Carefully Managing Part Inventory Helps Keep Navigation and Bridge Control Systems in Working Order

The Need

Code 525 was experiencing problems securing the spare parts required to keep multiple carrier-based navigation and integrated bridge control systems in working order. Lack of dedicated inventory management was resulting in repair delays and unnecessary costs.

The Solution

LCE helped establish the necessary processes, management and controls to manage the required spare parts inventory to support the control systems.

The Benefit

The Code now has a standardized process for receiving, stowing, and issuing materiel with proper inventory control. Using the new processes, 115 items have been received, documented and issued to support fleet operations and modernization efforts.

The Carrier Network, Navigation and Steering Controls Branch of the Naval Surface Warfare Center, Philadelphia Division (NSWCPD), also known as Code 525, provides in-service engineering for ship navigation systems and integrated bridge control systems. They also provide waterfront planning, development, implementation, execution, maintenance and upgrading support.

Managing spare parts for various control systems becomes a challenge

Code 525 inherited several carrier-based navigation and integrated bridge control systems that had been developed through type commander (TYCOM) support and alterations or fielded at new construction. Due to the lack of pre-installation integrated logistics support and unfunded infrastructure, the Code had problems in the area of material inventory. To support Fleet operations, the Code began scavenging spare parts as newer program-of-record installations replaced the TYCOM and new construction alterations. As the number of newer systems grew and the timeline for refreshing older systems lengthened, the Code found itself in possession of a wide variety of spare parts managed with an informal inventory system housed in a 3,000-sqare-foot, climate-controlled warehouse.

Lack of a process and dedicated inventory management results in repair delays and unnecessary costs

With more than 620 separate parts totaling over $2.8M in inventory, the Code risked losing control of the inventory process and wasting funds needed to support the Fleet. New and scavenged parts were being received and parts were being routinely shipped world-wide on very short notice. The lack of a dedicated process and inventory manager made it difficult to determine whether parts were available.

Despite ship requisitions for replacement parts, demand usage was not being registered in the Navy Supply System in a manner that

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stimulated the normal repair cycle for high-cost parts. Significant demand is a requirement for the system to identify the parts and carry them as stocked items. If parts were not readily available in the supply system, the items were often direct-ordered from a vendor with long lead times that a deployed ship cannot afford. Subsequently, Code spares were being delivered to ships with the requisitioned part re-directed to the Code to restock. Unfortunately, often the normal supply process cancelled the requisition once the replacement part arrived, thereby eliminating any demand signals.

Many of these parts are high-technology items that fail due to a small, replaceable part. However, when turned in for repair these items will be shelved until the demand signal triggers a repair. Due to the diminished demand signals for these parts, often a dozen or more items would languish on the shelf, unrepaired, ultimately becoming obsolete and unusable even if repaired.

Implementing inventory management best practices creates the necessary controls to cost-effectively supply necessary parts for navigation and bridge control systems

With help from Life Cycle Engineering, the Code:

- Established a professional inventory and warehouse manager position, filled by an LCE employee, to establish proper receipt, stowage and issue procedures for all materiel items
- Procured shelving and material management equipment to improve storage and shipment of items
- Identified and entered all materiel items into a formal materiel management database
- Implemented a standardized materiel location methodology
- Began to aggressively determine obsolete or unnecessary items in the inventory and dispose of them through the Defense Reutilization and Marketing Office (DRMO) process
- Began working with stakeholders and the Navy Supply System to explore establishing a dedicated depot for CVN Navigation and Integrated Bridge Controls in the warehouse to enable rapid repairs of critical equipment
- Began working with stakeholders and the Navy Supply System to properly establish the warehouse inventory as a mini-stock point for storage and shipment of supported equipment.

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The Code now has a standardized process for receiving, stowing, and issuing materiel with proper inventory control. Using the new processes, 115 items have been received, documented and issued to support fleet operations and modernization efforts. The effort also identified and disposed of more than 200 line items of unused and obsolete materiel.

While the establishment of the depot and mini-stock point is still in progress, the efforts to date have greatly enhanced the ability of the Navy Supply System to effectively respond to the needs of the supported systems.

Additional Information

For more information about improving operational and financial performance, please email us at info@LCE.com or visit www.LCE.com.

About Life Cycle Engineering

Life Cycle Engineering (LCE) provides consulting, engineering, information technology and education solutions that deliver lasting results for private industry, the Department of Defense and other government organizations. The quality, expertise and dedication of our employees enable Life Cycle Engineering to serve as a trusted resource that helps people and organizations to achieve their full potential. Founded in 1976, LCE is headquartered in Charleston, South Carolina with offices across North America and experience around the globe. Follow us on **LinkedIn**, **Twitter** and **YouTube** for company updates.

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