

**"READY. Ready. MARK!"** barked the Marine ground control approach (GCA) operator from the battle scarred valley below. In the thick overcast above, Maj. Paul W. Arcari sat in motionless concentration. At "MARK," he pushed his stop watch and activated the C-130's Doppler navigational system.

Immediately the pilot, Maj. Rex C. Salisbury, rolled to a heading of 283 degrees. Arcari began calling off heading changes. Now at 800 feet they were flying over sloping ground, descending to their drop altitude of 500-600 feet.

Khe Sanh, the besieged Marine combat base near the demilitarized zone in South Vietnam, lay below. It was completely shrouded in an ominous monsoon fog. The crew would airdrop using a newly developed instrument technique. Techni-



# LIFELINE TO KHE SANH

**The classic role of tactical airlift is the support of ground forces in a forward, combat area. Did Khe Sanh fit? And how!**

**by Capt. KEN KASHIWAHARA**  
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cally, the system should work. Significantly, it had to.

"Steady on 285. Come left to 283," Arcari instructed. Then, "Five-second warning. GREEN LIGHT!" Salisbury pulled the 130's nose up to an 8-degree angle. The copilot hit the drop button and 16 A-22 container bundles with 15 tons of supplies, slid out the rear of the aircraft to disappear under cushioning parachutes into Khe Sanh's perpetual fog factory.

As Salisbury put the plane into a steep banked climb, .50 caliber bullets from the hills below, crackled through the aircraft. Oblivious to the danger, the crew members listened with keen anticipation to the radio. The strike report was the all-important thing now.

"P-I," a voice echoed. Point of impact. Right on target! Salisbury, Arcari, flight engineer SSgt. Frank Jones all grinned as someone gave the thumbs-up sign. In the rear, loadmaster A1C William C. Jacobson smiled his satisfaction, and braced himself against the steep climb-out of the *Hercules*.

Major Salisbury's mission that day was part of a history-making operation that from January 21 through April 8, 1968, proved to

be one of the most significant of the Vietnam war.

Hundreds of 315th Air Division C-130 *Hercules* and 315th Air Commando Wing C-123 *Providers* flew 668 airdrop and 460 airland sorties, piping 12,430 tons of supplies through a continuous air lifeline to beleaguered Khe Sanh.

The technique of massive air resupply using instruments was totally new to airlift operations—an innovation resulting from a pressing necessity and a staunch determination to keep the pipeline open, no matter what the conditions. However, landings by the C-130s and C-123s were becoming extremely hazardous. "Mortar magnets" the Marines called the aircraft, because the enemy rounds chased them down the runway as they landed and took off. Naturally, the runway had taken a tremendous beating. Airdrop, it became obvious, was the answer.

By February 12, conditions had worsened and all C-130 landings were cancelled. The C-123s, a smaller aircraft requiring a shorter landing strip, continued to land daringly on Khe Sanh's battered 3,900-foot runway, delivering those items not airdroppable (special ammo and

Air Force aerial port team takes a short break

medical supplies). The *Providers* also landed fresh troops and evacuated casualties.

### A New Idea

It was apparent to airlift officials that monsoon conditions at Khe Sanh would severely hamper airdrops. The weather was often down to zero-zero. At Tan Son Nhut the 834th Air Division—headquarters for airlift in Vietnam—put their experts to work. Every available means of delivery had to be explored to prepare for all possible contingencies. One result was the new Instrument Meteorological Condition (IMC) technique.

"In developing the IMC technique, we first analyzed the unique problems of Khe Sanh," said Maj. Myles A. Rohrlick, operational requirements officer in the 834th. "There were many. The drop zone was extremely small, only 300 yards square, and located outside the Marine defense perimeter. There was no room for it inside the camp. So we dropped only during daylight. At night the Marines withdrew to the camp proper and, essentially, gave up the DZ to the enemy.

"In the morning they would sweep it for mines and secure it for the day's use. And the equipment to recover the dropped supplies was limited. Rough terrain forklifts and trucks were used to get the supplies to the camp. The Marines and our combat controllers were always under enemy fire on the DZ," Rohrlick said.

These were the problems to be overcome to accomplish what had to be accomplished: hit the DZ on the button, and do it under almost totally blind conditions!

"There was ground radar close to the drop zone, so we combined two existing systems to develop the new one," explained Maj. Henry B. Van Gieson, who helped develop the IMC drops. "Marine GCA positioned the aircraft over the threshold of runway 28. Then by using the Doppler to keep on course, and calculating the exact time it took (20 to 26 seconds, depending on winds) to fly to the computed air release point

we were able to put the bundles on the DZ."

There was no time to write out formal tech orders or have numerous dry runs. Once the technique was developed, it was up to the professional aircrews to make it work. They did.

The IMC drops were unqualified successes. The average distance of all bundles dropped was only 133 yards from the proposed impact point, on a DZ that was 200 yards shorter than the standard required length for Container Delivery Systems (CDS) drops.

The value of the new IMC drop procedures was borne out in the fi-



SSgts. Jim Hampton and Bruce Miller adjust the straps on C-130 cargo prior to airdrop.

nal statistics, which showed that 38 percent of all C-130 Container Delivery System drops were made using the instrument techniques.

Most of the smaller supply items, such as rations, fuel, and ammunition, were delivered by the CDS method. But the heavy, bulky loads of lumber and other material used in bunker construction required different modes of delivery—the Low

Altitude Parachute Extraction System (LAPES) and the Ground Proximity Extraction System (GPES). The latter was used for the first time in combat at Khe Sanh.

In both techniques pilots approach the runway as in a normal landing and, over the point of touchdown, with the aircraft only a few feet off the ground, the huge cargo pallets slide from the rear of the aircraft onto the runway. In LAPES, the pallets are jerked from the plane by an attached parachute. In GPES, by a hook, which snags an arresting cable strung across the runway. So successful were the systems that in one GPES drop, 30 dozen eggs were extracted without a single cracked eggshell.

### Longest Three Minutes On Earth

Although airdropping was the primary means (68 percent of the total tonnage) of resupplying Khe Sanh, the daring landings performed by the C-123 and C-130 pilots played an important role in continuing the supply line.

"The C-123 pilots continued to land throughout the entire operation," said Col. George W. Kinney, 834th vice commander, "although only when absolutely necessary. The *Providers*, needing only 1,400 feet of roll-out to slow sufficiently, were able to make the 90-degree turnoff to the offload ramp. But the C-130s had to go to the end of the runway to turn around, presenting inviting targets for enemy gunners."

Instructions to *Provider* pilots were simple. "Get in, unload cargo, load casualties and get out—fast." Consequently, the planes landed, taxied quickly to the unloading ramp, kicked their cargo bundles out the rear exit while still moving, taxied out to the runway and took off again—all in three minutes. "The longest three minutes on earth," according to one pilot.

The dangers to airlift crews, aerial port people and combat controllers were ever-present. Crew members of both C-130 and C-123 aircraft were wounded. Five C-123 crew members and their passengers were killed.

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Heroism was the order of the day. On one occasion Capt. Edwin A. Jenks' C-130 was hit by rocket fire shortly after landing. The barrage lasted 20 minutes, killed two passengers and wounded the loadmaster. The C-130's tail was extensively damaged, and fire started inside the aircraft.

Well aware of the exploding enemy rounds intent on putting them out of commission forever, the crew grabbed hand extinguishers and put the fire out.

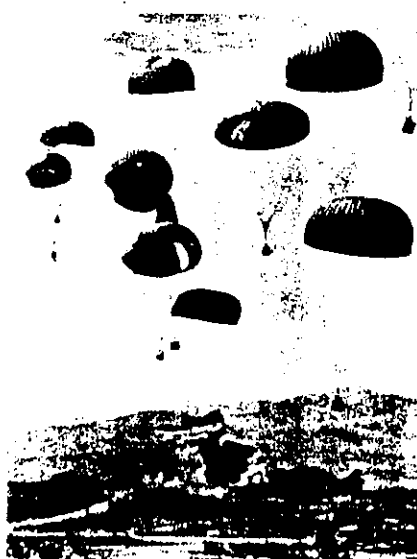
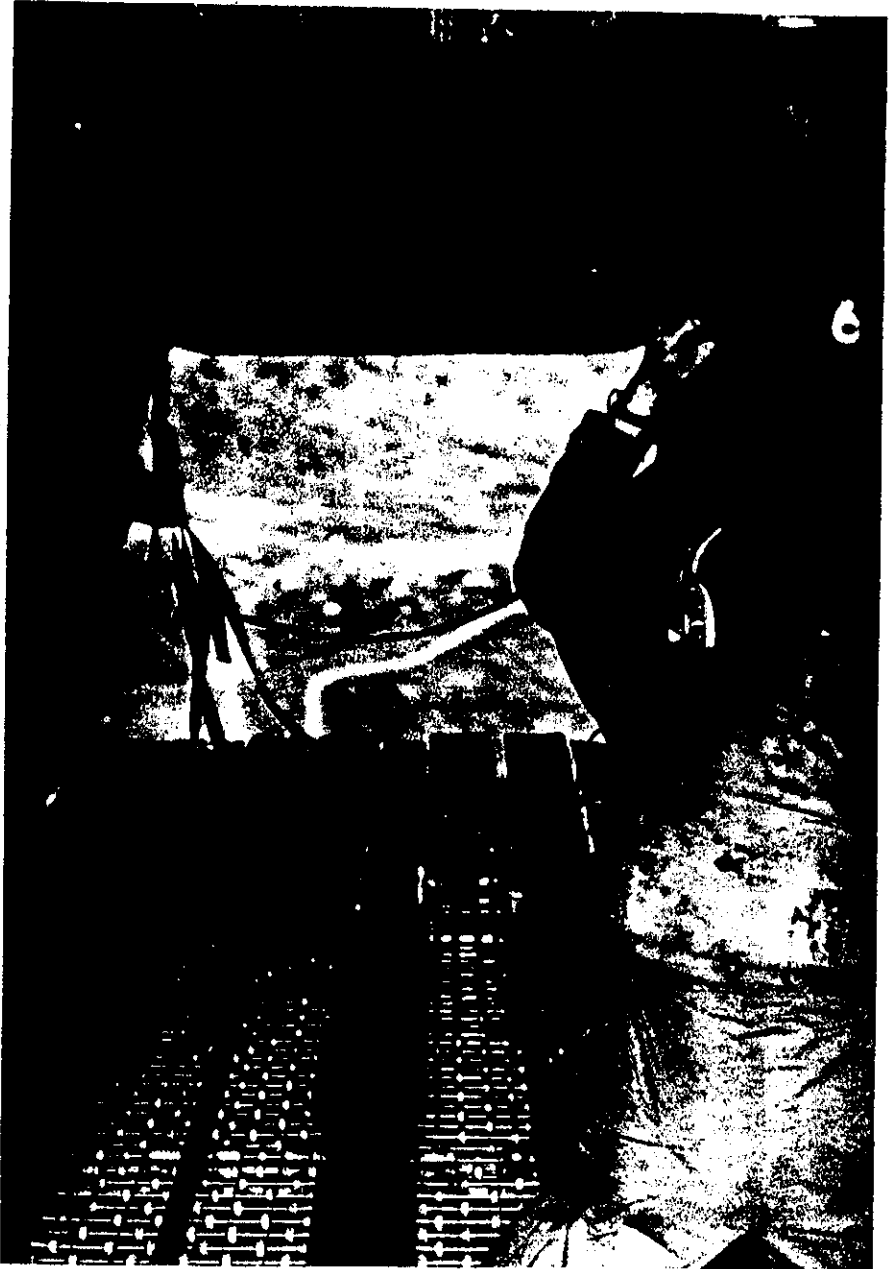
"A quick survey showed tires blown, hydraulic lines and control systems broken, and holes in the engines and blades," said Jenks.

Jenks and his crew made minor repairs until a maintenance team was flown in. But again, mortar rounds hit the plane, starting another fire. Forty-eight hours later, under cover of fog, the crew lifted the bullet-riddled C-130 off the Khe Sanh runway. Later maintenance men plugged 242 holes in the *Hercules* before they stopped counting.

Time after time the determination of the crews and the ruggedness of the aircraft were proved. One C-123 pilot tried four times to get into Khe Sanh before he made it. He simply refused to give up. One C-123K had both an engine and a jet pod shot on takeoff. It kept going. The crews continued to defy the enemy's fire power. Their mission was just too important.

Airlift people on the ground—2d Aerial Port cargo handlers, 8th Aerial Port combat controllers, mission commanders and maintenance people—were constantly exposed to enemy fire. After one C-123 landing, TSgt. Thomas Monley and his combat control team—Sgts. David McCracken, Erwin Rhodes and Walter Smith—spotted two pallets of mortar rounds that had been hit by enemy fire. They were burning. Quickly the team moved the passengers to safety. Then they pushed each pallet away from the bunkers, realizing that at any moment incoming artillery rounds or the fire could set off the ammo.

Loadmasters of 311th Air Commando Squadron watch as cargo plummets from their C-123 over Khe Sanh. BELOW LEFT: Airdropped supplies zero in on drop zone. BELOW RIGHT: Marines with forklift recover cargo.



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Less than five minutes after the team took cover, the pallets exploded, spewing shrapnel.

The stories of heroic deeds and the dedication of airlift personnel appear unending.


But the airlifters were not alone in the effort to support Khe Sanh. Marine C-130s and helicopters assisted in the resupplying. To keep the enemy fire down, Air Force and Marine fighters often flew in on the airlift aircraft's wing tips. At night B-52s dumped tons of bombs around the perimeter in a fireworks display that the Marines called, "Number One on the hit parade." Commented one Marine, "Man, whenever they hit, everybody on the base just smiles."

If there were ever any doubts about the value of tactical airlift before Khe Sanh, they have surely been dispelled. The auxiliary modes of aerial delivery proved their worth in what the experts call, "the classic role of tactical airlift—supporting ground forces in a combat area."

"Success at Khe Sanh," said General McLaughlin, "was a grateful and satisfied Marine commander. When he is low on rations and ammo, he gets grouchy and I don't blame him. Our mission was to keep the Marines' cupboard full and the ammunition at the ready. And we couldn't fail.

"To the layman the techniques of air resupply sound simple and quite mechanical," he continued. "But the real measure of success of a new delivery system is the professionalism of the aircrews and ground people and their devotion to perfection.

"In Vietnam we are blessed with such men. That, in the final analysis, was the measure of our success at Khe Sanh."

But perhaps the most satisfying testimony came from a grateful and satisfied Marine commander, Col. David Lownds, who headed all activity at Khe Sanh. "The air support has been outstanding," he said. "We've had quick response to all our requests. If the pilots think we're great, then it goes both ways." 



LEFT: Army and Marine Corps troops dash for C-123, its engines running.

Weary aerial port men are A1C Bill Smith, Doug Moody and Jim Wycoff.

Air Force medical technicians carry wounded man to C-130 at Khe Sanh.

