



Centralized Maintenance Can Improve Combat Support in the Air and Space Expeditionary Force

The U.S. Air Force is reorganizing into an Air and Space Expeditionary Force (AEF) that can deploy quickly and frequently from the continental United States (CONUS). Although this new vision offers advantages—such as replacing the permanent forward presence of airpower overseas—it places serious demands on the combat support infrastructure. Aircraft maintenance is an area of special concern because of the large amount of facilities, equipment, and personnel needed to keep aircraft operational during a conflict. Locating repair functions within individual units or wings could speed maintenance (thus sustaining sortie rates), but it would increase the size of the deployment footprint and may reduce the overall agility of expeditionary forces.

Centralizing Intermediate Maintenance in FSLs May Improve Performance

RAND Project AIR FORCE has developed a combat support concept that calls for the consolidation of intermediate maintenance and other activities at forward support locations (FSLs) within the theater. Intermediate maintenance includes the repair and inspection of major components such as engines, which must be removed from the aircraft and transported to a maintenance facility. The Air Force used this concept, which it calls centralized intermediate repair facilities (CIRFs), on an ad hoc basis during the Air War Over Serbia. CIRFs provided an effective level of support at far lower equipment and personnel deployment levels than those required by decentralized repair. The Air Force conducted a more formal test from September 2001 through February 2002 to see how well CIRFs in Europe could support steady-state operations in Southwest Asia. The test suggested the following conclusions:

- **CIRFs were capable of supporting steady-state operations with a reduced deployment footprint.**
- **The system offered increased flexibility.** The command and control network supporting CIRF operations allowed the system to recognize when operational goals were in jeopardy and to adapt support resources to meet the required sortie schedule.
- **Some areas require improvement.** For example, deployment management and transportation problems led to delays in CIRF operations. Shortfalls in command and control led to confusion of responsibilities and difficulties in effectively allocating resources. The Air Force has undertaken studies to improve both of these systems.

Further Steps Are Needed to Implement a Global System

The Air Force must address certain issues before it can implement the new combat support concept on a global scale. Under certain circumstances, CIRFs located in CONUS might provide the best support. The Air Force has begun to examine the requirements for establishing CIRFs at domestic sites. Other issues to resolve include the ownership of assets when units pool their equipment, facilities, and components, and the need to centralize decisionmaking in the command and control structure to better help units meet their operational requirements. ■

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This research brief describes work done for RAND Project AIR FORCE and documented in *Supporting Air and Space Expeditionary Forces: Analysis of Maintenance Forward Support Location Operations* by Amanda Geller, David George, Robert S. Tripp, Mahyar A. Amouzegar, and C. Robert Roll, Jr., MG-151-AF, 2004, 127 pages, ISBN: 0-8330-3572-X. Copies of this research brief and the complete report on which it is based are available from RAND Distribution Services (phone: 310-451-7002; toll free: 877-584-8642; or email: order@rand.org) or online at www.rand.org/publications/MG/MG151/. The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. **RAND**® is a registered trademark.

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