

**18 PARTS DRAWING**

**HTR1602V, TR1304H,  
TR1104**

\* Denotes standard hardware item that may be purchased locally.

△ Denotes parts found in parts bag assembly.

ITEM	DESCRIPTION	HTR1602V PART NO.	QTY	TR1304H PART NO.	QTY	TR1104 PART NO.	QTY
1	FLAPPER 10" INTAKE W/LABEL	811183	1	- - -	- -	- - -	- -
	FLAPPER 8" INTAKE W/ LABEL	- - -	- -	811174	1	811174	1
2	SCREW CAP 5/16-18 x 3 1/4	*8041037	1	*8041037	1	*8041037	1
3	LABEL DANGER KEEP HANDS AND FEET AWAY	400424	2	400424	2	400424	2
4	WASHER 5/16 SAE (11/32 ID x 11/16 OD x 1/16)	*8172008	25	*8172008	22	*8172008	22
5	NUT LOCK 5/16-18	*8160002	32	*8160002	28	*8160002	28
6	WASHER 5/16 FLAT CUT (3/8 I.D. x 7/8 O.D. x 1/16)	*8171003	16	*8171003	16	*8171003	12
7	PLUG 3/4"	811123	1	811123	1	811123	1
8	DEFLECTOR EXHAUST 7"	811111	1	811111	1	811111	1
9	CARRIAGE BOLT 5/16-18 x 3 1/2	*8024050	1	*8024050	1	*8024050	1
10	ELBOW ASSY TR/HTR	811196	1	811191	1	811191	1
11	SCREW CAP 5/16-18 x 1 3/4	*8041031	1	*8041031	1	*8041031	1
12	TUBE CLAMP	810953	1	810953	1	810953	1
13	KNOB	400339	4	400339	4	400339	4
14	IMPELLER ASSY (INCLUDES 16(1),17(1),18(1), 20(1))	810930	1	810974	1	810629	1
15	LABEL READ OWNER'S MANUAL	890301	1	890301	1	890301	1
16	SCREW CAP 3/8-24 x 2" GR 8 [50 Ft. Lbs. (68 N.m)]	810962	1	- - -	- -	- - -	- -
	SCREW CAP 3/8 - 24 X 2 1/4 GR 8 [50 Ft. Lbs. (68 N.m)]	- - -	- -	810932	1	- - -	- -
	SCREW CAP 7/16 - 20 X 2 GR 5 [60 Ft. Lbs. (81.4 N.m)]	- - -	- -	- - -	- -	500188	1
17	WASHER LOCK 3/8 TWISTED TOOTH	400502	1	400502	1	- - -	- -
	WASHER LOCK 7/16 TWISTED TOOTH	- - -	- -	- - -	- -	850132	1
18	KEY SQ. 1/4 x 2 3/4	*9201125	1	*9201125	1	- - -	- -
	KEY SQ. 1/4 X 2 1/4	- - -	- -	- - -	- -	*9201123	1
19	LABEL DANGER FLYING MATERIAL	810736	2	810736	2	810736	2
20	SPACER IMPELLER	830112	1	830112	1	830112	1
21	GUARD MANIFOLD	811059	1	- - -	- -	- - -	- -
22	GUIDE STARTER ROPE	830533	2	830533	2	830533	2
23	FRAME PANEL REAR	811106	1	811106	1	811106	1
24	COUPLER HOSE W/GRIP	811179	1	811170	1	811170	1
25	PAD FRAME SHORT	811120	2	811120	2	811120	2
26	CARRIAGE BOLT 5/16-18 x 1 3/4	*8024045	1	- - -	- -	- - -	- -
	CARRIAGE BOLT 5/16-18 x 3 1/2	- - -	- -	*8024054	1	*8024054	1
27	SCREW CAP 5/16-18 x 1 3/4	*8041031	4	*8041031	4	- - -	- -
	SCREW CAP 5/16-18 x 2 1/2	- - -	- -	- - -	- -	*8041034	4
28	ENGINE 16 H.P. V N W/CONTROL PANEL	810099	1	- - -	- -	- - -	- -
	ENGINE HONDA 11HP	- - -	- -	430366	1	- - -	- -
	ENGINE BRIGGS 11 HP INTEK V/C	- - -	- -	- - -	- -	811205	1
29	KNOB	850154	2	850154	2	850154	2
30	NUT LOCK W.A.	800227	2	800227	2	800227	2
31	WASHER 3/4, PLASTIC	800109	2	800109	2	800109	2
32	STUD 3/4 -10 x 5 1/2	810954	2	810954	2	810954	2
33	SCREW MACHINE #10-24 x 2	*8059143	2	*8059143	2	*8059143	2
34	PIN COTTER 1/8 x 1"	*8197031	2	*8197031	2	*8197031	2
35	WASHER 3/8 SAE	*8172009	10	*8172009	10	*8172009	10
36	NUT LOCK 3/8-16	*8160003	8	*8160003	8	*8160003	8
37	SCREW SHEET METAL 1/4 AB x 3/4	*8122082	3	- - -	- -	- - -	- -
38	GUARD MUFFLER	811058	1	- - -	- -	- - -	- -
39	BASE ENGINE	810907	1	810907	1	810907	1
40	PAD FRAME LONG	811122	2	811122	2	811122	2
41	PLATE FRONT 10" HTR W/INTERLOCK (INCL. 1,2,3,5(2),7,13,43,44,49,59,83,84)	811182	1	- - -	- -	- - -	- -
	PLATE FRONT 8" TR W/INTERLOCK (INCL. 1,2,3,5(2),7,13,43,44,49,59,83,84,87)	- - -	- -	811173	1	811173	1
42	PLUG CAP 1" SQUARE	810535	2	810535	2	810535	2
43	CABLE ASSY SWITCH SV	890443	1	890443	1	890443	1
44	CLIP-CABLE LIFT	850200	3	850200	3	850200	3
45	WASHER-EXTENSION	810652	2	810652	2	810652	2
46	SPRING	400332	2	400332	2	400332	2
47	LABEL CAUTION	830138	1	830138	1	830138	1
48	LABEL EAR,EYE,BREATHING	890254	1	890254	1	890254	1
49	LABEL WARNING ENGINE OVERHEAT	811215	2	811215	2	811215	2
50	BOOM-PIVOT W.A.	810870	1	810870	1	810870	1
51	TUBE-SQUARE BOOM ARM	810875	1	810875	1	810875	1
52	NUT LOCK 1/4-20	*8160001	5	*8160001	5	*8160001	5
53	HOSE 10" x 12.5' HTR (COMES IN SEPERATE BOX)	810705	1	- - -	- -	- - -	- -
	HOSE 8" x 12.5' TR (COMES IN SEPERATE BOX)	- - -	- -	810523	1	810523	1
54	CHAIN-LOOP ASSY	810878	2	810878	2	810878	2
55	SCREW CAP 1/4-20 x 1 3/4	*8041009	2	*8041009	2	*8041009	2
56	BAND HOSE BOOM 10" HTR	810868	2	- - -	- -	- - -	- -
	BAND HOSE BOOM 8" TR	- - -	- -	810880	2	810880	2
57	HOUSING ASSY W/LABELS (INCLUDES 5(2), 13(2), 45(2), 46(2), 47, 48)	810912	1	810976	1	810976	1
58	NOZZLE ASSY 10" HTR (INCL. 4(2), 5(3), 6, 23, 77, 79(4), 80(2), 82, 83, 84)	811010	1	- - -	- -	- - -	- -
	NOZZLE ASSY 8" TR (INCL. 4(2), 5(3), 6, 23, 77, 79(4), 80(2), 82, 83, 84)	- - -	- -	811009	1	811009	1
59	SPACER ENGINE INTEK	- - -	- -	- - -	- -	430355	1
60	CLAMP HOSE 10" HTR	810706	2	- - -	- -	- - -	- -
	CLAMP HOSE 8" TR	- - -	- -	810566	2	810566	2
61	ELBOW EXHAUST WA	811192	1	811192	1	811192	1
62	PAD FRAME CLAMP TUBE	811121	1	811121	1	811121	1
63	SUPPORT PLATE ENGINE / SPACER ENG.	810927	1	810965	1	810965	1

**19** Parts List continued from page 11.

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ITEM	DESCRIPTION	HTR1602V PART NO.	QTY	TR1304H PART NO.	QTY	TR1104 PART NO.	QTY
64	WASHER LOCK 3/8	*8177012	2	*8177012	2	- - -	-
	WASHER LOCK 5/16 EXT. TOOTH	- - -	-	- - -	-	*8181008	2
65	SCREW CAP 3/8 - 16 X 3/4	*8041048	2	- - -	-	- - -	-
	SCREW CAP 3/8 - 16 X 1 1/2 ZP	- - -	-	8041052	2	- - -	-
	SCREW CAP 5/16 - 24 X 3/4 G5	- - -	-	- - -	-	*8042026	2
66	SCREW CAP 3/8 - 16 x 1"	*8041050	6	*8041050	6	*8041050	6
67	SCREW MACHINE #6-32 x 3/4	*8059094	2	*8059094	2	*8059094	2
68	NUT LOCK #6 - 32	*8164003	2	*8164003	2	*8064003	2
69	ANGLE BRKT R.H.	810917	1	811096	1	811096	1
70	SCREW CAP 5/16-18 x 1"	*8041028	10	*8041028	9	*8041028	9
71	ANGLE BRKT L.H.	810916	1	810969	1	810969	1
72	SPACER	811097	1	811098	1	811098	1
73	WASHER FLAT CUT 1/4	*8171002	1	*8171002	1	*8171002	1
74	CONTROL THROTTLE ASSY	810904	1	810972	1	- - -	-
75	SCREW MACHINE 10-24 x 1/2"	- - -	-	*8123086	2	- - -	-
76	NUT LOCK 5/16-18 THIN HT.	- - -	-	8161041	1	8161041	1
77	NOZZLE FORMED STEEL 10"	811005	1	- - -	-	- - -	-
	NOZZLE FORMED STEEL 8"	- - -	-	811007	1	811007	1
78	HANDLE NOZZLE W / GRIP	811020	1	811020	1	811020	1
79	WASHER FENDER 5/16	*8172020	4	*8172020	4	*8172020	4
80	SCREW CAP 5 /16 - 18 X 1 1/2	*8041030	3	*8041030	3	*8041030	3
81	LABEL DO NOT FILL WHEN ENGINE IS HOT	400268	1	400268	1	400268	1
82	HANDLE LOOP NOZZLE	811019	1	811019	1	811019	1
83	GRIP HANDLE	500267	1	500267	1	500267	1
84	PLUG CAP	890132	2	890132	2	890132	2
85	FRAME SIDE RIGHT WA TR/HTR	811100	1	811100	1	811100	1
86	FRAME SIDE LEFT WA TR/HTR	811101	1	811101	1	811101	1
87	STRAIN RELIEF	500282	1	500282	1	500282	1
88	PLUNGER SWITCH	890440	1	890440	1	890440	1
89	TUBE HANDLE LIFT	811139	2	811139	2	811139	2

**20 TROUBLESHOOTING** *Before Requesting Service Review These Suggestions*

Problem	Possible Cause	Solution
Will not vacuum or has poor vacuum performance.	Nozzle height too high or too low. Clogged hose or exhaust. Excessive quantity of debris.	Adjust nozzle position. Unclog hose or exhaust (see page 6). Allow air to feed with debris.
Abnormal vibration.	Loose or out of balance impeller or loose engine.	Check impeller and replace if required. Check Engine.
Engine will not start.	Throttle & / or stop switch in off position. Out of gasoline. Bad or old gasoline. Spark Plug wire disconnected. Dirty air cleaner. Hose not installed, allowing interlock wire to ground.	Check stop switches, throttle, and gasoline. Connect spark plug wire. Clean or replace air cleaner. Or contact a qualified service person. Install hose onto housing.
Engine is locked, will not pull over.	Debris locked inside impeller. Engine problem.	See page 6, Clearing a clogged impeller housing. Contact an engine servicing dealer for engine problems.


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

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



**BILLY GOAT INDUSTRIES, INC.**

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**121 dB**  
(HTR1602VN  
MODEL)

Model

Serial No.

Unit(Weight)

 lbs.  kg

Engine Power

 kW  rpm

Purchase Date \_\_\_\_\_ Purchased from \_\_\_\_\_

**22 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 which are printed on the Billy Goat Serial Plate.

**BILLY GOAT.**  **BILLY GOAT INDUSTRIES INC.**  
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