



SMARTMAINTENANCEFASTSM

A Complete Set of Lifecycle Maintenance Processes and Products

Hexagon US Federal is accomplished in delivering high-performance Maintenance Steering Group (MSG-3) scheduled maintenance programs (SMPs) for fixed and rotary wing aircraft. An aircraft’s SMP is the foundation for lifecycle performance and sustainment. Our experience proves that the transformation of SMPs is the single best investment to ensure aircraft safety, maximize performance, and minimize maintenance costs while synchronizing parts with maintenance tasks and restoring and preserving material condition.

MSG-3 was introduced in 1980 under the governing authority of the Airlines for America (A4A). Since then, A4A’s Maintenance Program Industry Group (MPIG) has led its continuous improvement via a broad stakeholder consortium of airlines, Original Equipment Manufacturers (OEMs), government regulatory agencies, industry partners, and academia. Today, it is used globally by virtually all commercial air carriers. MSG-3’s superior approach to aircraft maintenance and sustainment is largely unused in the Department of Defense (DoD) and new to the helicopter world.

In response to the DoD’s aging aircraft fleets, declining budgets, and increasing maintenance costs, Hexagon developed SmartMaintenanceFast, an MSG-3 program for military aircraft and helicopters. Our military and commercial MSG-3 SMP experience on multiple aircraft platforms pioneered the design of our smart maintenance processes and products. SmartMaintenanceFast satisfies all requirements of the A4A’s latest MSG-3 revision and ensures full compliance with military-unique regulations, policies, missions, and environmental requirements. SmartMaintenanceFast integrates hierarchical SMP design and task-tracking numbers for performance based reliability feedback.

Consisting of FleetVector maintenance processes and FleetInsight maintenance products, SmartMaintenanceFast ensures platform safety, high performance, and affordability. Moreover, it synchronizes parts forecasting with maintenance tasks, and restores and preserves material condition.

HEXAGON PROVIDES

RESULTS

USAF C-5 Galaxy 2008–2015

Availability	▲	22%
Reliability	▲	35%
Mechanic Efficiency	▲	22%
Maintenance Cost	▼	20%
Maintenance Flow Days	▼	20%
Unscheduled Parts Demand	▼	35%

COMMITMENT

High-performance SMPs fully satisfying customer requirements, objectives, and goals

OBJECTIVITY

Smart maintenance program perspective and priorities independent of OEM business priorities

VALUE

Low risk, full lifecycle solutions and competitive pricing

EXPERIENCE

- Pioneer of the first MSG-3 lifecycle solution for a DoD legacy aircraft
- Fourteen years of DoD experience with fixed wing and rotorcraft
- Blended military and commercial aviation expertise

HEXAGON SMP EXPERIENCE

MILITARY AIRCRAFT

- F-15 Eagle (Boeing)
- C-5 Galaxy (Lockheed)
- TH-1H Huey II (Bell)
- UH-1N Huey (Bell)

COMMERCIAL AIRCRAFT

- A319/320 (Airbus)
- DC-9 (McDonnell Douglas)
- MD-80 (McDonnell Douglas)
- 727 (Boeing)

FleetVector Maintenance Processes

FleetVector maintenance processes maximize smart, fast, and high quality aircraft maintenance. They enable low-risk, rapid conversion of legacy sustainment processes into world-class scheduled maintenance programs.

- **VectorMx** builds transformational aircraft SMPs, increasing reliability up to 40 percent and reducing maintenance costs as much as 30 percent while restoring and preserving material condition. Hexagon applies MSG-3's proven logic and methodology to analyze engineering, maintenance, and empirical data. We provide customers with precise required maintenance tasks and their intervals. Moreover, the end-to-end hierarchical SMP structure ensures the right task is performed at the right time, boosting aircraft reliability.
- **VectorCard** translates SMP inspection tasks into comprehensive, succinct mechanic-centric work instructions, increasing mechanic efficiency up to 20 percent. Supporting all media types, they detail each task purpose, required parts and tools, and step-by-step mechanic instructions with clear, concise narratives, graphic illustrations, and color photographs. Hexagon VectorCard promotes safety, enables standard work, improves quality, increases mechanic touch time, and speeds work flow.
- **VectorControl** creates centralized, high performance management of aircraft heavy maintenance, reducing maintenance flow days by 20 percent or more. Methodically managing the critical path, it expedites the "inspect" phase and systematically choreographs "fix" phase tasks. The results are reinforced safety, improved work quality, reduced cycle time, increased workforce efficiency, more earned hours per day, and simplified inspection manageability.
- **VectorSustain** offers systematic, continuous surveillance of fleet performance and performance based reliability improvements of transformed SMPs throughout aircraft lifecycles. It ensures all SMP tasks are performing as intended by analyzing fleet-wide maintenance data, detecting the earliest indications of negative trends, determining root causes, and recommending corrective actions. Under VectorSustain, Hexagon personnel refine the SMP to ensure it remains current with aging aircraft challenges, changing mission environments, and modernization.

FleetInsight Maintenance Software Products

FleetInsight products, designed and ready for military network certification, directly complement FleetVector maintenance processes. They vastly improve data integrity, clarify decision-making, enable standardization, and speed MSG-3 analysis. After implementation, FleetInsight products afford customers with authoritative, centralized data and provide fact-based decision making capabilities for any SMP.

- **InsightDecision** filters and cleanses historical maintenance failure data and transforms it into relevant decision-making information, reducing analyst time by more than 80 percent compared to manual analysis. It facilitates root cause analysis and continuous monitoring of fleet reliability and task performance throughout the platform's lifecycle.
- **InsightAnalysis** guides analysts through MSG-3's full decision logic, digitally documenting all details, for development of new SMPs and lifecycle sustainment of the aircraft and SMP. It is fully A4A MSG-3 compliant, DoD adapted, supports both fixed and rotary wing aircraft, and provides a defensible, historical SMP baseline for VectorSustain performance-based reliability.

The Hexagon Difference

We empower you to make smarter and faster operational decisions. Our Smart**MaintenanceFast** program enables you to organize vast amounts of complex data into understandable visual representations. We equip you with superior products and solutions to optimize and protect operations to make your organization safer and more productive.

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About Hexagon US Federal

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