

Canadian CF-18 fighter/bombers' new combat capability jaw-dropping

They may be 1980s vintage, but the modernization program for the Canadian air force's CF-18 Hornet fighter/bombers is giving them jaw-dropping new combat capabilities.

The latest piece of high technology that will be delivered this spring is the Advance Multi-role Infrared Sensor (AMIRS) Sniper targeting which will literally enable bombs to change direction in mid-air and hit ground targets that have moved.

Col. Dave Burt, the Canadian Forces director of air requirements, uses the word "incredible" to describe the new capability the pods will give the venerable CF-18s and that is likely an understatement.

Thirty-six of the Sniper pods were acquired from Lockheed Martin at a cost of about \$126 million; \$101 million for the pods and \$25 million for technical support through to 2020.

Merely describing what the pods can do doesn't help one understand the significance of this acquisition and the combat capability it adds to the CF-18 as a weapons platform.

It has to be viewed in the context of NATO's 1999 78-day air war when Canadian CF-18s dropped 387,000 pounds of what were euphemistically called "precision" or "smart bombs" on Serbian military targets in Serbia and Kosovo.

Canadians went into the NATO campaign to halt Serbian ethnic cleansing of Kosovo's Albanians with 18 Hornets and just nine Forward Looking Infrared (FLIR) pods and NIGHT Hawk laser targeting systems.

Canadians weren't told at the time, but the air force had to borrow three-older generation pods from the Australians to give 12 of the 18 jets precision-targeting capability.

Using that system, the pilots acquired their targets from a distance about 16 kilometres and, once dropped, guided bombs onto them by manipulating a joy stick with their left hand while flying their jets with their right.

One of the problems with the pods was they only had four-power magnification, making target acquisition more difficult than it could have been.

If their predetermined targets were obscured by cloud cover, the pilots either had to find another target of opportunity like a bridge, for example, or abort the mission and return to base.

Another problem was that there were only three or four pods left in Canada to train 25 to 30 replacement pilots at CFB Cold Lake in Alberta and CFB Bagotville in Quebec.

The pilots also didn't have night-vision goggles or encrypted radios, which are two entirely different shortcomings that deserve their own separate examinations.

That no Canadian pilots were killed just by accident, let alone by enemies, was a minor miracle.

In 2001, the air force launched an \$880 million modernization program for the Hornet to rectify those and other problems, including the jets' obsolete computer systems.

Acquiring the new AMIRS targeting pod was the latest major modernization element.

It has 25 to 30 power magnification, compared to the NITE Hawks' four.

Also for the first time, the AMIRS pods give Canadian pilots the option of Global Positioning System guidance and targeting, in addition to laser targeting.

That means, unlike the Kosovo air war in which targets were selected in advance of a CF-18 even taking off, Canadian pilots now have the ability to have targets' GPS co-ordinates transmitted to them in flight.

As Col. Burt points out, in the future very few missions will be launched with predetermined targets.

Even the CF-18s' laser targeting has entered a new dimension. In the past, pilots were solely responsible for bomb guidance. The new system gives forward air controllers the option of changing targets while a bomb is dropping.

Imagine a CF-18 flying in a northerly direction approaching a target and dropping a bomb onto the south side of a building where enemies have been detected.

If a forward air controller on the ground notices that the enemies have moved to the building's west side, he or she can beam a laser on that new location, the bomb will detect it and will change direction to the newly designated target.

Even if the forward controller is discovered by enemies and must turn off the laser, the bomb will remember where it was last directed and will continue its flight to that target.

The accuracy the new CF-18 capabilities addresses a critical issue that manifested itself during the Kosovo air war: the moral obligation to limit collateral or accidental damage.

During that bombing campaign, Canadian Forces lawyers were present during the target selection process; they approved targets and they reviewed cockpit tapes after each mission.

That provided certainty to some pilots that the targets being bombed deserved to be destroyed, but created angst among other pilots who thought they were expected to be perfect in an imperfect world made more complicated by the fog of war.

The new precision technologies will alleviate much of that concern.

Military planners are often criticized for preparing to fight the last war.

The good news is that can't be said of the Canadian air force. By 2008 when the AMIRS pods become fully operational, the air force will be better prepared to fight the next war than it has ever been in its history.

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