

CASE STUDY

LASD Super Puma Mk 1 Block I Modification Program



In September 2012 Heli-One delivered the first of three completed Eurocopter AS332L1 Super Pumas to the Los Angeles County Sheriff's Department (LASD) Aero Bureau. The 'Air Rescue 5' mission profile is primarily SAR, but also demands duties such as SWAT and maritime missions, Homeland Security support, and natural disaster relief. Heli-One was successful in its bid for the complex, on-going and multi-aircraft 'LASD Super Puma Mk 1 Block I modification program'.



"There are many good people at Heli-One working non-stop to ensure every one of our needs are met... Heli-One's ability to bring focus and work together with Transport Canada and FAA (United States Federal Aviation Administration) who worked on the project was absolutely

phenomenal and they were 100 per cent committed. Without their combined extra effort, none of this would have been possible."

Deputy Patrick McKernan,
LASD Program Manager and Air Rescue 5 Chief Pilot

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A division of CHC Helicopter

Customer benefits

- Unprecedented operational capabilities enabled by cutting-edge upgrades
- Greater program turnaround efficiency through Heli-One's in-house STC approval capability
- The most cost-effective solution for the customer
- Upgrades enable compliance with the very latest national regulatory standards
- Seamless handover achieved through embedding Heli-One personnel with the Aero Bureau following delivery

Heli-One 
Knowledge at your service

Description of works

What we provided for the customer

The Super Pumas will provide a new generation of speed, lift and high-altitude performance as part of the LASD's 'Air Rescue 5' program. They will replace the Aero Bureau's ageing and inefficient Sikorsky SH-3H Sea Kings, and provide a whole new level of technical and safety features compliant with all regulatory standards.

To meet the demanding requirements of 'Air Rescue 5' the Super Pumas required a program of substantial modifications, christened the 'LASD Super Puma Mk 1 Block I modification program'. Heli-One's proposal was judged to provide the best value for the department. This was not only a combination of cost-effectiveness and quality assurance; our depth of experience with the Super Puma was a major deciding factor. Heli-One is an internationally recognized Design

Approval Organization (DAO) certified by Transport Canada – we have the capability and authority to approve STCs in-house. For projects with the level of complexity of the Block I program this offers a significant advantage in terms of project turnaround efficiency.

Heli-One's work for Block I included removing unnecessary equipment from the Super Pumas, upgrading existing equipment, and adding new equipment specific to meet 'Air Rescue 5' mission requirements.

All modifications were designed to enable the Aero Bureau to make a real difference to the lives and safety of the people of Los Angeles County. Whether it is the ability to fly to emergencies when other aircraft would be grounded by poor weather conditions, or faster delivery of patients

to hospitals using the Super Puma's speed in combination with avionics upgrades; the specifications for 'Air Rescue 5' have been designed for cutting-edge capability.

Heli-One ensured a seamless handover of the first ship to the LASD by embedding Heli-One personnel with the Aero Bureau for two weeks. The LASD technical team was comprehensively briefed on operation and functionality, as well as how to maintain the new upgrades and modifications.



Breakdown of technical delivery

Some of the 65 Block I upgrades and modifications completed in total by Heli-One:

- **Flight Management System (Universal Avionics UNS-1Fw FMS W/NMS)** Enables access to local hospitals' instrument flight rules (IFR) approaches for speedier and safer delivery of patients to hospital helipads
- **Enhanced Ground Proximity Warning System (Honeywell)** A protection tool which provides independent monitoring of an aircraft's position relative to surrounding terrain. Enables LASD to fly through rough terrain safely; even in poor weather and visibility conditions
- **Heli-One Patient Litter System** Allows for transport of multiple patients at one time
- **AeroComputers UC 5100LE Mapping System with AIS** Advanced technology vessel tracking to enable greater strategic mission control
- **General Dynamics (Axsys) V9 Thermal Imager and Camera System** A first for an LA County SAR helicopter; enabling a step-change in capability when searching for people on the ground
- **Appareo GAU 2000 Flight Data Monitoring System** Monitoring of flight data to ensure aircraft flight limits are not exceeded
- **Eurocopter Wire Strike Protection System** Enables the Super Pumas to achieve safer operation within the incredibly diverse terrain of the LA County's urban and rural environments
- **Sky Trac ISAT-200 Satellite Tracking System** Total situational awareness. Possesses features which enable sophisticated strategic operations planning and execution. Able to integrate with other emergency services to combine intelligence of cross-services assets locations

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