

Demand for airlift far exceeds supply, and senior USAF officers say it is time to expand the fleet.

The Squeeze on

THE Air Force mobility fleet long has been key to US power projection. In Operation Iraqi Freedom, however, USAF's transport and tanker aircraft were absolutely crucial. They not only made possible an unprecedentedly fast "rolling start" deployment into and within the theater, but also singlehandedly solved otherwise intractable access problems.

The unique capabilities of the new C-17 airlifter gave Washington the power to open and sustain a northern front despite Turkey's refusal to permit US troops to stage from its soil.

In the south, C-17 and C-130 trans-

ports provided swift and sure resupply of coalition ground forces, helping to sustain the momentum of their lightning-fast dash to Baghdad.

Meanwhile, USAF's aerial tankers extended the reach and staying power of Mediterranean-based Navy fighters, helping them get into the fight over Iraq and continue punching once they arrived.

The combined capabilities of, on one hand, civilian air freighters and passenger airplanes and, on the other, their USAF military counterparts made possible both the swift buildup of American power in the Gulf as

By John A. Tirpak, Executive Editor

Never before has a single airplane made an entire wartime front possible, but that's exactly what the C-17 accomplished in Operation Iraqi Freedom, solving a thorny access problem by dropping troops and landing tanks and supplies in enemy territory.

Air Mobility

USAF photo by SSgt. Mitch Fuqua



well as the quick return of forces when the war was over.

In all of this, however, airlift forces were pressed to their limits. Gen. Tommy R. Franks, commander of US Central Command, was forced to modify his original war plan to live within USAF's "constrained" airlift fleet. This forced US commanders to make gut-wrenching choices between competing high priorities.

With the exception of a VIP jet and a retiring medevac transport, every type of aircraft in the inventory of USAF's Air Mobility Command was put to virtually nonstop use. That meant that each diversion of a freighter or some other type of airplane for a pop-up requirement meant that some vital equipment was grounded elsewhere.

A "One-War" Force

The eruption of a second major regional challenge—say, on the tense Korean peninsula—would have brought American officials face to face with excruciating choices about how to meet the dire combat needs of two theater commanders, and in what order.

Gulf War II, thus, highlighted this fact: Airlift might well be indispensable to the American way of war, but the airlift fleet can handle no more than one major regional conflict at a time. This is hardly a military secret; it has been acknowledged for years. However, the unprecedented application of airlift in the Gulf—

sustaining fast ground operations, ferrying special forces, defeating access problems—has generated new pressure for a major rewriting of outdated airlift requirements.

Operation Iraqi Freedom underscored today's delicate balance of needs and capabilities, said Gen. John W. Handy, commander of the joint-service US Transportation Command and USAF's Air Mobility Command. Handy spoke with *Air Force Magazine* in May, shortly after the conclusion of major combat operations.

He said that, when Franks submitted his Iraq war plan for TRANSCOM's

review, it sparked "fairly substantial negotiations" between the commands.

"We have to ... negotiate because of lack of lift," he explained.

Handy said he would have liked to have been in a position to meet the warfighters' requirements, in full, when and where they wanted them to be met. However, he added, Franks had to defer some of the elements he wanted for the major assault. Various military aspects were postponed, "in some cases, by quite a long time," said Handy. At times, things had to be moved with less than optimum efficiency.



Photo by Paul Kennedy

The new Tanker Airlift Control Center at Scott AFB, Ill., is the nerve center of 24-hour-a-day global mobility operations. In the fast-moving war on terrorism, the ability to rapidly move people and machines is a key national asset.

USAF photo by SSgt. Cherie A. Thurlby



Leapfrogging from one captured airfield to another, C-17s and C-130s like this one allowed ground forces to maintain their momentum toward Baghdad by bringing forward everything from MREs to M1A1 tanks.

USAF's airlift fleet not only faced the demands of a full-blown war but also had to meet ongoing lift requirements of other regional commanders, support peacekeeping operations in Bosnia and Kosovo, back Operation Noble Eagle homeland defense missions, and help reinforce South Korea—all "right in the heart" of the ongoing Iraqi operation, said Handy.

Was the airlift fleet pressed to its very limits? Yes, said Handy, "categorically." He went on, "We were a very tight rubber band in terms of available lift and air refueling assets."

Handy noted that the airlift and mobility structure is sufficient to transport and sustain a force big enough to fight only one Major Theater War. Given the expanded uses to which airlift was put in Gulf War

II, as well as continuing demands of Operation Enduring Freedom and other contingencies, said Handy, “I firmly believe we need another Mobility Requirements Study.”

High Risk

The current requirements document—called MRS-05—was the first to take into account the need for more airlifters to fill special operations requirements. However, MRS-05 was completed before the 9/11 terrorist attacks. It was largely based on diminished airlift requirements then considered adequate for the post-Cold War world. The document noted that the airlift fleet even then was insufficient for known requirements, and it further stated that wartime needs could be met only with “a high degree of risk.”

Of course, AMC’s responsibilities have surged since then.

Maj. Gen. Edward L. LaFountaine, commander of the Tanker Airlift Control Center at Scott AFB, Ill., said AMC, before the attacks, was running about 250 to 260 missions per day. In the immediate aftermath of the attacks, he went on, the number hit a new plateau in the high 400s and even spiked above 500 missions per day in fall 2001.

When the war in Afghanistan slowed down, the airlift fleet settled back to a new level in the mid-300s per day, he said.

Even that number does not fully convey the extent of AMC’s new



USAF’s C-141s, shown here operating in support of Operation Enduring Freedom, played a role in medical evacuations as well as resupply in Gulf War II. The giant C-5s went everywhere USAF had a runway that was big enough.

workload. Air Combat Command, for example, scores its level of activity by a sortie standard—each combination of a takeoff and a landing counts as a single sortie. AMC scores its activity not by sortie but by mission. Completion of a single mission often requires several takeoffs and landings (i.e., several sorties) over several days.

“It’s about a three-to-one multiple of sorties to missions,” LaFountaine explained.

In Gulf War II, missions run by AMC increased to a peak of 460 a day, or roughly 1,400 notional sor-

ties. This did not include the activities of airlifters and tankers “chopped”—that is, temporarily assigned—to Central Command, which carried out a combined total of 13,616 airlift and tanking sorties during the conflict.

These figures include missions flown by the commercial aircraft of the Civil Reserve Air Fleet, or CRAF. The CRAF Stage 1 call-up of passenger airplanes greatly reduced the burden on AMC airlifters, which normally are configured for carrying not passengers but outsize and oversize cargo. There was no need for a similar call-up of civilian freighter aircraft; more than enough civilian carriers had already stepped forward and volunteered for duty.

Handy is on record as saying the currently planned procurement of only 180 C-17s is insufficient. He contended that the real requirement even under the old—and now outmoded—MRS-05 standard was more like 222 C-17s. Today’s need would go even higher.

Handy wants the Air Force to conduct a new requirements review right away, “while the lessons [of OIF] are all very hot on people’s minds” and supporting data are readily available.

He said flatly, “We need to look at the assumptions in MRS-05 and update it.”

The Air Force has taken delivery of more than 100 of the advanced C-17 transports. However, said



KC-10s such as this, refueling F-16s over Luke AFB, Ariz., were part of the mobility fleet in Gulf War II. During the war, AMC had to resupply other overseas locations, move reinforcements to Korea, and keep up with training.

USAF photo by SSgt. Jeffrey Allen

USAF photo by S/A. Jorge A. Rodriguez

Handy, the mobility force can actually call on fewer than 50 C-17s to support an action such as Gulf War II, given other demands on the inventory. These include other operations, test, training, and depot maintenance, Handy noted.

The general does not have a new goal number of C-17s in mind, but he said it should be a “very robust” fleet and exceed the figure of 222 called for under MRS-05. He has tasked his staff to come up with a number that would have allowed AMC to “meet General Franks’s initial logistics requirements,” as it was first stated. Handy said, “They’re still working on that.”

The Northern Front

When Turkey decided that US forces could not transit its territory to invade Iraq from the north, it seemed at first that there would be no northern front to the war.

A flight of 15 C-17s, however, was able to bring in 954 troops of the Army’s 173rd Airborne Brigade, which parachuted into the war zone on the night of March 26. They landed and regrouped in the vicinity of Iraq’s Bashur airfield, which then was taken and used as an American supply hub.

The C-17s staged out of Aviano AB, Italy, not far from Vicenza, where the paratroopers were stationed. Flying direct from Aviano, the first five aircraft dropped equipment while the other 10 dropped



USAF photo by TSgt. Rich Puckett

When Turkey declined to allow US forces to stage from its soil, the work-around was to bring them by air. Without the C-17, there would have been no northern front in Iraq.

paratroopers. Flying in darkness, the C-17 pilots used night vision goggles and made use of special field lighting set up by US Special Operations Forces.

The C-17s deployed another 1,200 troops to Bashur over the next few nights. On April 8, C-17s began the delivery of five US Army M1A1 tanks, five Bradley fighting vehicles, 15 M113 armored personnel carriers, and 41 Humvees, along with other equipment from the 63rd Armored Regiment in Germany. The job required 27 round-trips between Ramstein AB, Germany, and Bashur.

This marked the first time that the big 65-ton Abrams tank had been flown directly into a combat sector, and the airdrop of troops marked the C-17’s first combat personnel drop. Both types of operations had been practiced in preceding months.

The C-17 was the only airlifter able to operate on unimproved runways and one of only two aircraft (the other is the C-5) able to lift the Abrams tank. The limit is one Abrams per aircraft per mission.

“The reason we had a northern front in Iraq was because of the C-17,” asserted Maj. Gen. Roger A. Brady, AMC’s director of operations. “It has the capability to carry a lot of people and supplies into relatively short strips and that’s a unique characteristic of that airframe.”

Brady reported that M1A1 tanks had been deployed elsewhere in Iraq, too. “We did take in some tanks ... in some other operations in southern Iraq,” he said. “Obviously, at one tank per [aircraft], it’s not the preferred way to move tanks.” The vehicles were moved by aircraft chiefly because of the distances involved and the need to beef up the capability of small ground forces in places such as captured airfields in western Iraq.

The C-17 achieved a mission capable rate during the war of 88.2 percent, and the airplane has been turning in an MC rate “in the high 80s” for years now, said Brig. Gen. Loren M. Reno, AMC director of



USAF photo by TSgt. Stephen Faulisi

Paratroopers of the 173rd Airborne Brigade get “racked and stacked” aboard C-17s at Aviano AB, Italy, in preparation for the flight to Iraq. Nearly 1,000 of the troops went in by night, in the largest combat drop since World War II.

logistics. Its performance has been “magnificent,” he said.

The Vital Tankers

The Air Force’s fleet of aerial refueling aircraft and tanker crews also played a vital role in Iraqi Freedom and demonstrated a surprisingly high mission capable rate while doing it. Some 255 tankers were chopped to CENTCOM for the duration of the conflict.

The KC-135 tanker fleet is old, but that didn’t seem to affect operations too much. “The MC rate for the -135 has been running in the mid-80s,” Reno reported. “They have been workhorses.”

Not long ago, the KC-135 posed a serious problem, with many spending up to 400 days in depot maintenance. In fact, the ramp at Tinker AFB, Okla., was so full of KC-135s



USN photo by Cmdr. Thomas Lalor

A tanker air bridge stretching from Maine to Cyprus kept aircraft moving to the theater in a rolling buildup to and through the start of combat. USAF tankers allowed carrier-based Navy jets in the Mediterranean to get to the fight.



An AWACS breaks free after an in-flight refueling from a KC-10 during a mission in support of Operation Iraqi Freedom. Tankers were stationed throughout the region, some in bases barely large enough to hold them.

awaiting overhaul at USAF’s Oklahoma City Air Logistics Center that officials there had to turn away airplanes. The long stays were the result of ancient wiring, corroded joints, and the accumulated stresses, cracks, and other maladies typical of aged aircraft.

Tremendous progress has been made at Tinker since then, Reno said. “In the last two-and-a-half years, they have cut in half the number of KC-135s that are in depot status,” he said. Two years ago, he said, 160 KC-135s—about a quarter of the fleet—were in depot maintenance at

any given time. Today, the number is in the 80s.

The improvement is attributable to “improved processes” both by the ALC and its contractors, which have sped up overhauls.

Still, he said, the KC-135 must enter depot maintenance every five years. Lately, aircraft are being virtually rebuilt, due to corrosion and simple age. The average age of the KC-135 is 40 years.

Brady’s conclusion: “Recapitalization, replacement of the tanker fleet is critically important to us.”

After more than a year since the

Air Force first proposed to lease about 100 Boeing 767s configured for aerial refueling, the Pentagon on May 23 announced approval of the plan. It still must pass Congressional scrutiny.

For operations in Afghanistan and Iraq, USAF set up a “tanker bridge” across the Atlantic, supported by a string of critical air bases. At the western terminus were Air Force bases in the northeast United States. Halfway across was Lajes Field, on a Portuguese island in the mid-Atlantic. To the east were the European bases of Rota Air Base and Moron Air Base in Spain, RAF Mildenhall in Britain, Ramstein Air Base and Rhein-Main Air Base in Germany, and then Cyprus and destinations in the theater.

Tankers in the Mediterranean Sea and farther east were placed under the control of the CENTCOM air tasking order. Others were controlled by the Tanker Airlift Control Center. AMC worked hard to make sure all incoming flights were noted in the ATO and to deconflict aircraft.

Navy Grumbling

Some Navy carrier pilots grumbled about the availability of tankers for their needs, but Brady said that that problem “was put to bed pretty well by the Navy” itself. He explained, “If you’re a young O-3 in a fighter and you don’t get your tanker—something happens and [the mission] falls apart—you’re not going to be happy



C-130s ranged across Southwest Asia, bringing supplies to primitive locations. Gen. John Handy believes that, as the Army shifts toward smaller, lighter vehicles, it may be a good time to reassess the number of C-130s in the fleet.

about that. And occasionally that happened.”

He noted that the combined force air component commander, Lt. Gen. T. Michael Moseley, apportioned the tankers “in a way to get the best strike results and to get the best tankers against the best assets and to have the greatest effect on the target. It’s all about target effect.”

Gulf War II saw a huge number of C-130 transports employed in the tactical airlift mode. More than 140 were chopped to CENTCOM, Brady said. Kuwait City, the largest transshipment point for cargo and passengers, hosted most of the C-130s in the theater.

They went into austere locations and established airfields, said Brady, adding, “and they provided intra-theater lift around the [Arabian] peninsula, as well. They did their traditional workhorse job.”

The C-130s were stationed in “half a dozen locations,” Brady said, “but they were all over the place.” The Hercules transports in particular helped the Army keep up the momentum of the charge to Baghdad, he added.

“The Army moved very rapidly,” he explained, “and when you do that, it’s very easy to outrun ... your supplies and your equipment.” The C-130s and C-17s kept the Army and Marine juggernaut rolling.

The Army’s new operational concepts call for moving faster, both by ground and air. Its new fighting ve-



In Afghanistan, it became apparent that USAF needed far more flight crews that are proficient with night vision goggles. AMC quickly trained up from nine special operations crews to several hundred in time for OIF.

hicle, the Stryker, is designed to be air transportable by the C-130. This concept, too, has evolved since MRS-05, and Handy said the C-130 requirement will also need to be revisited.

He continued: “I’ve asked the question, ‘In light of what we’ve seen in Enduring Freedom and OIF, is there a requirement for a good, exhaustive, second look [at tactical airlift], much like MRS did for 2005?’ Should we look at the tactical side and say, ‘What do we need in the way of C-130s? Are we postured appropriately?’”

Handy said he’s seen nothing to

indicate that AMC should transition to an all-C-17 force of strategic airlifters, as some have proposed.

Although C-5s could not go everywhere in the theater as the C-17s did, the Galaxy’s huge throughput capacity makes it a capability too valuable to throw away.

Given the C-5’s capacious volume, Handy said, USAF needs some number of very highly modified, high-mission capable rate C-5s. “We still need both [the C-17 and the C-5], but I certainly can’t trade one off for the other,” he insisted. “I’ve got to work the modifications on the C-5 and work the acquisition of more C-17s.”

Blackout Conditions

The Air Force moved quickly to outfit the entire airlift fleet to be able to work at night in blackout

conditions. Brady said the Air Force learned from the war in Afghanistan that it did not have enough people trained to do night-vision-goggles landings. “Only our special-ops-trained folks in the C-17 had been trained to do that,” he noted. They numbered just nine crews.

“So we started a crash program to get as many C-17 and C-130 crews as we possibly could trained to conduct air-land operations on night vision goggles,” Brady added. “Now, we have several hundred crews that can do that.”

The move required quick-turn con-

tracting to obtain cockpit lighting filters so that C-130 crews, particularly, could use the NVGs, Brady said. The C-17 already came equipped with the proper lighting. “All you do is flip a switch,” he explained.

Another big winner, said LaFountaine, was the ability to “leapfrog” tanker airlift control elements, which did advance work on expeditionary air bases. They would set up air traffic control, lighting, navigation aids, and ground handling equipment in a bare-bones location, then, as soon as it was up and running, move on to another base. USAF had 10 TALCEs and each set up about three bases in Saudi Arabia, Jordan, Romania, Bulgaria, Turkey, and Iraq.

Newly formed Global Assessment Teams—the “leading elements for TALCEs”—would travel with Army and Marine units either overland or as paratroopers, said LaFountaine. Upon arrival at a captured airfield, GAT members would evaluate its suitability for operations and order what was needed to make it usable.

“It worked extremely well,” he said.

AMC expects to see a slight downturn in availability of airlifters and tankers for several months, but the dip will in no way resemble the massive reconstitution that followed the 1991 Gulf War, 1999 conflict in Kosovo, or 2001 war in Afghanistan.

In Desert Storm, every available



USAF photo by MSGt. Ronny Przysucha

Dependence on aerial tankers became all too apparent in Operation Iraqi Freedom. DOD has decided to pursue a third type of tanker, as insurance against a possible grounding of the KC-135.

airlifter was rushed into the theater—some only half painted. That didn’t happen this time around. “AMC this time did not accelerate or compress any aircraft that were in [programmed depot maintenance],” Reno boasted. “Accelerate means do the work faster; compress means there’s some work you don’t do so you can get the aircraft out of PDM faster. We did not do either in this war.”

Moreover, he said, no aircraft scheduled for depot were delayed in going there. “We stayed on the plan we had before the war,” Reno said. Air Force Materiel Command did,

however, give AMC a list of aircraft that could be compressed or accelerated if the need arose, he noted.

Reno explained, however, that many work-arounds were employed to boost the number of aircraft available for the conflict and that the fleet will require a short recovery period.

Aircraft washings—done not to make the airplanes attractive but to fight corrosion—were deferred, but must now be accomplished. Maintenance checks of aircraft, such as the C-5, were postponed and must now be performed.

Some of these items could be deferred without affecting the long-term health of the airplanes, Reno said, because they were typically done at the “forward edge” of the target period. They were pushed to the rear of the target period.

“What we try to do is reconstitute on the fly,” Handy explained. “We don’t defer maintenance, we don’t defer depots; we try to work those requirements in the middle of everything that we’re doing, because we know there’s not going to be some down time ... to take three months or six months and recover. I’d love to do that for the people, I’d love to do that for the weapon systems, but we find no time to do either.”

He went on to say that he didn’t expect a letup.

“I don’t see any end in sight,” he said. “We must posture ourselves at some degree of surge for some period of time.” ■



Brand-new Tunnor and Halvorsen loaders played a critical role in OIF, showing the importance of investing in things that may not be flashy or glamorous but which make all the difference in the crunch.

USAF photo by SSgt. Wayne Clark