

The Secretary of Defense Performance-Based Logistics Awards Program  
for  
Excellence in Performance-Based Logistics  
in  
Life Cycle Product Support

Section 2

Summary of Criteria Accomplishments

**WARFIGHTER-BASED CAPABILITIES AND OUTCOMES**

**Mission Success:** The Sniper Performance Based Logistics (PBL) program provides critical sustainment support to the United States Air Force (USAF) and Air National Guard (ANG) for its fleet of 358 Sniper Advanced Targeting Pods operating on the A-10, F-15E, F-16 Block 30-50, B-1, and B-52 aircrafts at combat, operational, and training locations around the world. The Sniper PBL program is built on a government-industry partnership managing and staffing the organic depot at Robins Air Force Base. The team includes personnel from Common Avionics within the Agile Combat Support Directorate, Warner Robins Air Logistics Complex (WR-ALC), and Lockheed Martin (LM). The most recent Sniper PBL contract was awarded in September 2012. Since then, this team has successfully surpassed the Sniper fleet Operational Availability (A<sub>O</sub>) contract requirement by 14% (see fig 1). On average, this performance provides an additional 50 operational pods to the warfighter. It is worth noting that the WR-ALC Organic Depot is a critical part of the Sniper PBL team and a key contributor to the A<sub>O</sub> success. During the January to December 2013 timeframe, the Organic Depot ensured critical spares were available to fill field requirements at a moment's notice by completing 909 repairs in an average of 6.7 days each against a target of 15 days or less. The Sniper PBL is a premier example of how public/private collaboration and focus on the warfighter in a teaming approach provides operational readiness and cost benefits for the Warfighter. Overall, the Sniper PBL team's exceptional performance resulted in a cost avoidance of \$77.3M during 2013 (see fig 1).

**Materiel Availability:** The USAF and ANG have been operating 358 pods at 44 sites worldwide. Pod A<sub>O</sub> is tracked as a Fully Mission capable (FMC) metric at each site in the Reliability and Maintainability for Pods (RAMPOD) system. The LM Sniper Spares tool provides the capability for technical experts to provide troubleshooting and technical advice to maintainers at each site, significantly reducing the response time and enabling quick resolution of technical issues. In addition, maintainers also have the ability to order Line Replacement Units (LRUs) and piece part spares through the same online tool. In 2013, 1210 total messages were addressed through the Sniper Spares tool; 194 of which were technical assistance requests. In 2013, these spares had an on the shelf availability of 98.6% to support expedited shipments worldwide to:

- Continental United States (CONUS) sites in an average of 1.2 days
- Outside Continental United States (OCONUS) sites in an average of 3.5 days.

OCONUS locations include war zones and areas with limited commercial transportation options.

The depot repair parts availability increased from 84.0% during the first quarter of 2013 to 94.0% by the last quarter. This improved the efficiency of the depot level repair process and aided in the rapid availability of assets for the users. The Sniper PBL team expedited assets back into the supply system resulting in higher materiel availability as exhibited by the 98.6% on the shelf availability of spares. The combined efforts have produced an environment where supply availability is extremely robust and spares and materiel are on-hand to support surges in operations.

**Materiel Reliability:** The Sniper PBL team maintains a consistent reliability improvement program via the Sniper PBL Reliability and Maintainability (RAM) team. The RAM team utilizes a closed-loop Failure Reporting and Corrective Action System (FRACAS) that evaluates all Sniper failures for emerging failure modes. This iterative process enables prompt identification of reliability degraders and root causes, serving as a foundation to implement corrective actions, and push reliability improvements to the field. In 2012, the Sniper PBL team identified an increased Gimbal failure rate and determined the primary cause as Gimbal slip rings. Enhancements to depot test equipment were developed to detect and

correct the failure mode to ensure Gimbals with intermittent failures were not returned to the field. As a result of this effort, a 27.0% reduction in Gimbal returns was achieved from 2012 to 2013. It is estimated that the added Gimbal test equipment will ultimately improve the Gimbal return rate by 40.0% compared to what it was in 2012. A faster Line of Sight (LOS) processor was incorporated into the Sniper focus mechanism that drove a 33.0% reduction in the jammed focus cell failure mode from 2012 to 2013. Also, the Sniper RAM team has recently identified an increased failure rate trend with the Solid State Power Amplifier (SSPA) component in the Compact Multiband Data Link (CMDL) LRU. The team is working with the supplier to identify root cause and corrective action. It is estimated that the pending corrective action for the CMDL SSPA will generate a 25.0% reduction in the future CMDL return rate. An effective FRACAS program has enabled Sniper to sustain a Mean Time Between Maintenance Event (MTBME) at 10.0% above requirement and a Mean Time Between Failure (MTBF) at 52.0% above requirement (see fig 2).

#### **SUSTAINMENT STRATEGY EFFECTIVENESS/EFFICIENCY**

**Operating and Support Cost Reduction:** The Sniper PBL team has delivered significant cost savings and value over the life of the program. Over the last five years these savings are seen in the form of lower total support costs during periods of lower operating tempos (see fig 3, 2013 – 2014, Total Availability Support Price) and greater per operating hour value during times of higher operating tempos (see fig 3, 2010 - 2011, Cost per Op Hour). The period of 2013 - 2014 (9/1/13-8/31/14) is expected to include both the lowest overall support cost and lower per hour operating costs when compared to the 2009 baseline.

#### **Alignment and Arrangement Type / Period of Performance / Incentives with the Requirements:**

Through the Sniper Sustainment Contract (SSC), the Sniper PBL team created a five year Firm Fixed Priced (FFP) vehicle that allows flexibility for the contractor and affordability to the Government, adhering to the fundamental PBL tenet of providing the contractor latitude to determine how best to achieve the A<sub>0</sub> requirement. This includes the ability to send Field Service Engineers (FSEs) to operational locations to perform maintenance and training as needed, determine where LRU spares need

to be positioned, and enhance Technical Orders to improve Operational-Level maintenance performance. Affordability for the Government is achieved through the Variable Support structure where the Government only pays for actual operational hours after the hours are incurred. The contract also includes “a la carte” pricing for additional items such as support equipment, site activations, and FSE support.

**Public-Private Partnering:** Introduced in 2005, the Sniper PBL depot is an innovative performance based partnership between WR-ALC and Lockheed Martin that has generated benefits including improving depot throughput, reduced Awaiting Parts (AWP) conditions, and reduced Retest OK (RTOK) occurrences. The collaborative relationship optimizes support to the warfighter by leveraging three types of Public Private Partnerships, including: Lease of Government facility space, Work Share Agreements, and a Direct Sales Agreement. In addition to the Sniper PBL program, the partnership also contributes to the local economy through employment of highly skilled personnel in Warner Robins, GA. This multi-year partnership, and the Government/Lockheed Martin commitment to keep it viable, serves as an example of what Government/Industry cooperation can achieve. The partnership is a symbiotic relationship that leverages the strengths of both organizations to allow for a level of success not possible separately. It also supports USAF compliance with Title 10 Core and 50-50 requirements by contributing 45% Organic Depot work share, with projected growth to 52% following a depot expansion project that is expected to complete in the 4<sup>th</sup> quarter of 2014.

**Systems Engineering Approach:** The Sniper PBL program utilizes an integrated total systems engineering approach to meet the principal contract metric of  $A_0$ . The Sniper PBL team has instituted a process to continuously monitor and identify critical health and performance indicators (e.g., operating hours, demand trends, repair rates, retrograde returns, Could Not Duplicate (CND) field failures, supplier performance, etc.). This proactive approach allows for early trend identification and rapid stock posture adjustments resulting in increased mission capability for the fleet. All retrofit improvements, including software, are planned, coordinated, and integrated to minimize the impact to the fielded systems. The modularity of the Sniper system (see fig 4) allows for significant field retrofits, like the Compact

Multiband Data Link (CMDL), to be easily implemented at the flight-line while reducing work load and system down-time. Individual Sniper Pod availability and spares orders are reviewed daily by a dedicated team of field engineers who analyze trends, identify anomalies, and provide technical support ensure A<sub>0</sub> goals are met at each location as well as at the total fleet level.

**Footprint Reduction:** The Sniper PBL program utilizes a true two-level maintenance concept and a highly modular design in the Sniper Pod to reduce workload, maintenance burden, and corresponding logistics footprint impacts on the user. The pod requires only two pieces of unique support equipment and two tool kits to perform maintenance at the Operational level. In 2013, the Sniper PBL team significantly reduced the logistics footprint of the Sniper Pod by reducing the quantity of pods in the fleet being cannibalized (CANN) for spare parts. After Field Service Engineers (FSEs) assessed the magnitude of ongoing cannibalization via a web-based tool, action was initiated to bring the CANN pods back to Fully Mission Capable (FMC) status. A simultaneous action educated and encouraged users on the value of the PBL system to build confidence in spares availability, resulting in a 364% reduction of average CANN pods per month from 2012 to 2013.

**Obsolescence Management:** The Sniper PBL team maintains an obsolescence management program that proactively manages, mitigates and resolves obsolescence issues before they impact operations. In this process, supply levels are identified for each unique obsolescence and Diminishing Manufacturing Sources (DMS) case and potential shortfalls are addressed prior to any supply impact. Through an active technology management program encompassing obsolescence and DMS monitoring, 15 critical obsolescence and DMS cases were successfully identified and resolved in 2013, resulting in substantial cost avoidance. Seven of the 15 cases were mitigated through “last time” buys totaling 1,096 parts. The remaining cases were mitigated through the identification of alternate parts. This successful obsolescence program was a key contributor in achieving 98.6% on the shelf availability of spares, and an average depot repair turn around time of 6.7 days.

Figure 1: Operational Availability & Cost Avoidance

Month	Sep 2012	Oct 2012	Nov 2012	Dec 2012	Jan 2013	Feb 2013	Mar 2013	Apr 2013	May 2013	Jun 2013	Jul 2013	Aug 2013	Sep 2013	Oct 2013	Nov 2013	Dec 2013	Average
% Above Requirement	14.5%	15.8%	15.0%	15.7%	15.5%	15.5%	15.7%	16.1%	15.8%	15.8%	14.7%	15.1%	16.1%	8.1%	7.4%	7.5%	14.0%
Cost Avoidance - Cost of Material Available Above Requirement (\$M)*	\$83.5	\$90.7	\$86.1	\$89.7	\$88.3	\$88.3	\$89.4	\$91.4	\$89.7	\$89.7	\$83.5	\$85.8	\$91.4	\$46.0	\$42.0	\$42.6	\$77.3

Figure 2: Reliability

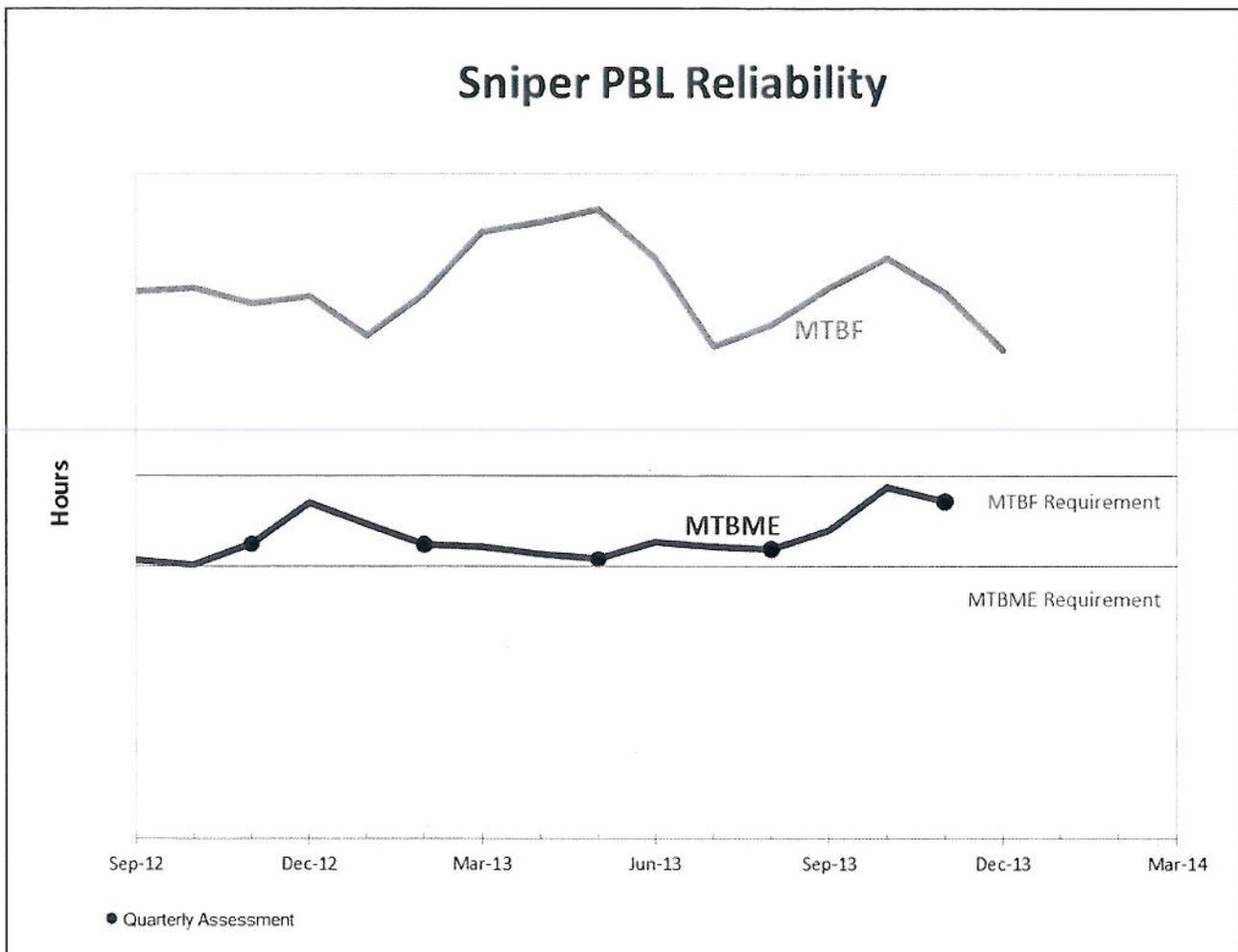


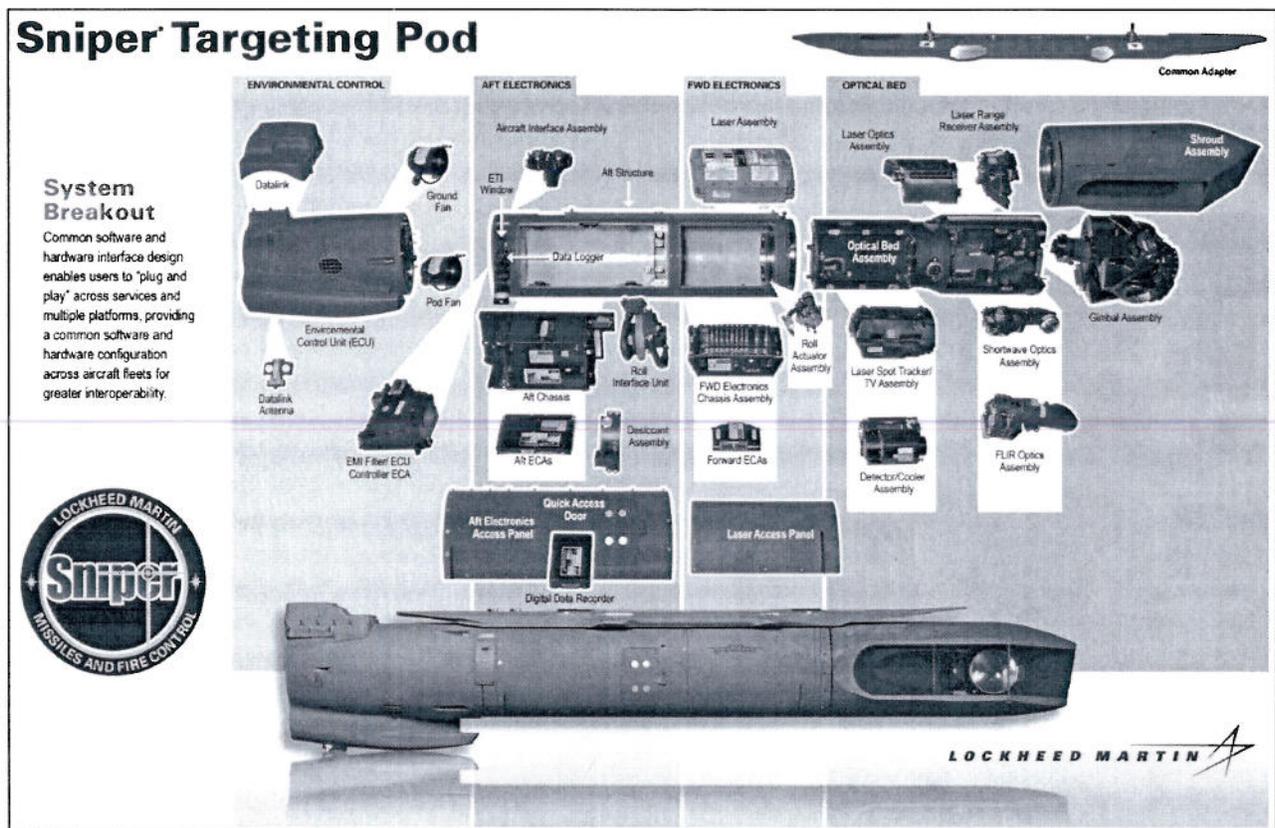
Figure 3: Support Costs

Contract Period	2009 - 2010	2010 - 2011	2011 - 2012	2012 - 2013	2013 - 2014
Total Availability Support Price	0.86	1.00	0.92	0.94	0.78
Op Hours	0.51	1.00	0.60	0.57	0.49*
Cost per Op Hour	1.00	0.60	0.92	0.99	0.96*

\* Estimated

Note: Figures are made relative to the highest value in each row to protect proprietary information

Figure 4: Sniper System Modularity



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Section 4

Achievements

The Sniper Performance Based Logistics (PBL) program provides critical sustainment support to the United States Air Force (USAF) and Air National Guard (ANG) for their fleet of 358 Sniper Advanced Targeting Pods operating on the A-10, F-15E, F-16 Block 30-50, B-1, and B-52 aircraft at combat, operational, and training locations around the world. The teamwork between the United States Government and LM on this Sniper PBL contract has demonstrated a comprehensive solution to provide the user with the support needed that consistently meets or exceeds the required readiness rates. Some of the major achievements this year include: (1) realizing a \$77.3M cost avoidance by maintaining the Sniper fleet Operational Availability (A<sub>O</sub>) 14% better than the requirement; (2) maintaining an O-Level spares on-hand availability rate of 98.6%; (3) improving availability of depot repair parts from 84% to 94% in 2013; (4) outperforming the Mean Time Between Maintenance Event (MTBME) requirement by 10% and the Mean Time Between Failure (MTBF) requirement by 52%; (5) reducing support costs by up to 10% from previous PBL contracts; (6) a public-private partnership that supports USAF compliance with Title 10 Core and 50-50 requirements and employs highly skilled technicians in Warner Robins, GA; and (7) reducing the Sniper logistics footprint by decreasing the average quantities of cannibalized pods by 364% from 2012 to 2013. This PBL effort has reduced costs, delivered superior operational availability, and provided exceptional value and support to USAF and ANG customers around the world.