



Highlights of [GAO-05-819](#), a report to the Secretary of Defense

## DEFENSE TRANSPORTATION

# Air Mobility Command Needs to Collect and Analyze Better Data to Assess Aircraft Utilization

### Why GAO Did This Study

Airlift is a flexible, but expensive, transportation method. From September 2001 to April 2005, the Department of Defense (DOD) has spent about \$9.5 billion using airlift to transport equipment, supplies, and troops for Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF). As of December 2004, airlift accounted for about 13 percent of all cargo and passengers transported for these operations. DOD has stated that high demand for available airlift assets requires the department to use airlift assets as efficiently as possible. However, DOD's primary objective emphasizes delivering "the right items to the right place at the right time" over using aircraft capacity as efficiently as possible.

Under the Comptroller General's authority, GAO sought to determine whether DOD used capacity on strategic military aircraft transporting cargo and passengers between the United States and overseas theaters for OEF and OIF as efficiently as possible.

### What GAO Recommends

GAO is making recommendations to improve DOD's collection and analysis of information on operational factors that impact payloads transported on strategic airlift missions. DOD concurred with our recommendations. However, based on DOD's comments, GAO has modified one recommendation.

[www.gao.gov/cgi-bin/getrpt?GAO-05-819](http://www.gao.gov/cgi-bin/getrpt?GAO-05-819).

To view the full product, including the scope and methodology, click on the link above. For more information, contact William Solis at (202) 512-5140 or [solisw@gao.gov](mailto:solisw@gao.gov).

### What GAO Found

Because the Air Mobility Command (AMC), which is the Air Force agency responsible for managing airlift, does not systematically collect and analyze operational factors that impact payloads on individual missions, DOD does not know how often it met its secondary goal to use aircraft capacity as efficiently as possible. AMC collects data about short tons transported and information about operational factors, such as weather and runway length, when planning and executing airlift missions. AMC does not capture data about these variables in a manner that allows officials to determine historically whether aircraft capacity was used efficiently. Historical mission planning files and the Global Air Transportation Execution System that is used to track mission data could provide some information about operational factors that affect mission payloads, but limitations associated with these data sources do not allow officials to determine whether DOD used aircraft capacity as efficiently as possible. In the absence of data about operational factors that impact payloads on specific missions, GAO calculated the average payloads for each type of strategic aircraft and compared these to historical average payloads, known as payload planning factors. GAO found that over 97 percent of C-5 missions and more than 81 percent of C-17 missions carried payloads below DOD's payload planning factors, as shown in the table below. However, because data on operational factors that impact payloads were not available, GAO was not able to determine whether these payloads indicate efficient use of aircraft capacity. Without adequate information about operational variables and how these impact mission payloads, AMC officials do not know the extent to which opportunities exist to use aircraft more efficiently and whether operational tempo, cost, and wear and tear on aircraft could be reduced. In addition, DOD officials do not have the benefit of such analysis to determine future airlift requirements for planning purposes.

**Number and Percentage of Missions Below, Meeting, or Exceeding AMC's Payload Planning Factors**

Type of aircraft	Number of missions	Payload planning factor (in short tons)	Number of missions below the payload planning factor	Percentage of missions below the payload planning factor	Number of missions meeting or exceeding the payload planning factor	Percentage of missions meeting or exceeding the payload planning factor
C-5	4,425	71.5	4,305	97.3	120	2.71
C-17	8,909	45.0	7,263	81.5	1,646	18.5
C-130	551	12.0	539	97.8	12	2.2
C-141	511	19.0	378	74.0	133	26
KC-10	186	32.6	152	81.7	34	18.3
KC-135	110	13.0	88	80.0	22	20
<b>Total</b>	<b>14,692</b>		<b>12,725</b>		<b>1,967</b>	

Source: GAO analysis of DOD data.

Notes: This analysis does not consider operational factors used for mission planning because data were not available. Although the C-130, KC-10, and KC-135 are not considered strategic airlift aircraft, GAO has included them in its analysis in those instances when AMC used these aircraft in strategic airlift roles. Because C-5 aircraft have separate compartments for passengers and cargo, we use a 71.5 payload planning factor (the sum of the cargo and passenger payloads).