

■ MARSHALL

C-130 Hercules

Centre wing box replacement



A new Lockheed Martin enhanced service life centre wing box is a highly cost-effective way to add decades to the useful lifespan of a C-130 Hercules.



Centre wing box replacement is a lengthy and complex process requiring specialist equipment and extensive experience that few organisations possess.



Marshall Aerospace has completed 80+ centre wing box replacements since 1975, and has been recognised by Lockheed Martin as the world's only Centre of Excellence.

Giving the world's workhorse a new lease of life

As a major primary structure that bears significant operational load and experiences exceptional stress during flight, the C-130 centre wing box is a designated “lifed article” whose operational limits are specified in terms of total flight hours or age.

The original C-130J centre wing box is rated for a lifespan of roughly 20 years, depending on how the aircraft is operated. Once a centre wing box has reached its end of life, it will need to be replaced in order for the aircraft to remain airworthy.

Designed and produced by Lockheed Martin, the new **enhanced service life** (ESL) centre wing box can effectively re-life an aircraft once installed, potentially extending its useful lifespan by several decades.

45,000 hours

Original C-130J centre wing box



122,500 hours

ESL C-130J centre wing box

(Lockheed Martin, 2025)

Marshall Aerospace can undertake centre wing box replacement on a standalone basis or as part of a scheduled heavy maintenance input.

As part of a through-life fleet management approach, we can also advise C-130 operators on the timing and sequence of centre wing box replacements across multiple airframes.

Nearly 80 CWB replacements completed

80⁺

First CWB replacement
(RAF C-130K)

1975

C-130J CWB replacement
through in-house innovations

30%

Faster

Named the world's
only CWB Centre
of Excellence by
Lockheed Martin

2024



Marshall Aerospace: unique C-130 centre wing box capabilities



Facilities

- ❑ 2x CWB slots
- ❑ Steel-reinforced concrete flooring
- ❑ Laser positional measurement equipment
- ❑ CWB and parts storage



Practices

- ❑ Comprehensive documentation
- ❑ Thorough inspection and NDT
- ❑ Full repair and rebuild of parts & structures
- ❑ Reachback to Lockheed Martin



Innovations

- ❑ Proprietary CWB staging, trestling and tooling
- ❑ Bespoke repair schemes with engineering support
- ❑ Unique speed-and-feed slow drilling process

“Recognizing Marshall as the first Lockheed Martin-approved Centre of Excellence for its work leading the C-130 centre wing box replacement programme is a natural choice.”

Rod McLean

Vice President and General Manager, Air Mobility & Maritime Missions
Lockheed Martin Aeronautics

LOCKHEED MARTIN



To accommodate the risks and requirements of centre wing box replacements, Marshall Aerospace has developed proprietary tooling, equipment and operational instructions. We use OEM kits containing all necessary parts and components, and conduct multiple reviews with Lockheed Martin during the replacement process.

To date, Marshall Aerospace is the only organisation outside the United States to have successfully completed a C-130J centre wing box replacement.



About Marshall Aerospace

Established in 1909, Marshall is a British engineering specialist with a rich heritage and an enduring commitment to serving governments and prime contractors.

As a global leader in military maintenance, repair and overhaul (MRO), we work closely with aircraft operators to keep their fleets mission-ready and mission-capable. We have supported the C-130 Hercules since 1966, earning multiple world-first accreditations, permissions and accolades for our excellence on the platform.

Drawing on decades of engineering expertise and wide-ranging design organisation approvals, we are able to plan, integrate and certify complex programmes from start to finish, from standard avionics upgrades to completely bespoke special mission conversions.

We are also a leader in precision manufacturing, designing and producing parts, components and complex subsystems for flagship defence programmes under long-term contracts for some of the world's largest OEMs.



For more information please contact the Marshall sales team



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