Aerotest Limited
Consultants & Specialists in Aero Engine Test Facilities & Ground Support Equipment

QEC Water Vapour Resistant (WVR) "Aero-Bag"

For the Lockheed Martin C-130E to H & C-130J Hercules Aircraft QECU's

ATL 1105-001
C130H QEC WVR Aero-bag

ATL 1175-001
C-130J QEC WVR Aero-bag

ATL 1174-001
C-130H QEC WVR Aero-bag
Extended Tailpipe

The Water Vapour Resistant WVR Aero-bag has been designed and developed to enable the Quick Engine Change Units (QECU), installed on the C-130E to H & J hercules aircraft to be stored and preserved against the environment for indefinite periods of time whilst mounted onto a storage/ transport support stand. The durable WVR Aero-bag is manufactured as one assembly, such that they completely enclose and protect their contents from potential corrosive elements in the external ambient environment.

The standard WVR Aero-bags are unique in size and shape to the C-130E to H standard (1105-001) and extended tailpipe (1174-001) and C130J (1175- 001) QECU's. The WVR Aero-bags are produced in two standard colours RAL-5029 Light Blue and RAL-6001 Green, although additional colours are available upon request.

The WVR Aero-bag is designed to protect the QEC during storage and transportation.

The WVR Aero-bag has been designed and developed as a result of rigorous testing. The ATL1175-001 C-130J WVR Aero-bag was tested and approved by Lockheed Martin Aeronautics Inc, Marietta, Georgia.

This product has consequently been identified as the preferred design for all future WVR preservation, storage and transportation standards.

Part Marking

Each WVR Aero-bag is individually identified with the following information:

- WVR Aero-bag Part Number.
- Description.
- Individual Serial number.

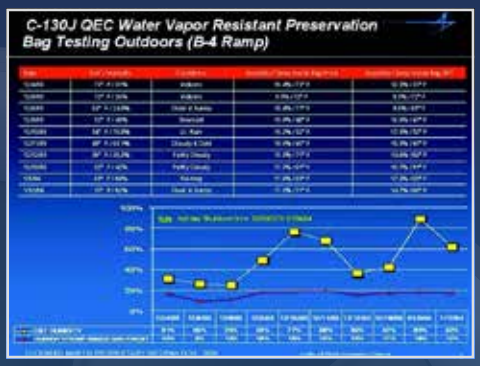
Each WVR Aero-bag is supplied in a lightweight fabric transport bag. This simplifies transportation and ensures that all elements of the Aero-bag system remain together as a complete working unit.

The WVR Aero-bag is designed to interface with the C-130E to H & J QECU's when fitted to the following transport trolley/ support stands:

Part Number:	NSN No:
200-000-101	1740-00-106-8512
200-000-104	1740-01-231-4826
ATL1169-001	1740-99-133-9408

Relative Humidity

- The graph below shows a C-130J QEC WVR Aero-bag under test. The tests compare the environmental conditions using the outside humidity levels and the humidity levels within the Aerotest Aero-bag. The humidity level within the WVR Aero-bag must be sustained at a level below 40% which is illustrated in the graph below by the red line. The external humidity level is represented by the yellow line. This technology is the basis for all Aerotest's WVR Aero-bag designs.



If the storage and preservation system is properly managed, the QECU's can be safely stored indefinitely. The Silica Gel is the only thing that needs to be monitored, generally requiring replacement or rejuvenation approximately every six months.

The preservation system is monitored by observing an Environmental digital indicator which is located on the side of the WVR Aero-bag and is capable of reading relative humidity, temperature and due point inside the Aero-bag.

Special Features and Specification

- Integrally welded continuous 'TZIP easy' zip seals are welded in a horizontal direction around the Aero-bag. This enables the QECU inclusive of rear tailpipe to be accessed without having to remove it from its transport stand.
- Two sealed porthole covers are located at the front and rear sections of the WVR Aero-bag. Their primary function is to provide an access point to remove and/ or replace the silica gel into the nacelle intake and tailpipe sections, without breaking into the primary 'TZIP easy' zip seals.
- Two one-way purge valves are installed into each porthole cover, this arrangement is for connecting a purge valve adapter which screws onto and opens the purge valve allowing nitrogen purging of the WVR Aero-bag.
- The WVR Aero-bag material has a rated temperature envelope of -30 to +70ºC (-22 to 158ºF.)
- The WVR Aero-bag is manufactured from a supported PVC textile which is strong and durable and may be creased or folded.
- The Aero-bag outer surfaces are coated with a protective flexible coating of acrylic lacquer for protection against ester-based fluids.
- Attachment straps ensure that the horizontal zip is easy to open and close.
- Aero-bag internal desiccant sachet-retaining bags are located in the nacelle intake and tailpipe sections. Each bag is permanently fitted and has been designed to allow the desiccant sachets to be easily accessible and held in position once installed.
- The WVR Aero-bag is sealed against the transport trolley and QECU by four gasket seals which are welded into position to provide permanent, robust and reusable fixture.
- The air condition inside the Aero-bag is monitored via the use of humidity indicatorpaper or an optional electronic Hygrometer They are visible through a porthole mounted on the side of the Aero-bag.
- The WVR Aero-bag has an Integral pressure relief valve fitted, set at 0.5 psi (3.5 kPa). This ensures the Aero-bag is not over pressurised when subjected to variation in atmospheric pressure or temperature, enabling safe transport at altitude and transfers between cold to hot climates.
- The Aero-bag has an external sealable panel to store engine logbook records and standard WVR Aero-bag repair kit, along with a clear aperture panel to view and store records documents.
- Laminated installation / operating instructions are supplied with each WVR Aero-bag.

Ordering Information:

Standard Tailpipe

C130H	ATL 1105-001-B (BLUE)
C130H	NSN 1610-99-812-5770 (BLUE)
C130H	ATL 1105-001-G (GREEN)
C130H	NSN 8145-99-226-0010 (GREEN)

Extended Tailpipe

C130H	ATL 1174-001-B (BLUE)
C130H	NSN 8145-99-226-2322 (BLUE)
C130H	ATL 1174-001-G (GREEN)
C130H	NSN 8145-99-852-9683 (GREEN)
C130J	ATL 1175-001-B (BLUE)
C130J	NSN 1610-99-424-2995 (BLUE)
C130J	ATL 1175-001-G (GREEN)
C130J	NSN 1730-99-974-1591 (GREEN)

NCAGE Number: KE 160

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