

"The Hottest Thing in the Air Force"

BY JAMES H. WINCHESTER

TECHNICAL Sgt. Newel Leeland, a slim, intent young U.S. Air Force specialist, has one of the oddest offices and most ticklish jobs in the world. As a "boom" operator on an aerial tanker, his desk is a padded pallet in the tail of a flying service station. He works stretched out prone, surrounded by gauges, dials and switches and separated from space only by a half-inch thick pane of plexiglas.

His job is the exacting function of flying the tanker's trailing, telescoping fuel nozzle into a coffee-cup-sized hole in the nose of a thirsty jet, while both planes are speeding through the air at close to 300-miles-an-hour. Often he's called upon to make such hook-ups at night, in radio silence, using only radar or pinpoint lights for signals. A careless move or miscalculation on his part could bring disaster.

Air refueling, which enables our jet fighters and bombers to remain

in flight indefinitely, limited only by their crew's endurance, has been termed by the Strategic Air Command as "the hottest thing in the Air Force." Last year, USAF aerial tankers made more than 150,000 hook-ups, one on the average of every 15 minutes around the clock.

It is this program which gives us the mobility to fly our bombers anywhere in the world and back again, without having to maintain costly and vulnerable advance fields from which to refuel them. A wing of B-47 jet bombers, for instance, can be flown from Florida to England in a matter of hours, being refueled once in the air enroute. If they had to stop to be serviced, either in Bermuda or Newfoundland, the same movement would take a couple of days.

To maintain this mobility, the Air Force has several dozen long-range refueling squadrons, each of which supports a wing of jet bombers

or fighters. Sgt. Leeland is a key figure in this specialized operation. Come along while we accompany him on a typical refueling mission. His squadron is temporarily based at Kindley AFB in Bermuda. Their assignment: to refuel a mass movement of B-47 jet bombers, making a non-stop flight from Florida to North Africa.

It was after midnight, about the time the six-engined B-47s, which are capable of carrying an atom bomb faster and higher than any other plane now in operational use, were taking off from Tampa that Leeland and the others in the tanker crews at Bermuda began to warm up the engines of their planes. Then, one by one, following each other at one-minute intervals, the planes thundered skyward.

Each of these four-engined, propeller-driven tankers weighed better than 82 tons at take-off. Somewhere out toward the Azores, three miles high above the cold Atlantic waters, each has a pinpointed spot carefully reserved in the sky. There, pulled together by the invisible electronic strings of radar, each tanker will rendezvous with its assigned jet bomber. Before dawn lightens the day, more than a quarter-million gallons of fuel will be transferred in mid-air.

At 17,000 feet, Capt. James Clark, pilot of the tanker to which Leeland is assigned, levels off and begins to orbit slowly in his assigned air space. The radar operator keeps a close eye

on his fluorescent scope for the first sign of their assigned bomber. Outside, where the temperature is 22 degrees below zero in startling contrast to the summer weather on the ground in Bermuda, it is still dark. At this altitude, in the cold, clear upper spaces, the stars seem unnaturally close, hanging like ornaments just beyond the dim glow of the tanker's own running lights.

"Target in range!" reports the radar operator.

Spread-eagled in the tail bubble of the tanker, Sergeant Leeland strains his eyes for the first glimpse of the jet, slicing down through the thin air from 40,000 feet. "I have visual target," Leeland reports to the captain over the intercom.

From now until the tense and ticklish task of transferring several thousands of pounds of fuel from the tanker to the jet in mid-air is completed, Leeland is in complete charge. First step is to direct the bomber into final position for the hook-up. Normally, he would do this by switching his own radio transmitter to the bomber's frequency and talking directly to the pilot.

UNDER combat conditions — as on this mission — he signals with dim green and red lights, mounted in the tanker's tail. Red lights mean up or drop back. Green lights denote forward or down. The boom itself is illuminated, making it stand out in sharp relief against

the darkness of the night.

But Leeland — or the two-score other boom operators working feverishly in tankers which are now spread over several thousand square miles of air space — has no time to admire the lighting effects. The six-engined B-47, only a dim and lethal shadow, is there beneath him — moving at better than 300-miles-an-hour.

"Ready to hook-up!" he tells Captain Clark over the intercom.

It's the message that Clark has been waiting for. Because the propeller-driven tanker is so much slower than the jet bomber, he has to increase his own speed. He does this by putting the tanker into a shallow dive. The B-47, her 600-mile-an-hour speed now reduced to virtually half that to keep from overrunning the tanker, hovers behind like a lean and hungry bird. The long flight from Tampa has almost exhausted her fuel. The tank cover on her nose is open to receive the tanker's boom nozzle.

Carefully, Leeland begins the delicate task of directing the bomber into position for the hook-up. With one hand he operates the pistol-grip which flies the boom. With the other he works the signal lights. Steady nerves are needed. A careless move, sending the heavy, metal pipe crashing into the thin top of the jet cockpit, means disaster.

Less than 50 feet separate the two hurtling craft now. The B-47 creeps — if 300 miles-an-hour can be called

creeping — slowly up on the end of the boom, which is extended to its full length of 47 feet, 4 inches. In the cockpit of the jet bomber, the two pilots fight their controls, holding their plane steady in the down-wash from the tanker's four engines. The two planes are so close that — even in the darkness — Leeland, looking down through his plexiglas window, can make out the strained expressions on the faces of the bomber crew.

Leeland gives directions to the pilots of both planes. Over his own intercom he tells the captain of the tanker: "Steady."

At the same time he snaps a switch and a set of green lights in the tail blinks on. The bomber creeps forward a few more feet. Leeland strains to get his boom into position. This is where the skill acquired during several hundred previous hook-ups pays off. Carefully he flies it nearer true center. A slight adjustment to his controls. The boom drops slightly. Just below, the jet moves forward, almost imperceptibly.

Abruptly, the boom tip slides up the center of the bomber's tank door and Leeland rams it into the small, cup-like opening. There is a sharp rasp of metal on metal as the two speeding planes are hooked together. The contact sends a tremor through both craft.

"Contact!" Leeland reports.

Far forward, the flight engineer pushes a lever and the precious fuel

starts pouring down the twin pipes of the boom and into the bomber. The boom is extended to 47 feet, four inches. That is all the distance separating the two planes as they hang together — like a puppy dog chasing its mother — while the refueling goes on.

When the bomber is full — it takes 15 to 20 minutes to transfer the 5,800 gallons of JP4 fuel — Leeland signals and the tanker breaks off contact by dropping down and away from the jet bomber. The jet climbs back to its cruising altitude beyond 40,000 feet for its most efficient operation. It will not have to be refueled again until it lands in North Africa.

The ticklish business completed, the tanker plane heads back for Kindley Field. The boom is retracted to its inactive position and locked in place. Everyone aboard — notably the boom operator — relaxes.

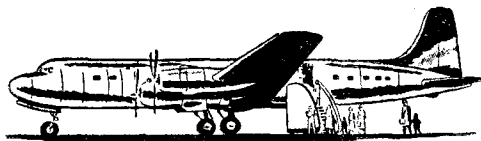
OBVIOUSLY, not everyone possesses the physical and psychological qualities necessary to handle a boom operator's job, where the smallest error means the loss of two million-dollar planes and nearly a dozen lives. The Air Force gives all its boom operators the same aptitude

tests required for control-tower operators. These requirements call for the mental powers of an engineer, the physical reflexes of an athlete, and a strictly non-nervous temperament.

Many of the solid and reliable airmen are former gunners. Most of them have had combat experience, either in World War II or in Korea. Their schooling is long and hard. Nearly a year is required from the time a boom operator first starts training until he is allowed to make a solo hook-up in the air.

Some fifty or more of these daylight hook-ups have to be completed successfully before the operator is allowed to start on night refueling techniques. Only after he has mastered this phase of his work — bringing the two planes together with light signals instead of by radio directions — is he certified as a full-fledged operator.

America's next step in the evolution of aerial refueling is the jet-powered tanker-transport. Toward this goal, a four-engined jet tanker is already being delivered to the Air Force, adding to this nation's strength and security by increasing the range and power of our aerial task forces.





MEANY

AT THE SUMMIT

By Harold Lord Varney

IT IS DEFINITIVE of the recent American trade union movement that while the AFL has the numbers, it is the CIO and the Leftist unions which have had the characters.

It has been the CIO which has contributed to the national stage such headline naturals as John L. Lewis, Walter P. Reuther, Sidney Hillman, Harry Bridges and Michael J. Quill. Against these limelighters the AFL has entered such unglamored subjects as Bill Green, Matt Woll, Dan Tobin, the Hutchesons (father and son), Harry Bates and their ilk — highly expert labor executives all, but lacking in the newsworthiness that seizes a front page. Color has been a rare attribute in the AFL since dramatic old Sam Gompers died in 1924.

Now that the “house of labor” is at last a house and not a duplex, it is symptomatic that this new leviathan should find its president in that prototype of the average man — George Meany. The ascendancy of Meany tells us something important about the future