

## Belcher Bits BB-18:

### CF-5A Update and Weapons 1/48

#### Background

The CF-5 in Canadian service was intended as a low-cost tactical fighter to support Canadian troops in NATO. As it was intended for overseas deployments, the capacity for mid-air refueling was critical for the operational single seat CF-5As. This was possible through the use of a bolt-on refueling probe fitted on the starboard side of the aircraft. Typical deployments to Europe comprised a gaggle of CF-5As accompanying a C-137 (Boeing 707) tanker with wingtip refueling pods.

Recognizing that these aircraft would likely be operating from shorter fields, all were fitted with under-fuselage hooks to engage emergency arrestor gear in case of brake or chute failure.

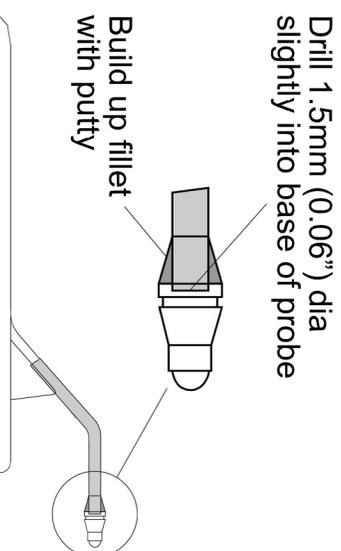
#### Refueling probe installation (CF-5A only)

If made in one piece, this would be a fragile item even in plastic, but in brittle resin, it is a repair waiting to happen. For this reason, we have designed the part to use a length of brass rod (supplied) for the exposed probe pipe. There is a good solid seat for the brass rod in the resin base; you should be able to lift the whole model by the probe when completed!

Glue the probe base in place on the fuselage. The forward end touches the first vertical panel line forward of the cockpit, and the long base is centred 4mm (0.15") down from the canopy rail; this means the probe sticks out at approximately 45 degrees from the fuselage.

Cut the brass rod to 23mm (0.9") long and bend (fairly sharply) in the middle so it matches the drawing. Glue the base end into the resin piece; the nose of the pipe should be lined up with the aircraft centreline when viewed from above, but point slightly down when viewed from the side.

Drill a shallow hole into the base of the probe tip, glue it on the end of the brass rod and when dry, fair the step with a fillet of putty.



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#### Arrestor hook installation

The hook should be lightly sanded to remove it from its casting flash, and the top of the hook arm can be sanded a bit more so it sits slightly off the under surface of the aircraft. The hook assembly is on the centreline of the aircraft, with its forward end lined up with the trailing edge of the wings.

#### CRV-7 Rocket Pods

As tactical support aircraft, typical weapons used by CF-5s were either iron bombs, cluster bombs or CRV-7 rocket pods. Canada has no reputation for arms dealing but in fact one of the more successful aircraft weapons, the CRV-7 rocket, is a Canadian product by Bristol Aerospace in Winnipeg. The 2.75" FFAR (folding fin aerial rocket) has been in use since the '50s. However, Defence Research Establishment Valcartier applied modern propellant technology to a 2.75" rocket motor. The result was greater range, flatter trajectory and twice the energy on impact, enough to penetrate Warsaw Pact aircraft hangars.

Bristol also developed CRV-7-compatible launchers for use with fast jets, these being the 6 tube LAU-5002 and 19 tube LAU-5003. These launchers have been used by CF-5, CF-104s and CF-18s. The first two are out of service and CF-18s no longer use rocket pods; their air-ground offensive armament are now limited to bombs, being considered more accurate and less likely to put the aircraft in range of ground fire. As tactical support aircraft, typical weapons used by CF-5s were bombs or CRV-7 rocket pods. Canada has no reputation for arms dealing but in fact one of the more successful aircraft weapons, the CRV-7 rocket, is a Canadian product by Bristol Aerospace in Winnipeg. The 2.75" FFAR (folding fin aerial rocket) has been in use since the '50s. However, Defence Research Establishment Valcartier applied modern propellant technology to a 2.75" rocket motor. The result was greater range, flatter trajectory and twice the energy on impact, enough to penetrate Warsaw Pact aircraft hangars.

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LAU-5003C



LAU-5003D

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### **LAU-5002**

This six tube launcher is intended for training use and the cylindrical main body is re-usable. The nose fairing is frangible (i.e. disintegrates when rockets are fired). Behind the main body is a boat-tail fairing intended to improve aerodynamics of the rocket pod, and direct the exhaust plume and debris straight aft. Note that inside this rear fairing is a flat EMI shield over the rocket motors, so no rocket ignitors or tube ends are visible when the pods are loaded.

The launchers have attachment lugs on 14" centres, with an umbilical attachment point behind. Typical colour scheme is either white or olive drab, with a black nose. Lugs are natural metal.

### **LAU-5003**

This is the warshot version, and the nineteen tube launcher is not re-usable but is jettisoned after use. Two versions have been used in Canadian service. The LAU-5003C has a frangible nose fairing (always seen with a black tip) similar to the LAU-5002. The later LAU-5003D (only the CF-18 was in service by the time this came out) uses a more streamlined fairing with rocket exit slots covered with a plasticized fabric. The rockets are less likely to be affected by debris from this type of fairing. Both types also use a longer tail fairing than the LAU-5002. Colour scheme is either white, olive drab (or light grey for CF-18s).

### **Thanks**

Thanks to Steve Sauve for putting the bug in my ear on this set.

### **References**

1. Website for Bristol Aerospace [www.bristol.ca/Launchers.html](http://www.bristol.ca/Launchers.html)
2. Various references for F-5 aircraft

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