

# flying

SAFETY

DECEMBER 1990

## Desert Shield-A look at the buildup



## A SPECIAL ISSUE

Welcome to a special issue. *Flying Safety* has been providing Air Force members information about the Air Force's safety program for nearly 45 years. In that time, it has seen a number of conflicts around the globe. During each of these situations, *Flying Safety* has kept the contributions of the safety program in focus.

These pages are dedicated to the people of Operation Desert Shield. They represent the efforts of professionals at every level who believe in the value of deploying with nothing less than the best. Their stories will be told in future issues, but for now, pictures are still worth a thousand words.

Successful mission accomplishment will always be the reason for including safety concepts in our planning. Operation Desert Shield has clearly demonstrated the benefits in preparedness gained through employing an effective safety program.

In this magazine are some of the pictures taken on our recent staff visit to the Middle East. We are presenting them to help orient our readers to what is happening in this crucial area of the world. We couldn't cover it all in the time allotted, and we regret if we haven't satisfied your total curiosity. Let us know your interests, and we'll try to provide coverage in future issues. □



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This issue is dedicated to all our airmen who stand ready to defend freedom.



## SPECIAL FEATURES

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### DEPARTMENT OF THE AIR FORCE • THE INSPECTOR GENERAL, OSAF

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## GETTING THERE

When Iraq invaded Kuwait, the United States began the largest military deployment since World War II. For the Air Force, the Military Airlift Command was the hub of this massive deployment. An operation on such a grand scale posed many challenges. For the aircrews, it meant extended flying hours and operations. They also had to fly in and out of airfields with minimum navigational aids and in crowded airspace where the air traffic controllers were taxed to their maximum ability.

Because of the enormous scope of Operation Desert Shield, MAC aircraft were supplemented by commercial cargo and passenger aircraft from the Civil Reserve Fleet (CRAF). By December, MAC had flown nearly 6,500 missions airlifting more than 200,000 personnel and better than 200 million pounds of combat equipment.

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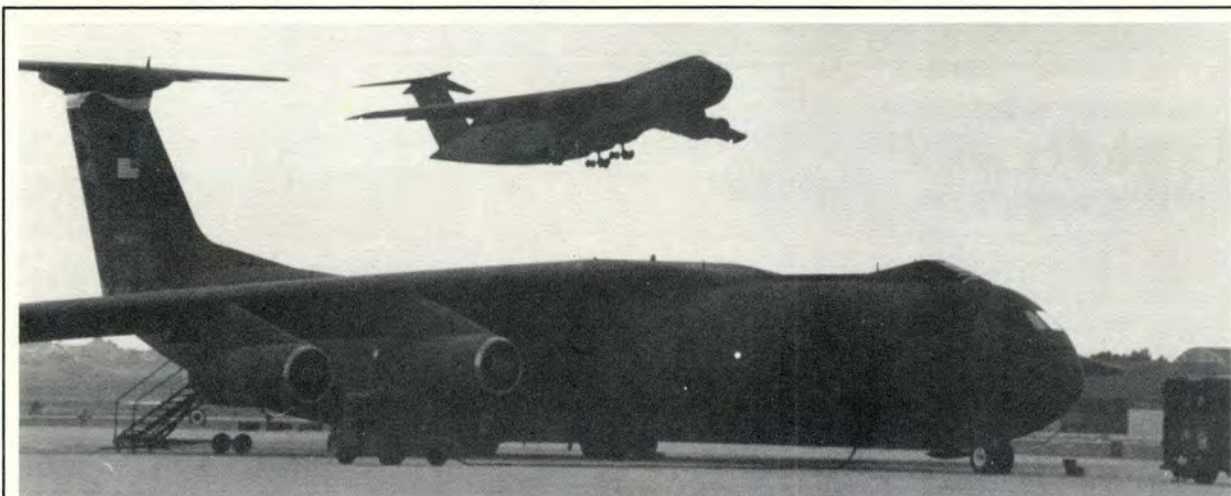


Troops bound for the Desert Shield operating area head for a waiting C-5B.

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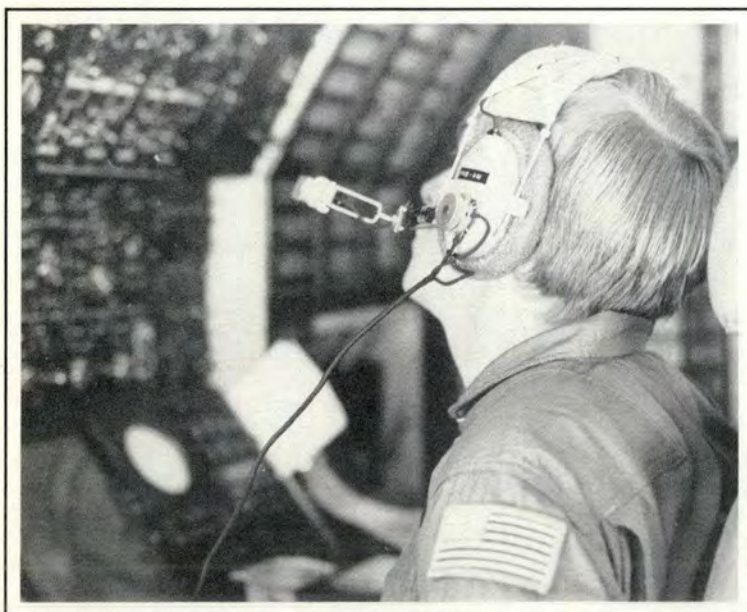


One of three hangars at an overseas air base, which have provided temporary quarters for thousands of American troops on their way to Desert Shield. The facility also provides shower and dining facilities, a small BX, and even a video theater.



Like an aluminum cloud, a C-5 delivers a load of parts and equipment. Albert's ability to deliver oversize loads, such as tanks, gives commanders added flexibility to quickly move combat gear and personnel.

These C-5Bs are at the half-way point on their journey to the Middle East; but they won't be here long. The average ground time is only 3 hours.



MSgt Andrew Fabian, flight engineer, 326 MAS, will monitor every system of the C-5B for the next 8 hours during the crossing of the Atlantic.

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## Getting There continued

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The massive buildup not only heavily tasked MAC flight crews but also challenged the ground crews and air terminal units. Airfields, which would normally support 10 or 15 daily cargo operations, were suddenly tasked to handle as many as 70 operations every 24 hours. Staging bases in Europe provided temporary quarters and dining facilities for thousands of deploying people each month.

It has been said, getting there is half the battle. The people of the Military Airlift Command have met this challenge. Now, as the airlift mission gradually shifts from deployment to support operations, MAC flight crews and ground crews continue to provide vital equipment and parts to our forces in the Middle East. □



One of the many temporary passenger terminals set up to support the Desert Star, the Air Force's military shuttle air carrier.



Somewhere out there is a horizon. Desert dust can often, and unpredictably, obscure the natural horizon on the clearest of days.

A C-141 gets ready to move out after only a 2-hour stop at a European staging base.





Moving cargo is the life's blood of Desert Shield. MAC's C-130s and C-141s move thousands of pounds of cargo around the clock.



Portable hangars like this can be set up in hours. They provide shelter from the desert sun and protection from sandstorms while working on aircraft.



Endless sand dunes fade into a nonexistent horizon. The blowing dust rises as high as 18,000 feet while leaving downward visibility remarkably clear.

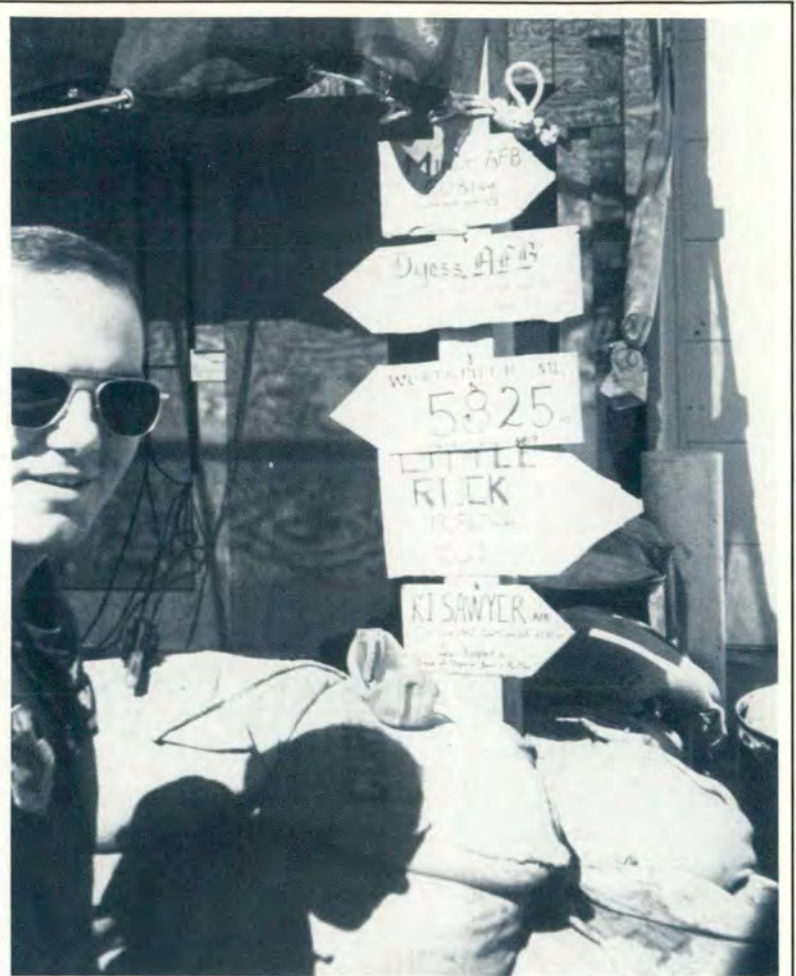
## HOUSING

Where do *you* call "home"? For the members of the Air Force remaining in the Desert Shield area of operations, home can be any one of a variety of places.

For some, it is nothing more than a standard eight-person tent. For others, housing might be found in living quarters which host-nation contractors left behind when they finished the job. And still others will find shelter from sand and wind in temporary structures erected by Air Force civil engineers.

Wherever they found a place to live, Air Force people have been improving upon it since the first day. The pride and satisfaction which come from these improvement projects are a big reason why they feel they're the best in "country."

Another benefit arises from a good night's sleep. Well-rested professionals don't miss the critical details which must be completed if we're to get the mission done. □



Desert Shield forces have come from many locations to find a temporary "home" in the desert.



After heavy traffic by military vehicles, the desert sand is pulverized into an extremely fine powder. Proper servicing and maintenance procedures can minimize the effects of sand and dust on aircraft and equipment.





"Home" in the desert for the Air Force members is made more comfortable by the addition of a wooden deck and a shade canopy. With the air-conditioning units connected, these tents make adequate rest possible during the hottest days and nights.



Using their spare time to construct decks and awnings has kept many tent-city residents from becoming bored.



As soon as the immediate problems of housing and munitions storage were met, civil engineers started to improve the quality of life. One of the first projects was a permanent latrine facility with modern plumbing.



## MAINTENANCE

Desert Shield is the first "full blown" test of the Combat Oriented Maintenance Organization (COMO). The purpose of COMO was to form fighter squadrons into cohesive and autonomous deployable units capable of flying and maintaining combat aircraft. In effect, COMO allowed tactical fighter units to "hit the ground running" when they were deployed to the Persian Gulf. The concept was the idea of then TAC Commander, Gen W. L. Creech, who first implemented it in the late '70s. The concept has now been adopted in variations by all commands.

The COMO concept of "decentralized" maintenance which dedicates every type of maintenance specialist, including AGE and munitions, to a specific fighter squadron not only affords commanders' considerable flexibility, but

*continued*



A Home station? Or the Desert? Proper documentation of aircraft forms is still crucial to safe aircraft operations.

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Modern combat aircraft depend upon more than a pilot to get the mission done. It also requires quality maintenance. A fully mission-capable aircraft provides the edge in air combat.

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An A-10 is towed from its parking spot to the wash rack. In the desert climate, frequent washings have ensured dust and sand don't keep the aircraft from supporting Operation Desert Shield.

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## Maintenance continued

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also fosters team identity between maintenance and operation. This camaraderie is evident throughout every unit deployed to Desert Shield. "We know each other, we know our jets and our equipment. We have trained together as a unit so operating deployed is pretty much the same as at home base," explained one of the F-16 production superintendents. □



When an engine is due a time change, even in the desert, the specialists can do the job as easily as in the states.



Once removed from the aircraft, the engine will either be repaired on station or shipped for depot maintenance just as it would at home station.



A specialist makes a last-minute check of an F-16 engine before it's installed in the jet following a routine time change.



The shade provided by a "T" hangar in the desert makes a routine engine change possible any time of the year. All in a day's work, the aircraft is returned to combat ready status with a new engine.

## AMMO

The success of any air combat operation depends on the availability of a sufficient amount of the right kind of ammunition. Getting the bombs and bullets to the deployed area is often one of the most difficult and complex logistics operations.

In the short period since the beginning of Operation Desert Shield, many munitions storage areas have been constructed. It is to the credit of the munitions safety folks and Red Horse engineers who quickly constructed these facilities that not one explosive safety waiver has been required for the bulk storage of munitions within the theater. Better yet, they have assured the ammunition needed for the continued success of our desert operations. As they say in the munitions community, "Without Ammo, the Air Force would be just another airline." IYAAAYAS!! □



Putting the claws on a Falcon, a munitions load team from the 363 TFW hangs an AIM-9 sidewinder on the wing of an F-16. Over the years, the AIM-9 has proven itself in combat.

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During realistic combat training, a munitions loading team prepares to load a live cluster bomb unit on a combat ready F-16 deployed to the Arabian Gulf.



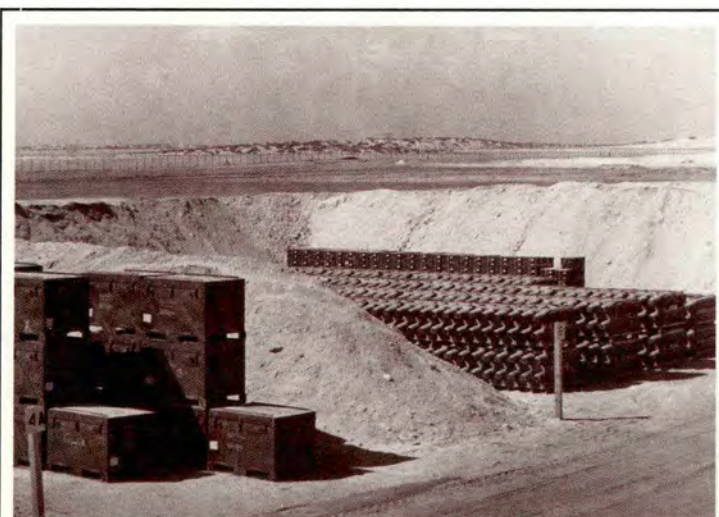
Ammo troops assemble 500-pound bombs on a RAM (Rapid Assembly Munitions).



Munitions specialists check out Aim-9 missiles at a deployed site in the Arabian Gulf.



Live combat turn sorties provide realistic training and help maintain the proficiency of both maintainers and flightcrews. Above, a munitions loading team chief checks the arming wire and fuze setting on a 500-pound bomb.



Properly constructed "mods" allow this unit to store nearly 3 million pounds of explosives safely. Modular storage units for explosives were among the first projects completed by the civil engineers.



From bombs to bullets: A munitions team links ammunition to be installed in aircraft gun systems.

*“The belief that security can be obtained by  
throwing a small state to the wolves  
is a fatal delusion.”*

**Sir Winston Churchill, 1938**







## OPERATIONS

From Day One of Desert Shield, operations had to overcome many unique challenges. The first aircrews to arrive were faced with flying in crowded and unfamiliar airspace. This was further complicated by poor communications between aircrews and local air traffic controllers which initially caused some hazardous traffic conditions. However, after the first few weeks of experience and close coordination between US and local air traffic controllers, airspace problems have been minimized.

At low level, pilots found many challenges. They quickly learned, or relearned, the dangers of flying through the dusty desert haze in which the horizon is so obscured or misleading, it often requires flying IFR even during the usually cloudless days. And many chopper crews learned a new meaning for IFR when they were required to land in the

*continued*



A KC-135 copilot refers to the checklist prior to inflight refueling operations.



The KC-135R is the newest version of the Air Force's time-proven air refueling jet. CFM-56 engines provide a significant increase in thrust and refueling capability.



**BUSY BOOMER:** A1C David Hart, 306 ARS/Deployed, boom operator, flies daily missions over the Arabian Gulf refueling Navy and Marine Corps combat aircraft.



Over the waters of the Arabian Gulf, an EA-6 prepares to receive fuel which will allow it to nearly double its range in support of Operation Desert Shield.



**PASSING GAS:** Hundreds of aircraft over the Arabian Gulf keep SAC tankers busy. An F-18 from the aircraft carrier *Midway* gets ready to take on a load of fuel.



A Marine Corps F-18 receives fuel from an Air Force KC-135 using a probe and drogue.



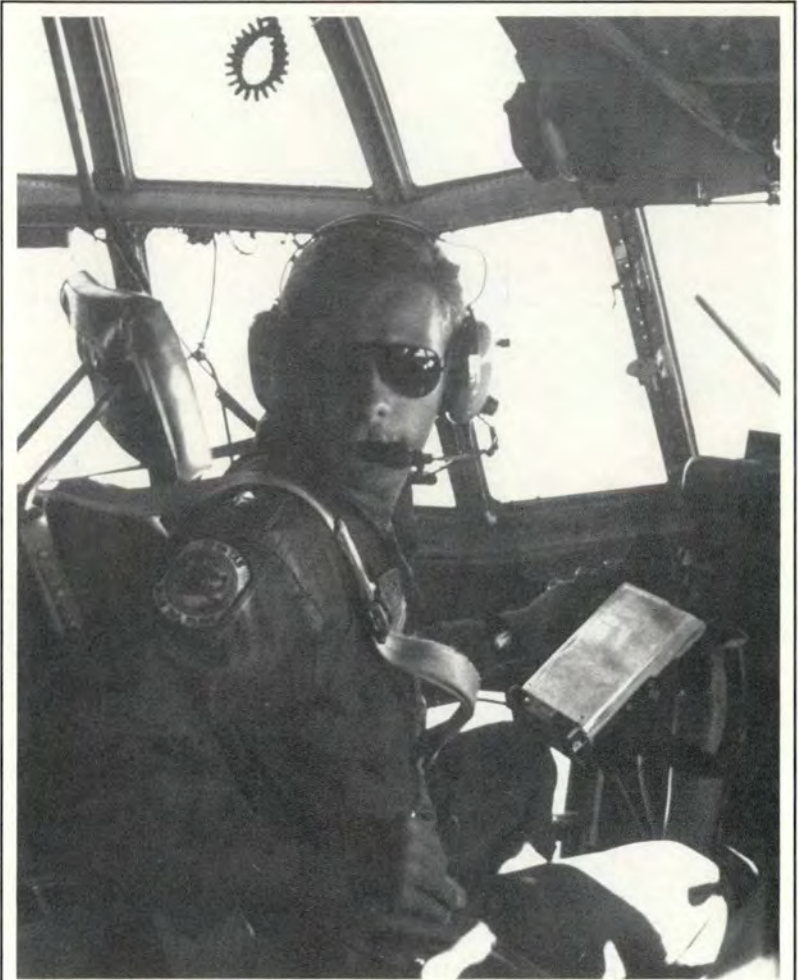
KC-135 Stratotankers of the 1703 AREFWP/Deployed stand ready on the edge of the flight line at a Desert Shield operating location. Their recent support of a major exercise provided more than 1,800,000 pounds of jet fuel to other aircraft in 2 days.

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## Operations continued

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dusty and soft desert surface. On the ground, both flight and ground crews were required to operate on overcrowded taxiways and parking ramps. These problems were particularly serious at night because of poor lighting and unreliable ramp markings. In spite of these difficulties, Yankee ingenuity has prevailed. Crews are successfully operating in the Arabian desert while maintaining an impressive safety record. Within 30 days of the initial deployment, most units were flying daily sorties at or above those at home station. □



A C-130 pilot from the 37 TAS/Deployed confers with the flight engineer during preparation for arrival at a Desert Shield operation location.





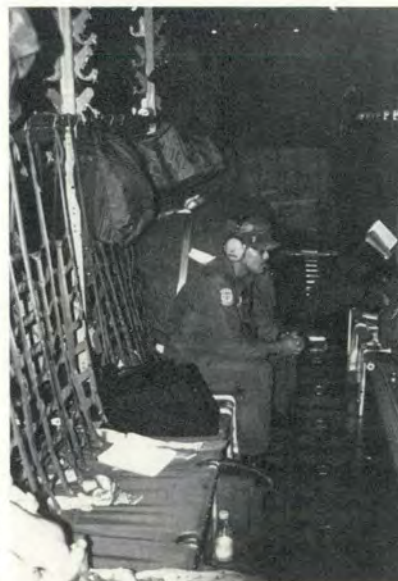
MAC's vast C-130 fleet in support of Operation Desert Shield has provided nonstop transportation of troops and materials since the earliest days.



Although it's a tight fit, the maintenance crews of the 7 ACCS/Deployed have learned how to quickly install an ABCCC unit in their C-130s.



Crew positions onboard an airborne battlefield command and control center unit are austere, but provide a vital link to air and ground forces in support of Operation Desert Shield.



His immediate tasks temporarily completed, a C-130 loadmaster on the Desert Star takes a break until the next stop. The Desert Star routes provide a guaranteed transportation system for troops in the theater.

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## Operations

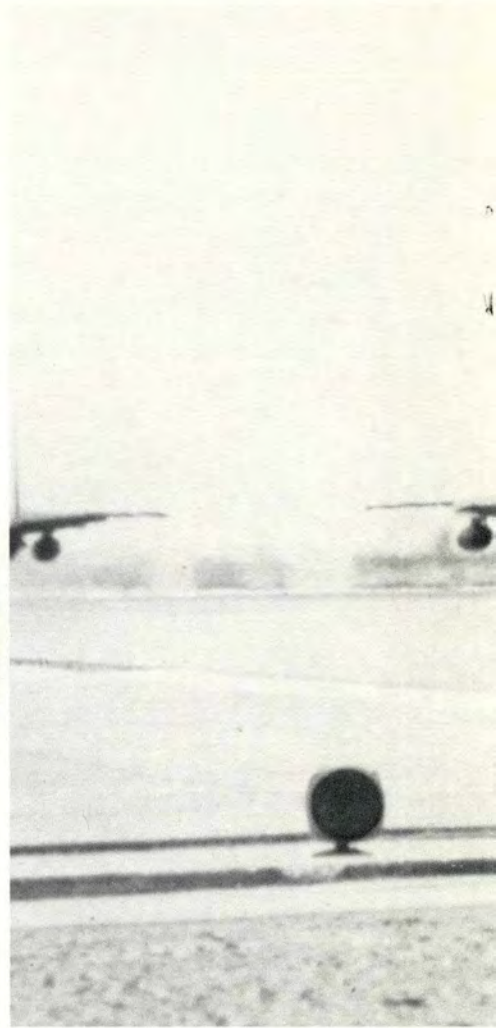
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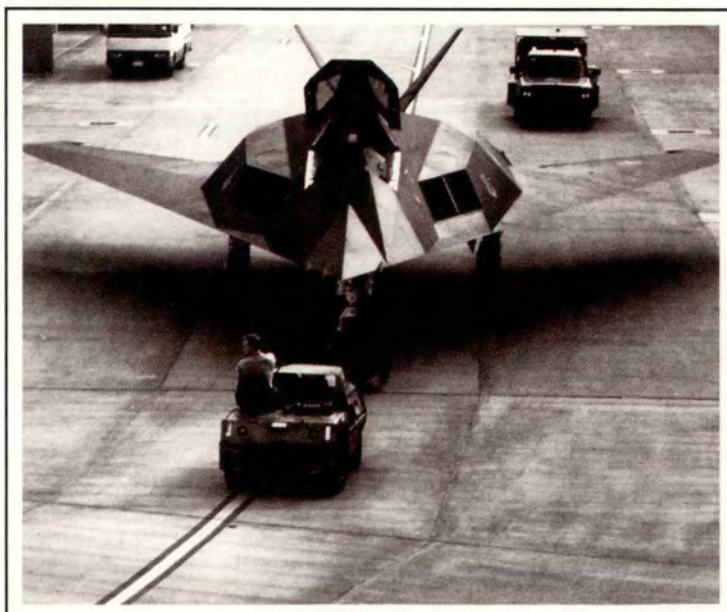
A pair of F-15s from the 1 TFW/Deployed take off for a training mission.



An F-4 Wild Weasel on a recon mission takes on fuel over the Arabian desert.



Two F-4s from the Birmingham ANG fly recon missions over Saudi Arabia.

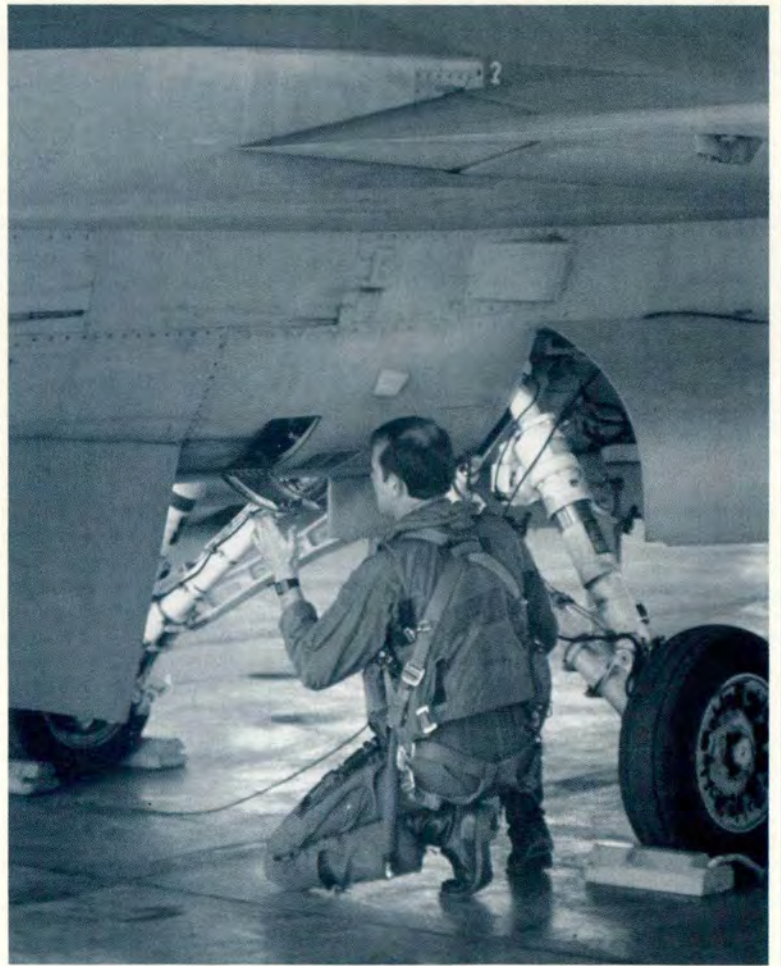


An F-117 stealth fighter deployed to the Arabian Gulf is towed to the flight line.

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## Operations

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One simple step of the preflight inspection can be as important to a safe flight as all the hours of preparation.

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The relative coolness provided by these shelters enables both pilot and aircraft to avoid the effects of desert sun while preparing for a training mission in support of Operation Desert Shield.





The aircraft from two A-10 wings have joined forces at a single site in the desert to ensure round-the-clock support of Desert Shield objectives.



Clear communications and strict adherence to TOs have made for a mishap-free "hot pit" refueling operation.

## THE PROVIDERS

### Desert Dining

Proper nutrition is vital to the health and morale of any unit. Most also agree that because it lessens fatigue, good nutrition lessens the chance of mishaps. For this reason, the United States has traditionally maintained the world's best-fed military. For the Americans deployed to Desert Shield, state-of-the-art, climate-controlled mess tents have replaced the antiquated and often fly-infested field kitchens of World War II or the Vietnam era. These facilities not only produce excellent food but also provide a comfortable place to dine.

Gone, too, are the C and K rations which soldiers and airmen had to eat when there were no dining facilities. These have been replaced by the MRE (meal ready to eat). While the MRE, like its predecessor, is often the subject of a GI's humor, few will argue

*continued*

Aircrews and support people all head for the dining tent for a fresh, hot meal. MREs are only a small part of the diet, now that contracting units have arranged for delivery of local products.



SOS: One of the hundreds of contract cooks employed to support Desert Shield serves a generous portion of chipped beef (SOS) to a hungry captain. A good breakfast is the best way to start the day, and steak is often on the morning menu.



Aptly named the Desert Inn, this tent is actually a dining facility, fully equipped with ovens, freezers, steam tables, and other restaurant gear. A familiar sight to thousands of American military personnel, it is typical of the dining facilities which were deployed to the Desert Shield theater.



Air Force troops in the Middle East can now expect at least two hot meals a day, cooked by contract employees and supervised by Air Force chefs. The latest stainless steel kitchen equipment helps to bring Air Force troops some very good chow.



Not everyone likes the same thing, so people frequently separate the MREs into different boxes to make it easier to find your favorite item.

The labels may look slightly different, but the contents taste the same. Once a dining facility gets set up, you would almost think the food was prepared just for your taste buds.

## The Providers continued

they do provide a well-balanced meal. The main gripe about the MRE is not the taste (better, if heated) nor the quantity of food (5,000 calories per meal), but the limited variety. The food service folks are helping Desert Shield forces maintain a keen fighting edge.

### THE MEDICS

At Desert Shield locations, the Military Air Support Hospital (MASH) of TV fame has been replaced by the ATH or air transportable hospital. Like its predecessor, the ATH's purpose is to perform life-saving treatment for the critically wounded. Unlike MASH, these medical facilities are completely air transportable and can be set up almost entirely by deployed medical personnel. Each ATH has operating rooms with modern, up-to-date equipment for performing life-saving surgery. □

Yes, even in the middle of a Desert Shield billeting location, there's a US Postal Service mailbox to take letters back home to loved ones. We all know how nice it is to hear from the folks back home. But it works both ways. WRITE HOME OFTEN! It's free!!



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Mail call is an important part of the daily routine. Letters from home help boost morale.



Each day the postal service receives tons of mail. Everything from cookies to photos from home pass through the military postal service.



A far cry from the Vietnam era field hospital, the air transportable hospitals are fully equipped with state-of-the-art operating rooms. Facilities such as this will greatly increase the survival rate of battlefield casualties.



A few weeks ago this was an empty lot. Now, it's a fully equipped hospital ready to meet the needs of Operation Desert Shield participants.

Each air transportable hospital has a well-stocked pharmacy. While it may not be as big as at home, it has whatever the doctors prescribe.

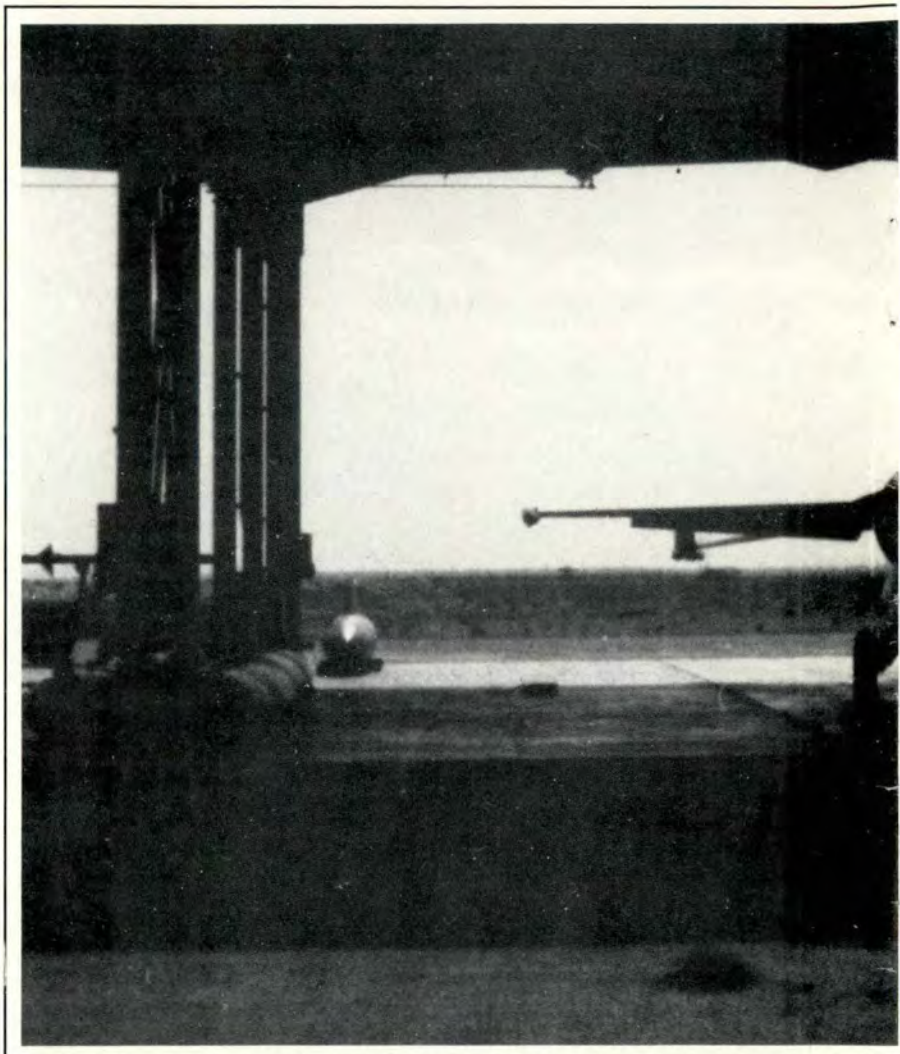


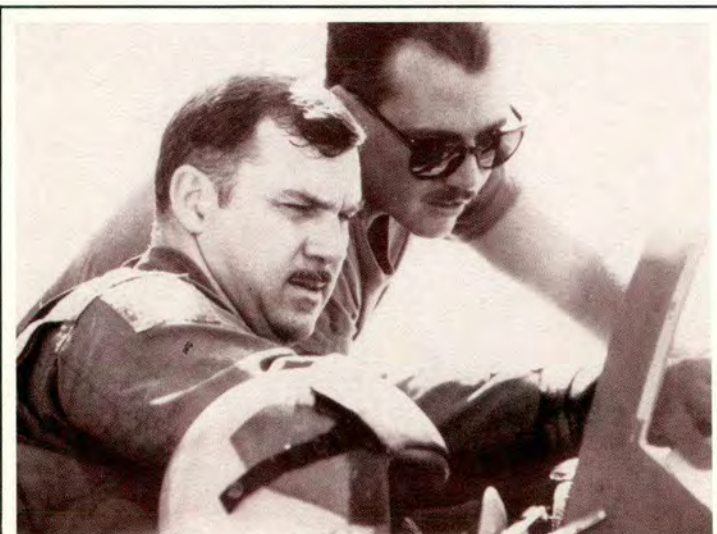
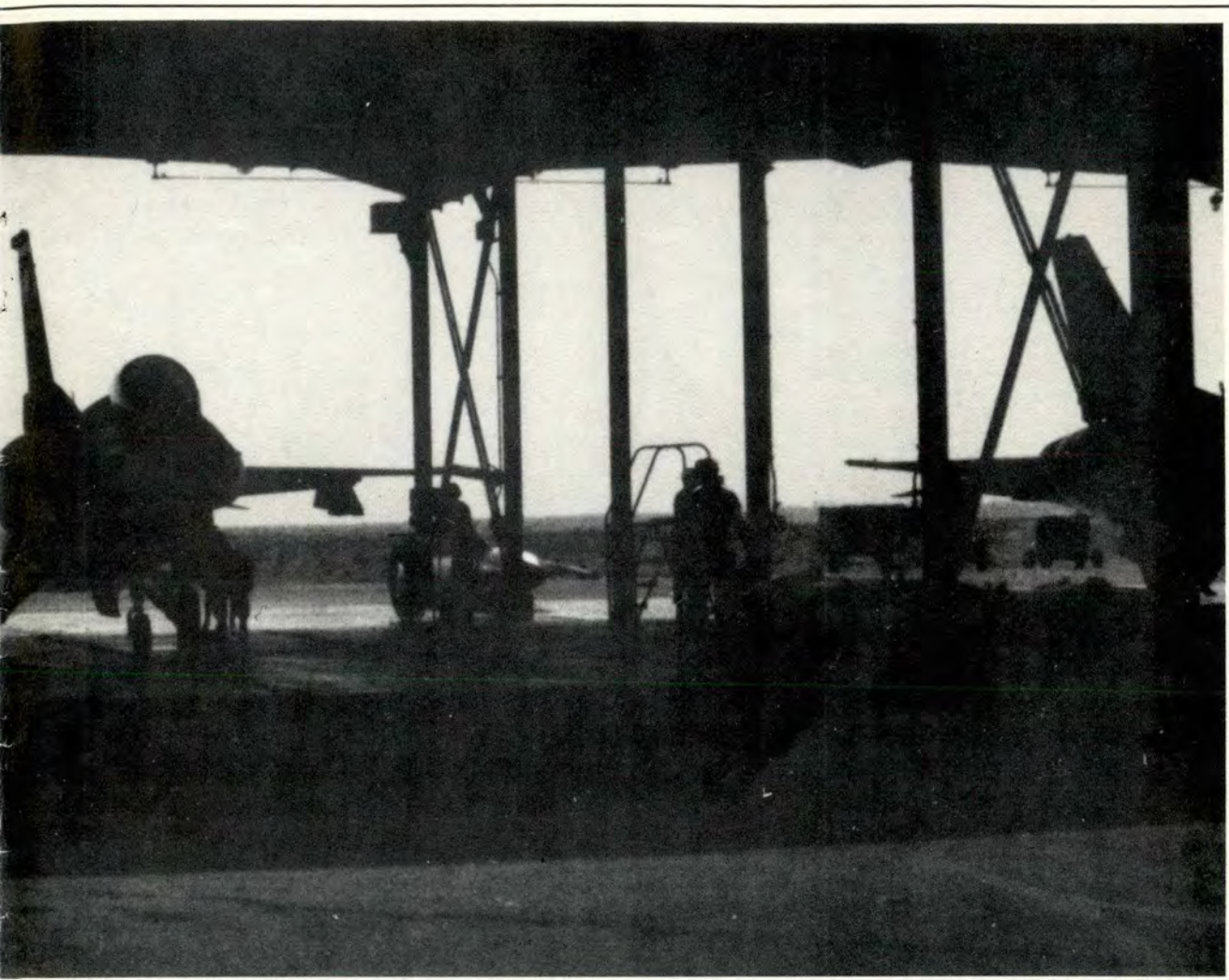
From an injured foot to a life-threatening shrapnel wound, the medics deployed to Desert Shield are ready.

## STANDING READY

Most people, aircraft, and munitions are in place. Red Horse and Prime Beef teams have established the facilities needed to sustain air combat operations. Aircrews are now flying daily training and reconnaissance missions to familiarize themselves with the possible combat environment. Maintenance specialists are keeping the aircraft fully mission capable, and munitions loading teams practice daily to maintain proficiency. They have learned to operate in the extreme heat and sand of the hostile desert environment.

Many aircraft are now alert, loaded with munitions, standing ready to engage in combat. The bottom line, as one wing commander put it, is "We are ready now. Every day we sharpen our skills a little more. While no one here wants a war, if it comes, we are standing ready to engage and defeat the enemy." □





Desert Shield is a team effort. Pilots, maintenance, security, and countless other officers and airmen are standing ready to meet any challenge.

