Nike Dart
Vern Knowles
July 2002

All dimensions are in inches

Construction Notes:
1. Reinforce all air frame tubing with two wraps of 6 oz fiberglass.
2. Use three small self tapping screws to secure nose cone to body tube.
3. Recovery harness anchor strap is 1/2" wide tubular Kelvar.
4. Recovery harness is 9/16" tubular Nylon. Approximately 20 feet long.
5. 3/16" steel quick links connect recovery harness together.
6. Kevlar cloth flame shield protects the parachute.
7. Rocketman R7 parachute.
8. Missile Works RRC2 altimeter. Set to redundant apogee deployment mode.

Details of Ejection Charge Holder

- Ejection charge holder is assembled from a compression nut, brass coupler, and thin wall brass tubing. The brass tubing is soldered in place in the coupler. Two grinders are inserted and the leads pass out the back end and through a small hole in the compression nut. A small amount of clay is also used inside the coupler to seal the wire lead hole in the compression nut. Black powder is placed inside the tubing and sealed with masking tape.
- The entire assembly is then screwed into the bushing that is permanently mounted in the bulkhead.

- The ejection charge holder can be prepared and then loaded into the rocket from the forward end of the body tube by screwing it into the bushing mounted in the bulkhead.

- Ejection charge holder (See details at right.)

- Eyebolt can be removed to inspect or replace the recovery harness anchor strap if needed.

MOTOR SECTION CONSTRUCTION NOTES

1. Body tubing 2.566" ID x 13.563" Phenolic Phenolic with 2 layers 6 oz fiberglass ~ 2.7" OD.
2. Coupler tubing is Phenolic Phenolic, 7.0" long, 4" exposed, 3" epoxied into body tube.
3. Coupler tubing is reinforced internally with 2 layers 6 oz fiberglass.
4. Motor tube is 54mm ID x 17.25" Phenolic Phenolic.
5. Bulkhead is 3/16" thick plywood.
6. Centering ring is 1/8" plywood.
7. Fin can is a one-piece molded unit of Dupont Zytel. (ACME Engineering)
8. Fin can is contained within the body tube. Only the three fins protrude.
9. Motor retainer is aluminum with threaded end cap. (Aero Pack International)
10. Rail guides are plastic (Blacksky) secured with 6-32 Tee-nuts and 6-32 x 3/8" machine screws.
11. 1/4" x 2" steel U-bolt for recovery harness attachment.
12. All joints secured with West System Epoxy.

NOTE: Motor section will accommodate Aerotech 1706 NS case. (K550 or K185 motor)

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--- Altimeter access joint

--- Parachute deployment joint

Primer
Dupli-color Filler Primer
Gray Filler FP101
High-Build Formula

Undercoat
Krylon 1502 Flat White

Color Coat 1
Krylon High Gloss
1501 Glossy White

Color Coat 2
Rust-o-lem Painters Touch
1955 Fluorescent Red-Orange

Clear coat
Krylon Crystal Clear
Acrylic coating
1301 Crystal Clear

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