

NAR OFFICIAL CERTIFICATION LABORATORY

HIGH POWER ROCKET ENGINE TESTING REPORT

Manufacturer and Type: AMW K650

Effective Dates: NAR Certification: 4/1/04

Certified Total Impulse (N-Sec): 1840

Delay Times: Plugged

Propellant Type: Red Rhino

Propellant Mass (GM): 931

Casing Diameter (MM): 54

Casing Length (MM): 492

----- STATIC TEST DATA -----

Number Tested: 3

Casing Date Codes: None

Date Tested: 3/27/04

Test Temp (°c): 17

Elevation (FT): 200

Total Impulse (N-Sec): 1821.46

std. deviation: 11.04

Peak Thrust (Newtons): 751.22

std. deviation: 12.67

Burn Time (Seconds): 2.77

std. deviation: 0.06

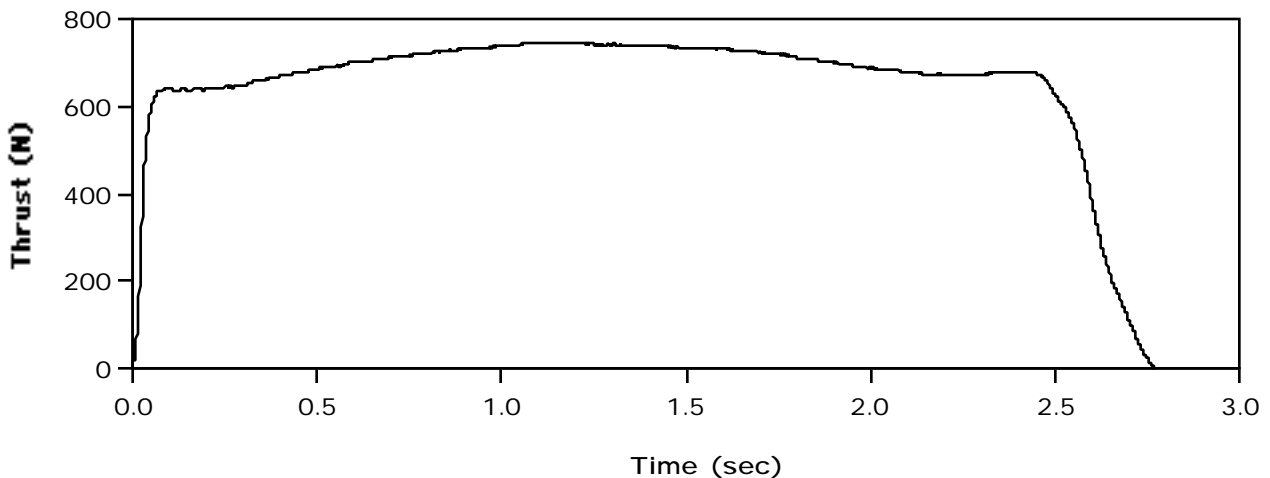
Casing Burnt Mass (GM): 876.4

Max Casing External Temp (°c): under 200

Delay Time (sec)	Plugged
Initial Mass (gm)	1808.7
Avg. Measured Delay	None

Remarks: Uses the 54-1750 motor case

Typical Thrust - Time Curve:



John Kane
NAR S&T Committee Chairman

; AMW K650 RASP.ENG file made from NAR published data
 ; File produced April 19, 2004
 ; The total impulse, peak thrust, average thrust and burn time are
 ; the same as the averaged static test data on the NAR web site in
 ; the certification file. The curve drawn with these data points is as
 ; close to the certification curve as can be with such a limited
 ; number of points (32) allowed with wRASP up to v1.6.

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K650 54 492 P .931 1.8087 AMW
0.022 308.257
0.045 566.480
0.058 620.440
0.081 639.668
0.135 639.668
0.229 643.494
0.351 662.823
0.594 701.380
0.810 724.434
0.999 743.763
1.151 751.220
1.381 747.588
1.610 736.001
1.835 709.031
2.073 685.876
2.244 674.400
2.334 682.051
2.429 685.876
2.469 666.648
2.528 597.285
2.573 481.714
2.609 358.391
2.631 250.471
2.681 146.477
2.721 65.507
2.748 23.124
2.770 0.000
  
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