

Nike Smoke - Level 3 Certification Project

Rocket Name: Nike Smoke - Mfg. Polecat Aerospace
 Built by Jeffrey M. Barnosky

Part Description	Notes	Weigh Std	Weigh Metric	Quantity	Total Wt Lb	Cost EA.	Tax	Part Total	Vendor
Nike Smoke 10" Rocket Kit - 4" - 98mm Motor Mount	11" 8" Tall - Bare parts kit			1		\$420.00	Included	\$420.00	CommonWealth Displays
Rocksim Software Version 8.0				1		\$99.95	n/a	\$99.95	
Evacuation Pump 1 Qt.				1		\$14.99	\$0.90	\$15.89	
Epoxy Glue Slow Set									CommonWealth Displays
Super Glue CA									CommonWealth Displays
Fiberglass Cloth									CommonWealth Displays
W.S. 32oz Fiberglass Resin #105 A						\$28.01	\$1.68	\$29.69	CommonWealth Displays
W.S. 7oz Fiberglass Hardner Slow Set #206 A						\$13.05	\$0.78	\$13.83	CommonWealth Displays
W.S. 7oz Fiberglass Hardner Extra Slow Set						\$22.48	\$2.69	\$25.17	CommonWealth Displays
W.S. Pump						\$10.04	\$0.60	\$10.64	CommonWealth Displays
Palm Sander 1/4 Sheet				1		\$22.00	\$1.32	\$23.00	Lowe's
Misc Sand Paper									
1/2 Yard Nomex Fabric				1		\$15.00	Included	\$15.00	CommonWealth Displays
Caulk tube of Clear Polyseamseal Adhesive Caulk				1		\$5.49	\$0.33	\$5.82	Hood's Do-it Center
1/4 sheet Finishing sander				1		\$21.96	add		Lowe's
Baltic Birch 6mm Plywood Sheet	Payload bay carrier plates			2		\$5.98	add		Michaels
Baltic Birch 12mm Plywood Sheet	Payload bay carrier mount stand offs			1		\$3.49	add		Michaels
35mm film and developing misc items	5 rolls as of 3-24-2007 posterboard			1		\$0.99	\$0.06	\$1.05	CVS

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Booster Section									
Aft. Center Ring 4" ID x 10" OD	Compressed Plywood 3/8" 7 ply		245 gr.		0.539	Included			CommonWealth Displays
Mid. Center Ring 38mm ID x 2.25" OD	Compressed Plywood 3/8" 7 ply		245 gr.		0.539	Included			CommonWealth Displays
Forward Centering Ring 38mm x 2 1/8" OD	Compressed Plywood 3/8" 7 ply		245 gr.		0.539	Included			CommonWealth Displays
Stainless 5/16" U-Bolts	U-Bolt ONLY		38.4gr.	2	0.169	\$2.95	add		Fastenal
Stainless 5/16" Nuts			4.85gr.	4	0.042	\$0.30	add		
Stainless 5/16" Ny-lock Nuts			4.85gr.	4	0.042	\$0.45	add		Hood's Do-it Center
Stainless Flat Washers 1 1/2" OD x 5/16" ID			13gr. Average	8	0.229	\$0.90	add		Hood's Do-it Center
Stainless 5/16" Chain Quick Links	2400 Lb. Working load		77gr	1	0.169	\$5.30	add	\$11.24	CommonWealth Displays
Main Booster Body Tube 10" x 46 13/16"	Pre Slotted - Pre Fiberglassed 4 Fin	6.0lbs.		1	6				
Fin	Compressed Plywood 3/8" 7 ply		650 gr.	4	5.726	Included			
1/2" Yellow Kevlar Nylon Shock Cord Section	Pre Sewn Looped ends		200 gr.	1	0.44	\$19.99	add		CommonWealth Displays
Shock Cord - Rubber Bungie	??Long??			1	??				
4" Engine Mount Tube - Heavy Wall Upgrade Part	Uncut-34" 480gr./Cut = ??		??	1	??	\$12.00	\$0.72	\$12.72	CommonWealth Displays
Aft Retainer and Support Ring 10" x 3 15/16"	Cardboard reinforcement for base		143 gr.	1	0.315	Included			
Launch Lug - 3/4" x 8" Copper Pipe			88 gr.	2	0.193	Had Stock			Hood's Do-it Center
Launch Lug Riser - Solid Oak 7/8"x3/4"x12"	Both Ends Tapered		?? 93 gr. ??	1	??	Had Stock			
Nomex Anti-Zipper Pad 6"x15" Custom Formed To Fit			15 gr.	1	0.033				CommonWealth Displays
Motor Retainer 98mm Flange Mount Quick Change	Aero Pack Inc.		236 gr.	1	0.519	\$63.00	\$3.78	\$66.78	CommonWealth Displays
8/32 Allen Head Retainer bolt Assm.	1" bolt, flat washer and Ny-lock Nut		5 gr.	12	0.132				

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Upper Payload Section									
Main Body Tube 10" x 33 7/8"	Pre-Fiberglassed Cardboard	4.75lbs.		1		Included			
Launch Lug 3/4" x 8" Copper Pipe	3/4" copper pipe			1		In Stock			Hood's Do-it Center
Launch Lug Riser - Approx 1" x 1" x 12"	Solid Oak			3					Michael's
Stainless 5/16" U-Bolts	U-Bolt ONLY		38.4gr.	4		\$2.95	add		Fastenal
Stainless 5/16" Nuts			4.85gr.	8		\$0.30	add		
Stainless 5/16" Ny-lock Nuts			4.85gr.	8		\$0.45	add		
Stainless Flat Washers 1 1/2" OD x 5/16" ID			13gr. Average	8		\$0.90	add		Hood's Do-it Center
Upper Bulkhead Without Machined Lip				1		Included			
Lower Bulkhead WITH Machined Lip				1		Included			
Electronics Bay 10" x 8 7/8"				1		Included			
Stainless 5/16" x 12" Threaded Rod	2 - 3' pieces cut to length - 5pc 12"			2		\$7.99	\$0.96	\$15.94	Hood's Do-it Center
Stainless 5/16" Nuts			4.85gr.	4					
Stainless 5/16" Ny-lock Nuts			4.85gr.	4		\$0.45	add		Hood's Do-it Center
Stainless Flat Washers 1 1/2" OD x 5/16" ID ????				8		\$0.90	add		
Stainless 5/16" Wing Nuts	2pk /\$1.35		8.5gr	5		\$3.38	\$0.20	\$3.58	Lowes
Stainless 5/16" Chain Quick Links	2400 Lb. Working load			2		\$5.30	add	\$11.24	CommonWealth Displays
Electronics Mounting Plate				2					Michael's
Electronics Mounting Plate Guides				4					Michael's
1/2" Yellow Kevlar Nylon Shock Cord Section	Pre Sewn Looped ends			2		\$19.99	add	\$39.98	CommonWealth Displays

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Nose Cone Section									
Nose Cone Pointed	Pre-Fiberglassed	7.4lbs		1		Included			
Bulk Head - Mounting plate	Compressed Plywood 3/8" 7 ply	3/8lb-.375lb		1		Included			
Stainless 5/16" U-Bolts	U-Bolt ONLY		38.4gr.	2		\$2.95			Fastenal
Stainless 5/16" Nuts			4.85gr.	4		\$0.30			
Stainless Flat Washers 1 1/2" OD x 5/16" ID			13gr. Average	8		\$0.90	add		
Stainless 5/16" Ny-lock Nuts				4		\$0.45			Hood's Do-it Center
Stainless 5/16" Chain Quick Links	2400 Lb. Working load			1		\$5.30	add		CommonWealth Displays
Shock Cord - Rubber Bungie									CommonWealth Displays
1/2" Yellow Kevlar Nylon Shock Cord Section	Pre Sewn Looped ends		211gr.	1		\$19.99	add		CommonWealth Displays

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Other Assembly Parts									
Parachute XXL Large 129 sq. ft	4 line - 60lb to 129.8 lb tested load	3lb 12 oz		1		\$239.00	\$14.34	\$253.34	CommonWealth Displays
Parachute Drogue 6.3 sq. ft	24" 1.0 to 2.2 lb tested load	6 oz		1		\$27.00	\$1.62	\$28.62	CommonWealth Displays
100' Tubular Kevlar 5/8" Shock Cord	Weight= 2Lb 11.4 oz. Per 100'	2lb 11.4 oz		1	2.712	\$75.00	\$4.50	\$79.50	CommonWealth Displays
20' Tubular Kevlar 1/8" Shock Cord	Weight= 28gr. Per 20' 1.4gr per ft.					\$12.00	\$0.72	\$12.72	CommonWealth Displays
Delta Quick Links For Parachutes	5/16" Stainless Steel	91 gr.		2	0.4	\$5.20	\$0.62	\$11.02	CommonWealth Displays
98/7680 Motor - Dr. Rocket RMS 98mm	Red anodized Aluminum					\$350.00		\$350.00	CommonWealth Displays
RMS 98/7680 M1600R	7085 N-sec Imp. 3762 g Prop.Wt.	6717 gr.		1	14.795	\$499.95	\$30.00	\$529.95	Wildman Rocketry
or RMS 98/7680 M2400T	7680 N-sec Imp. 3527 g Prop.Wt.	6483 gr.		1	14.279	\$499.95	\$30.00	\$529.95	Wildman Rocketry

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General Assm. Weights									
U-bolt system unit each	U-bolt, 4Washers, 2Nuts, 2LockNuts		110 gr.	8					
8/32 Allen Head Retainer bolt Assm.	1" bolt, flat washer and Ny-lock Nut		5 gr.	12					

Last Modified - April 12th 2007

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