1106th TASMG

(Theater Aviation Sustainment Maintenance Group)

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1106TH Fulltime Supervisor

and

M-Day Director Aviation & Safety

Agenda

- Introductions
- 1106th TASMG Overview Presentation
- California Army Aviation Program Overview and Highlights

Missions and Vision

Deployments
2004-05 OIF & OEF
2009-10
OIF/OEF/OND
2013 OEF
OEF/? 2016-17

Pre-Mobilization: Perform fulltime intermediate and depot level maintenance in support of Army National Guard aircraft.

Mobilization: Act as Army Materiel Command aviation maintenance depot. Provide theater level maintenance for deployed aviation forces: Europe, Southwest Asia, Southeast Asia, Central/South America.

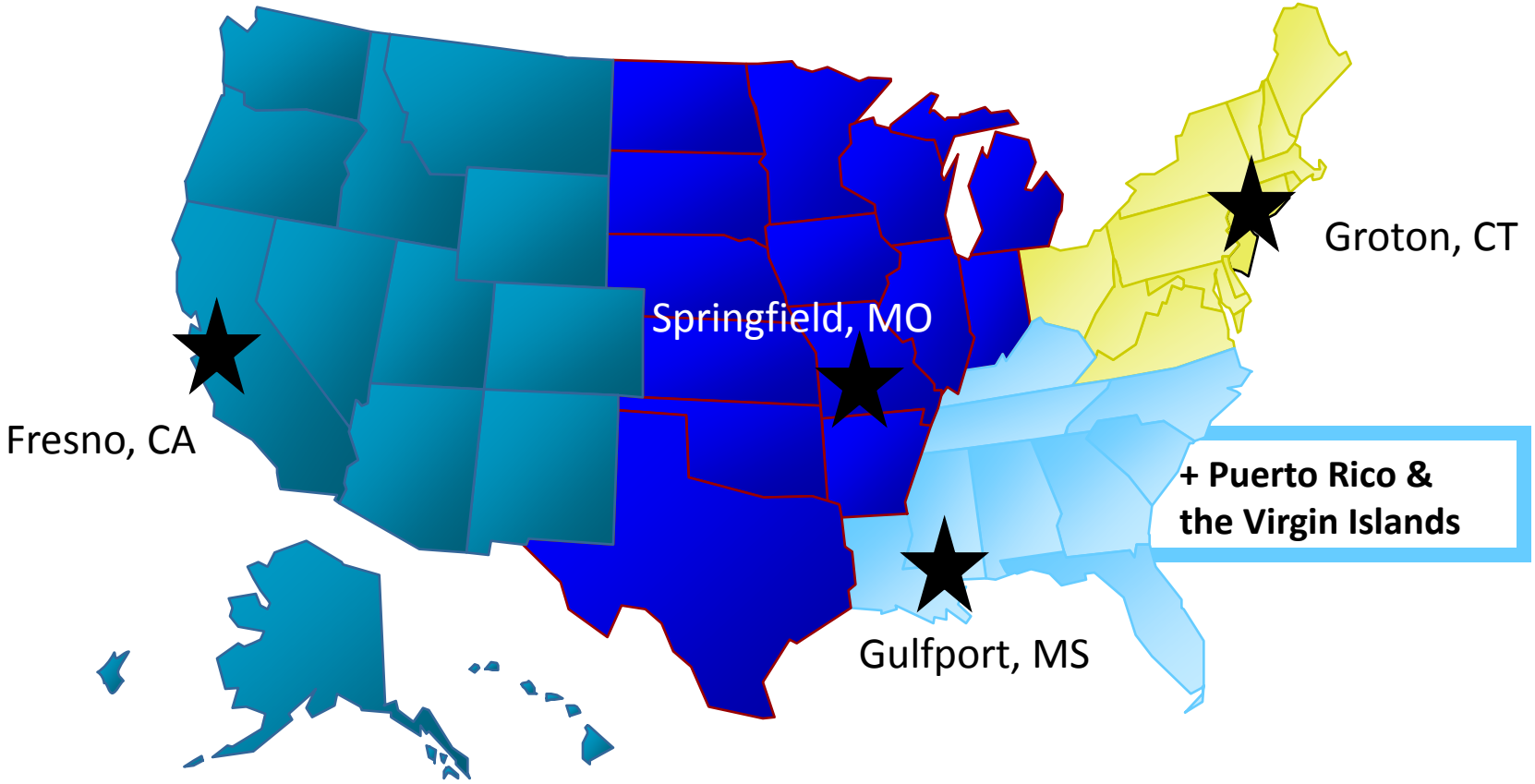
State and Federal Emergencies: Support the Adjutant General and Governor by providing aviation maintenance and logistical support in support of civil authorities.

Commander's Vision for the 1106th TASMG

Army's premier Aviation sustainment organization. Able to maintain and sustain all Aviation systems in the 21st century.

Support to all Army Aircraft

TASMG REGIONS



- Performs AVIM/Depot Maintenance Functions
- Provides maintenance facilities and training for ARNG aviation Soldiers

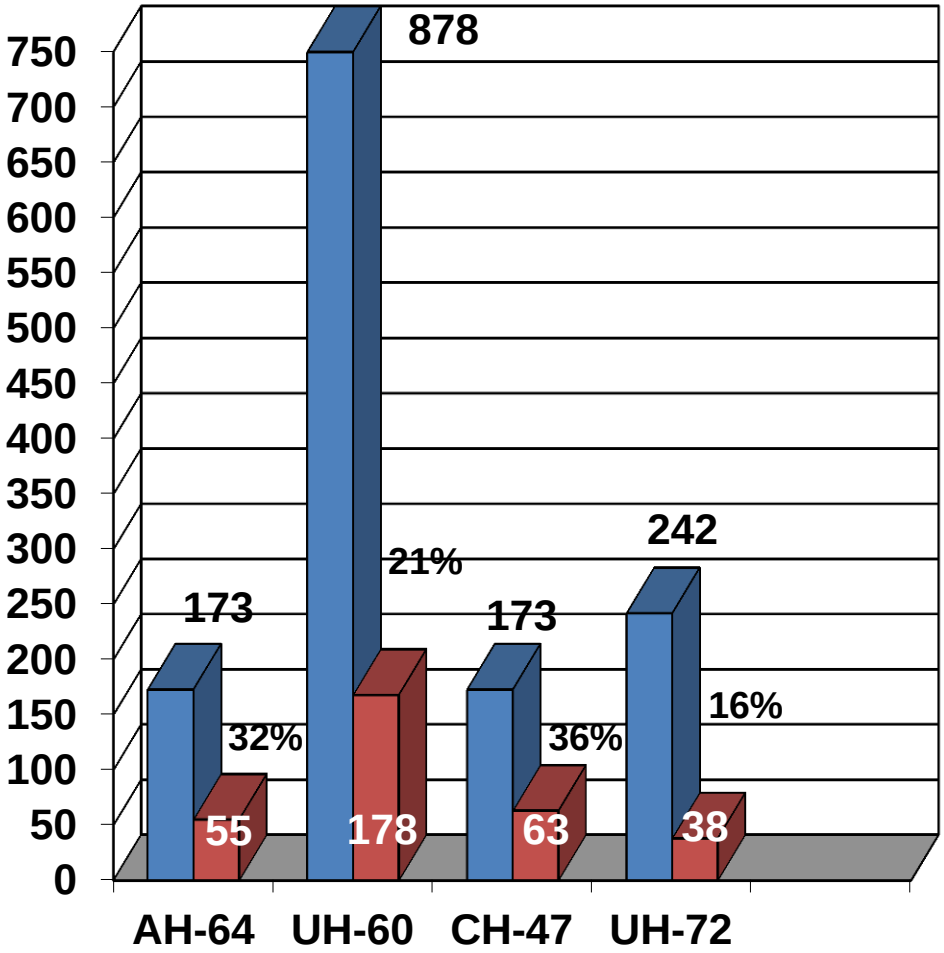
Full-Time Support Mission

- Performs Aviation Maintenance that impacts the health of the ARNG Aviation fleet over the long haul
- Repairs deficiencies that are beyond the AASF capability
- Performs National Maintenance Program (NMP) work, repairing parts/components and returning them to the Army Supply System
- Provides specialized aircraft repair/response teams (Contact Teams)
- Backup Field Level Maintenance
- Provides CL IX Regional SSA/ASL
- Provides Technical Assistance

#1 Priority

Support to Deploying Forces

Total ACFT in 1106th TASMG Region



23% (334) of ARNG ACFT are in 1106th TASMG Region

*Acft numbers plus or minus due to fielding's and mobilizations

- Total ARNG Fleet
- CA TASMG Region

TASMG Unique Capabilities

- **We are the "Special Forces" of Army Aviation Maintenance.**
  - Able to build highly specialized teams with unique tooling and deploy that team forward to complete complex and non-standard maintenance
  - Repairs as far forward as possible; reduces turn-around time; keeps combat assets in the fight
  - On-site Aerospace Engineer to develop repair solutions and attain proper permissions for the repairs
  - Assists CCAD in Emergency situations (AH-64 xmsn)

1106th Theater Aviation Sustainment Maintenance Group (TASMG)

Community Based Organization

FULL-TIME EMPLOYEES

Active Guard/Reserve (AGR) Strength	40/$2.1 million
National Guard Technicians/DA Civilian	113/$7.1 million
State Active Duty	24/$2.3 million
Contractors	94/$7.8 million
TOTAL:	**301/$19.3 million**

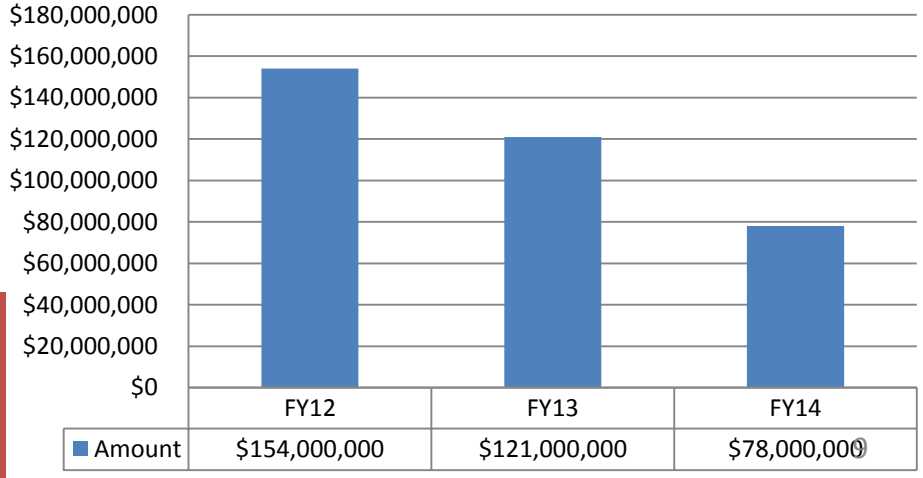
M-DAY / NATIONAL GUARD MEMBERS

Total Authorized Strength/Assigned	484/451
HHD (Fresno)	95/112
A Company (Fresno)	321/265
B Company (Santa Barbara)	68/74

ANNUAL FACILITY OPERATING COSTS
(rents, utilities, etc.) $1.9 million

Transportation Costs $180,000

Annual Funding Program



* TASMG Maximizes parts money through significant oversight To get a 45 to 65% return on the AFP
*Maximize Flying hour money through processing of DSCA reimbursable

Full-Time Support to the Fleet

- **Guard has 6 UH-60A left that will be inducted into the A-L line, come end of FY15 Guard will be out of A-L induction business. Guard will have no ACFT in A-L line after FY17.**

- **In FY14 Guard had 189 ACFT with T-700 engines. Today Guard has 12 ACFT left in fleet with T-700. $285M saved over past 2 years by doing engine swaps. Guard is doing swaps to assist the Engine APM complete all ACFT with T-700, this includes Army TDA ACFT, Border Patrol, and Customs.**

	DoD O&M Cost	Flight Hours	2014 Cost	Annual Savings
UH-60A	$ 5,375/hr	3500 hr	$ 18,812,500	$0
UH-60L	$ 4,059/hr	3500 hr	$ 14,206,500	$4,606,000
UH-60M	$ 3,412/hr	3500 hr	$ 11,942,000	$6,870,500

CORROSION CONTROL FACILITY (CCF)

- State of the Art Aircraft and Component Paint Facility
- $38 million new CCF is approximately 90,000 square feet and encompasses 38,000 square feet of hangar space

- Used by the Army for deployment/ redeployment to/from NTC.
- Annual cost savings of $151,200 and risk reduction of hazardous spills into the environment.

UH-60 Fleet for ARNG Projections

	FY13	FY15	FY20
• UH-60M	36	95	160
• HH-60M	34	51	75
• UH-60L	247	377	451*
• HH-60L	13	16	0
• UH-60A	448	339	274**
On Hand	778	878	
Authorized	**849**	**899**	**960**

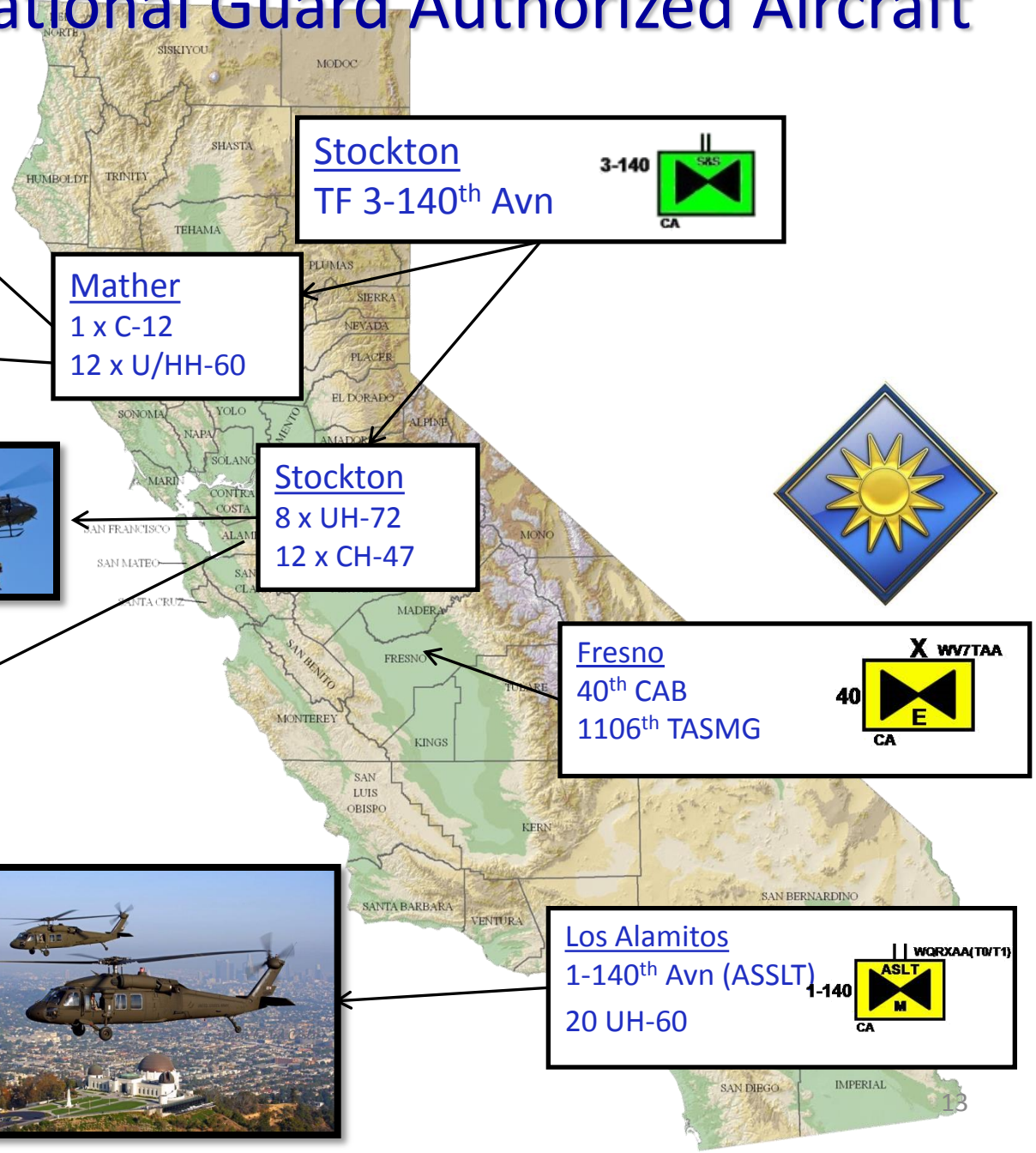
Guard 24% Digitized FY20

Army 85% Digitized FY20 MTOE

*FY17 all guard UH-60 will be delivered from A-L line. Guard has been feeding line since its start, approx. 45 ACFT at CCAD (This is why states Are filled to 80%) . Army will be bill payer starting FY16, Army units will have to go short or take A model from guard as replacement. All cascades from AC to Guard have to be L models, they will come from AC units getting M models or CCADs A-L line.

**A model retirements will slow down to allow the guard to grow to ARI 960. Difficult for Army to give guard L models while they feed the line.

CA Army National Guard Authorized Aircraft



Stockton
TF 3-140th Avn

Mather
1 x C-12
12 x U/HH-60

Stockton
8 x UH-72
12 x CH-47

Fresno
40th CAB
1106th TASMG

Los Alamitos
1-140th Avn (ASSLT)
20 UH-60

CA Aviation Mobilizations

- Aviation Mobs supported by CA ARNG since 2003

Unit	1st Mob	2nd Mob	3rd Mob	4Th Mob
B1-126 CH47	2003	2008	2012	
C1-168 Med	2003	2008	2012	
140 AHB	2005	2011	2016	
F 140TH AVIM	2004	De-Activated		
1106 TASMG	2005	2010	2013	2016
F 2-235TH Med	2010			
40 CAB	2011	2016		
640TH ASB	2011	2016		
3/140TH S&S	2012			

Aviation Mobilizations

- 40 CAB CDR and Team are currently overseas for mission overview with a mob date of Oct this year.
- Current and previous MOB process is cumbersome and wastes a lot of time and money for elements below Brigade level.
- Training areas in CA have High Altitude, Dust, and NVG training areas.
- Pre-certification doesn't seem to be reducing mob time requirement

OND Accomplishments
Last Super CAB Iraq

3 Divisions Supported/8 AABs Supported

10 AVN BNs C2'd throughout deployment

Total Flight Hours: 121,450

Personnel Moved: 177,926

Cargo Moved: 7,117,451 lbs

AWT/SWT Missions: 7,764

Utility Missions: 10,553

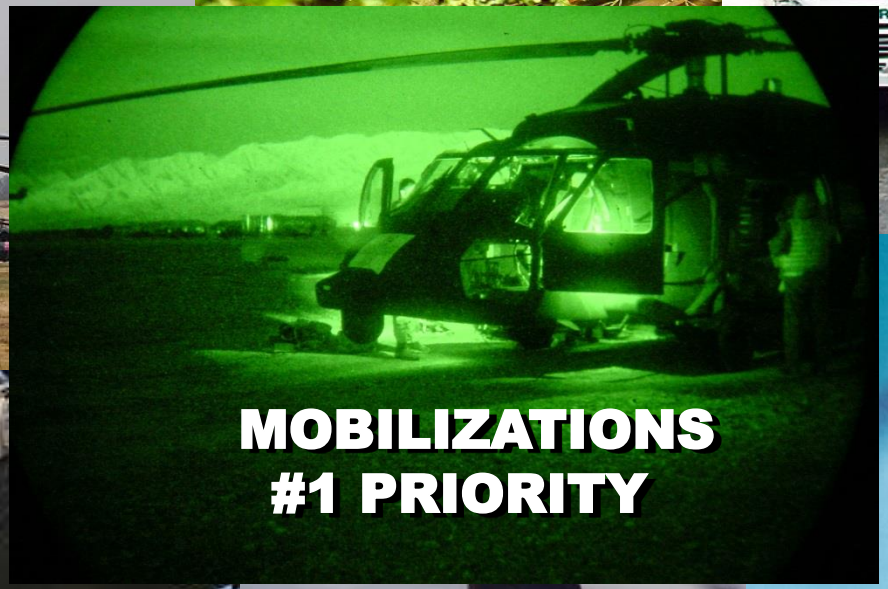
MEDEVAC Missions: 535

VIP Missions: 16,326

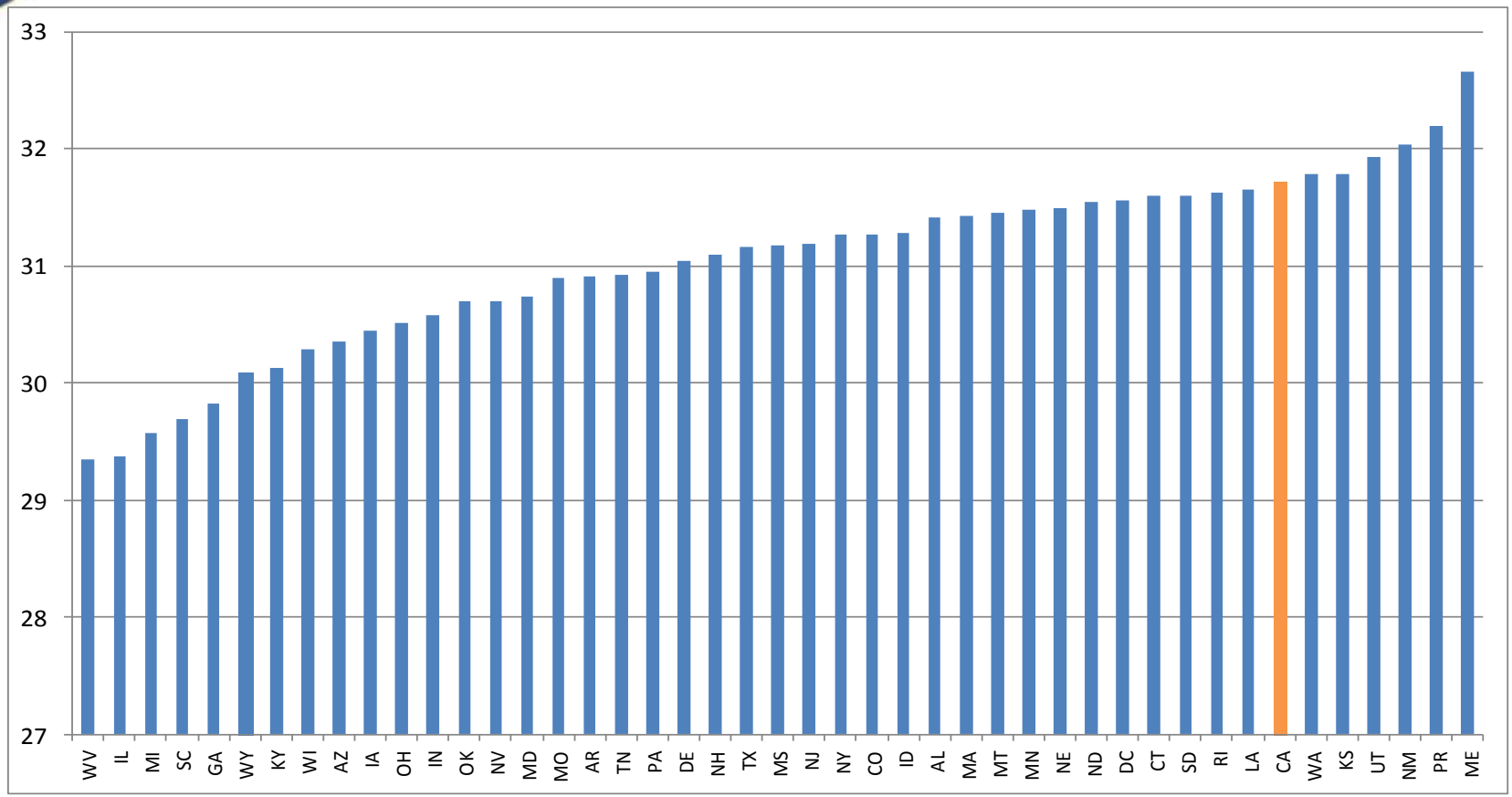
TST Missions: 172

275 Total Aircraft

CNG Aviation Missions



UH-60A Fleet Average Age by State



- Average H- 60A Fleet Age: 32.43 years
- Average H- 60L Fleet Age: 23.63 years
- Average H- 60M Fleet Age: 3.62 years
- When fielded UH-60L's from A to L conversions = average L age increases

Backup Slides

- Specific TASMG Back Shops Capabilities

SHEETMETAL SHOP

- Capabilities include removal, fabrication, repair, modification, and installation of parts and assemblies
- Variety of specialty tools and equipment used to perform extensive structural repairs
- Perform repair and balancing of main and tail rotor blades

MAXI-BOLT GUNS
- PORTABLE FOR INSTALLATION OF VARIOUS FASTENERS

COLD WORKING KIT
- TO PREVENT HOLES FROM CRACKING

COMPOSITE REPAIR
- FIBERGLASS
- KEVLAR

HONEY COMB
- ALUMINUM
- NOMEX

MACHINE SHOP

- Performs close tolerance and complex machining
- Can machine helicopter parts from raw material using state of the art equipment

SOFTWARE

▪SOLID WORKS-
DRAWING AND DESIGN PROGRAM
THAT DRAFTS IIN 3D
▪FEATURE CAM
COMPUTER AIDED MANUFACTURING

FADAL

▪ 3 DIMENSIONAL MILLING MACHINE

FARO ARM

▪REVERSE ENGINEERING
▪PRECISE MEASURING OF COMPLETED MANUFACTURED PARTS

MAZAK

▪A ONE SET UP OPERATION TURN MILL, SAVES A LARGE AMOUNT OF TIME
▪ONLY TASMG THAT HAS ONE

MILTRONICS

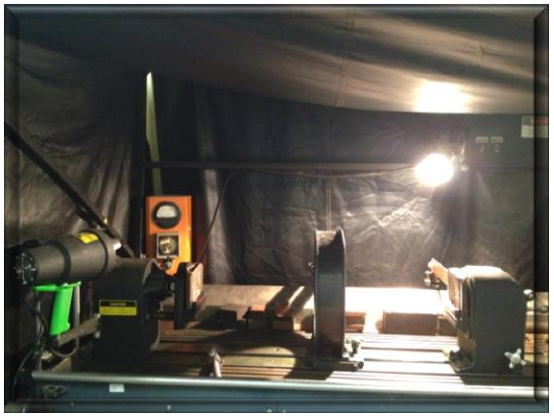
▪CNC LATHE, FOR LARGE PARTS

NON DESTRUCTIVE INSPECTION (NDI)

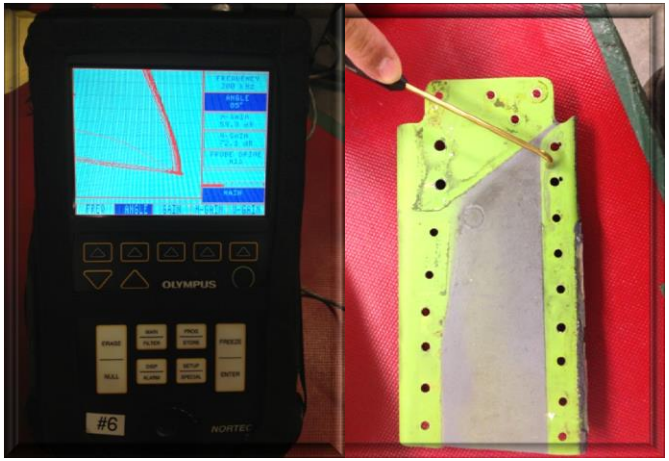
- Use a wide group of analysis techniques used in science and industry
- Evaluate the properties of a material,component or system without causing damage
- Level II capability for 4 disciplines of NDI/NDT: ultrasonic, eddy-current, dye penetrant and magnetic particle

▪DYE PENETRANT(PT)

▪MAGNETIC PARTICLE(MT)



▪EDDY CURRENT(ET)



▪BOND MASTER 1000C+ ▪NORTEC 2000DT ▪ULTRASONIC(UT) •SONIC 1200M

ENGINE SHOP

–Turbine engine testing, diagnostics, and repair

–Flexible Engine Diagnostics System (FEDS)

AIRCRAFT
- CH-47
- UH-60
- AH-64

ENGINES
- T55GA714A
- T700/T701/T701C/T701D

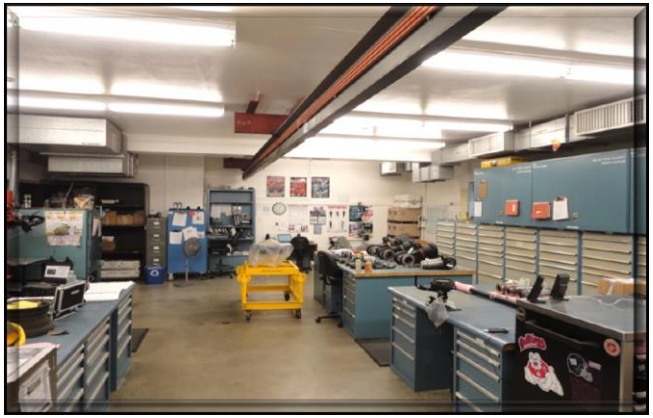
FLEXIBLE ENGINE DIOGNOSTICS SYSTEM (FEDS) A/E37T-33

POWERTRAIN SHOP

– Diagnoses, troubleshoots, and repairs malfunctions in aircraft powertrain components and their subcomponents

– Performs maintenance trend analysis

TRENT ELECTRIC PART OVEN



AIRCRAFT SUPPORTED

- CH-47D
- AH-64D
- UH-60A/L

HYDRAULICS SHOP

- Works on hydraulic and pneumatic systems components for UH-60, CH-47, AH-64 and AGSE
- Fabricates hydraulic and pneumatic hoses and lines to specification

HABCO HYDRAULIC POWER UNIT MODEL 5K2005HPU

▪DESIGNED FOR USE WITH UH-60 TRIM ACTUATOR TEST SET AND HYDRAULIC COMPONENTS.

DAYTON T BROWN UH-60/AH-64 STRUT ASSEMBLY TEST CART

AVTRON MODEL H201 TEST STAND

▪TESTS HYDRAULIC CYLINDERS, PUMPS, MOTORS, LOAD CONTROL VALVES AND OTHER COMPONANTS

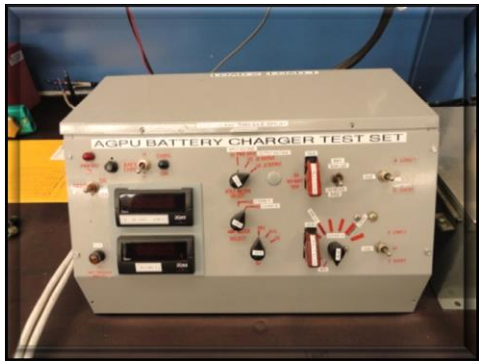
▪ PROVIDES PROOF PRESSURE, INTERNAL LEAKAGE, CRACKING PRESSURE AND GENERAL PERFORMANCE CHARACTERISTICS

▪ INCLUDES AVTRON DATA ACQUISITION SYSTEM

DAYTON T BROWN UH-60 DAMPER TEST CART

ELECTRIC SHOP

- Repair and test most components and subsystems using advanced computer and test technology
- Capability to fabricate harnesses and electrical cables



AGPU BATTERY CHARGER TEST UNIT

K735B Univate

- UH-60 L/H AND R/H RELAY PANEL
- UH-60 GENERATOR CONTROL UNIT
- CH-47 GENERATOR CONTROL UNIT

STARTER/AC GENERATOR TEST STAND

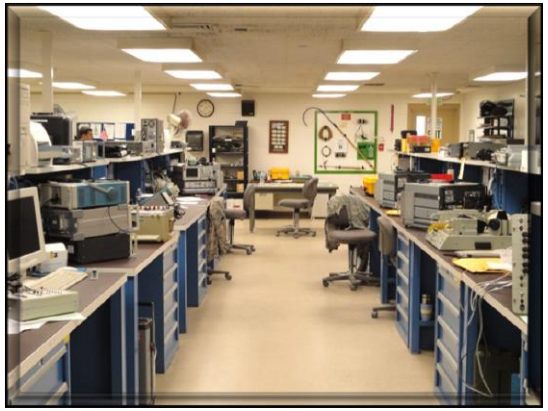
START CONTROL VALVE TEST BENCH

- UH-60

AVIONICS SHOP

- Depot level repair and test capability of components based on customer requirements
- Aircraft Survivability Equipment and Night Vision Goggles/Devices repair and training

▪NIGHT VISION DEVICE MAINTENANCE



CALIBRATION VAN 705

▪CALIBRATION LAB FOR ELECTRONIC EQUIPMENT. RF GENERATORS, MULTI-METERS, SPECTRUM ANALYZER, DIAL INDICATORS, PITOT STATIC TESTER, TORQUE WRENCHES, IFR AEROFLEX SIGNAL GENERATORS.

▪REPAIR COMPONENTS AND COMMUNICATION, NAVIGATION AND RADAR SYSTEMS

▪ INTERNAL TASMG TEST MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE)

CAPACITOR-INDUCTOR-ANALYZER

- CIRCUIT COMPONENTS TESTER
- ELECTRONIC SYSTEM TESTER

TEKTRONIC CABLE TESTER

▪ELECTRONIC SYSTEMS RF CABLE TESTER

AEROFLEX, GRM-122

- SINCGARS RADIO
- VHF / UHF RADIO
- SURVIVAL RADIO
- NAVIGATION RECEIVERS

ARMAMENT SHOP

– Performs diagnostics, troubleshooting, and malfunction repair of the AH-64D armament, electrical, and avionic systems and components

– Performs ammunition loading/unloading and weapon subsystems configuration changes for AH-64D fire control systems

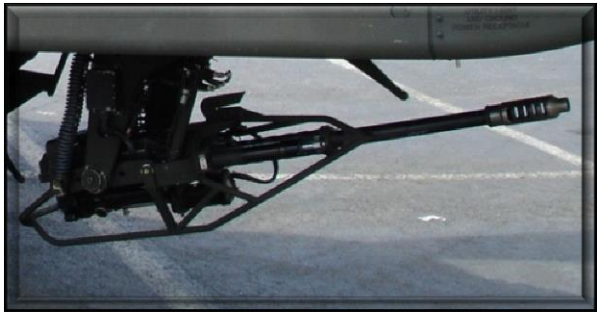
MAINTENANCE

- ZERO BORESIGHTS
- LASER WARNING DETECTOR SET AN/AVR-2
- SIGHTING SYSTEMS REPAIR
- ELECTRICAL/AVIONICS TROUBLESHOOTING
- HELFIRE SYSTEMS REPAIR/TESTING
- SHOE ALIGNMENT KIT
- PYLON RACK REPAIR (AH-64D)

CALIBRATED BORESIGHT HARMONIZATION KIT (CBHK)

GUNS

- 30mm M230 CHAIN GUN REPAIRS



ROCKETS

- 2.75 ROCKET POD MAINTENANCE