

TALON[®] LC Hydraulic HEC Dual Cargo Hook System for the Bell 429 Aircraft



Provides
an STC-certified
solution for CFR
Part 133 external load
missions, including HEC

New HEC Dual Hook Systems for Bell Aircraft

Onboard Systems is committed to rolling out new Human External Cargo (HEC) dual hook systems for a wide variety of aircraft models, and is currently developing a kit for the Bell 429 aircraft. This new kit will provide an STC-certified solution for a variety of CFR Part 133 external load missions, including HEC, high-value cargo transport, utility line work, short haul, and search & rescue.

Bell 429 Systems

- ✔ **Complete HEC System** — Includes all fixed provisions and controls, a lightweight frame, and dual TALON LC Hydraulic Cargo Hooks (see Figure 2) mounted to a lightweight frame (see Figure 4). The hook's keeperless design can accommodate a wide range of load ring sizes and styles, while eliminating dynamic rollout risk. The lock indicator window on the back of the hook gives ground crew personnel an easy visual signal that the hook is locked, and the maximum angle of the hook opening is almost 90° for easier loading and unloading.
- ✔ **Compatible with Bell Fixed Provisions** — Can be installed on an aircraft without any cargo hook provisions, or can interface with existing Bell dual hook fixed provisions.
- ✔ **Improved ground clearance** — Compared to the OEM design.
- ✔ **At Your Fingertips** — Primary release via an electrical button on the cyclic, with backup release via a hydraulic dual master cylinder installed on the collective. Dual master cylinder is compliant with both FAA and EASA requirements for preventing inadvertent release.
- ✔ **Load Capacity** — With the Y-rope attached to both cargo hooks, the dual cargo hook system load limit is 1,322 lbs (600 kg) for both HEC and non-HEC (NHEC) missions. When an NHEC load is attached to only the primary cargo hook, the normal aircraft load limit of 3,000 lbs (1,361 kg) applies.
- ✔ **Multiple Configurations** — Optional kit configurations include fixed and/or removable provisions, an Onboard Weighing System for the primary cargo hook, and a Personnel Carrying



Figure 1: Side views of Onboard's TALON LC Hydraulic Cargo Hook, which greatly increases load security via a keeperless design and high-reliability hydraulic release mechanism.





Figure 2: A Y-rope is required when conducting human external cargo (HEC) missions using Onboard's dual cargo hook kits to provide a controlled interface between the two cargo hooks and the longline.

Device System (PCDS) including the Y-rope, rigging plate, and longline.

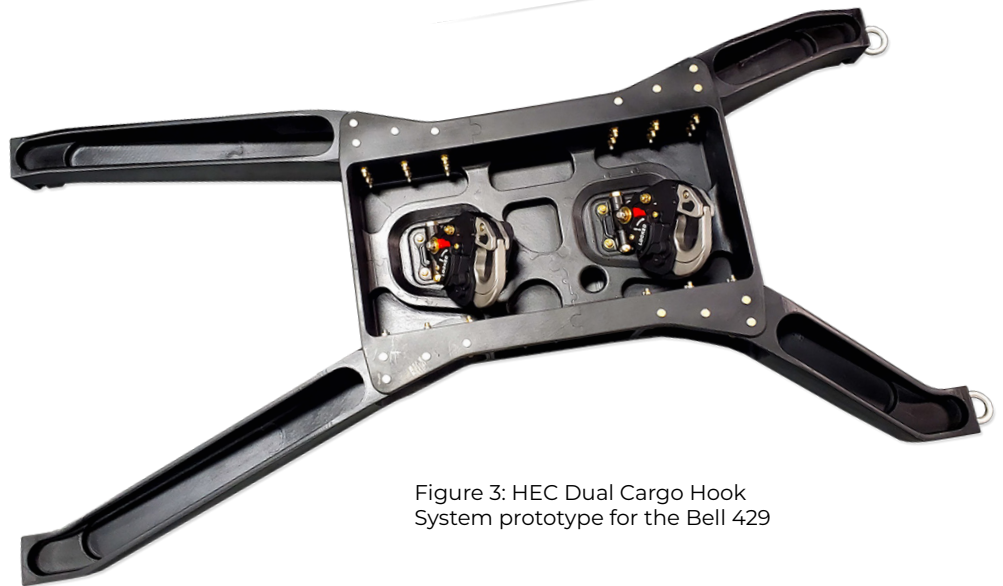




Figure 3: HEC Dual Cargo Hook System prototype for the Bell 429

Other Considerations

 **HEC Y-Rope** — The only part of the personnel carrying device system (PCDS) that must be purchased from Onboard to use any of these kits for HEC missions are the kit-specific Y-Ropes (see Figure 3), as it is part of the STC equipment. Because the Y-Rope is needed for transporting humans, it carries additional manufacturing and quality requirements as compared to non-human bearing components. Our STC will allow for local approvals of alternatives for any components below the Y-Rope.

 **HEC Longlines & Accessories** — Onboard can also provide other essential components for properly rigging your aircraft to carry human external cargo, such as rigging plates, longlines, weight bags, lanyards, and carabiners (see Figures 1-4 below). These parts can be submitted for local approvals.

For more information on these components, please visit our website where you can sign up for our product information list to get periodic project status updates including certification, pricing, and product availability for these kits.

Timeframe

Based on our experience in developing other HEC-approved dual hook kits, we anticipate that the Bell 429 system will be certified by the FAA and ready for sale in the spring of 2024. Onboard will also apply for Transport Canada and EASA certifications.

Contact Us

For more information, please contact one of the sales team members listed on the back of this brochure.

Onboard also offers optional HEC Longline Kits that include an HEC Longline (#1) along with the Y-Rope, a 25-lb. weight bag (#2), a rigging plate (#3), and a lanyard (#4) to connect to your locally-approved PCDS harness.



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