



Civil Aviation Authority

EMERGENCY MANDATORY PERMIT DIRECTIVE



Number: 2022-005-E

Issue date: 19 May 2022

In accordance with 41(1) of Air Navigation Order 2016 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

Type/Design Approval Holder's Name:

HAWKER AIRCRAFT LTD

Type/Model Designation(s):

Hawker Hurricane and Sea Hurricane

Effective Date:	23 May 2022
TCDS:	Not Applicable
Foreign AD (if applicable):	Not Applicable
Supersedure:	Not Applicable

ATA 32 – Undercarriage – Undercarriage Fork End Fittings – Inspection / Replacement

Manufacturer(s):

Hawker Aircraft Ltd / Canadian Car and Foundry Co / Gloster Aircraft Co Ltd

Applicability:

Hawker Aircraft Ltd / Canadian Car and Foundry Co / Gloster Aircraft Co Ltd Hurricane and Sea Hurricane aeroplanes (All marks and serial numbers).

Definitions:

For the purposes of this MPD, the following definitions apply.

Affected part:

MLG fork end fitting Part No. A73450 or A73450 HR where the centreline counterbore is greater than 1.6 inches in depth.

Serviceable part:

Part No. A73450 or A73450 HR where the centreline counterbore is less than or equal to 1.6 inches in depth (refer to Section 1) or,

Part No. A73450 which has subsequently been manufactured in accordance with the applicable design data where the centreline counterbore is less than or equal to 1.6 inches in depth (refer to Section 1).

Reason:

A recent incident was reported of an in-service failure of a main undercarriage radius rod upper fork end on a Hawker Hurricane Mk 2B. The aircraft whilst in the hangar was found to be sitting left wing low and it became apparent the left-hand main undercarriage gear leg was out of alignment. The lower fork end fitting of the radius rod upper was found to be sheared and had become detached from the trunnion and sleeve, which slides fore and aft on the lower boom outer girder.

Further investigation has shown that during restoration of aircraft or wing assemblies, replacement fork end fittings (Part No: A73450) have been manufactured incorrectly and installed. Non-conforming parts have the counterbore drilled to 1.8 inches instead of the drawing dimension of 1.6 inches (Figure 2). As a result, the material thickness is reduced causing a reduction in strength. This could cause the MLG to collapse during ground manoeuvres or upon landing.

For the reasons described above, this MPD requires a one-time inspection of the MLG fork end fittings (6 off) to address this potential unsafe condition.

Required Action(s) and Compliance Time(s):

- 1) Before further flight from the effective date of this MPD, accomplish the following:
 - 1.1) Dimensionally inspect all six undercarriage fork end fittings, Part No. A73450 (HR) (Figure 1, Port and Starboard marked A, B, C) to determine the counterbore depth,
 - 1.2) If the depth of the parallel section of the counterbore is measured to be less than or equal to 1.6 inches, the fork end fitting is deemed a serviceable part,
 - 1.3) If the depth of the parallel section of the counterbore is determined to be greater than 1.6 inches, the fork end fitting is deemed to be an affected part and must be replaced with a serviceable part,
 - 1.4) Ensure compliance with this MPD is recorded in the aircraft logbook.

Reference Publications:

AP 1564A, B, C & D Hurricane Mk I, Mk II, Mk IV.

Remarks:

1. The safety assessment has warranted immediate publication and notification without implementing the full consultation process.
2. If requested and appropriately substantiated, CAA can approve Alternative Methods of Compliance for this MPD.
3. For any questions concerning the technical content of the requirements in this MPD, please contact: GA Unit, Safety and Airspace Regulation Group, Civil Aviation Authority, Aviation House, Beehive Ring Road, Crawley, West Sussex RH6 0YR. E-mail: ga@caa.co.uk

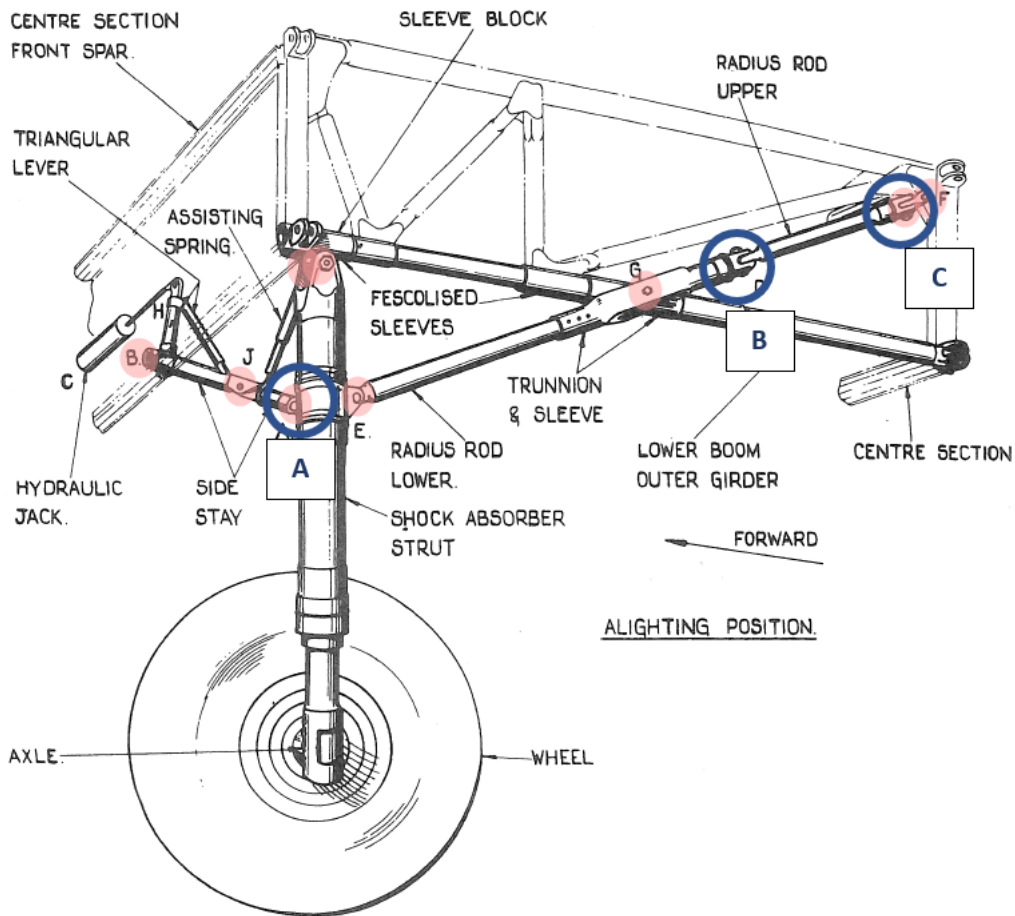


Figure 1 Starboard Main Undercarriage, Port Opposite.

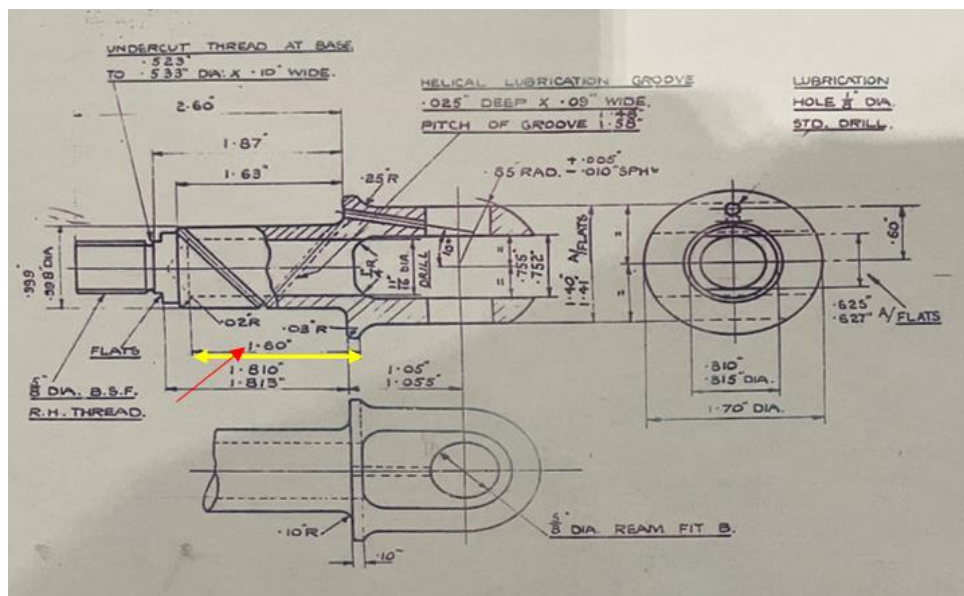


Figure 2: Part No: A73450