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Letterkenny Army Depot

welcomes

National Center for Manufacturing Sciences

Commercial Technologies for Maintenance Activities

Technology Showcase Vendor Participants

ISO 9001:2008 Registered

ISO 14001:2004 Registered

OHSAS 18001:2007 Registered

VPP Star Certified

November 2-3, 2016

**COL Deacon Maddox
Commander
Letterkenny Army Depot**



U.S. ARMY COMMANDS



**U.S. Army
Forces Command**

*Organizing and
Manning*



**U.S. Army Training
and Doctrine
Command**

*Training and
Doctrine*



**U.S. Army
Materiel Command**

*Equipping and
Sustaining*

- ✓ **Prevent:** *The Army prevents conflict by maintaining credibility based on capacity, readiness and modernization.*
- ✓ **Shape:** *The Army shapes the environment by sustaining strong relationships with other Armies, building their capacity, and facilitating strategic access.*
- ✓ **Win:** *If prevention fails, the Army rapidly applies its combined arms capabilities to dominate the environment and win decisively.*



U.S. ARMY



ARMY MATERIEL COMMAND



- **MISSION:** The Army Materiel Command (AMC) develops and delivers materiel readiness solutions to ensure globally dominant land force capabilities.
 - **VISION:** Army Materiel Command sustains the current-to-future force by utilizing state-of-the-art technologies, materiel life cycle support, and integrated logistics while ensuring materiel and technological overmatch.
 - **TOP PRIORITY:** Providing the equipment and materiel that the Joint Warfighter needs to accomplish their mission.
- ✓ From **Research and Development to Contracting**; from **Munitions Support and Manufacturing** within the Army's **Organic Industrial Base**; from **Logistics Readiness Centers at Army Installations**; to **Global Distribution and Deployment and Foreign Military Sales**...AMC touches every phase of the materiel life cycle.
 - ✓ AMC, as the Army's Lead Materiel Integrator (LMI), leverages the Global Supply Chain and delivers Materiel Readiness to Joint Forces...Worldwide.
 - ✓ AMC is encouraging innovation, developing leaders, and aggressively reshaping in order to meet the challenges of Force 2025 and beyond.



**IF A SOLDIER DRIVES IT, FLIES IT, WEARS IT,
SHOOTS IT, COMMUNICATES WITH IT,
OR EATS IT...AMC PROVIDES IT.**

Sustaining the Strength of the Nation!



AMCOM OVERVIEW



- **MISSION:** AMCOM develops and delivers responsive aviation, missile and calibration materiel readiness to the United States Army in order to optimize joint warfighter capabilities at the point of need.
- **VISION:** Mission First, People Always, enabling synchronized aviation, missile and calibration materiel enterprises providing unmatched capability for the Army and the Nation.



CORE COMPETENCIES

- Acquisition Support
- Sustainment Logistics
- Organic Industrial Base
- Field / Sustainment Maintenance
- Calibration
- Security Assistance
- Supply and Maintenance Support
- Aviation Center Logistics Command (ACLC)
- Depot Level Support
- Corpus Christi Army Depot (CCAD)
- Letterkenny Army Depot (LEAD)



AMCOM presence in 11 countries, 77 CONUS and 33 OCONUS locations.



LETTERKENNY ARMY DEPOT



VISION: Letterkenny Army Depot is a data-driven, metrics-based organization that consistently delivers Best Value to its partners through an organizational culture that prizes quality, continuous improvement and innovation.

MISSION: Letterkenny Army Depot develops and delivers materiel readiness for Air Defense forces of the United States and its international partners and builds combat power for combined and joint route clearance operations worldwide.

Keys to success:

- People—develop personnel to ensure: personnel growth, motivation and cost/quality/schedule
- Cost—deliver goods and services to supported agencies at the lowest cost possible
- Quality—deliver goods and services to supported agencies IAW quality parameters established by contract and specifications
- Schedule—deliver goods and services to supported agencies on or before required delivery date
- Shape—shape the business





COMMAND PRIORITIES



AMC

- Provide Army Materiel Readiness and Support Unified Land Operations
- Provide Responsive Global Logistics, Acquisition Support, and Technology Development
- Assure the Army's Technology Advantage Through Innovative Research and Development
- Optimize the Organic Industrial Base, Global Supply Chain, and Materiel Life Cycle Support
- Sustain a Ready and Resilient Workforce and Develop Adaptive Army Leaders

AMCOM

- Unified action
- Sustainable readiness
- SHARP
- Human capital development
- Organic industrial base
- Audit readiness

LEAD

- Workplace safety - Industrial / SHARP / FP
- Shape for Future
- Industrial Mission Performance
- Continuous Process Improvement - audit ready



ARMY ORGANIC INDUSTRIAL BASE



Life Cycle Management Commands (LCMC's)


Communications-Electronics Command
 Aberdeen, MD
CECOM


Aviations and Missile Command
 Huntsville, AL
AMCOM


Tank Automotive Command
 Warren, MI
TACOM


Army Contracting Center – APG
 Aberdeen, MD
ACC-APG


Communications Electronics Research Development & Engineering Cmd
 Huntsville, AL
CERDEC


Army Contracting Center-Redstone
 Huntsville, AL
ACC-R


Aviation Missile Research Development & Engineering Cmd
 Huntsville, AL
AMRDEC



Army Contracting Center – Warren
 Warren, MI
ACC-WRN


Tank-Automotive Research Development & Engineering Cmd
 Warren, MI
TARDEC


Tobyhanna Army Depot
 Tobyhanna, PA
TYAD


Corpus Christi Army Depot
 Corpus Christi, TX
CCAD


Letterkenny Army Depot
 Chambersburg, PA
LEAD


Anniston Army Depot
 Anniston, AL
ANAD


Red River Army Depot
 Texarkana, TX
RRAD


Joint Munitions & Lethality Command
 Rock Island, IL
JMC

Pine Bluff Arsenal, AR (PBA)
Bluegrass Army Depot, KY (BGAD)
Crane Army Ammunition Activity, IN (CAAA)
Tooele Army Depot, UT (TEAD)
McAlester Army Ammunition Plant, OK (MCAAP)


Joint Manufacturing & Technology Center
 Rock Island, IL
JMTCC


Watervliet Arsenal
 Watervliet, NY
WVA

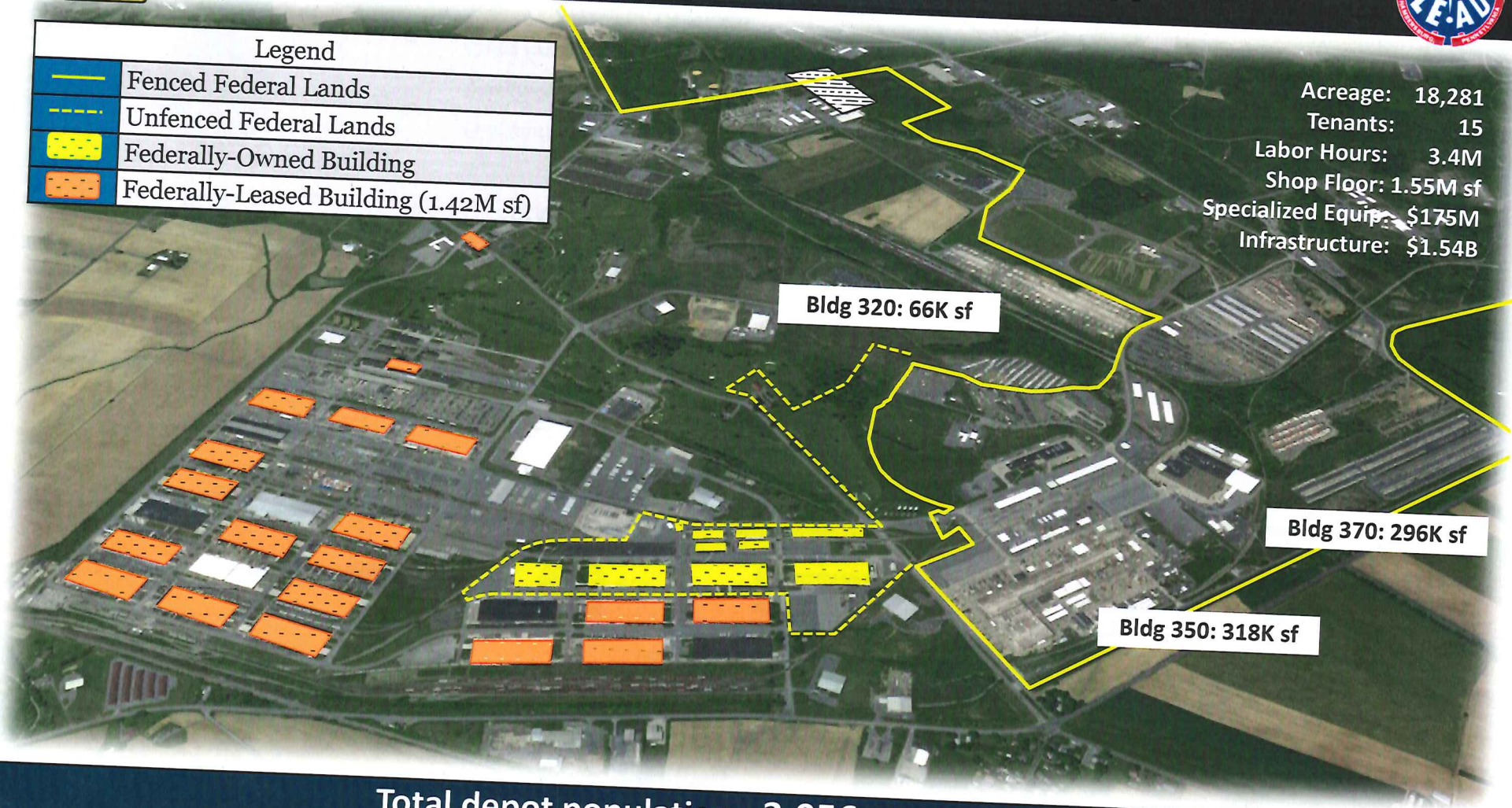


THE INDUSTRIAL COMPLEX



Legend	
	Fenced Federal Lands
	Unfenced Federal Lands
	Federally-Owned Building
	Federally-Leased Building (1.42M sf)

Acreage: 18,281
 Tenants: 15
 Labor Hours: 3.4M
 Shop Floor: 1.55M sf
 Specialized Equip: \$175M
 Infrastructure: \$1.54B

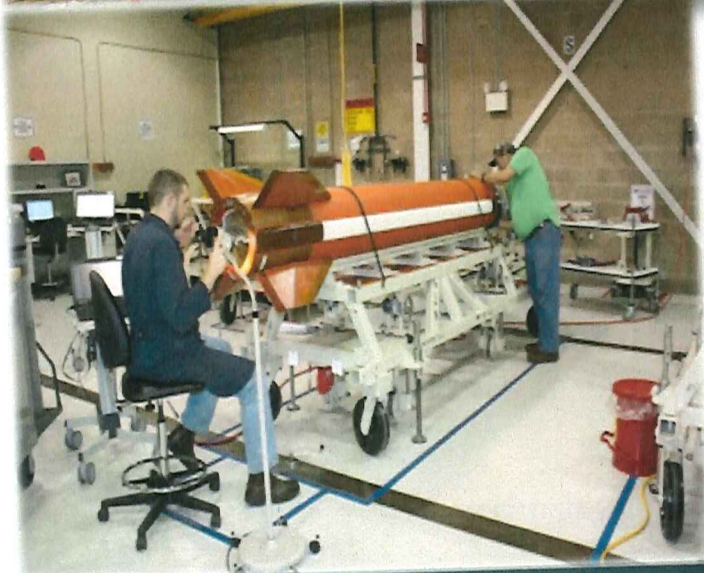
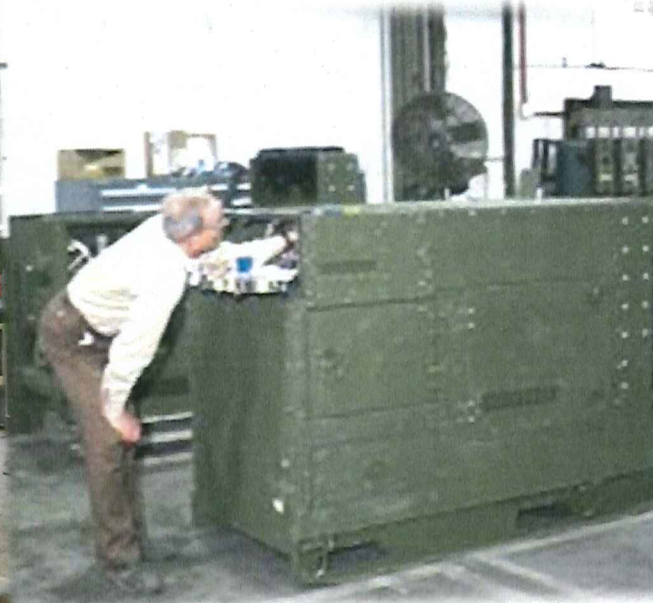


Total depot population: 3,056 as of 30 September 2016
 Depot proper: 1374 Government employees + 930 contractors/Military/PFIs = 2,304
 Tenants: 650 Government employees + 102 contractors/Military = 752
Letterkenny Army Depot and its tenants

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CENTER OF INDUSTRIAL AND TECHNICAL EXCELLENCE

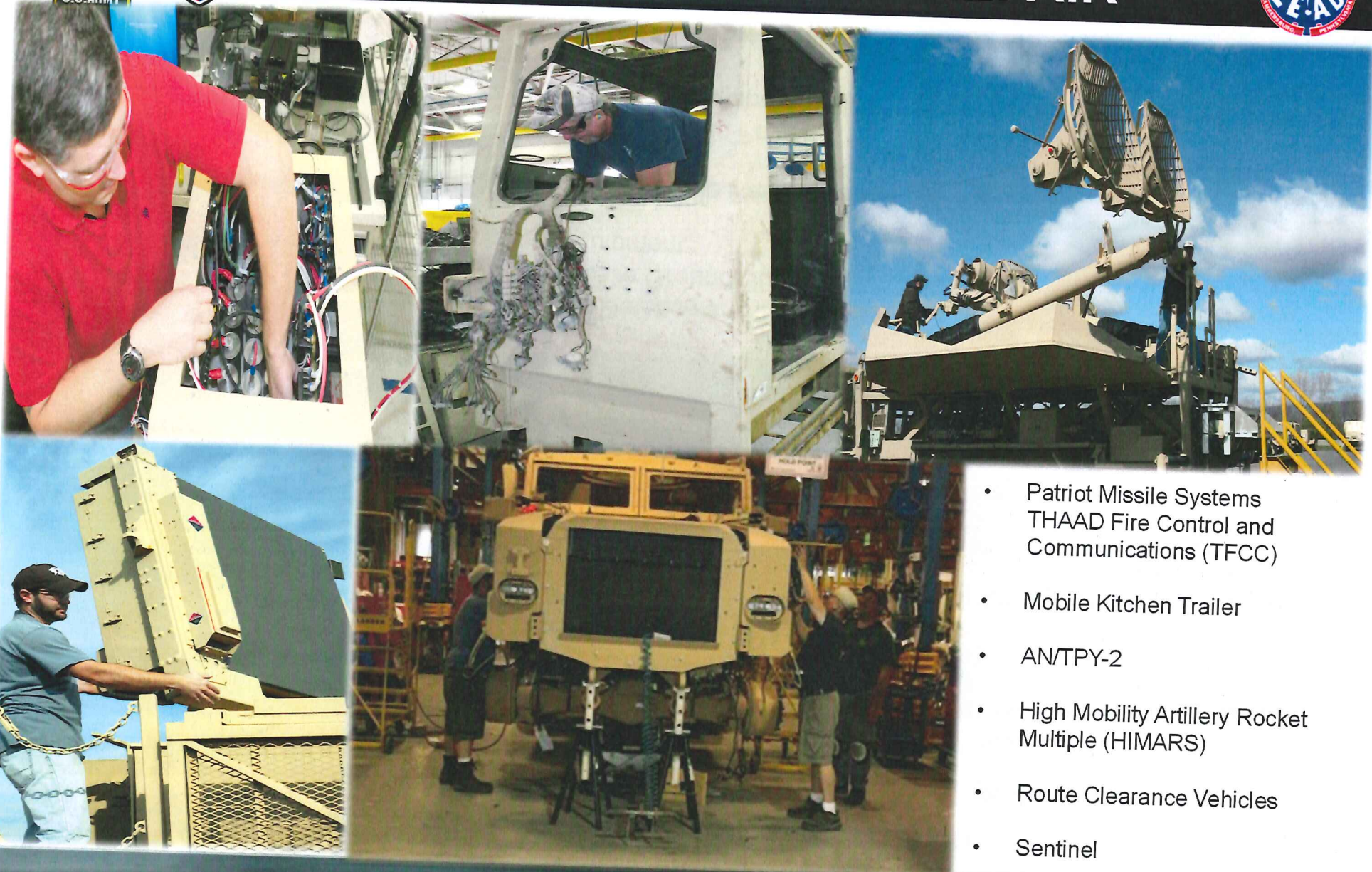


- Air Defense and Tactical Missile Ground Support Equipment
- Patriot Missile Recertification
- Mobile Electric Power Generation Equipment
- Route Clearance Vehicles (RCV)





DEPOT SOURCE OF REPAIR



- Patriot Missile Systems
THAAD Fire Control and
Communications (TFCC)
- Mobile Kitchen Trailer
- AN/TPY-2
- High Mobility Artillery Rocket
Multiple (HIMARS)
- Route Clearance Vehicles
- Sentinel

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LEAD – the Army Organic Industrial Base Missile System Readiness Partner



THE DEPOT OF CHOICE



Aviation Ground Power Units

- LEAD AGPU New Build program met shortage of assets in FY10
- 220 New Build assets scheduled from April 2012 through June 2014
- Estimated total cost avoidance with LEAD as original equipment manufacturer is \$200K-300K per asset



Cougar to JERRV Conversion

- 25 Cougar to Joint Engineering Rapid Response Vehicle conversion assets completed in 8 weeks
- Completed teardown, modification and assembly



Patch Kit

Joint MRAP Vehicle PM sent an urgent task for LEAD to produce, crate and ship 3,000 M-ATV Exhaust Patch Kits



LEAD/BAE Partnership

- LEAD provided support for 300 Panther vehicles by modifying, assembling, testing, painting and shipping assets
- 809 Special Operations Command variation MRAP and Medium Mine Protected Vehicles
- Assembled 797 MRAP doors

Force Provider

- U.S. Army Natick Soldier Systems Center funded LEAD to produce new build modules beginning in FY11
- Successful performance resulted in additional funding for 17 new build modules during FY12

Ground Mobility Vehicles

LEAD produced customized platform needs for Special Operations Command



CONTINUOUS PROCESS IMPROVEMENT



2009-2016

Lean Savings
\$166,220,485

Six Sigma Black Belt and Green Belt certifications:

- 1 Master Black Belt certification
- 1 Master Black Belt candidate
- 6 Black Belt certifications
- 5 Green Belt certifications
- 12 Lean facilitators trained in FY16

FY16-Accomplishments

- \$12.51M Lean savings
- \$7M employee-initiated savings
- 11 Rapid Improvement Events and projects
- 10 Validated Two Piece Summaries
- 1 Value Engineering project

9X Shingo Recipient

- PATRIOT '05
- HMMWV '06
- HMMWV '07
- Power Generator '07
- BIDS '08
- PATRIOT Missile Recert '08
- PATRIOT '10
- AGPU '11
- Force Provider '13

Employee Involvement



Value Added Results



Hands on Action



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Lean because it is the right way to do business!



FOREIGN MILITARY SALES



Perform repair, overhaul, modification and/or conversion of missile and/or ground support systems:

AVENGER
HAWK
MLRS
HELL FIRE
PATRIOT

TOW
BRADLEY
SENTINEL
STINGER
TOW COBRA

Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I):

- Provide worldwide logistics and field integration support
- Provide training and technical assistance
- Provide project and design services
- Desktop document publishing
- Expedite repair / returns programs
- Fabricate repairs





U.S. ARMY



HOW WE DO IT...



- LEAD has a certified Quality Management System, Environmental Management System and a Safety Management System
- LEAD implemented the most successful LMP/SAP transition in the Army and continues to make strides in utilizing the LMP tools

- LEAD's customer satisfaction is consistently at 98% or above
- LEAD's productivity rate is 1620 direct labor hours
- LEAD invested \$107M in infrastructure over the past four years
- LEAD is the only Army depot that can control shipping and receiving needs



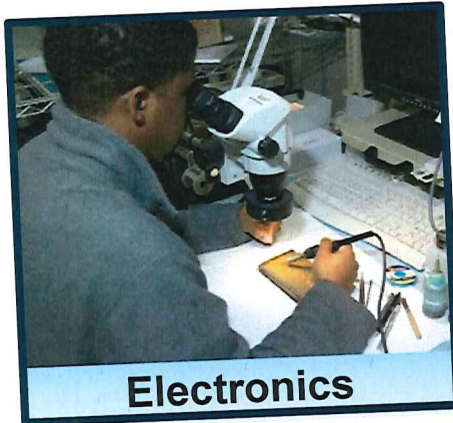
EXCELLENCE IN SAFETY

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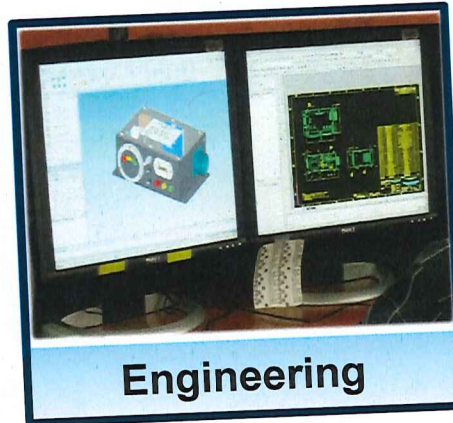
LEAD – the Army Organic Industrial Base Missile System Readiness Partner



CAPABILITIES OVERVIEW



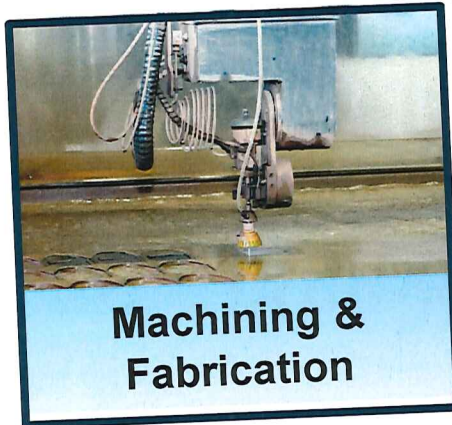
Electronics



Engineering



**Ground Support
Maintenance**



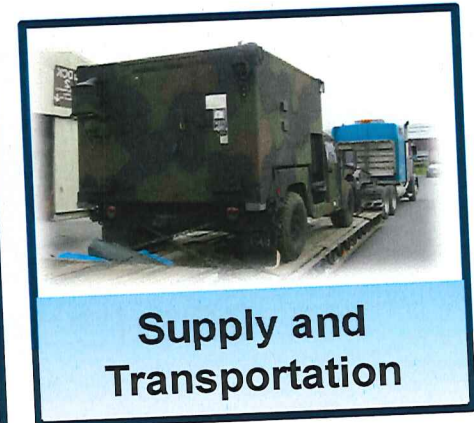
**Machining &
Fabrication**



Welding



Material Prep



**Supply and
Transportation**



PRODUCTION/PROCESS AREAS



1.55M square feet
overhaul / process / assembly work areas

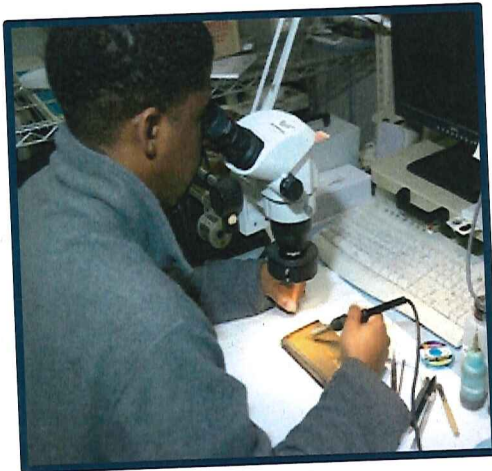


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CAPABILITIES



ELECTRONICS



- 296,161 square foot electronic and missile system maintenance and equipment facility
- Current primary emphasis:
 - PATRIOT end items
 - Avenger
 - TOW
 - Army missile systems components to include Javelin, Hellfire, MLRS, and HIMARS
 - HAWK secondary items

Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I):

- Analog/digital electronics
- Antenna Mast Group (AMG)
- Engagement Control Station (ECS)
- Information Coordination Central (ICC)
- Launching station
- Communications Relay Group (CRG)
- Circuit cards
- Cables and harness





RADAR TEST SITES



- One of three sites in the world with the capability to map the Patriot radar
- 28-acre test site

- **Patriot Test Site:**
 - Patriot radar and Antenna Mast Group (AMG) systems tested
 - Includes a pattern range for radar performance testing
 - 1,350 square foot, 24-foot high thermal chamber to simulate temperature extremes
- **HAWK Test Site:** Designated free space radiate zone used to test the HAWK Missile System and Counterfire Target Acquisition (CTA) and tracking system
 - System Integration Check Out (SICO)
 - Live target tracking
 - Systems alignment and bore sighting
 - 152,00 square foot facility





DE-CANNING/MISSILE CERTIFICATION



- 40,000 sq. ft. dedicated Lightner Missile Complex
- Missile disassembly and assembly / missile safety test
- Missile de-canning and canning
- Explosive handling / pressure testing
- PMITS test
- Quality
- De-canning RAM system (DRS)
- PIMITS test station
- 5-ton overhead cranes / forklifts
- Lightning warning and protection
- Explosive weight: 2,000 lbs.

- Complete Patriot and HAWK storage, disassembly testing and recertification
- Inert storage: 20,000 sq. ft.
- Classified storage: 3,000 sq. ft.
- Foreign Military Sales new build for Patriot
- Primary skills
 - Program management
 - Logistics
 - Electronic equipment specialists
 - Certified electronic technicians
 - Supply / material handlers
 - Quality and quality assurance
 - QASAS





CIRCUIT CARD TESTING AND REPAIR

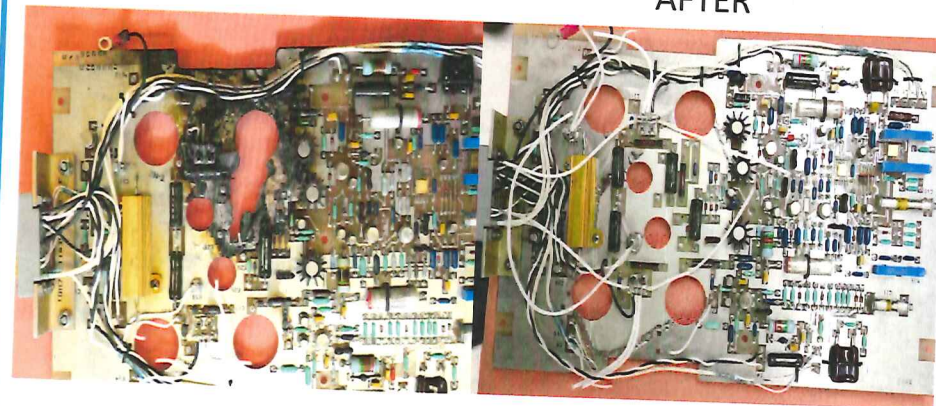


- Inspect
- Disassemble
- Microblast
- Clean
- Repair
- Surface Mount

- J-STD-001 soldering and micro miniature soldering performed
- Power zoom stereo-microscope
- General Electric Test Set (GETS) consoles provide state-of-the-art technology in diagnostic circuit card testing
- Process, repair, and/or reconstruct circuit boards with up to 9 layers per side

BEFORE

AFTER



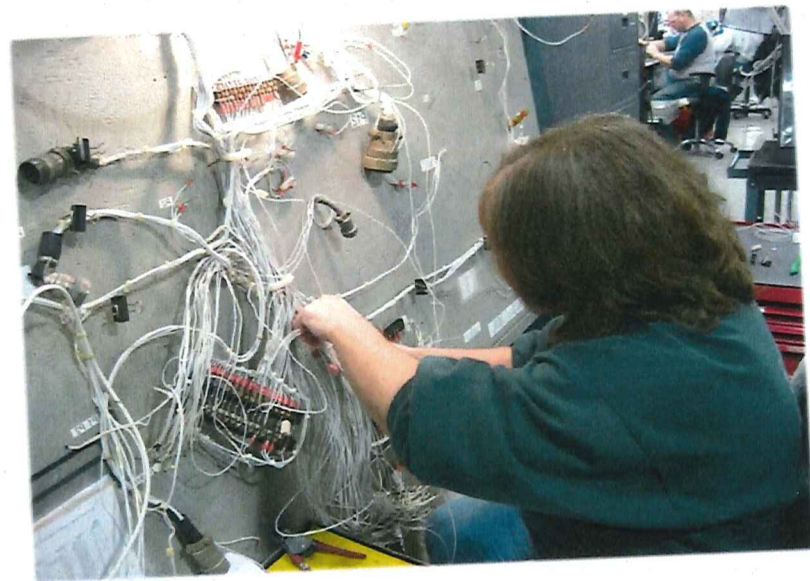


CABLE HARNESS FABRICATION/REPAIR



- Full service wire harness repair and fabrication on assemblies ranging from small jumpers to multi-branched assemblies
- Thermal shrink and laser etch marking manufacturing
- Harness layout process
- Reel-to-reel spooling for fiber optic and copper cables
- Assembly of connectors, pins and hardware

- T-Foca fiber optic termination and testing
- DIT-MCO testing to include high voltage
- Environmental thermal shock testing up to 210c
- Final mechanical installation, testing and inspection
- Splicing, assembly and attachment of connectors
- Transmission efficiency testing
- IPC 620 and J-STD-001 certified technicians





GROUND SUPPORT MAINTENANCE



- Refurbishment and maintenance involving a variety of Route Clearance Vehicles (RCVs), HMMWVs, shelters, trailers, material handling equipment, and PATRIOT support equipment, etc.
- Production area capabilities:
 - Large high bay area equipped with 60- and 30-ton overhead cranes
 - Low bay area is supported by smaller capacity cranes and a myriad of material handling equipment
- From 2006 through 2010, LEAD performed maintenance on approximately 4,100 HMMWVs for TACOM and an additional 500 for SOCOM and other customers

- Lower Tier Project Office (LTPO) Recap 5-Ton Trucks
- RG31 Home Station Training
- RG33 Conversion-MMPV Panther
- Component Reclamation-RG33 Conversion
- Joint EOD Rapid Response Vehicle (JERRV)
- USMC Buffalo, Joint Services, proof of principle
- Weld repair and fabrication support
- Heavy armor weld and battle damage repair
- Electronics systems integration



PATRIOT support equipment



RG31



Cougar



Panther



JERRV



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WHEELED VEHICLE SUPPORT TEST TRACK



- One-mile test track
- 9,000 square foot tire and wheel alignment shop
- Water fording capabilities
- Crane testing area

CAPABILITIES



MACHINING AND FABRICATION



- Laser cutting: up to 1.25" thick sheet plate, and a .50" thickness for aluminum and stainless steel; maximum size of 13'x10'
- Water jet machines cut up to 8" thick material (not limited to steel, aluminum, wood, rubber, armor, glass and composites)
- Pre-heat armor and titanium to aid in preventing cracking in the forming process
- Electrical discharge machining--produce dies, jigs and fixtures
- Tubing and hosing--reversed engineer technology; round/square stocks
- Upholstery--sound/water proofing; crew seats/covers; drapes/curtains; straps; vehicle storage solutions
- Box Shop--custom-built containers, crates, skids, hutman's

- 50,000 square foot production area
- Rapid Machining Cell: Intuitive programmable machining allows fast turnaround time from engineering concept to end product
- Lathe/Turning Center-- Mazak 9 Axis Integrex
 - Combination reduces set-up time
 - Antenna positioned: simultaneously machines 5 axes
- Milling machines--
 - Ingersoll 6 Axis Bridge Mill (10'x40' table; '1 to infinity' lot size)
 - Ingersoll Gantry Mill (20'x8' table; 2 heads/5 axis; 16,000 RPM spindle speed)
 - Haas CNC router vacuum table (magnet clamping/quick change over and full sheet milling)

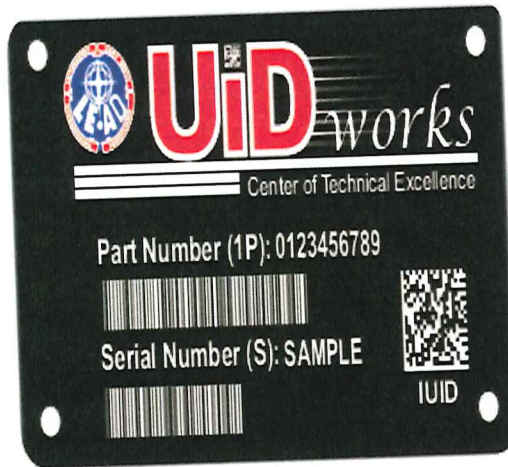




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UNIQUE ITEM IDENTIFICATION DATA FABRICATION PLATES AND SCHEDEMICS



Saves taxpayer dollars through increased productivity and efficiency:

- Improved item visibility for operational planning
- Lowers total life-cycle costs of items acquired and manages item visibility
- Supplies item data needed for top-level logistics and engineering analysis
- Facilitates issuance of a clean audit opinion as required by the 1990 Chief Financial Officers' Act by providing an accurate data source for determining value and accountability of property and equipment
- Improves access to historical item data across the life cycle from system design to disposal

- Metal photo aluminum plates or Tesa labels
- Dimensions: from 1" x 1" to 20" x 24"
- Thickness: from .005" to .125"
- Template: standard or custom
- Color schemes: traditional black on silver, silver on black, special rub-on dyes, such as gold, red and orange
- Adhesive backing: 3M or CARC compatible
- IUID data submitted to Registry
- Marking of tangible items or assets as mandated by DFARS and MIL-STD-130



CAPABILITIES



WELDING



- 15,000 square foot production area
- Operations range from small component repair, production workload to full asset modifications and repair

- Titanium Welding / ROBOTIC Weld Cell
- BLU-CO Tables (Quick Set-up)
- Carbon/Air Arc Gas Welding
- Aluminum, Stud, and Fusion Welding (Gas or Flux)
- Tungsten Inert Gas (TIG), Gas Mechanical Inert Gas (MIG)
- Manual Metal Arc (Stick)
- Spot Welding 100,000 watts
- Stainless Steel



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CAPABILITIES: MACHINING AND FABRICATION



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MATERIAL PREP/FINISH



- Paint operations in five buildings located in close proximity to product lines
- Complimented by state-of-the-art VOC control technology to ensure environmental compliance
- Two parallel processing lines supported by sub-floor pits for: Cleaning, lubrication, paint preparation, corrosion prevention application, undercarriage painting, application of base/final/pattern paint, drying, stenciling, and end item preservation for storage/issue

- Seven drive-in paint lines with various paint capabilities specializing in CARC paints
- Large drive-in wash rack facility with two wash racks
- Four metal pre-treat systems
- Three paint line systems
- Five drive-thru paint and abrasive blast cleaning booths
- Three small parts coating/drying carousels



CAPABILITIES



ENGINEERING



VALUE ENGINEERING

BEST VALUE

- Institutional knowledge of DOD armament systems
- Instinctive ability to maximize weapon system sustainment

EXPERT SERVICE

- Experts in the field of service life enhancement
- Restore worn components to like-new condition
- Fraction of the cost of new acquisition

PROBLEM SOLVING

- Simplify customers' logistical problems
- Respond to part non-availability
- Reverse engineering and fabrication services



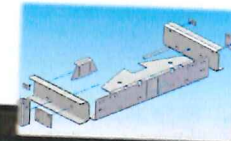
PATRIOT Coupling
Acquisition Cost: \$13,909
Repair Cost: \$85



MLRS Actuator Screw
Acquisition Cost: \$5,773
Repair Cost: \$92

REVERSE ENGINEERING

- Flat bed scanner checks pattern quality and reverse engineer parts
- FARO arm (with laser attachment scanner)
 - 8' measuring capability
 - Tolerance +/- .002





SYSTEMS-BASED APPROACH



- Metal Pretreatment, Plating & Painting
- Sheet Metal Fabrication Capabilities
- Missile Maintenance
- Generator Overhaul
- Wire Harness Fabrication
- Motor Rebuilding

- Electronic System Integration
- Machine shop
- Circuit Card Repair
- Hydraulics
- Diagnostic Testing
- Automotive Recap

Aviation & Missile Command



Tank Automotive Command



Communications Electronics Command



Special Operations Command





RECAP PLAN



Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I):

The Phased Array Tracking Radar Intercept of Target (PATRIOT) Recap program brings the ground support system to near zero hours/miles and applies the PAC-3 modernization program upgrades.

LEAD is DOD's *only organic solution* for one-stop service for tactical missile maintenance, modification and integration. LEAD possesses all the specialized capabilities that support *Total* weapon system maintenance including:

- manufacturing
- storage
- certification
- GSE rebuild
- CONUS and OCONUS support
- final demilitarization



4 Radars



32 Launchers



4 Engagement Control Stations



3 Communication Relay Groups



1 Information Control Central



8 Antenna Mast Groups

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Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I): PATRIOT



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PATRIOT MAJOR END ITEMS



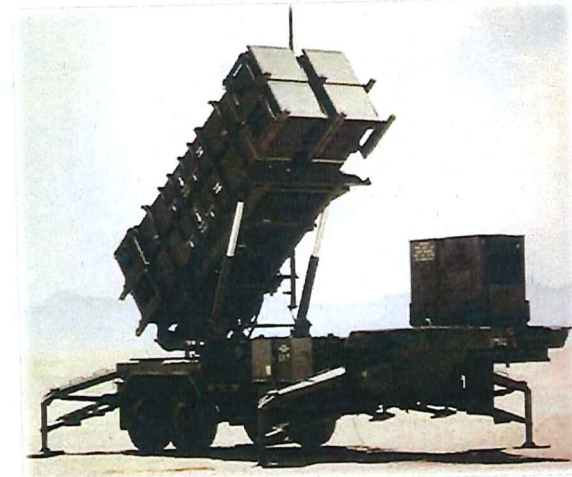
PATRIOT RADAR SHELTER

- Complete disassembly of all electrical and mechanical sub-assemblies
- All sub-assemblies are tested down to the lowest possible level in accordance with Depot Maintenance Work Requirements (DMWRs)
- Final test for System Integration Checkout (SICO) using factory test equipment



PATRIOT LAUNCHER

- Complete recap of launcher system
- Complete disassembly
- Corrosion removal and sand blast parts
- Parts are re-plated and exterior parts coated with Chemical Agent Resistant Coating (CARC) paint
- Reassemble and install all new hardware
- Complete testing





PATRIOT MAJOR END ITEMS



PATRIOT RADAR ANTENNA

- Each phased array radar antenna element is removed
- All elements radio frequency tested individually on the General Purpose Electronic Test Station (GETS-1000)
- Antenna interior/exterior panels disassembled
- Radio frequency retainer/shield replaced
- Motors/actuators rebuilt
- Coaxial/triaxial cables replaced



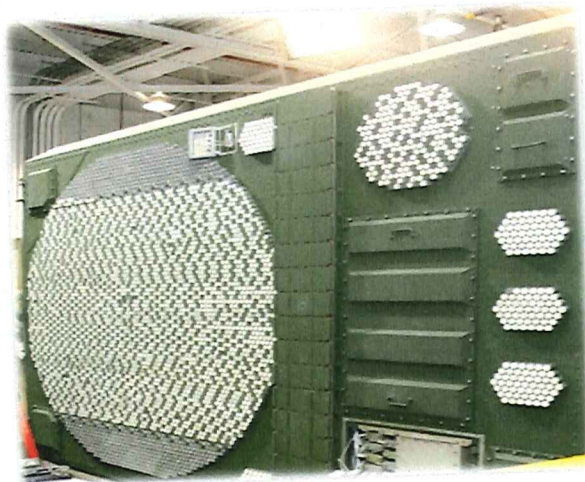
PATRIOT ANTENNA MAST GROUP (AMG) PLATFORM

- Complete recap of AMG Assembly
- Complete disassembly
- Corrosion removal and sand blast parts
- Reassemble and install all new hardware
- Paint
- Complete integration and testing





PATRIOT MAJOR END ITEMS

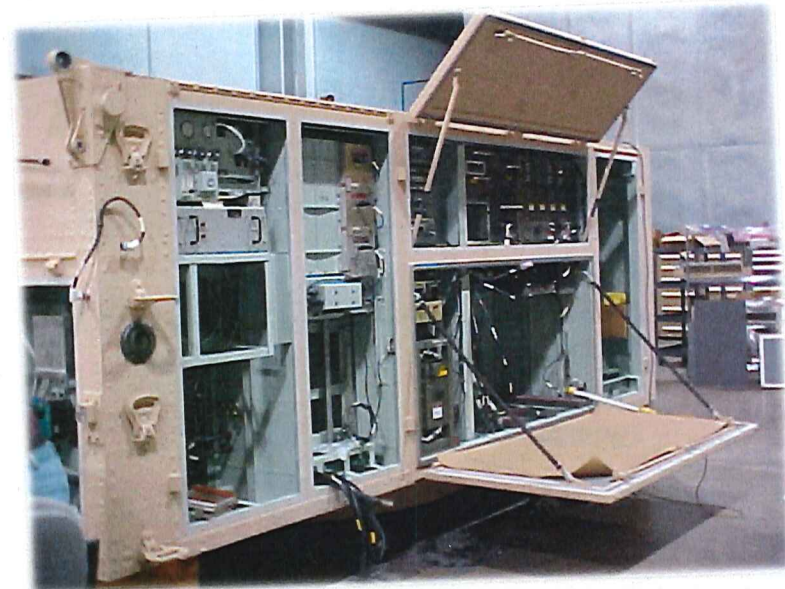


All PATRIOT major end items to include assemblies, sub-assemblies and major parts are:

- Disassembled: to bare frame and/or empty shelter level, stripped of paint, re-plated, painted, and stenciled
- Recapitalized: implementing 100% replacement of high-wear, low-reliability items during reassembly
- Improved: installing configuration updates IAW technical manuals/depot maintenance work requirements
- Tested: radar tested to factory performance specifications on a 28-acre radar test site and system integrated system check-out
- Quality checked: at various steps in the assembly process by certified quality control inspectors

Additional work specifics:

- Chassis: disassembled to lowest level and restored to a like-new condition, implementing 100% replacement list' items
- Circuit cards: cleaned, 100% visual inspection, and mandatory engineering changes
- Wiring harnesses: replaced and/or refurbished according to the Statement of Work
- Parts are fabricated on site that are not available for purchase





TUBE-LAUNCHED, OPTICALLY-TRACKED, WIRE-GUIDED (TOW) MISSILE



Traversing Unit & Launch Tube

- Depot Maintenance Overhaul
- System Rebuild/Modification
- Fielding Support
- Technical Training



Bradley TOW 2 Support Equipment



Optical Sight



Missile Guidance Set



Missile Guidance Set (MGS)



TOW Missile Launchers



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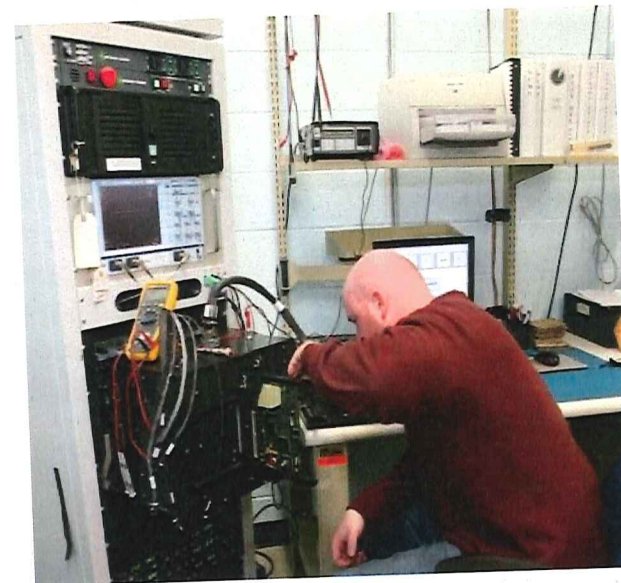


JAVELIN SYSTEM SUPPORT



Capabilities include repair of field tactical trainers and basic skills trainers

- Board Test Set – Troubleshoot and repair of Optical Interface (OIF) and FLIR circuit cards
- System Test Set – Troubleshoot and repair of Javelin Command Launch Units
- Depot Maintenance Overhaul - System Rebuild/Modification - Fielding Support – Technical Training





AVENGER REPAIR



Since 1992, LEAD provided Avenger depot-level maintenance and total fleet maintenance to National Guard Bureau, Marine Corps, and Foreign Military customers.

Complete overhaul of unserviceable assets:

- Generation I and Generation II FLIRS
- AFOCALs (limited repair)
- Laser Range Finders
- Gunner's Console
- Avenger Video Tracker
- Remote Control Units
- Gunner's Hand Station
- Optical Display Unit (ODU)
- ODU Electronics Control Box
- FLIR Display Monitors
- Environmental Control Unit (ECU)
- PPU, ECU and PPU Control Boxes and Relay Box
- Cables/Harnesses

Additional Avenger capabilities:

- Test and repair Shop Replaceable Units (SRUs)
- Extensive Fabrication
- Modification and upgrades
- Extensive repairs to the Turret (composite repair)
- HMMWV complete overhaul from the frame up (zero hours and zero miles)
- In-country SICO of major items by experienced Letterkenny Avenger and truck technicians

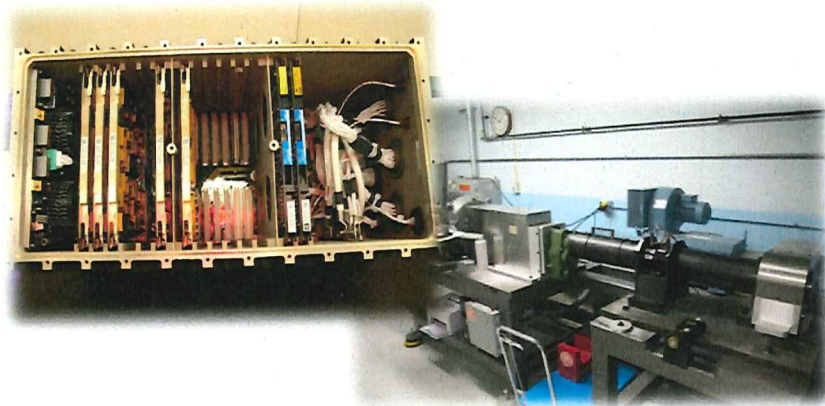




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HIGH MOBILITY ARTILLERY ROCKET SYSTEM (HIMARS)



HIMARS Component Repairs:

- Hydraulic Reservoir
- Power Switching Unit
- W19 Circuit Card Assembly
- W20 Circuit Card Assembly
- Ethernet Hub circuit Card Assembly
- Universal Ethernet Hub Circuit Card Assembly
- WPUD Circuit Card Assembly

HIMARS Component Repairs *(continued)*:

- Boom Extension Actuator
- Pump Drive Gearbox
- Boom Extension Gearbox
- Travel Lock Actuator
- Hydraulic Pump
- Boom Motor
- Hoist Motor





SENTINEL RADAR SYSTEM



BASIC SENTINEL RADAR SYSTEM AN/MPQ-64

- Basic Sentinel Radar System consists of a HMMWV and trailer-mounted, radar-based, antenna transceiver group
- LEAD performs complete system overhaul (Antenna Transceiver Group and HMMWV Group) less the antenna



IMPROVED SENTINEL RADAR SYSTEM

- Improved Sentinel radar system consists of a M1083 Family of Medium Tactical Vehicles (FMTV) truck and a M1082 Light Tactical Vehicle (LMTV) trailer-mounted, radar-based, antenna transceiver group
- LEAD helped develop the FMTV prototype for productivity
- LEAD facilitated to establish test and repair capabilities for Sentinel A1 and A3 radars



**Sentinel M1082
LMTV Trailer**



**Sentinel M1083
FMTV Truck**



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ROUTE CLEARANCE VEHICLES



Panther



Cougar



Buffalo



Husky



RG31



JERRV





GROUND MOBILITY VEHICLE (GMV)



← Before

→ After



← Before

→ After





GROUND MOBILITY VEHICLE



- The GMV has a cruising range of 275 miles for operations behind enemy lines with only occasional resupply.
- GMVs feature an open rear, where an enclosed cabin would normally be.
- This flat bed area is used to store all the fuel, ammunition, rations and other supplies that the mission requires.

Improvements over the HMMWV include:

- Heavier suspension
- More rugged tires
- Improved ground clearance
- More powerful engine
- Open bed for improved storage and access
- Winch for towing other vehicles (up to 4,200 pounds)
- GPS navigation
- Custom Armor package
- Track-nut design to customize trucks to meet mission requirements





MATERIAL HANDLING EQUIPMENT



**6K Rough Terrain
Variable Reach forklift**



**10K All Terrain Army Lifting System
(ATLAS) Forklift**



4K All Terrain Army Lifting System (ATLAS) Forklift



CONSTRUCTION EQUIPMENT



5 cubic yard scoop loader

LEAD is the National Guard Bureau's "Depot of Choice"

7.5 Ton Cranes





SHELTER MAINTENANCE AND REPAIR



Shadow Shelters



250 and 280 Shelters



- Depot Maintenance Overhaul
- System Rebuild/Modification
- Fielding Support
- Technical Training

- Receive used, worn and damaged shelters and return them to 'code A' condition
- Value Stream Analysis studies reduced cost, streamlined production methods, and shortened turnaround time to field these vital assets to the Soldier as quickly as possible and at a minimal cost



PATRIOT Shelters



BIDS Shelters



U.S. ARMY



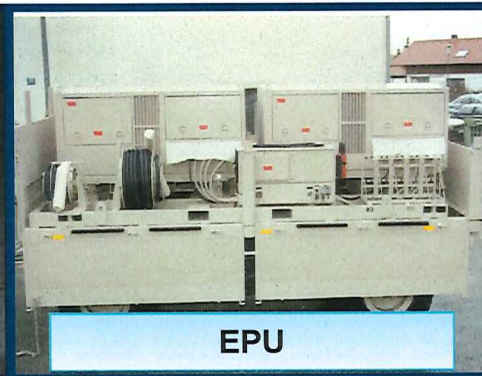
POWER GENERATOR RESET



2 thru 60KW skid



5 thru 150KW
Power Units



EPU



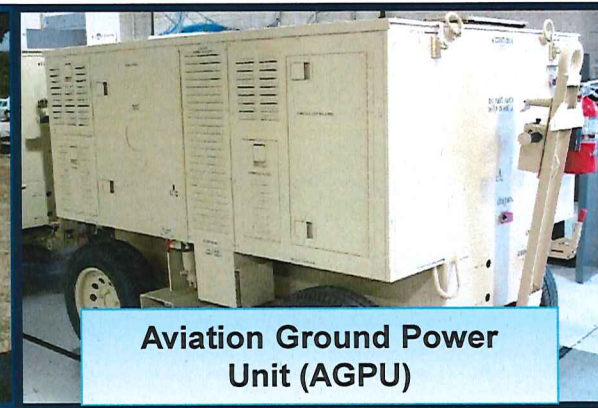
EPP III



840KW DPGDS



Generic Air Nitrogen
Generator (GANG)



Aviation Ground Power
Unit (AGPU)



AVIATION GROUND POWER UNIT



Service Life Extension Program (SLEP) and Reset Program

- Complete overhaul and RESET to Code A
- Direct support and general support to OCONUS and CONUS locations
- Final handoff inspections at a designated unit location
- New equipment training
- Complete testing of all assemblies and assets per MRO



- Letterkenny is the AGPU Reset "Gold Site"
- All CONUS AGPUs are reset at LEAD



AGPU



AGPU New Build Program - OEM

- First OEM to build new units since 1983
- Production line runs parallel to RESET line
- Combined effort with Program Manager, LEAD's Engineering and Fabrication Divisions
- LEAD manufactures more than 400 mechanical parts to include frame, outer shell and interior sub-components





TACTICAL QUIET GENERATORS



- The generators that LEAD resets include 54 variants of skid and trailer mounted, and are shipped "Condition Code A."
- Product line: 3kw, 5kw, 10kw, 15 kw, 30kw, 60kw, 100kw, 150kw, 200kw, 420kw

- Rugged and reliable military electrical power generating source
- Easily transportable by trailer
- Operates under extreme environmental conditions





SOLDIER SUPPORT EQUIPMENT



LEAD prototyped the mobile kitchen and developed National Maintenance Work Requirement criteria



- New build
- Reset
- Shower refurbishing and fielding
- Mobile kitchen new build
- Containerized kitchens





LETTERKENNY ARMY DEPOT



Letterkenny Army Depot is a data-driven, metrics-based organization that consistently delivers Best Value to its partners through an organizational culture that prizes quality, continuous improvement and innovation.