when machine is turned off.
Do not leave tamper on the ground, store tamper in the chipper hopper.

MAINTENANCE

PERIODIC MAINTENANCE

Periodic maintenance should be performed at the following intervals:

Maintenance Operation	Every Use (daily)	Every 5 hrs (daily)	Every 25 Hours
Inspect for loose, worn or damaged parts.		●	
Clean Debris bag	●		
Check bag strap tightness	●		
Engine (See Engine Manual)			
Check for excessive vibration		●	

Troubleshooting

Problem	Possible Cause	Solution
Abnormal vibration.	· Loose or out of balance impeller or loose engine	· Check impeller and replace if required. Check engine
Will not vacuum or has poor vacuum performance	· dirty debris bag. Hose kit cap missing. ·Clogged nozzle or exhaust. Excessive quantity of debris. · Improper nozzle height	· Clean debris bag. Shake bag clean or wash. Check for hose kit cap. Unclog nozzle or exhaust. Allow air to feed with debris · Adjust nozzle height so that it is closer to the debris
Engine will not start.	· Throttle in off position. Engine not in full choke position. Out of gasoline. Bad or old gasoline. Sparkplug wire disconnected. Dirty air cleaner	· Check stop switches, throttle, choke position and gasoline. Connect spark plug wire. Clean or replace air filter. Or contact a qualified service person.
Engine is locked, will not pull over.	· Debris locked in impeller. Engine problem.	· See page 5. Contact a engine service dealer for engine problems
Nozzle scrapes ground in lowest height setting.	Nozzle height out of adjustment	Adjust nozzle height (See Nozzle height fine adjustment for hard surfaces on page 5
No self-propelling	· Drive bail not engaged · Drive belt worn or broken · Drive clutch cable out of adjustment or broken. · Drive chain off the sprocket.	· Engage the drive bail. · Check the drive belt. · Check the drive clutch cable (see page 12). · Check the drive chain (see page 12).
Self propelled drive will not release	· Improper drive clutch cable adjustment or cable is kinked.	· Check the drive clutch cable (see page 13).
Noisy or broken chain	· No chain lubrication. · Chain misalignment or tension.	· Lubricate chain. · Check the drive chain (see page 12).
Unit does not free-wheel backwards	· None	· Push the unit slightly forward then the unit will free-wheel
Too much dust coming from bag.	· Vacuuming very dry, brittle or small debris	· Switch to felt bag (see page 1 accessories)