



**DoD Maintenance Symposium
Manufacturing Panel
27 October 2008**

Fleet Readiness Center Southeast

Captain Timothy S. Matthews - Commanding Officer



Mission: We provide aviation maintenance solutions that satisfy Navy Warfighters' demands.



We fix it right, so they're ready to fight!



DEMOGRAPHICS

- Largest Tenant Command on Naval Air Station Jacksonville
- Largest Industrial Employer in Northeast Florida / Southeast Georgia
- 70 Buildings on 127 Acres
 - Approximately 45,000 Pieces of Plant Equipment
 - Total Replacement Value in Excess of \$720 Million
- 2,910 Civilians and 1,016 Military
 - Augmented by over 600 Contractors
 - Average Civilian Age 51
- Approximately 120 Occupations



One of every 10 manufacturing jobs in Jacksonville is at FRCSE



WHY WE EXIST

■ FRC's are Key to Readiness

- Ready, Controlled Source of Depot Maintenance
- Minimize Equipment Out-of-Service Time
- Assure Steady Flow of Engines and Components
- In-Service and Emergency Repair On-site
- Quick Response Manufacturing Capabilities
- Capability to Repair Close to 7,000 *Different* Components
 - Routinely work less than 1/3 of these Components each year.



We are there for the Fleet, when the Fleet needs us



BUSINESS-LIKE...BUT NOT A BUSINESS

INDUSTRIAL MANAGEMENT LEADERSHIP

- **A Business Framework**
 - Revenues Cover Costs
- **A Business Perspective**
 - Focus on Quality, Costs, and Financial Results
- **A Business Culture**
 - Competitiveness
 - “Best Value”
- **But . . . A Military Mission**
 - Motivated by Customer Requirements
- **Use of State-of-the-Art Business Management Tools**
 - Critical Path Modeling
 - Project Management Methodology
 - MRP II in a Remanufacturing Environment
 - Lean Manufacturing
- **ISO 9001:2000 Standard Certification**
- **AS9100:2004 - Revision “A” Certification**
 - Aerospace Version
- **ISO 14001:2004 - Environmental Management System**

Fleet readiness, not profit!



PARTNERSHIPS...WHAT ARE THEY?

- Agreement Between Public and Private Sector
- FRCSE Provides Articles and / or Services to Industry
- FRCSE Serves As:
 - Subcontractor to
 - Prime Contractor / Original Equipment Manufacturer (OEM) on Existing Agreement
 - OEM in Support of Basic Ordering Agreement (BOA)
 - Partner With Private Industry
 - Provide Goods, Services or Facilities,
Not Subject to Contract





PBL PARTNERSHIPS

Availability & Reliability



F/A-18 E/F Unique Components
Guaranteed Fill Rate



AAS-44 Forward Looking
Infra-Red (FLIR)
90% Guaranteed Availability



F404 Engine Main Fuel Control
90% Guaranteed Availability



F404 Engine Components
85% Guaranteed Availability



EA-6B Hydraulic Components
100% Guaranteed Availability



F414 Engine Components
85% Guaranteed Availability



ALQ-142 Electronic
Countermeasures
85% Guaranteed Availability



F/A-18 Cockpit Displays, HUD, DDI
85% Guaranteed Availability



AN/ALQ-126B Electronic
Countermeasures
85% Guaranteed Availability



SECDEF PBL AWARD WINNERS



Legislative Authorities

Authority	Description
10 U.S.C. 2208(j)	Depot Sales of Articles or Services outside DoD if the purchaser is fulfilling a DoD contract.
10 U.S.C. 2474	CITE Designations and Public-Private Partnerships
10 U.S.C. 2539b	Sale of Services for testing of materials, equipment, models, computer software, etc.
10 U.S.C. 2563 <i>(Formerly 10 U.S.C. 2553)</i>	Sale of Articles or Services outside of DoD (specific conditions).
22 U.S.C. 2770	Allows <i>sales of articles and services</i> to a U.S. company for incorporation into end items to be sold to a friendly country.
FAR, Subpart 45.3	Permits provision of <i>government-furnished equipment, material and facilities</i> to contractors.
FAR, Subpart 45.4	Provides for contractor <i>use and rental of government property</i> .



Sales of Articles and Services

10 USC 2563: Articles and services of industrial facilities: sale to persons outside the Department of Defense

- Sale of articles & services by working capital fund industrial facilities not commercially available
 - Not commercially available = unavailable in required
 - Quantity,
 - Quality, or
 - Time
 - The articles or services can be substantially manufactured or performed by the industrial facility concerned with only incidental subcontracting
 - The sale of the goods and services is made on the basis that it will not interfere with performance of work by the industrial facility concerned for the Department of Defense
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10 USC 2563: (cont)

- **Methods of sales**

- Advanced incremental funding allowable
 - Payments before the commencement of work or the incurring of costs in connection with the manufacture of the articles or the performance of the services
 - Full cost, either reimbursable or fixed price
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FRCSE MANUFACTURING CAPABILITIES

The manufacturing facilities at FRCSE Jacksonville utilize state of the art equipment and techniques for producing precision parts and assemblies. Components are made to precise standards to meet the most demanding requirements. The wide range of processes provides customers with unique capabilities not typically found at one facility. The scope of our operations includes a variety of advanced methods, with exceptional process controls and production oversight.

FRCSE Jacksonville is ISO 9000/AS9100 certified and has fully embraced and implemented Lean Process Improvement principles.



Sheet Metal Fabrication

- * CNC Laser/Punch Press capability
- * Fluid Cell Press forming
- * Large capacity stretch forming
- * Large capacity flat pattern digital scanning
- * Large 8-axis CNC brake
- * Plastic forming and injection

Machine Tool Manufacturing

- * Climate controlled CNC machine shop
- * Six new 5-axis machine centers, (four large capacity)
- * High speed machining technology
- * Thirty-three foot 5-axis gantry mill capability (end of FY '09)
- * New large capacity (up to 30,000#) horizontal boring mill capacity
- * Advanced CNC turning and grinding capability up to 60-inch diameter
- * CMM measuring/inspection
- * Dedicated NC programmers

Surface Treatments

- * Large Electroplating and Corrosion Control facility
- * Large environmentally compliant component and aircraft painting facilities
- * Manual and CNC shotpeening
- * Robotic and manual powdered metal spraying processes (Plasma, HVOF and Thermal)
- * Two large cleaning facilities with chemical & mechanical cleaning processes

Additional Processes

- * Metal heat treat facilities (very large aluminum capability)
- * State of the art Non Destructive Inspection capability
- * Tool & Die, Pattern and Mold making facilities
- * In house Material Laboratory support
Established "Critical Safety Item" process
- * In house FST Engineering for F/A-18, EA-6B, P-3, E-6 and H-60. Utilize sister FRCs engineering staff on other platforms.
- * Qualified staff, process and facilities to perform First Article Testing (FAT).
- * Process engineering support staff



Industrial Manufacturing CPI

- **CPI Projects:**
 - **Manufacturing Equipment Modernization (FY03-08) - \$21.0M**
 - Installed six new CNC 5-Axis Machining Center
 - Installed new CNC Horizontal Boring Mill
 - Installed new Hydro Form Fluid Cell Press
 - Installed new Stretch Wrap Press
 - Rebuilt two W&S Lathes
 - Procuring new Spar Mill
 - Procuring new CMM
 - Procuring new CNC Lathe
 - **Heat Treat Equipment Modernization (FY07-09) - \$3.5M**
 - Installed new small vacuum furnace
 - Procuring new aluminum processing furnace (salt bath)
 - Procuring new medium vacuum furnace
 - Procuring new pit, melting pot, and tempering furnaces
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CNC Strippit Laser/Punch Press



Fluid Cell Metal Forming Press



Stretch Wrap Press



CNC Strippit 8-Axis Press Brake



CNC Monarch Spinner Lathes



CNC Hermle 5-Axis Machine Center



CNC G&L Horizontal Boring Mill



CNC Mitsui Seiki Jig Bore



CNC 5-Axis Mitsui Seiki Machining Center



CNC Hauser Jig Grinders



Coordinate Measurement Machine (CMM)



Eddy Current Tester



Ultrasonic Tester



Ion Vapor Deposit (IVD)



Electroplating Shop





Heat Treat Furnaces



Variety of Customers

- 17 orders for DLA in 2008 for \$1.3 mil
 - Manufacturing MOA signed with Boeing
 - Obtaining NADCAP Certification
 - Manufactured EA-6B Canopy Side Beams for Northrop Grumman
 - Multiple FMS customers
 - Manufacture for other Navy Depots
 - Support Airforce workload
 - Manufacturing Workload for 2008 - 154K hrs
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MANUFACTURING SUCCESS STORIES

- **Critical Workload Completed or In Process**
 - **F/A-18**
 - Y395 Former
 - Engine Mounts (L & R)
 - Nacelle Parts
 - Inner Wing Spar Segments
 - **EA-6B**
 - NLG Swivel Pins
 - ICAP-III Fixtures
 - Antenna Base Plates
 - **P-3**
 - AFB 394 Plank Components
 - Center Wing Plank Components
 - **H-60**
 - Tail Bumpers
 - RAST Fitting
 - **H-53**
 - Skins (for FRCE & FRCSW)
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F-18 L/H ENGINE MOUNT



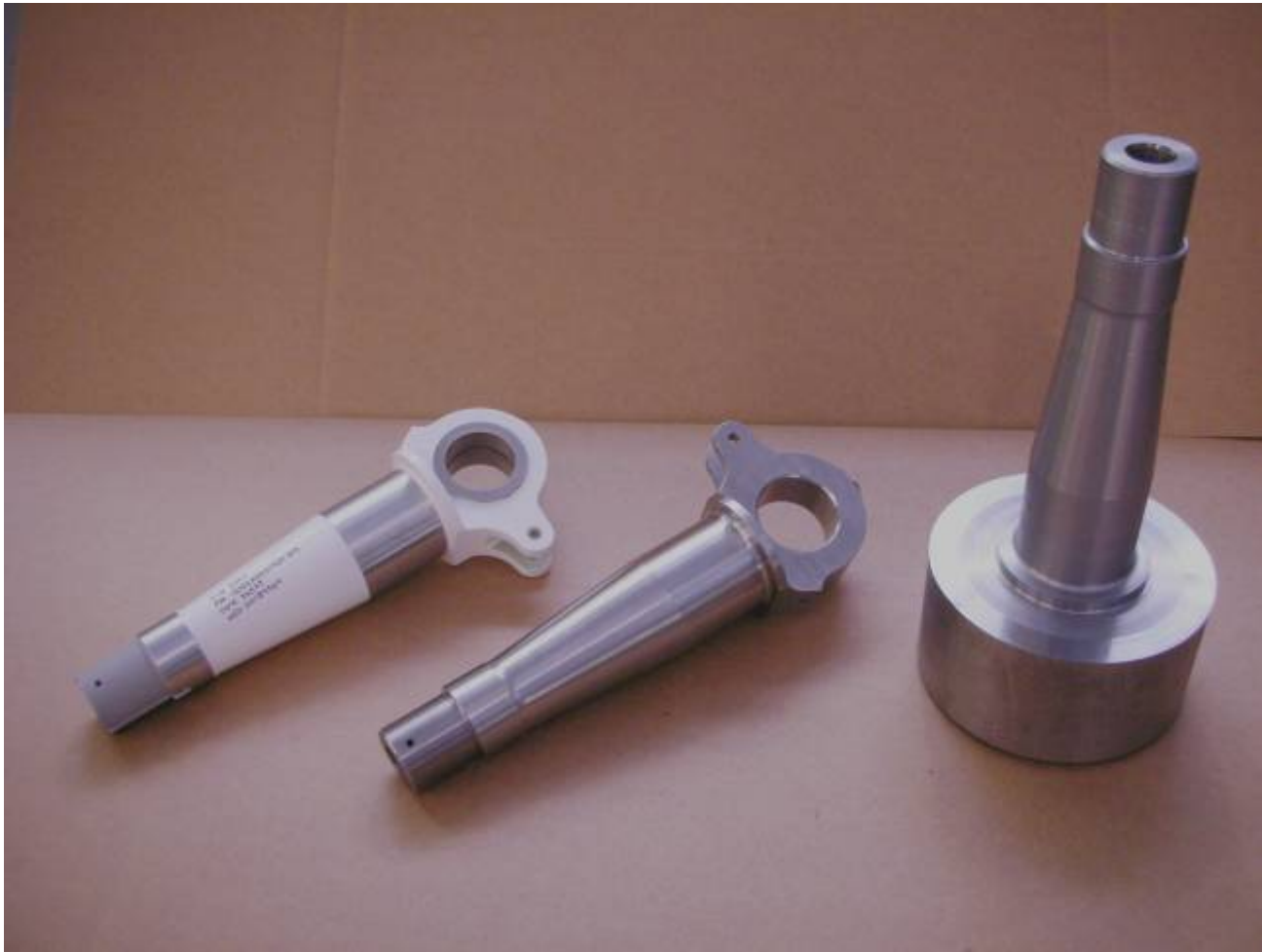


F/A-18 Y395 Former





EA-6B SWIVEL PIN





Contact Information

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BACKUP SLIDES





What Allows Us to Partner

10 USC 2464: Core Logistics Capabilities

- It is essential for the national defense that the Department of Defense maintain a core logistics capability that is Government-owned and Government-operated (including Government personnel and Government-owned and Government-operated equipment and facilities) to ensure a ready and controlled source of technical competence and resources necessary to ensure effective and timely response to a mobilization, national defense contingency situations, and other emergency requirements.
 - The Secretary of Defense shall require the performance of core logistics workloads necessary to maintain the core logistics capabilities and shall assign such facilities sufficient workload to ensure cost efficiency and technical competence in peacetime while preserving the surge capacity and reconstitution capabilities necessary to support fully the strategic and contingency plans.
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What Allows Us to Partner

10 USC 2474: CITE & Partnerships

- Service Secretaries required to designate Centers of Industrial & Technical Excellence (CITE)
 - The Secretary designating a Center of Industrial and Technical Excellence may authorize and encourage the head of the Center to enter into public-private cooperative arrangements (“public-private partnership”) to provide Private sector use of excess capacity
 - Maximize the utilization of the capacity of a Center of Industrial and Technical Excellence
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What Allows Us to Partner

10 USC 2474: CITE & Partnerships (cont)

- To reduce the cost of products of the Department of Defense produced or maintained at a Center
 - To leverage private sector investment in—
 - (i) such efforts as plant and equipment recapitalization for a Center; and
 - (ii) the promotion of the undertaking of commercial business ventures at a Center
 - Any facilities or equipment of a Center of Industrial and Technical Excellence made available to private industry may be used to perform maintenance or to produce goods in order to make more efficient and economical use of Government-owned industrial plants and encourage the creation and preservation of jobs to ensure the availability of a workforce with the necessary manufacturing and maintenance skills to meet the needs of the armed forces
 - To foster cooperation between the armed forces and private industry
 - Head of CITE has authority to enter into partnerships
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