

RICK REAMS

SENIOR ASSOCIATE, DAYTON AEROSPACE, INC.



DAYTON AEROSPACE

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PROFILE

Over 40 years of aircraft technical management experience on multiple billion-dollar US Air Force (USAF) acquisition programs. Highly experienced technical leader in aircraft design, development, test, and airworthiness certification. Proven competencies in airframe structural development, certification, full-scale test, and expert knowledge of the Aircraft Structural Integrity Program (ASIP). Significant work in engine development, propulsion integration and test, as well as subsystems design, qualification, and air vehicle integration. Extensive experience with USAF airworthiness certification and system safety processes, integrity programs, and independent review teams. NH-04, Department of the Air Force (DAF) (Retired)

PRINCIPAL AREAS OF EXPERTISE

Air Vehicle Subsystems Engineering	Technical Engineering Management	Aircraft Engine Design/Development
Aircraft Structural Integrity	Systems Engineering	Propulsion System Integration
Airworthiness Certification	Systems Integration	System Test
	Airframe Full-Scale Test	

WORK HISTORY

Senior Associate | Dayton Aerospace, Inc.
2024-present, *Dayton, OH*

Providing system engineering, aircraft structural integrity, propulsion design and development, and program management support across all program phases including development, production, sustainment, and operations—to both industry and government clients. Airworthiness subject matter expert providing airworthiness certification support and training to multiple customers within and outside the government.

Systems Engineer | B-21 Program Office, Bombers Directorate (AFLCMS/WBS)
2014-2024, *Wright-Patterson AFB, OH*

Led the Air Vehicle Team of five integrated product teams (IPTs) and 20+ engineers on the \$80B B-21 engineering and manufacturing development (EMD) program. Transitioned the program from technology development (TD) to EMD and low-rate initial production (LRIP) phases. Collaborated with the B-21 prime contractor, USAF, and the Department of Defense (DoD) for a successful critical design review (CDR). Established and gained approval for the B-21 tailored airworthiness certification criteria (TACC) document. Developed a novel structural certification approach with the Air Force Life Cycle Management Center Engineering Directorate (AFLCMC/EN) and the Air Force Research Laboratory (AFRL). Secured program approval for risk reduction projects and improved nondestructive inspection (NDI) techniques. Championed laboratory upgrades and dedicated testing for aircraft hydraulics, fuels, and electrical power subsystems, and improved low observable (LO) measurement and diagnostic tools. Directed engine technology development, supported wind tunnel and full-scale propulsion testing, and upgraded several aircraft subsystems test laboratories. Served on the B-21 airworthiness independent review board (IRB) and led the Air Vehicle Team through airworthiness assessments and risk characterization to achieve the first B-21 military flight release (MFR). Managed modifications, configuration changes, and envelope expansion process for the first flight test aircraft.

EDUCATION

BS, Aerospace Engineering
University of Cincinnati

MS, Aeronautical Engineering
Air Force Institute of Technology

MBA, Business Administration
University of Dayton

Air Command and Staff College
Air War College

CERTIFICATIONS & TRAINING

Acquisition Professional
Development Program (APDP)

Systems Planning, Research,
Development & Engineering
(SPRDE) – Level III

Program Systems Engineering –
Level III

WORK HISTORY (CONT'D)

Structures Technical Advisor | Structures Branch, Flight Systems Engineering Division (AFLCMC/EZF)

2007-2014, *Wright-Patterson AFB, OH*

Oversaw technical projects in the Structures Branch, managing subject matter experts (SMEs) across five structural disciplines for USAF airworthiness certification to support independent assessments of new designs and legacy aircraft modifications. Supported ASIP reviews of all USAF aircraft and contributed to ASIP and Mechanical Systems Integrity Program (MECSIP) policy revisions. Served as Chairman of the First Flight Executive Independent Review Team (FFEIRT) for the Airborne Laser (ABL) YAL-1A prototype, and obtained high-risk acceptance from the Missile Defense Agency (MDA). Served as NDI representative for EN; transitioned NDI projects from AFRL to Air Logistics Centers (ALCs). Wrote and edited multiple Structures Bulletins to include new damage tolerance requirements, NDI capability guidelines, determination of equivalent flight hours (EFH), finite element correlation, and bird strike design criteria. Key member of a USAF nonconforming titanium task force which investigated the potential safety implications of titanium parts with unknown pedigree. Contributed to independent reviews for the B-2 program to include design and certification of a third-generation aft deck, and an EHF antenna trade study. Led recovery effort for a B-2 damaged by an on-ground fire-designed temporary and permanent repairs to return the aircraft to service. Led and supported multiple EIRTs for several classified programs. Supported three independent review teams on the B-1 wing and carry-through box cracking, X-51 first flight, and a summit on the F-15 longeron failure. Performed an independent risk assessment of an E-8 aircraft to determine repair options for an over-pressurized wing.

Lead Structures Engineer | F-22 (currently AFLCMC/WAU)

2006-2007, *Wright-Patterson AFB, OH*

Managed structural integrity for the F-22's development, production, and sustainment. Revitalized the F-22 ASIP program to address full-scale fatigue test findings and established force management processes for sustainment. Created a \$300M+ program plan for the Structural Retrofit Program (SRP) II to meet service life requirements. Secured support to address airframe mounted nozzle sidewalls (AMNS) cracking issues. Guided two large test and analysis programs to identify and resolve cracking in aft fuselage frames and wing attach lugs discovered in full-scale testing. Developed inspection criteria for improperly heat-treated titanium structural members and instituted an Airworthiness Certification Board process to recover damaged aircraft from a wheels-up landing.

Lead Structures Engineer | C-17 SG (currently AFLCMC/WL)

2005-2006, *Wright-Patterson AFB, OH*

Co-led Airframe and Flight Technology IPT for C-17 structures in development, production, and sustainment. Managed \$25M annual ASIP budget for a 145+ aircraft fleet and developed recovery plans for several damaged aircraft at overseas locations. Aircraft were ferried to the depot for permanent repairs without incident. Oversaw \$40M in reliability and maintainability projects to address field deficiencies, and to improve safety and reliability. Certified C-17 carriage and airdrop of the FALCON air-launched drop test rocket.

Aerospace Engineer | C-17 (currently AFLCMC/WL)

1997-2005, *Wright-Patterson AFB, OH*

Technical leader of the Extended Range Fuel Containment System (ERFCS) project, increasing the center wing dry bay fuel capacity by 10,000 gallons. Developed and certified the airworthiness plan, including fuel transfer and measurement systems, avionics, structures, and secondary barrier system. Managed several aircraft recovery teams which defined ferry flight restrictions and inspection and repair guidelines. Technical manager of the Composite Horizontal Tail (CHT) affordability project—devised a flight certification plan which included successful full-scale static, ground vibration, and flight flutter tests. Addressed Crisis Management Team (CMT) issues for C-17 safety, managed multiple ASIP projects, and implemented cost-reduction initiatives. Contributed to C-17 airworthiness policy and served on the Executive Independent Review Team (EIRT) and the Safety and Health Independent Review Team (SHIRT) structural evaluations of the ABL integration laboratory and prototype aircraft. Performed risk assessments of the ABL nose window which led to additional materials testing and improved structural integrity.

Prior to 1997:

- Aerospace Engineer, B-2, *WPAFB, OH*
- Aerospace Engineer, Flight Systems Engineering, Strength Branch, *WPAFB, OH*

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