

Ultra Electronics SERVICE BULLETIN

This Service Bulletin complies
with British Civil Airworthiness
Requirements, Sect.A, Chap.A5-3.

Signed . 

CAA Approval No. DAI 1501/39

1 April 1994

SERVICE BULLETIN No. 003LG-32-002

LANDING GEAR - EXTENSION AND RETRACTION - CONTROL AND INTERFACE

INTRODUCTION OF LGCIU Pt. No. 003LG034C

1. Planning Information

A. Effectivity

Airbus Industrie A330 and A340 aircraft, all models.

Landing Gear Control and Interface Unit (LGCIU), part number 003LG034A,
all Serial Numbers.

Landing Gear Control and Interface Unit (LGCIU), part number 003LG034B,
all Serial Numbers up to, and including, 199.

B. Reason

This Service Bulletin introduces a new on-board replaceable module
(OBRM) containing improved software (identified as the 4C Standard)
which embodies changes requested by the aircraft manufacturer.

In-service experience on A330 aircraft has highlighted a retraction
inhibit fault associated with the left main landing gear pitch trimmer.

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C. Description

This Service Bulletin introduces LGCIU Pt. No. 003LG034C, containing a modified OBRM Pt. No. 003LG0300204C. The new OBRM incorporates revised software, described below, which implements the changes requested by the aircraft manufacturer. No LGCIU hardware changes are required.

The 4C software standard incorporates a delay which will inhibit the gear retract cycle only after a fault in the pitch trimmer monitoring has been confirmed present for at least 500 milliseconds.

D. Compliance

Compliance with this Service Bulletin is recommended.

The manufacturer will make modified OBRMs available to Operators by exchange, on request. The manufacturer will also incorporate this Service Bulletin, on request, into all LGCIUs returned for investigation and/or repair. Operators need not return LGCIUs specifically for this Service Bulletin to be incorporated.

Operators who wish to re-program their own OBRMs will be provided with one master OBRM for use with a recommended firmware data loader (See para. 2 of this Service Bulletin).

E. Approval

The technical content of this Service Bulletin is approved under the authority of CAA Approval No. DAI/1501/39.

F. Manpower

Manpower requirement for accomplishment of this Service Bulletin are as follows :-

Fitting of exchange OBRM	0.25 manhours
Reprogramming existing OBRM	1.5 manhours

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G. Material Cost and Availability

The new OBRM, Pt. No. 003LG0300204C, will be made available to Operators free of charge by exchange, on request. Alternatively, a master OBRM will be provided free of charge to Operators who wish to reprogram their own OBRMs. Sets of new OBRM identification labels will also be supplied for use with the reprogrammed OBRMs - Operators must inform Ultra Electronics of the quantities required.

Operators who return LGCIUs solely for this Service Bulletin to be incorporated will be charged 80% of Ultra Electronics' current 'No Fault Found' charge.

H. Tooling - Price and Availability

Operators who wish to reprogram their own OBRMs must have access to an Aerospatiale Firmware Data Loader, Type RMR PRECIS B, Pt. No. 37A0D0-3000-000. Data on price and availability of this device can be obtained from Aerospatiale Avionics and Systems Division.

J. Weight and Balance

None.

K. Electrical Load Data

Not affected.

L. References

Ultra Electronics Component Maintenance Manual Ref. No. 32-31-81.

Ultra Electronics LGCIU Production Test Specification 003-LG-00-0006.

ATE Test Specification, Aerospatiale Ref. No. 003-LG-03-4B.

2. Accomplishment Instructions

A. OBRM Change

Accomplishment of this section of the Service Bulletin is achieved by removing OBRM Pt. No. 003LG0300204A or Pt. No. 003LG0300204B and replacing it with OBRM Pt. No. 003LG0300204C.

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Refer to Ultra Electronics Component Maintenance Manual 32-31-81, Page 301, para. 2.A for OBRM removal instructions.

Refer to Ultra Electronics Component Maintenance Manual 32-31-81, Page 702, para. 2.D for OBRM installation instructions.

Correct functioning of the new OBRM will be checked during the start-up BITE tests when the unit is next powered up.

C. OBRM Reprogramming

Remove and discard the original identification labels from the OBRM.

Refer to the Aerospatiale Instruction Manual for the RMR PRECIS B firmware data loader and carry out the erasing, reprogramming and test procedures as directed, using the 003LG0300204C master OBRM supplied by Ultra Electronics.

Engrave the OBRM part number (003LG0300204C) and serial number details onto the new blank labels, ensuring that the software standard legend is shown as '4C' on the front label.

Using a cloth moistened with iso-propyl alcohol, or an equivalent solvent, thoroughly clean the two areas on the OBRM where the new labels are to be fitted. Allow the solvent to evaporate and then fit the new labels.

Fit the reprogrammed OBRM as described in para. B above.

D. Notification

After accomplishment of this Service Bulletin, the Operator must advise the manufacturer of the following details :-

- (1) Service Bulletin Number.
- (2) Serial Number(s) of the LGCIU unit(s) modified.
- (3) Date of accomplishment.

These details must be sent to :-

Project Support Manager (Flight Systems),
Ultra Electronics,
Controls Division,
Knaves Beech Business Centre,
Loudwater,
High Wycombe, HP10 9UT,
United Kingdom

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The Operator must record the accomplishment of this Service Bulletin within the appropriate equipment documentation system.

3. Material Information

Incorporation of this Service Bulletin changes the manufacturer's part number of the LGCIU from 003LG034A or 003LG034B to 003LG034C.

The front face of the new OBRM will carry the legend '4C'.

New Part No.	Qty.	Unit List Price	Keyword	Old Part No.	Instructions- Disposition
003LG034C	-	N/A	LGCIU	003LG034A or 003LG034B	Code 1
003LG0300204C	1	N/A	Module	003LG0300204A or 003LG0300204B	Codes 1, 2 or 3
003LG030025	1	N/A	Label	003LG030021	Code 4
003LG030022	1	N/A	Label	003LG030022	Code 4

Disposition Codes

- 1 Return LGCIU to manufacturer
- 2 Return OBRM to manufacturer for exchange See NOTE below.
- 3 Operator to reprogram existing OBRM
- 4 Old part not re-usable. New labels are blank and must be engraved (see para. 2.C).

NOTE: The 003LG034C LGCIU is interchangeable with the 003LG034A and 003LG034B LGCIUs, but the 003LG034C LGCIU must be fitted to the aircraft in pairs.