

## Rural Fire Service ~ Helicopter Structural and Electrical Modifications for Role Equipment

We have worked closely with operators to develop a range of practical, rugged firefighting role equipment to add water bombing capabilities to the range of services your helicopter offers. Listed below is information to help you and your LAME with structural and electrical provision installation that may be required to operate firefighting role (HELIFIRE Monsoon Bucket) equipment.

**Structural and Electrical Modifications** – If your Helicopter has an existing type rated helicopter hook, source of bleed air, cyclic mounted switch and wiring loom to an external 12 or 24-volt supply DC power outlet, then no other equipment will be required to operate the quoted HELIFIRE Monsoon Bucket.

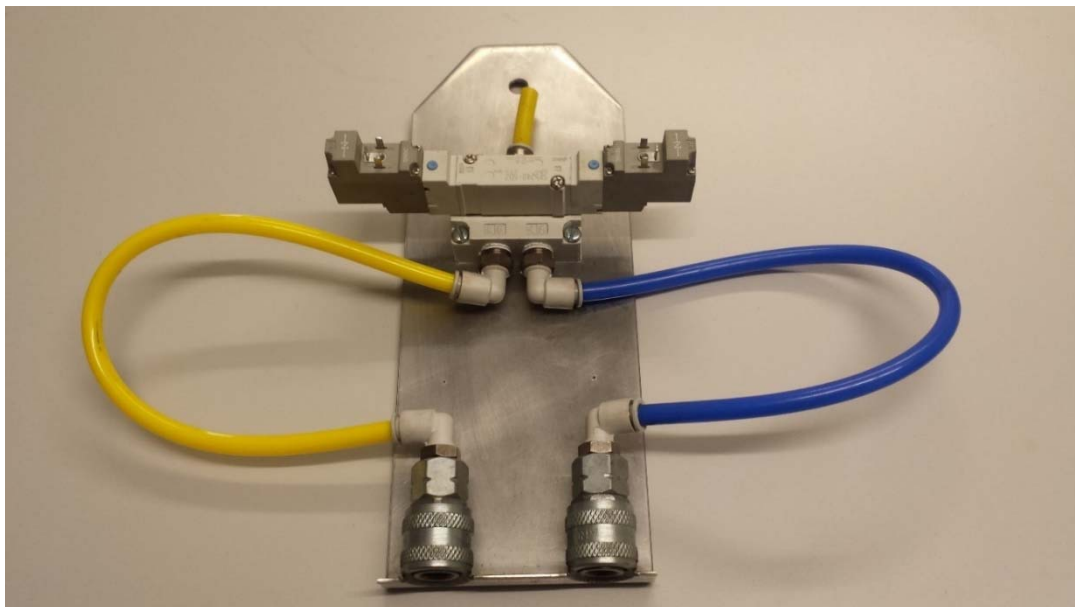
If, however, your Helicopter has an existing type rated helicopter hook but does not have a Supplemental Type Certified (STC) to use bleed air, cyclic mounted switch and wiring loom to a universal external Electrical Controller 50Amp power supply designed to control a HELIFIRE Monsoon Bucket or longline remote hook release, then your option is to have your LAME contact Russell Goulden, Engineering Manager at Oceania Aviation to:

- Install a P2 Bleed Air Mod to run and operate Pneumatic role equipment
- Install an External Bleed Air Outlet using a Female ARO coupling through the lower engine bay skin
- Install an Electrical Power Supply and external Role Equipment Control Loom, Longline Release/Plug 50A
- Install a cyclic mounted double action switch and external Role Equipment Control Plug

**HELIFIRE Bucket Operation** – The HELIFIRE Monsoon Bucket is controlled using a sources of compressed air from either (a) turbine bleed air mod, or (b) Constant duty 12/24vdc Onboard Air System, or (c) Breathing Apparatus Cylinder and Regulator with a DIN connector to operate the integral pneumatic ram within the HELIFIRE Monsoon Bucket using a cyclic mounted switch and PIC Electrical/Pneumatic Controller.

**HELIFIRE Electrical/Pneumatic Controller** - The HELIFIRE dump system is controlled using a PIC 12vs Electrical/Pneumatic Controllers and breakaway coupling which is powered using a cyclic mounted switch from an existing 12 or 24 volts DC source and source of compressed air.

The controller contains a pneumatic solenoid valve body with integrated electrical connection plugs with LED, dual airlines and breakaway couplings that is attached to an existing hard point next to the cargo hook or on the Skid.

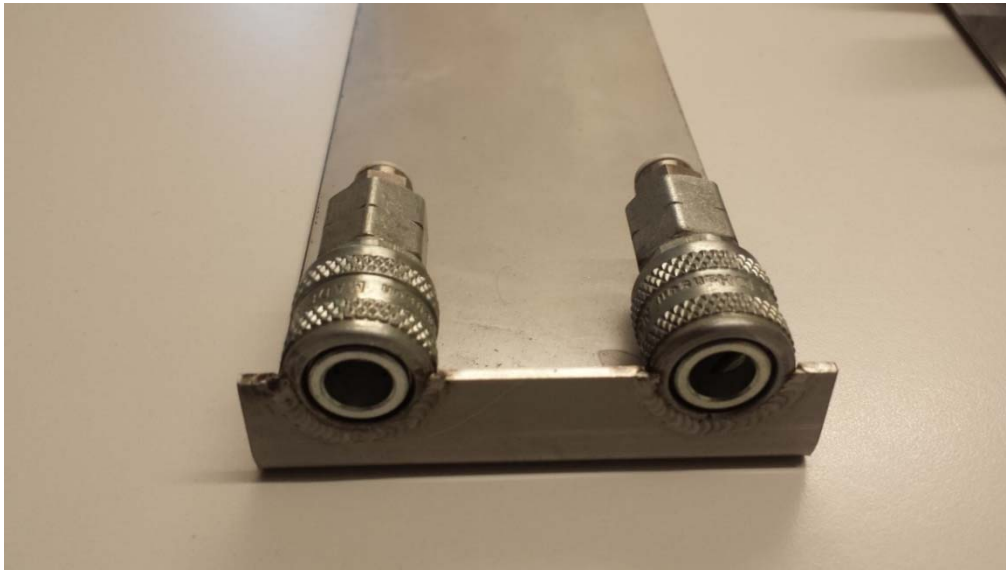


**HELIFIRE Dump System Operation** – The HELIFIRE Bucket's monsoon doors allow the pilot to perform single or multiple drops according to the operational needs of the mission. The monsoon doors are operated by the Pilot using a cyclic mounted Pilot actuated switch, which in turn operates the HELIFIRE Electrical/Pneumatic Controller's solenoid valve, which is mounted using one of the following options:

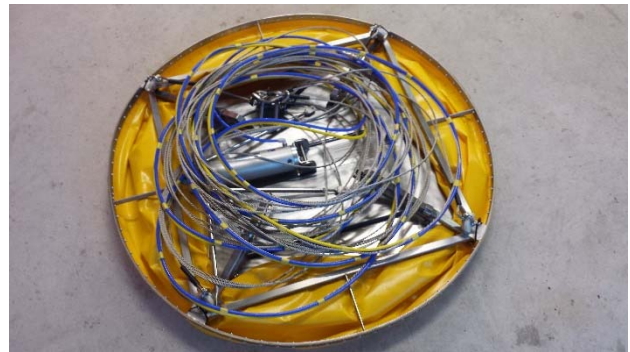
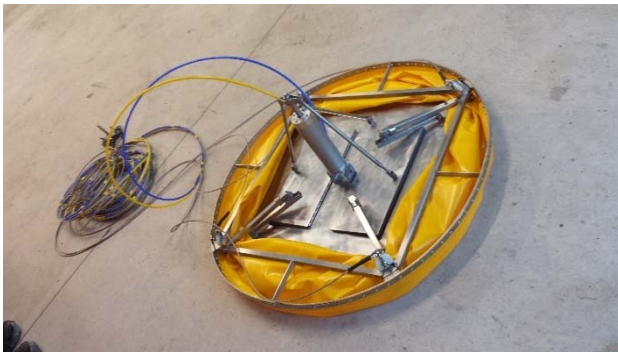
**Option A** - mounted permanently inside the aircraft; or

**Option B** - mounted on a hard point next to the Helicopter Hook.

The pneumatic ram within the bucket is controlled via two 8 mm airlines, which are connected by two standard ARO quick release bayonet connectors between the HELiFIRE Bucket and airline outlets (Port A & Port B) on the HELiFIRE Dump System Controller.



**Attachment to Aircraft** – In simple, the Pilot/Flight Crew or Fire Fighters simply attach the HELiFIRE Monsoon Bucket to the Helicopter hook, then they plug in the ARO quick release bayonet connectors to the source of air. They then connect the HELiFIRE Dump System Controller to an existing 24-volt dc power source on board the Helicopter...and you are ready for operation.



**Manufactured in New Zealand by Rural Fire Service for Aerial Firefighting**

For additional information please email [simon@monsoon-bucket.com](mailto:simon@monsoon-bucket.com) or [021 712 180](tel:021712180)