

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

Section 2

Summary of Criteria Accomplishments

Improvements in Warfighter-Based Capabilities and Outcomes

Mission Success: NAVSUP WSS provides worldwide logistics support for aviation tires to Navy, Marine Corps and Foreign Military Service customers. This support covers 23 separate tire sizes in support of 16 different types of aircraft including fixed and rotary wing platforms. Management of such an extensive, worldwide, and diverse tire inventory presents significant challenges to the Navy logistics community. Prior to the initial PBL contract award in 2001, all aviation tire management functions were performed in-house. Government personnel managed a wholesale inventory of 60,000 tires stored in numerous, geographically dispersed government warehouses incurring the carrying costs associated with warehousing and managing the large inventory of tires. Frequent individual contracts were awarded for each tire type to various tire manufacturers, a labor-intensive process for both government and industry personnel. Variations in customer demand and manufacturer's delivery times resulted in frequent stock-outs, aged customer unfilled requirements and negative impacts on readiness. Since PBL program inception, backorders have been reduced from 3,500 to zero, hundreds of thousands of tires have been delivered, and logistics response time improved from 60 days to under 2 days in the continental United States (CONUS) and under 4 days outside the continental United States (OCONUS). These dramatic results are the direct result of PBL contract innovation, which leverages the manufacturer's core competencies, capitalizes on commercial best practices, and aligns the supply chain to meet the mission requirements of the aviation tire community. During 2016, no aircraft sortie was missed due to unavailability of a tire covered by this PBL.

Material Availability: The Navy Tire PBL Team developed an innovative solution that streamlines the aviation tire management process while providing the highest level of combat readiness at a cost lower than traditional support. The Team found solutions to numerous internal and external process shortcomings such as delayed procurement actions, manufacturing capacity, and raw material constraints; shortcomings, which resulted in delayed shipments and high levels of unfilled customer requisitions. Support transitioned seamlessly to the PBL upon contract award with no adverse impact to the fleet customer. Initial PBL support was provided via a 15-year firm-fixed price contract (one 5-year base with two 5-year options) with Michelin that was awarded in Feb 2001. This award package focuses on the 4-year firm-fixed price follow-on contract that was awarded competitively to Lockheed Martin in Feb 2016. Since award to Lockheed Martin, Navy aircraft tire readiness is maintained at its highest level ever, with 100% of the requisitions filled and 20,550 tires delivered worldwide from Feb 2016 to Feb 2017 [demand data by tires type is shown in Figure 1]. 1,048 tires have been delivered to foreign military partners such as Spain, Australia, Taiwan, Korea, and Malaysia since Feb 2016. The contract delivery metric requires that 100% of the requisitions are filled and that 95% of all requisitions are filled on time (48-hours CONUS and 96-hours OCONUS). Lockheed Martin has exceeded the on-time delivery metric of 95% with an on-time delivery of 98.2% CONUS and 98.7% OCONUS [Supply Response Time (SRT) details shown in Figure 2]. There are zero (0) backorders. Under the PBL, the Navy no longer owns or maintains wholesale tires. Lockheed must maintain required inventory levels to meet metrics in its own warehouses. Navy retail customer inventory is also significantly reduced as the consistently short delivery timeframes allow the customer to maintain a lower local inventory level.

Reliability: Aviation tire reliability, safety, and maintainability are a focus of the program and are an on-going focus of the Team. Engineering investigations have been reduced under the PBL due to the ongoing focus on efforts to improve aviation tire reliability, safety, and maintainability. The government/industry Tire PBL Team makes customer visits to Naval Air Stations and Marine Corps

Air Stations to identify and resolve any warfighter issues affecting any aspect of the aviation tire supply chain. This direct dialogue with the actual tire user has created an exchange of information resulting in further process improvements to the supply chain.

Sustainment Strategy Effectiveness/Efficiency

Operating and Support Cost Reduction: The competitive, firm fixed price PBL contract was awarded in Feb 2016 to Lockheed Martin Mission Systems for a three-year base period with two six-month priced options at a total value of \$131.3M. The Navy business case estimates total cost avoidance of \$24.3M. Lockheed's proposal met both Business Case Analysis (BCA) affordability criteria and was determined fair and reasonable by the NAVSUP WSS Contracting Officer. The PBL uses a single commercial supply chain integrator to provide responsive and timely support to the fleet while reducing total logistics ownership costs. Lockheed Martin is the prime contractor for the program. Lockheed has sub-contract arrangements with its primary supplier, Michelin, and other tire companies, such as Goodyear, as required to meet specific tire requirements. Because of the sustained superior performance under the PBL program, the Navy reduced retail tire inventories ashore by 66% with a value of \$1.7M. Lockheed is required to retrieve fleet retrograde from locations worldwide and dispose of scrapped tires. Retrograde pick-up is accomplished worldwide and is tailored to meet the requirements of the Fleet customer. Timely retrograde pick-up eliminates the need for labor and storage space for retrograde tire management. Lockheed has picked 6,869 retrograde tires during the first year of the contract. These improvements, coupled with the complete elimination of a wholesale inventory of over 60,000 tires have significantly reduced the Navy cost of ownership.

Public-Private Partnering: The concept of PBL support for tires was initially met with skepticism by the Navy's tire suppliers. The NAVSUP WSS team overcame this hurdle by conducting Market Forums and ensuring the participation of tire manufacturers and recognized industry leaders in the field of Third Party Logistics. The interaction and dialogue generated during these forums led to the

forging of a number of industry partnerships, matching tire manufacturers with the core competencies of logistics providers. These partnerships ultimately resulted in the creation of a highly competitive environment whereby multiple qualified offerors aggressively bid for the Navy's tire support business. The Team established a contractual framework that leveraged best commercial practices and maintained the industrial base for Navy aviation tires. By utilizing a single logistics integrator, the Navy is afforded the benefit of having a single point of accountability for all operations affecting fleet support including requirements forecasting, inventory management, retrograde management, storage, and transportation. This strategy aligns the efforts of the logistics provider and the manufacturer with fleet support demands. Under the contract, Government processes are replaced with state-of-the art commercial systems in the areas of forecasting, transportation, warehousing, and technical information flow.

Systems Engineering for Supportability Approach: The Team enhances the engineering improvement process through a collaborative effort with the manufacturer and the Fleet Support Team (FST) for engineering evaluation and approval of new tire configurations. The frequent communication and exchange of information by the PBL Team has facilitated immediate action to address safety issues including the immediate quarantine of suspect tires. The outcome of this teaming arrangement is the reduction in non-mission capable aircraft due to a lack of tires, thereby assuring optimal weapons system availability.

Logistics Footprint Reduction: The Tire PBL has significantly reengineered the tire supply chain. Through the provider's assumption of all aspects of requirements forecasting and inventory management the Navy has been able to eliminate its wholesale inventory of over 60,000 tires, freeing up an estimated 280,000 cubic feet of storage space in Defense Logistics Agency distribution depots, while the improved delivery times have enabled the Navy to reduce retail tire allowance levels at shore facilities by 66 percent, from 4,769 to 1,626 tires, with an associated savings of

\$1.7M. PBL sustained superior performance has eliminated the need for massive stockpiles of tires at operating bases. When the Fleet customer orders a tire, it is delivered when it is needed.

Obsolescence Management: Under this contract, all tire inventories are managed by the contractor who carries the full risk of obsolescence, eliminating the need for obsolescence management by the Navy. Risk to the provider is minimized by communication between government and industry team members and regular program reviews.

Arrangement Type/Period of Performance/Incentives: The PBL is clearly focused on the desired outcomes of DoD Acquisition Reform guidance. The BCA ensures affordability and the firm-fixed price per tire contract controls cost growth. Both the original PBL and the follow-on that is the subject of this write-up were competed on a best value basis. The Navy tire industrial base remains robust. PBL support is fully integrated with the Navy Supply System and maximizes use of and maintains existing Navy infrastructure and expertise. Performance improvements from the original PBL were captured in the follow-on PBL via re-baselining of demand and cost parameters.

Any Cost-Initiatives: The NAVSUP WSS Pricefighters organization reviews every PBL proposal from a "should cost" perspective. The contractor's proposal estimate is examined, analyzed, and recreated using various cost estimating techniques to develop a cost model to capture all of the cost elements. Each of the contractor's Basis of Estimates (BOEs) is evaluated. Price Fighters recommendations are provided to the Contracting Officer and are used to prepare the Pre-Negotiation Business Clearance and to assist in contract negotiations. Pricefighter input on the Tires PBL facilitated cost analysis and supported the Contracting Officer's fair and reasonable determination and contract award.

Figure 1: Demand by Tire-type

Performance Review Board (PRB) I covers Feb 4, 2016 – Aug 31, 2016; PRB II covers Sep 1, 2016 to Feb 28, 2017

PRB I

NSN	Item Description	April	May	June	July	August	Total PRB I
2620014646078	F-18 Nose	199	723	661	653	758	2994
2620014554869	F-18 E/F Main	131	450	362	356	419	1718
2620009284502	P-3 Main	96	184	215	125	180	800
2620001654043	F-18 A-D/S-3 Main	81	192	159	162	201	795
2620009369416	E-2, C-2 Nose	54	120	172	153	279	778
2620015305087	H-53 Nose & Main/V-22 Main	26	86	107	112	150	481
2620008347441	EA-6B, E-2, C-2 Main	40	92	98	121	104	455
2620000614108	P-3 Nose	33	102	97	90	91	413
2620009461108	V-22 Nose	36	76	121	57	107	397
2620011185543	H-60 Main	28	55	37	63	75	258
2620997833900	AV-8B Nose	37	40	64	30	71	242
2620012522753	AV-8B Main	3	77	23	79	19	201
2620011684622	AV-8B Out	11	73	16	30	50	180
2620001690143	EA-6B Nose	3	10	11	6		30
2620011618182	H-60 Tube			2	24		26
Total		778	2280	2145	2061	2504	9768

PRB II

NSN	Item Description	Sep	Oct	Nov	Dec	Jan	Feb	Total PRB II
2620014646078	F-18 Nose	563	697	610	574	302	650	3396
2620014554869	F-18 E/F Main	302	383	429	260	275	280	1929
2620009284502	P-3 Main	189	109	91	170	102	148	809
2620001654043	F-18 A-D/S-3 Main	217	209	105	225	88	75	919
2620009369416	E-2, C-2 Nose	104	91	63	144	81	78	561
2620015305087	H-53 Nose & Main/V-22 Main	89	130	90	119	51	146	625
2620008347441	EA-6B, E-2, C-2 Main	73	82	67	138	57	67	484
2620000614108	P-3 Nose	66	78	31	63	114	90	442
2620009461108	V-22 Nose	43	140	64	60	40	157	504
2620011185543	H-60 Main	64	46	45	44	78	82	359
2620997833900	AV-8B Nose	26	31	19	53	40	17	186
2620012522753	AV-8B Main	55	42	66	25	23	71	282
2620011684622	AV-8B Out	29	26	34	13	20	62	184
2620001690143	EA-6B Nose		1		3	10	12	26
2620011618182	H-60 Tube	6		7	20			33
2620002775398	H-46 Helo	40			3			43
Total		1866	2065	1721	1914	1281	1935	10782

Figure 2: Supply Response Time (SRT) Performance

PRB I

MONTH	CONUS				OCONUS				TOTAL	
	TOTAL REQs	ON TIME	LATE	SRT	TOTAL REQs	ON TIME	LATE	SRT	REQS	SRT
Apr	231	231		100.0%	33	33		100.0%	264	100.0%
May	714	709	5	99.3%	230	230		100.0%	944	99.5%
Jun	659	634	25	96.2%	241	240	1	99.6%	900	97.1%
Jul	508	507	1	99.8%	209	202	7	96.7%	717	98.9%
Aug	728	721	7	99.0%	189	188	1	99.5%	917	99.1%
	2,840	2,802	38	98.7%	902	893	9	99.0%	3,742	98.7%

SRT for PRB I: 98.7%

Contractual requirement: 95%

- 47 late shipments
 - 23 - Carrier Delay
 - 2 - Administrative Error
 - 4 - Inventory Location
 - 18 - GFM sourced from alternate warehouse

PRB II

MONTH	CONUS				OCONUS				TOTAL	
	TOTAL REQs	ON-TIME	LATE	SRT	TOTAL REQs	ON-TIME	LATE	SRT	REQS	SRT
Sep	497	489	8	98.4%	144	141	3	97.9%	641	98.3%
Oct	605	600	5	99.2%	111	108	3	97.3%	716	98.9%
Nov	433	419	14	96.8%	97	96	1	99.0%	530	97.2%
Dec	522	506	16	96.9%	173	173		100.0%	695	97.7%
Jan	359	354	5	98.6%	165	164	1	99.4%	524	98.9%
Feb	416	412	4	99.0%	160	157	3	98.1%	576	98.8%
	2832	2780	52	98.2%	850	839	11	98.7%	3682	98.3%

SRT for PRB II: 98.3%

Contractual requirement: 95%

- 63 late shipments
 - 62 - Carrier Delay
 - 1 - Inventory Location

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Section 4

Achievements

The Navy Tire Performance-Based Logistics (PBL) Team is recognized for their innovative reinvention of the logistics supply chain for the management of Navy Aviation Tires. The Team's four year term, \$131.1M contract maintains a single point of accountability for Navy/Marine supply chain management responsible for requirements forecasting, inventory management, retrograde management, storage, and transportation. This strategy synchronizes production with fleet support demands and the logistics provider creating a cost effective, streamlined supply chain for aviation tires. Under the current contract, there are zero (0) backorders and Navy aircraft tire readiness remains at its highest level ever with 100% of all requisitions filled and over 20,500 tires delivered worldwide since Feb 2016. PBL performance has consistently exceeded the on-time delivery metric of 95% with the most recent reporting period showing on-time performance rates of 98.3%. The Navy no longer maintains a wholesale tire inventory, freeing up an estimated 280,000 cubic feet of storage space in Defense Logistics Agency distribution depots. Cost avoidance associated with the reinvented supply chain for Navy aviation tires are \$24.3M during the term of the contract. Improved delivery times have enabled the Navy to reduce retail tire allowance levels at shore facilities by 66 percent, from 4,769 to 1,626 tires, with an associated savings of \$1.7M. The PBL also provides support to countries such as Spain, Australia, Taiwan, Korea, and Malaysia; over 1,000 tires have been delivered to foreign military partners since Feb 2016. The Tire PBL contract serves as an industrial model for commercial and DoD PBLs.