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Article and Photo

Submissions: Articles should be about 500 words long; however, C4IT, engineering, logistics and environmental specific articles can be up to 2,000 words -- all acronyms must be spelled out when first used. To have your article considered for publication, photo(s) must accompany each article. Articles can be submitted by DHL or other carrier in hard copy and/or in Microsoft Word on a 3.5 disk, CD, or e-mailed electronically. Please submit original photographs and graphics. All slides, photos, graphics and illustrations should be in color where possible. Please include **by-line** when submitting article. Let us know if you want your photos and graphics returned to you. Submit inquiries, letters, articles, and photographs to:

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Summer 2009 - 03 April 2009
Fall 2009 - 03 July 2009
Winter 2010 - 03 October 2009
Spring 2010 - 03 January 2010



On the Cover: Night view of LORAN Station Kodiak's new LED lighting system.; read more on page 40.

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87' CPB Crews Benefit from Award Winning EPSS

by Brittany Noelle Davis, Performance Technology Center, TRACEN Yorktown, VA
LCDR Terence Williams (CG-452)



During the late 1990s and early 2000, the Coast Guard replaced its entire inventory of 82-foot patrol boats (WPBs) with sixty-five 87-foot coastal patrol boats (CPBs). With the acquisition of the new cutters, engineering crews faced not only a new workplace but also significant changes in their job requirements. Even though the new cutter was distinctive and significantly more complex, the CPB was treated as a one-for-one replacement for the original vessel in terms of maintaining the ten person crew size; the existing maintenance infrastructure; and shore-side support facilities. According to a Maintenance Analysis study conducted by the Coast Guard's Office of Naval Engineering, the amount of annual and corrective maintenance required

for systems aboard the CPB increased 582% over the equipment on the original cutter.

In recognition of these challenges, CG-132, Office of Training, Workforce Performance, and Development, commissioned a front-end analysis (FEA) from the Performance Technology Center at Training Center, Yorktown. The analysis found that CPB crews (Engineering Petty Officers, Machinery Technicians, and Electrician Mates) could not perform unit or intermediate level preventive and corrective maintenance on the Kobelt steering system, MAN generator set, Ship Service Diesel Generator (SSDG) switchboard, York HVAC, EDI alarm panel, and EVAC vacuum toilet. This rendered the

87' Coastal Patrol Boat EPSS
Change System **Kobelt Steering**

Contents Search Glossary Print -Search- Go About

Home > Maintenance > Maintenance-Monthly > Lube Stern Launch Ramp Doors

Term:

- Actuator
- Bleed
- Block Diagram**
- Breather
- By-pass
- Cartridge
- Cartridge Valve
- Cavitation
- Check Valve
- Control
- Counterbalance Valve
- Cracking Pressure
- Cylinder
- Damper
- Directional Valve
- Drain

Definition: Block Diagram
A diagram representing the flow of information and the functions performed by each component in a system.

Lube Stern Launch Ramp Doors

Tools/Consumables:
Grease gun
All-purpose grease
Cotton jean wiping rags

References: MPC: A-M-5859; COMDTINST 9077.1 (series)

Safety: General Safety Procedures for mechanical and electrical hazards.

Remember* Click anywhere outside the "pop-up window" to close it

NOTE: Perform this maintenance monthly.

Step 1 - Tag out the AC system IAW COMDTINST 9077.1 (series).

Step 2 - In the RIB area, wipe all grease fittings on the hydraulic ram ends clean from dirt and old grease.

Step 3 - Apply grease to each fitting just until fresh grease comes out of the pivot joint.

Step 4 - Wipe up all excess grease and properly dispose of all grease soaked rags IAW local state and federal regulations.

Step 5 - Clear all tags IAW COMDTINST 9077.1 (series), restoring

AC CIRCUIT BREAKERS
CON-TECH-ING

My Computer 100%

engineering capability inadequate to maintain the cutter's operational requirements.

To correct this deficiency, the FEA provided stakeholders with a three-part recommendation package which included residential training, job aids with extensive training, and stand-alone job aids. Of these interventions, the first tool developed was an electronic performance support system (EPSS), designed to provide step by step procedures for operating and maintaining the six new systems. During the development and review process of the EPSS, stakeholders and subject matter experts were so impressed with the potential of the product that they suggested implementing it as a stand-alone performance intervention in lieu of residential training to see if the EPSS by itself could provide technicians and operators with the performance support needed to accomplish tasks at their work-site.

In 2007, three years after the 87' CPB EPSS was released to the field, the Performance Technology Center conducted a formal evaluation to verify if, by itself (absent the classroom training component), the EPSS was providing crews with adequate performance support at the unit level. The evaluation indicated that using the EPSS, CPB engineers were able to accomplish required job tasks that they were previously unable to perform. In addition to the increase in engineering performance capacity, the evaluation found that the EPSS provided an estimated 11:1 return on investment (ROI) to the Coast Guard over traditional training. As a result of positive feedback from users and the fiscal benefits of the EPSS, CG-45 and CG-751 decided to continue supporting the use and upkeep of EPSS.

With the help of experts from the MLCs, ELC, and several CPBs, the Performance Technology Center spent the past several months bringing current EPSS content into alignment with the present day condition of the cutters. The updated EPSS is available to the field in electronic and hardcopy format as of February (the revised EPSS is available via the CG Intranet at <http://cgweb.tcyorktown.uscg.mil/PTC/CPB/>). In addition to the systems originally on the EPSS, the hydraulic pump unit, Gyrocompass, and Autopilot systems will be incorporated for release in the next version of the EPSS, slated for completion in FY 2010.

ISPI
International Society
for Performance Improvement
Award of Excellence
2008

87' Coastal Patrol Boat

A.D.D.I.E. IN ACTION

2003: A person working at a control panel.

2007: A tablet displaying "DAE Evaluation Readings".

2004: A laptop displaying a software interface.

2005: A tablet displaying a software interface.

2004: A document with a map.

100% Respondents recommended similar EPSS for all platforms

In 2008, the International Society for Performance Improvement recognized the 87' CPB Project as an outstanding performance intervention by presenting the Coast Guard with an Award of Excellence. In addition, the 87' CPB project was selected as a top ten nominee for National Training and Simulation Association's Governor's Award and has been nominated for the 2008 American Society for Performance Improvement (ASTD) Excellence in Practice awards in the categories of Learning Technologies and Performance Improvement.

Follow-up: The EPSS project was recently awarded two citations, one in the Learning Strategies category and the other in the Performance Improvement category from the American Society of Training and Development.