

Fixed-Wing Police Operations Climb to New Heights

By Leonard Luke, DEA Ret., Pilatus Business Aircraft, Ltd.

It was my first surveillance flight. The year was 1975, and I was flying along the Mexican Border between Mexicali in Baja, CA, and Calexico, CA. I still recall the tail number of the Cessna 210 I was flying, and I would tell you it, but then I'd have to kill you. But to be serious, the aircraft in which I flew my first surveillance flight is still in service, and revealing its tail number would not be in the best interest of my former employer. I retired in 2002 after 31 years of service for the U.S. Drug Enforcement Administration (DEA), and it makes me smile to think that today a new DEA observer could be taking a first flight in that same airplane.

But while it's fun to reminisce about the early days of low level patrols with binoculars, police fixed wing operations have come a long way since then and changed for the better. High technology, multi-mission, fixed-wing surveillance aircraft are now operated by government agencies and police forces across the country as special mission, surveillance, reconnaissance, SAR and command and control platforms. While the venerable Cessna 172s are still out there soldiering along, today we have law enforcement crews setting new standards in capability with sophisticated Pilatus PC-12 Spectres, King Air 350s and 200s, P-3s, Cessna Citations, Learjets and Gulfstream jets.

The DEA started its aviation program in 1971 when they received a surplus military T-41 (a Cessna 172) in a wooden crate. DEA Agent/Pilot Ludlow Adams, who was assigned to the Atlanta office, assembled the airplane after work hours on his own time. Surveillance flights were conducted at low altitude with the naked eye. Occasionally you might use binoculars, but if you were like most, after a few left turns in the sky while looking through them, you reached for the airsickness bag. Then you did your best to keep quiet and not use them again until the mission was accomplished.

Communication with ground units during those early days was also less than ideal. Transmissions between the aircraft and ground units were done using portable VHF radios and often on shared frequencies with other police agencies in the locale.

Through static and frequency congestion, the observer had to control activities on the ground and be able to convey the big picture from the air while holding a hand-held radio, binoculars and a map. If you think that sounds hard, imagine doing it at night. Many surveillance flights began in the daylight hours and continued into night, especially when watching a stash location for activity.

Growth & Technology

Despite the difficulties, the benefit of fixed-wing assets was clearly recognized, and demand for their support grew. The DEA Aviation Unit followed a growth-path familiar to that of many forces. After a few years, more aircraft were slowly added to the fleet, and their technology was improved, first in the form of UHF radios. This may not sound like a big deal, but at the time, it was a major step forward in modernizing air-to-ground communications. Later, gyro-stabilized binoculars became available for the observer, and these tools are still in the inventory of many departments today.

By the mid to late 1970s, most federal law enforcement agencies and some state police agencies were operating several aircraft, including twin-engines. The twin-engine airplanes were used for undercover operations, transport missions, prisoner extraditions and sometimes VIP movement. However, due to their high operating costs and major advancements in the reliability of single-engine aircraft, small twin-engine aircraft had limited appeal.

Single-engine aircraft, with their low acquisition and operating costs, were proving to be safe platforms for police aviation operations. As single-engine airplanes gained popularity, they saw use in a wider variety of roles, including surveillance, traffic enforcement, border patrol, personnel transport, drug interdiction and marijuana eradication missions.

Whether single-engine or twin, fixed-wing aircraft grew to become a critical asset to police operations. As missions evolved, many departments had to adjust their operational roles and add technology to their existing fleets. This meant finding newer and even more advanced equipment to meet the requirements. And everyone was looking to add even more capable aircraft.

Smugglers Bounty

During the 1980s and early 90s, air smugglers frequently began crossing the border from Mexico and South America. Flights would cross the U.S. border into South Florida carrying huge loads of cocaine and marijuana. Small aircraft would fly low and under the radar from Mexico, cross into the U.S. along the southwest border and drop their loads on small dirt strips or uncontrolled airfields. More nighttime fixed-wing operations were required to be effective against this type of activity.

To answer the threats, the U.S. Customs Service flew advanced aircraft such as King Air 350s, Citation Jets and Lockheed P-3s as part of their interdiction program in and around the source countries and at the U.S. borders. The P-3s, aided by the U.S. military, flew missions in South America and tracked drug smuggling aircraft from the moment they took off and along their flights toward the U.S. The DEA also flew large turboprops in South America and supported many host countries' police agencies in their enforcement actions. Those missions included reconnaissance, intelligence gathering, transport and in emergency cases, medical evacuation of wounded personnel. Inside the U.S., many state and local police agencies also worked these joint investigations using their fixed-wing assets.

Fixed-wing surveillance and interdiction techniques netted seizures of millions of dollars of drugs and led to the arrest of many large-scale air smugglers. The operations also led to the seizure of serviceable aircraft. Drug forfeiture laws permitted the conversion of these aircraft into government property that subsequently found their way into law enforcement fleets.

While seized aircraft helped many departments get their fixed-wing operations going, drug smugglers were not the only source of aircraft at the time. During the 1990s, the U.S. military retired hundreds of C-12s (King Air 200s), which were then made available to state and local police agencies. Many surplus C-12s can still be found in fleets conducting air operations for departments across the country.

Surveillance Sophistication

Since the terrorist attacks on September 11, police fixed-wing operations have been called on to do more intelligence gathering, and many now include a homeland security mission. The constantly changing missions have demanded that air operations adjust to new roles and responsibilities. And as the missions have changed, so have the aircraft. Police fixed-wing operations today have evolved from the small piston airplanes to more complex turboprops and in some agencies, even turbofan aircraft.

Beginning in the mid 1990s, several agencies began installing Electro-Optical Infrared (EO/IR) sensors on the left side of fixed-wing aircraft just as they had done with helicopters for many years. It is common to see fixed-wing aircraft outfitted with a FLIR, Wescam, Gyrocam or other brand of sensor. Agencies also added operator's stations and swivel chairs (nicknamed "the dental chair") to the rear passenger compartments of aircraft in which an observer or TFO could sit. Many also installed large windows in the left rear side of the aircraft to improve the view.

As modification and equipment needs grew, so did the need for larger and more capable aircraft. The Pennsylvania State Police was one of the first agencies to outfit the Cessna Caravan with a Gyrocam EO/IR sensor and an operator station for its high tech surveillance missions.

Today, operations in restricted airspace often require fixed-wing aircraft to climb to high altitudes in order to accomplish their tasks. Fortunately, with advanced sensors and pressurized aircraft, car license plates can comfortably be read from 30,000 feet.

The Pilatus PC-12 Spectre is one such aircraft. This single-engine turboprop was introduced at the 2003 National ALEA Conference and was developed based on requests by several government agencies, including DEA, for a new, low-cost, commercial, off-the-shelf surveillance platform. The agencies wanted new technology to replace older, unreliable fixed-wing aircraft in their fleets.

The pressurized PC-12 is equipped with a retractable EO/IR sensor in the tail cone that is monitored from an operator's console in the cabin with dual monitors, moving map display, DVR, tactical radios, downlink and satellite communication capabilities. The aircraft currently is part of the U.S. Customs and Border Protection fleet and in operation across the country. The USAF Special Operations Command has also acquired six PC-12s, designated as U-28As, and flies them on missions protecting our homeland.