



679 Armament Systems Squadron



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U.S. AIR FORCE



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Outline



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- Summary



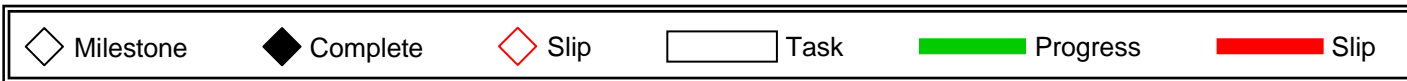
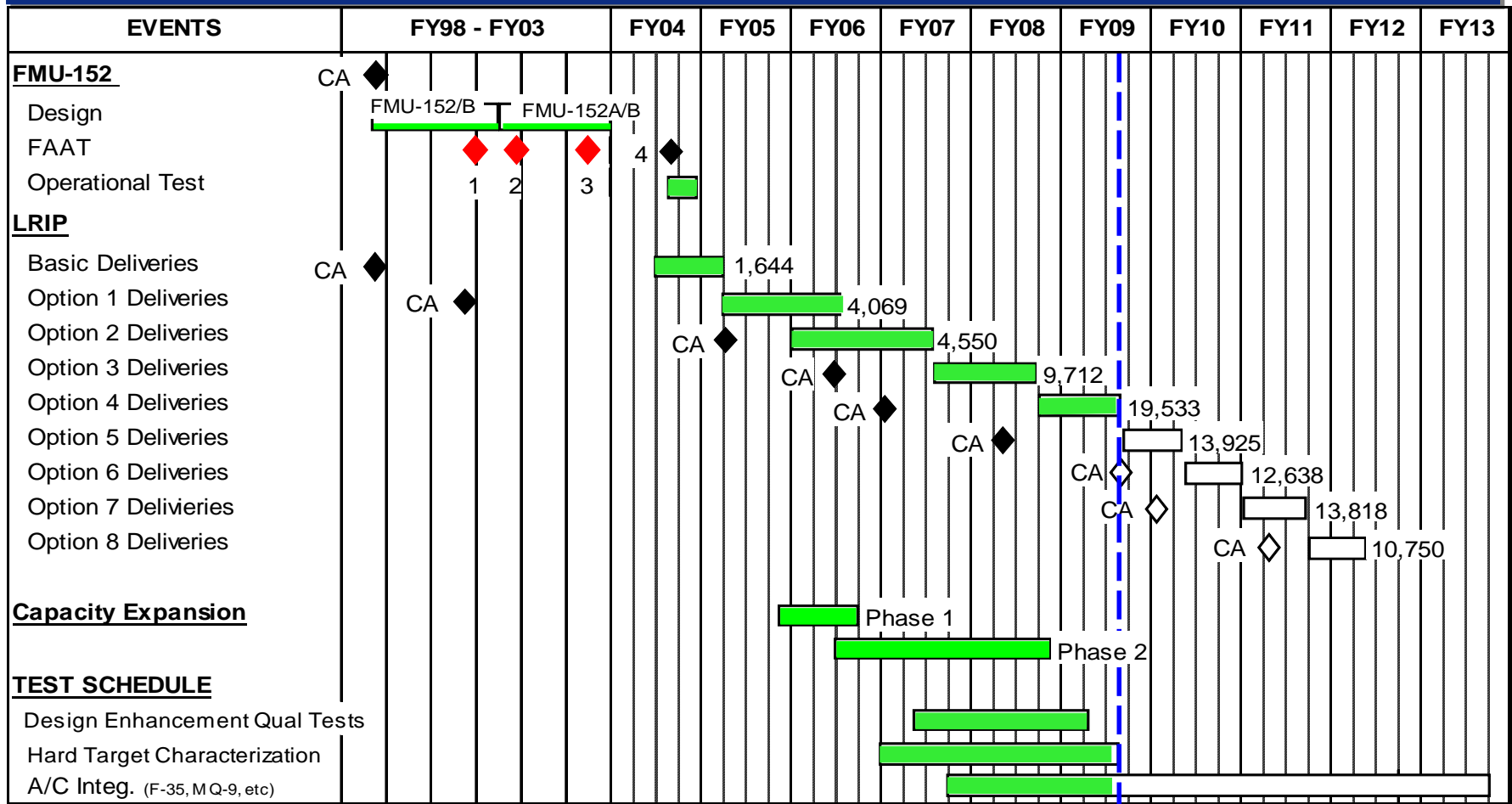
JPF System Description

- System - FMU-152A/B, FZU-55A/B, Power Cable, Closure Ring
- Requirements Based from JDAM JORD (CAF 401-91-III-A, 10 Mar 01)
- Cockpit Selectable Arm/Delay Times In-flight Retargeting (Through JDAM)
- Interchangeable with Current FMU-124, FMU-139, and Some FMU-143 Applications
- Single Tail Fuze Compatible with MK80 Series, BLU-109, BLU-110, BLU-113, BLU-121, BLU-122 and BLU-126 Warheads
- Weapons: All JDAM Variants, AGM-130 and GBU-10/12/15/16/24/27/28
- AF & Allied Nations (AF Lead)
- Built by Kaman Precision Products, Incorporated (Orlando, FL / Middletown, CT)





JPF Program Schedule





Design Enhancement Qualification Status



- Enhanced Design JPF
 - Changes Invisible to Operator
 - No Change to Way Fuze Operates
 - No Change to Nomenclature
 - No Change to Technical Orders
- Purpose of Enhancements
 - Producibility : Reduce Parts/touch Labor – Increase Production Yield
 - Testing: More Extensive Factory Test – Fewer Quality Escapes
 - Reliability: Deliver quality fuze
- Qualification of Enhancements & 2nd Production Facility
 - Completed Last Two Sled Test 24 Sep & 15 Oct
 - Two Flight Test Sorties – Dec 08 & Jan 09
 - Begin Enhanced Design Production at 2nd Facility – May 09

Continuous Improvement



Sled Test-15 Oct 08

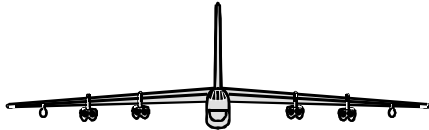




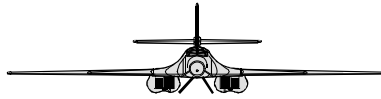
Aircraft Integration Update



ON-GOING



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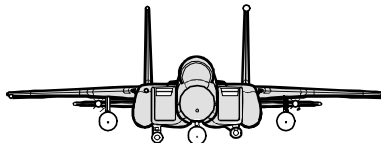
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B-2



F-16

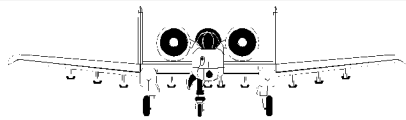


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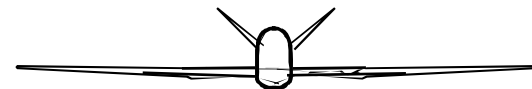


F-22A

NEW



A-10



MQ-9B

FUTURE



F-35

JPF Integration Occurs With JDAM



Initiatives

- JPF Hard Tgt Characterization – Gather JPF Survivability Data (>5K psi)
 - Phase I – Detonation Test & 2 Sled Tests (Complete)
 - Phase 2 – Eight Sled Tests (10K psi Tgts)
 - First Test Conducted Dec 07 – Successful
 - Second Test Conducted Jan 08 – Did Not Detonate
 - FA Conducted and Corrective Action Implemented
 - Third Test Conducted Jun 08 – Did Not Detonate
 - Fuze Damaged During Retrieval Limiting Ktr's Investigation; FA Inconclusive
 - Fourth Test on 4 Feb 09 – Successful
- Retractable Actuator Study
 - Testing Complete; Data Supports Increased Shock Endurance From 40kGs to 70kGs
 - Production Implementation Projected by Aug 09
- FZU-55 Pull Force Study – Excessive Pull Force Measured During LAT
 - Pursuing Coined Groove vs. Photo-Etched Groove Process
 - 78 Out of 79 Prototype Pulls Successful
 - Production Implementation Projected by Aug 09



Operational Reliability Summary



Year	Total Expenditures	Total Reported Failures	Reliability	Relevant Failures	Reliability
2005	184	13	92.9%	5	97.1%
2006	368	3	99.2%	3	99.2%
2007	3,120	70	97.8%	43	98.6%
2008	1,818	51	97.2%	25	98.5%
2009	465	13	97.2%	2	99.6%
Cum.	6,179	150	97.6%	78	98.7%

Reliability > 95% Requirement



Summary



- Production Line Steady
 - 38,000 JPF Systems Placed in the Inventory
- Operational Reliability Stable (98.7% a/o Apr 09)
- Ongoing Initiatives
 - Hard Target Characterization
 - Retractable Actuator Study
 - FZU-55 Coined Groove Design Validation
- Working Lots 6-8 Negotiation Activities