

Gear Alternative

Number	Description	B9 Part #	Dimensions	Weight	Vendor	Vendor Part #	Unit Cost	Quantity Needed	Unit	Price
1	Adhesive: Permabond, Black magic 737	B9- BWM- X0004	1 oz.		Curell	EC0460	\$ 0.16	1	[1] one oz. tube @ 16.12	\$ 0.16
2	Socket, Clearette, In-line, plastic	B9- BWM- X0006			DIGI- KEY	2A2010-ND	\$ 0.02	1	pk of 100 min 1.55	\$ 0.02
3	Holder, led, Panel, Black nylon	B9- BWM-G0001	5mm.		DIGI- KEY	67- 1332- ND	\$ 0.27	1	pk of 1000 min .27	\$ 0.27
4	Motor Connection wire	B9- BWM- X0025	20 AWG, 100 Feet		DIGI- KEY	C2040R- 100- ND	\$ 0.24	1.25	100 ft. min 24.36	\$ 0.30
5	GENERATOR BOX	B9- BWM-G0002			HARBE	A694	\$ 5.75	1	100 min 5.75	\$ 5.75
6	GENERATOR COVER, no holes, right side	B9- BWM-G0003			HARBE	A695 B	\$ 2.36	1	100 min 4.72	\$ 2.36
7	GENERATOR COVER, with holes, left side	B9- BWM-G0004			HARBE	A695 A	\$ 2.36	1	100 min 4.72	\$ 2.36
8	LARGE GEAR	B9- BWM-G0005			HARBE	A614	\$ 5.25	1	100 min 5.25	\$ 5.25
9	GENERATOR HANDLE (modified A 615)	B9- BWM-G0006			HARBE	F-015	\$ 5.88	2	100 min 5.88	\$ 11.76
10	GEAR SLEEVE	B9- BWM-G0007			HARBE	A736	\$ 3.18	1	100 min 3.18	\$ 3.18
11	Paul, Black	B9- BWM-G0008	0.07" Thick		Kaplan	F-016	\$ 2.69	1		\$ 2.69
12	PVC pipe (modified of part 23971)	B9- BWM-G0009	3/4" SCH. 40 X 10'		LOWES	F-017	\$ 0.02	4	2.18 per 10ft	\$ 0.07
13	Encore Plastics 5 gal. Snap on Lid	B9- BWM-G0010	5 Gal		LOWES	276477	\$ 1.97	1		\$ 1.97
14	MOTOR	B9- BWM-G0011			Mabuchi	RS-55VC-3754	\$ 4.00	4		\$ 16.00
15	SHCS, steel	B9- BWM-G0012	8-32 X1.18		Mcmaster- Carr	91251A183	\$ 0.34	1	pk of 25 min 8.51	\$ 0.34
16	Nylon Insert hex Lock Nut, Zinc Plated	B9- BWM-G0013	8- 32 Nylock Nut		Mcmaster- Carr	90631A009	\$ 0.02	4	pk of 100 min 2.35	\$ 0.09
17	SHCS, steel	B9- BWM-G0014	8-32 X 2 1/2		Mcmaster- Carr	91251A207	\$ 0.38	8	pk of 25 min 9.62	\$ 3.08
18	SHCS, steel	B9- BWM-G0015	M3 thread, 10mm long X, 0.5mm		Mcmaster- Carr	91290A115	\$ 0.05	8	pk of 100 min 4.65	\$ 0.37
19	Flat washer, steel, zinc plated	B9- BWM-G0016	M3, 7mm OD x,0.45- 0.55mm thick		Mcmaster- Carr	91166A210	\$ 0.02	9	pk of 100 min 1.55	\$ 0.14
20	Lock washer, steel, zinc plated	B9- BWM-G0017	M3, 5.6mm OD x,0.9mm thick		Mcmaster- Carr	911908510	\$ 0.02	8	pk 100 min 2.17	\$ 0.17
21	DIRECTIONAL ARROW	B9- BWM-G0018	1 3/8" x 7"		Mcmaster- Carr	16055T231	\$ 0.49	1	pk of 20 min. 9.82	\$ 0.49
22	Plastic Loop Clamp	B9- BWM-G0019	3/16" X 3/4, 3/8 wide, 3/64 thick		Mcmaster- Carr	8876735	\$ 0.05	1	pk of 100 min 5.40	\$ 0.05
23	Triangular Shank Phillips Pan heat screw, zinc plated	B9- BWM-G0020	1/4" long x 4-20 Thread		Mcmaster- Carr	90380A106	\$ 0.07	3	pk of 100 min 6.50	\$ 0.20
24	Triangular Shank Phillips Pan heat screw, zinc plated	B9- BWM-G0021	3/8" long x 4-20 Thread		Mcmaster- Carr	90380A108	\$ 0.07	1	pk of 100 min 6.80	\$ 0.07
25	Square Nut, Zinc Plated	B9- BWM-G0022	8- 32 square Nut,11/32 x 1/8		Mcmaster- Carr	94855A216	\$ 0.02	1	pk of 100 min 2.08	\$ 0.02
26	Dow 748, silicone Sealer	B9- BWM- X0002	3 oz. Tube		Mcmaster- Carr	74915A654	\$ 0.10	1	10.15 of 100	\$ 0.10
27	Generator Control Board	B9- BWM-G0023			Polyfusion		\$ 27.00	1		\$ 27.00
28	Black 2 conductor cord	B9- BWM- X0003	18 AWG, 2 cond		SIMCONA	F-006	\$ 0.00	3.5 Feet	min. 500 ft. .75/ft	\$ 0.01
29	Pinion wire stock (modified out of part A1C 9-N32008, 22 per foot)	B9- BWM-G0024	32 pitch, 8 teeth, 14.5° Press angle, 0.313" OD		Stock Drives	F-018	\$ 0.50	4	36 per 6 ft	\$ 2.25
30	GREASE	B9- BWM-G0025	500 grams, 17.64 oz.		TAI Lubricants	RYEOLUBE 362 HM	\$ 0.23	1	1 lb. jar 22.95	\$ 0.23
31	Additional Gear	B9- BWM-XXXXX	260 grams		HARBE	XXXXX	\$ 0.10	1	9.54 for 100	\$ 0.10
32	Additional housing	B9- BWM-XXXXX	400 grams		HARBE	XXXXX	\$ 0.15	1	14.68 for 100	\$ 0.15
									Total Generator Cost	\$ 86.85
	<b>Seating Materials</b>									
33	Additional plastic for mfg of pedals or procure pedals	B9- BWM-XXXXX					\$ 5.00	2	336 g plastic	\$ 10.00
34	Wood, Pine	B9- BWM-XXXXX	2X4		Home Depot		\$ 1.68	14	9.37 per 186	\$ 1.68
35	Wood Screws	B9- BWM-XXXXX			Home Depot		\$ 0.05	18"	4.68 per 36"	\$ 0.05
36	Wooden Dowel	B9- BWM-XXXXX	1" Diameter		Home Depot		\$ 2.34	36"	5.57 per 36"	\$ 2.34
37	Pine Oriented Strand Board Plywood	B9- BWM-XXXXX	7/16 in. x 2 ft. x 4 ft.		Home Depot		\$ 5.37	1		\$ 5.37
38	Steel Plate		2 in. x 7 in. (Metal Products 5 in. x 8 in. Steel Safety Plate)		Home Depot		\$ 0.94	2	1.87 for 5 in. x 8 in.	\$ 1.87
									Total Seat cost	\$ 21.31
									Total cost	\$ 108.16
<b>Labor-Burden</b>	Assembly Estimate				HARBE		\$ 36.50	2		\$ 73.00
<b>Tooling Estimates</b>	<b>New Motor Mount Box</b>	Zytel 45HSB			HARBE		\$ 20,000.00			
	<b>Large Gear</b>	Zytel 45HSB			HARBE		\$ 12,500.00			
	<b>New Large Gear</b>	Zytel 45HSB			HARBE		\$ 13,750.00			
	<b>Gear Sleeve</b>	Zytel 45HSB			HARBE		\$ 2,500.00			
	<b>New Generator Cover</b>	Zytel 45HSB			HARBE		\$ 17,750.00			
	<b>Crank arm and Axle</b>	Zytel 45HSB			HARBE		\$ 11,650.00			
							\$ 78,150.00			
							<b>Total Difference:</b>			<b>\$ 25,550.00</b>