



A 1st Squadron Sikorsky CH-3E flies over Washington, D.C. on a VIP transport mission.

Flying With The U.S. Air

Actually, unless you plan on shortly being elected to Congress or having the President appoint you to a Cabinet post, don't expect to ride with what is probably one of the safest flying organizations around. But how did they get to be so safe?

By David Harvey

Reporting from Andrews AFB, Md.

IF HEAVEN HELP US, the nuclear balloon ever goes up, most people have a theory about what the President will do.

He will jump aboard one of those shiny U.S. Marine H-3s you see on the nightly news and dash from the White House to Andrews Air Force Base, 15 minutes to the east. There he will clamber aboard a specially converted Boeing 747 and climb as fast as he can away from ground zero. After consultation with advisors aboard this "airborne command post," the theory goes, he will direct a suitable "response" to whatever horrors have been perpetrated on the nation below.

But how do those advisors, who include

key members of the Cabinet, the Joint Chiefs of Staff, leaders of Congress, and anyone else deemed essential to the continuation of life after Doomsday, get to the Andrews tarmac? And what about other lesser leaders whose emergency assignments mean they must scatter away from Washington to putative underground command bunkers in the Blue Ridge foothills to the capital's west?

These also have a helicopter-taxi service. It doesn't belong to the U.S. Marine Corps, however. Their special fleet is the 13 aircraft array belonging to the U.S. Air Force (USAF) First Helicopter Squadron. The helicopters—nine Bell UH-1Ns and four Sikorsky CH-3Es—are as much a part of United States war "readiness" as the ICBMs in the silos, the bombers on their runways, and the submarines in the depths.

Squadron personnel are as closemouthed on this aspect of their mission as anyone else

concerned with the nuclear "sharp end" of national security. However, in August they broke cover to celebrate a remarkable achievement in helicopter aviation: 30 years—120,000 flying hours—of accident-free operations.

"Accident-free means no incidents causing more than \$50,000 worth of damage," says Lt. Col. John Lerda, the squadron's operations officer, touching wood, "and that's been the story. In addition, we're to the point where we have a 99.9% mission-completion record and 70% of the birds are ready to go anytime."

The classified mission of the squadron is obviously extraordinarily demanding. Can you imagine the outcry if the chairman of the Joint Chiefs failed to make it to that 747 because his helicopter broke down?

"It'd be Desert One [a reference to the disastrous Iranian-hostage rescue mission] on the Pentagon pad," says Lerda. "We can't afford that."

This critical requirement for practically a 100% service guarantee has evolved, ironically, because of the squadron's peacetime—and second most important—mission of providing VIP taxi service for anyone who's anyone (except the President).

"We fly 14 sorties a day, five days a week,

and it's a very protocol-sensitive mission," says Lt. Col. Mark Bridges, squadron commander at the time of our visit. (He has recently been reassigned as part of normal rotation.) "In fact, we have to be aware of an 'awe of rank' syndrome. The pilots have to be happy with the fact that they're the ones in the driver's seat. That can be hard with the secretary of defense sitting behind you."

Unlike company CEOs who can—and do—make their corporate pilots' lives miserable, Bridges says his passengers are a unique bunch: most, if not all, have a close working knowledge of aviation. "They know the pilot's word is law when it comes to the safety of the flight. We get on OK in that respect."

Defeating the odds

Safety is, in fact, the single concept permeating all aspects of operations. "Ten percent luck and 90% the best maintenance and training we can get: that's the key," says Lerda.

The squadron's 150 people—split three ways between operations, flight line, and mission specialists—offer a range of safety guarantees that would make the average civilian operator green with envy. When this is allied with a 27-man pilot pool boasting an average of 2,000 flight-hours each, all of whom have been instructors or combat pilots in other units, the First Squadron's record begins to come into perspective.

"If you went to some line unit out there in the Pacific," says Maj. Jim Tanner, chief of standards and evaluation, "they'd probably say, 'Gee, well those guys ought to be safe,

all, the goal of "no accidents" has managed to elude practically everybody else in the helicopter-flying business.

Safety's secrets

Is there a direct-line relationship between the ultimate in care of the machinery and safety? If so, are there any lessons to be learned from looking into the First's maintenance methodology?

Senior Master Sgt. John Gibbons, the squadron's field-maintenance branch supervisor, believes one of the secrets lies in the layers of supervision. "Nothing gets done that isn't checked by someone else," he says. "And then it's checked again."

The squadron's helicopters come into the hangars at Andrews for scheduled "phase" inspections—the CH-3s every 200 hours, the UH-1s at 125 hours—where they are picked apart.

The phase inspection is preceded by a round-table conference during which every piece of work to be done is detailed. A computer print-out lists the "time-sensitive" items. Then work cards are handed out to shop personnel with each person signing for his own work, says Gibbons. Another important factor is that maintenance personnel are separate from inspectors.

The phases place particular attention on flight dynamics systems, load-bearing points, and splines. Anything close to its limits is changed and there is a lot of "on-condition" changing of parts as well, Gibbons indicated. The big difference, however, lies in the experience of the technicians involved.

"These are people who can put their hand

probably about 10,000 items, according to Gibbons.

Keeping Murphy at bay

The squadron is also meticulous about things like tools, which are all individually accounted for during their use on the job. So far, the First has avoided the ultimate "Murphy's Law horror story": a wrench jammed in the controls.

"It's a constant possibility," Gibbons concedes, "and if we have a tool missing, even a tiny one, the whole place freezes, the aircraft is red-crossed, and no one goes home until it's found. That tends to concentrate the mind wonderfully."

Although it doesn't possess the facilities itself, the squadron has access to some advanced test equipment on the base. This includes NDI (nondestructive testing instrumentation) such as X-ray inspection, borescopes, and the like. Certain items, like rotor blades, must take a trip through NDI during the phase inspections. In addition, the technicians have access to a precision-equipment measuring laboratory (PML) at Bolling AFB, in the District of Columbia. Advanced avionics checkout is available in the squadron's own hangar, however.

What emerges from the shop—every 150 or 200 hours—is a machine as close to "new" as man can make it. Pilots as close to perfect as man can make them then take over.

"We don't take first-term pilots, period," says Tanner. The high times-on-type required is part of the safety emphasis but it is also a prerequisite for the required "maturity of judgment." (Remember those VIPs in

Force VIP Helicopter Squadron

look at their missions,' and that's probably true. But we can't afford to take any risks at all. The people we carry are national assets, if you like."

Not being able to afford incidents or accidents puts a big premium on the maintenance support. Air Force officers always make a ritual nod to the guys with grease on their hands, to the point where it's predictable. In this case, though, it seems they are right in acknowledging a huge debt. After

round a splined shaft and tell if it's loose or not. Everything's done by the book, from the technical orders in the maintenance manuals, but there's this extra 'spin' coming from the experience factor. Our guys have an average of 10 years knowledge of these helicopters," said Gibbons.

Backing up this experience is an extensive maintenance control system called—in USAF language—MMIC that tracks the individual histories of all critical components,

back!) Even so, these high-time pilots get the help of a flight engineer on every flight and a copilot on the H-3s.

"Again the experience factor: these are people who can tell something's wrong through the seat of their pants," says Col. Bridges. "They're also good at clearing the aircraft into tight areas."

Problems and comedies

Those tight areas are mostly classified, it turns out. They could be CIA "safe houses" on the eastern shore of the Chesapeake or isolated "conference centers" in Virginia; they could be defense plants, football stadiums, whatever. The squadron has a folder of "about 100" sites it has collected over the years, says Col. Lerda. Sometimes their isolation causes problems.

"Yes," concedes Bridges, "Murphy's always ready to strike. He struck recently when we were picking up high-ranking leaders of the People's Republic of China from a meeting. The lead H-3 started streaming smoke from a jammed rotor brake on start-up. That meant everybody from machine one had to be taken off."

"We didn't have a support H-3 handy, so we had to bring in two H-1s. There wasn't

(Continued on Page 76)

