



Civil Aviation Authority
SAFETY NOTICE
Number: SN-2021/013



Issued: 10 June 2021

**Undercarriage Leg Support Bracket
Avions Max Holst MH.1521 “Broussard” (All Marks)**

This Safety Notice contains recommendations regarding operational safety.

Recipients must ensure that this Notice is copied to all members of their staff who need to take appropriate action or who may have an interest in the information (including any ‘in-house’ or contracted maintenance organisations and relevant outside contractors).

Applicability:	
Aerodromes:	Not primarily affected
Air Traffic:	Not primarily affected
Airspace:	Not primarily affected
Airworthiness:	All BCAR A8-23 / A8-24 / A8-25 Organisations
Flight Operations:	All Avions Max Holste MH 1521 “Broussard” Operators
Licensed/Unlicensed Personnel:	All Maintenance Engineers in Airworthiness Organisations operating, servicing, maintaining Max Holst MH.1521 Broussard (All Marks)

1 Introduction

- 1.1 A number of Avions Max Holste MH 1521 “Broussard” aircraft (MH1521) operate on a National Permit to Fly on the UK civil register for which this Safety Notice is concerned.
- 1.2 During aircraft scheduled annual maintenance on an MH.1521, seats and forward cockpit floor were removed to gain access to service inspection items such as control cables, pulleys and undercarriage legs. While inspecting the aircraft undercarriage components under the floor, longitudinal cracks were found initially on the left-hand side (see [Appendix 1 photos](#)) and then subsequently in the starboard leg outboard lower support bracket (letter box bracket). The crack was observed on the bottom forward shelf of the bracket. The crack was approximately 1 inch long, visible by eye while using an inspection mirror to observe the general condition of the area below the undercarriage leg. The engineers who found the crack were alerted to its presence initially on the left-hand side, due to a deformation or skin ripple forward of the letterbox fitting. Reference [Appendix 1](#).
- 1.3 It is not known if the bracket was the original factory fitted unit, how many hours the bracket had accumulated before failure, or what the cause of the crack was, although it is possible to have been caused by excessive load on the bracket during a heavy landing. With the age of the aircraft and affected part, age-related fatigue is also possible. There are no documented or reported instances of this crack occurrence, or previous safety notices, airworthiness directives from the previous type certificate holder (EASA/DGAC) or operators, hence it is not known if this occurrence is typical for the type.

- 1.4 With the difficulty of access for inspection (see [Appendix 1](#)) and the equally difficult nature for general visibility of the bracket (the undercarriage leg while fitted, obscures easy access for inspection), cracks or damage could be missed or overlooked.

The purpose of this Safety Notice is to highlight this particular event and recommend that owners and operators of MH1521 Broussard aircraft carry out inspection of the affected brackets, with subsequent inspections carried out annually during scheduled maintenance.

2 Recommended Actions To Be Taken

- 2.1 For any applicable MH1521, it is recommended that operators should carry out inspection of the affected part/s, and subsequent inspections annually. By way of:
- 1) Removal of cockpit seats and floor panels as required (see [Appendix 1](#)) to gain access to the undercarriage leg support letterbox brackets. This is to inspect the following items: The letterbox bracket top, bottom, side walls and all attachment nuts/bolts.
 - 2) Where access is possible, the use of an inspection mirror/borescope or magnifying glass and torch to pay particular attention to the underside of the lower shelf of the letterbox bracket (See [Appendix 1](#)) is advised. It is recommended that a flexible borescope is used in preference to an inspection mirror due to the difficulty in manipulating a mirror in this area, if the leg is installed.
 - 3) Check the letterbox bracket for signs of fatigue damage or cracking in the corners of the lower shelf of the bracket (see [Appendix 1](#)) checking for evidence of cracking around all the stud/nut attachment areas.
 - 4) If, upon inspection, cracks or damage are found to the bracket, the faulty unit should be removed for repair or replacement.
 - 5) If access is too difficult with undercarriage legs fitted, jack and support the aircraft as necessary, and remove the undercarriage legs to facilitate inspections (see [Appendix 1](#)).

3 Further Information

- 3.1 Details of the component, location, and modification state may be found in the following publications

MH1521 ACE.104 Illustrated Parts Manual

MH1521 Service manual

4 Queries

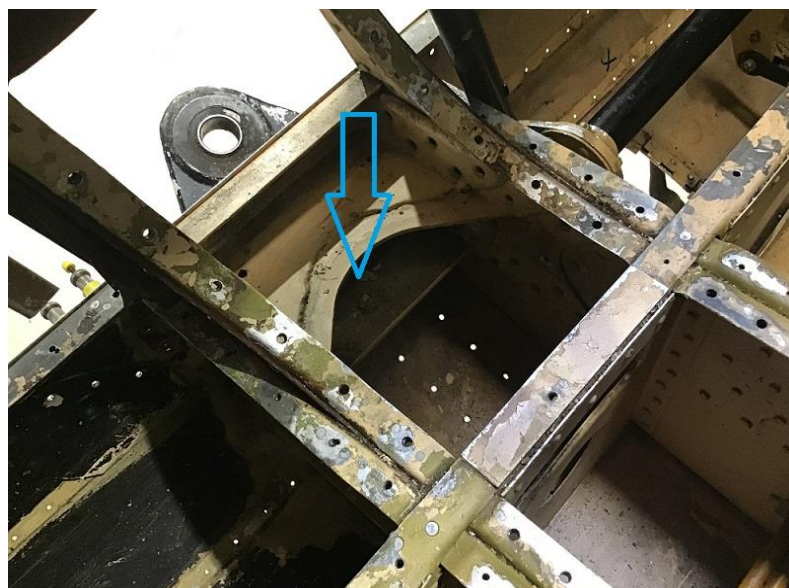
- 4.1 Any queries or requests for further guidance as a result of this communication should be addressed to the GA Unit, Safety and Airspace Regulation Group, Civil Aviation Authority, Aviation House, Gatwick Airport South, West Sussex RH6 0YR. Tel: +44 0330 1383495 E-mail: ga@caa.co.uk

5 Cancellation

- 5.1 This Safety Notice will remain in force until further notice.

Appendix 1

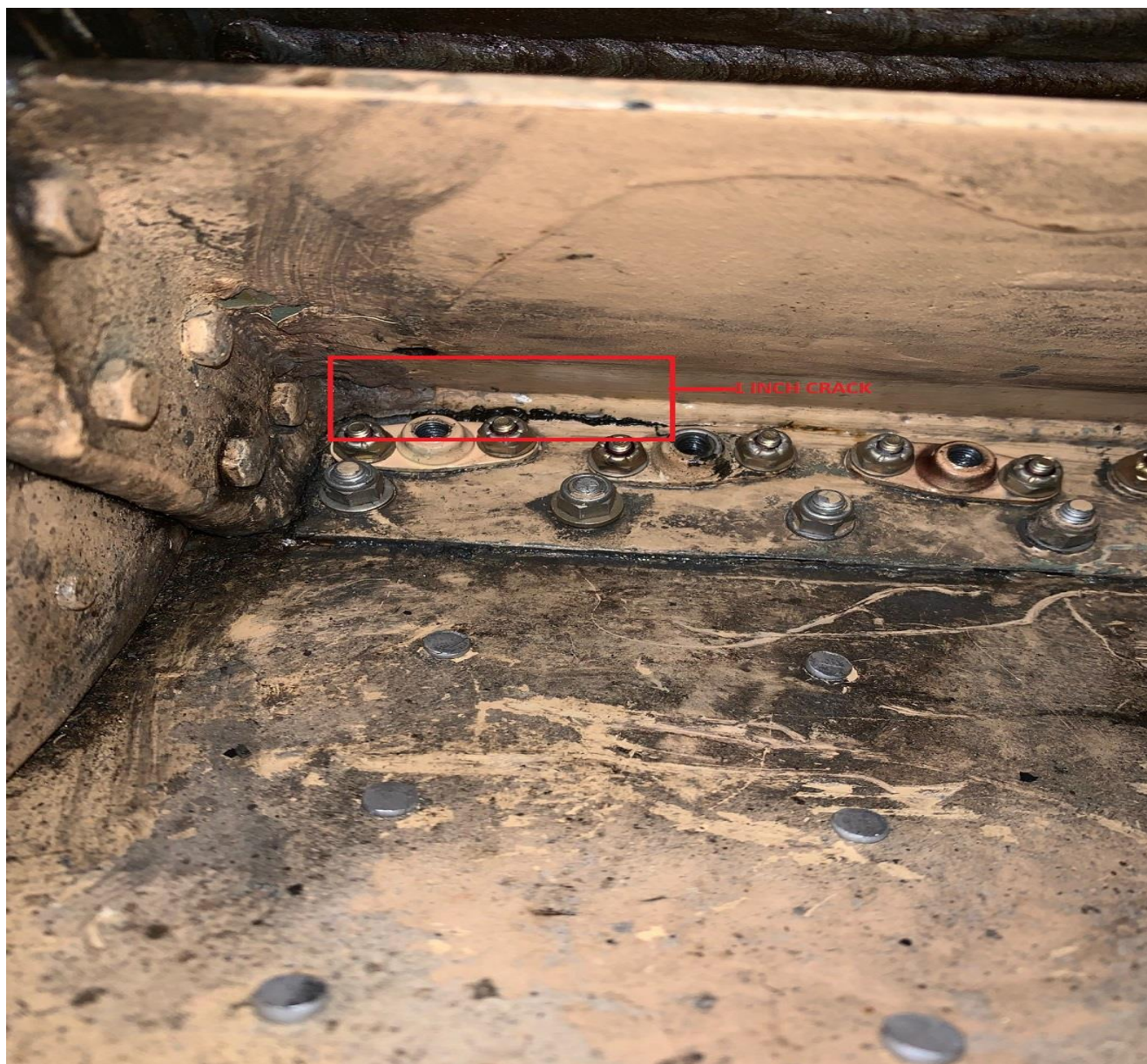
MH.1521 port and starboard undercarriage support letterbox brackets. Undercarriages removed



MH.1521 port undercarriage support letterbox bracket. Floor panels and leg removed for access

MH.1521 left hand (port) undercarriage support letterbox bracket. Leg removed, crack shown on lower shelf



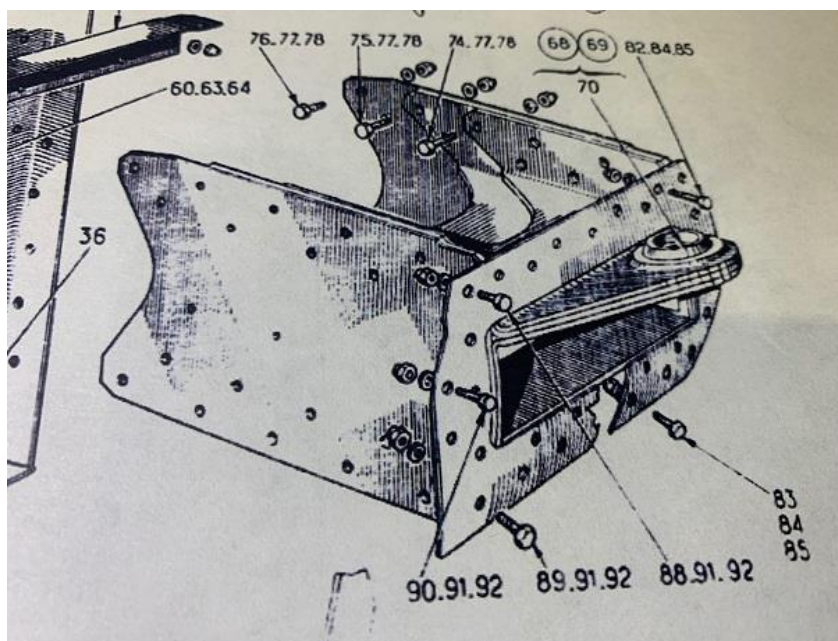


MH.1521 Left hand (port) undercarriage support letterbox bracket lower shelf. Crack is shown from underneath, photo taken whilst leg removed. Photo taken with a mobile phone



MH.1521 Starboard undercarriage support letterbox bracket. Undercarriage leg still fitted

MH1521 ACE.104 Illustrated Parts Manual. Letter box bracket



MH.1521 starboard undercarriage leg fitted through letterbox bracket

