The Unparalleled Aerial Firefighting Aircraft

Over the past 50 years, Canadair has proven to be a key player in fighting forest fires globally. As the only purpose-built amphibious aircraft, it is specifically designed for tight maneuvering at low altitudes and airspeeds over difficult mountainous terrain. With the ability to perform continuous water drops by sourcing water from nearby locations, Canadair continues to demonstrate its best in class performance in combating wild fires worldwide.

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Initial Massive Attack

The concept behind “Initial Massive Attack” is to fly to the fire shortly after its detection and immediately attack the fire with multiple drops of water/foam mix. Leaving the attack site prematurely can result in the wind reigniting the fire and Canadair’s unique amphibious and performance capabilities avoids this risk, supporting a sustained series of drops by using nearby water sources. In addition, Canadair can quickly make critical adjustments to sudden fire direction changes.

Highest Productivity & Efficiency

A Canadair delivers over 400 tonnes of water/foam on a typical day, averaging 6 rotations per hour, at 6 tonnes per drop over a 12-hour period. With experienced flight crew, much higher productivity is achievable. On July 8th, 2018 in Italy, for example, a single Canadair and 2 crews alternating in missions, performed 207 drops, delivering 1200 tonnes in a single day. No other aerial firefighting aircraft can achieve this level of productivity; land-based aircraft can perform on average 7 to 8 drop rotations per day. Even with larger tank aircraft, this results in a maximum of 120 tonnes per day.

Highest On Duty Hours

Canadair spends, on average, 50% more time battling forest fires per mission than other aerial firefighting aircraft by using water sources in the vicinity of a fire. On average, Canadair can stay on the fire for more than 3 hours at a time and only return to base for refueling approximately 3 times per day. This provides more than 12 hours of active firefighting whereas other aircraft return to base for refuel/reload on average every 2 hours.

Most Efficient Aerial Firefighter

HIGHEST DAILY PRODUCTIVITY

<table>
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<tr>
<th>Water Drops</th>
<th>115 Drops</th>
<th>49 Drops</th>
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<tr>
<td>Water</td>
<td>690,000 L</td>
<td>185,000 L</td>
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**Highest Frequency of Drops**

With the ability to perform multiple rotations in quick succession compared to land-based aircraft, Canadair can follow the erratic behavior of wild fires. In conjunction with the ground crew instructions, Canadair can react to a change in priority in a timely manner which is critical in controlling and extinguishing the fire.

**Five Tonne Drops Are An Effective Minimum**

It has been demonstrated that dropping less than five tonnes of water/foam on a high intensity fire is not effective. A lower volume drop on a high intensity fire results in the majority of the water droplets evaporating, leaving little left to hit the fire.

**Lowest Dropping Altitude & Highest Precision**

A low dropping altitude is vital to suppress wild fires. For safety reasons larger aircraft are required to fly at higher altitudes while dropping retardant. Because of its high lift wing and its turbo-prop engines that provide instant thrust, Canadair can safely attack the fire at lower altitude and lower speed thus offering the highest precision. Its drop pattern and high-water density is such that it can suppress the fire faster, leaving the ground crew to safely extinguish hot spots.

**Complementary in Nature**

Canadair is a great addition to organizations that have land-based firefighting fleets, providing complementary support for larger fires. It’s ability to travel far distances and attack the fire while other assets are repositioned, ensures initial attack effectiveness. Once in position, land-based aircraft can drop lines of retardant, while Canadair aircraft and helicopters can focus on attacking sections of the fire head-on. Further, with its low altitude drops and high drop accuracy, it can suppress the fires that have broken through retardant lines.

**The Greener Aircraft**

Canadair’s exceptional design, permitting the aircraft to refill from nearby water sources rather than returning to base to reload combined with turboprop engines, results in a lower fuel burn per litre of water dropped compared to land-based aircraft. In addition, the Pratt & Whitney engines are certified to ICAO stage IV noise standards, have the lowest NOx emissions, and are capable of using Sustainable Alternative Jet Fuel (SAJF) making Canadair the greenest Aerial Firefighting aircraft available on the market today.