



Luftfahrt-Bundesamt
-AD-Department-

Airworthiness Directive

*In case of any difficulty, reference should be made
to the German original issue*

94-001 L'Hotellier

Date of issue: 03.02.1994

Affected aeronautical equipment:

L'Hotellier ball and swivel joints with locking cams (-Type 45 -/ Ratchet)

- all sailplanes and powered sailplanes equipped with L'Hotellier ball and swivel joints with locking cams.

Subject:

Inspection and Modification of L'Hotellier quick release attachment

Reason:

New evaluations of reported incidents involving L'Hotellier ball and swivel joints with locking cams have prompted the LBA to have these joints as well incorporated into the investigations as to the operational safety of L'Hotellier ball and swivel joints.

The results are similar to those obtained with the ball and swivel joints with lock plates.

As has been demonstrated in the tests, even normal operating conditions are sufficient under unfavourable circumstances to surmount the static friction (i.e. even the locking cams may open).

Action and compliance:

Compliance: following actions must be accomplished not later than April 30, 1994

The ball and swivel joints with locking cams must be secured. For this purpose, the following actions are to be accomplished:

- 1) Safety pins (e.g. L'H 140-31 made by Hotellier) have to be retrofitted. In case the locking cams have not already been fitted with holes (\emptyset 1,3 mm) these holes are to be drilled within the framework of this AD.

Insertion of a safety pin is not applicable for L'Hotellier ball and swivel joints which are already equipped with other approved locking systems (e.g. Uerlings sleeve), or if such systems are newly installed.

Uerlings sleeves (specification number SE-001/78) can only be installed for straight joints and transmissions, but cannot be used for 90° joints.

2) Flight Manual

a) Section "Rigging"

The recommendation in several Flight Manuals: the lock plate of L'Hotellier ball and swivel joints "should be secured"... given in this or in a similar form is to be deleted and to be replaced by the following sentence:

"The L'Hotellier ball and swivel joint must be secured."

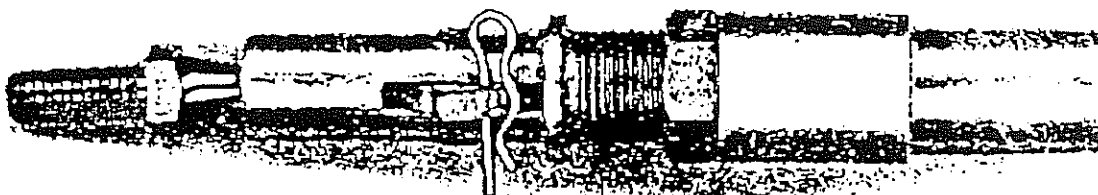
- b) If older Flight Manuals do not contain information on L'Hotellier ball and swivel joints, the following paragraph (probably on a new page) is to be included in the Flight Manual under the Section "Rigging", if the Hotellier joint is or is to be secured by means of a safety pin:

Hotellier Ball and Swivel Joints

Prior to installation everyone should familiarize with the functioning of L'Hotellier ball and swivel joints.

The swivel is to be slid completely over the ball on the rod with the locking cam pulled back. During locking the locking cam moves back slightly so that in a correct joint the hole on the averted edge of the locking cam becomes visible.

The safety pin is to be inserted in this hole thus securing the ball and swivel joint.



Warning !

Unsecured ball and swivel joints may open automatically in flight !

These entries in the Flight Manual can be made in writing or as a copy indicating this AD-No.: 94-001.

An entry in the list of effective pages or an update of the amendment no. is to be made indicating the AD-No.: 94-001, if such a list exists.

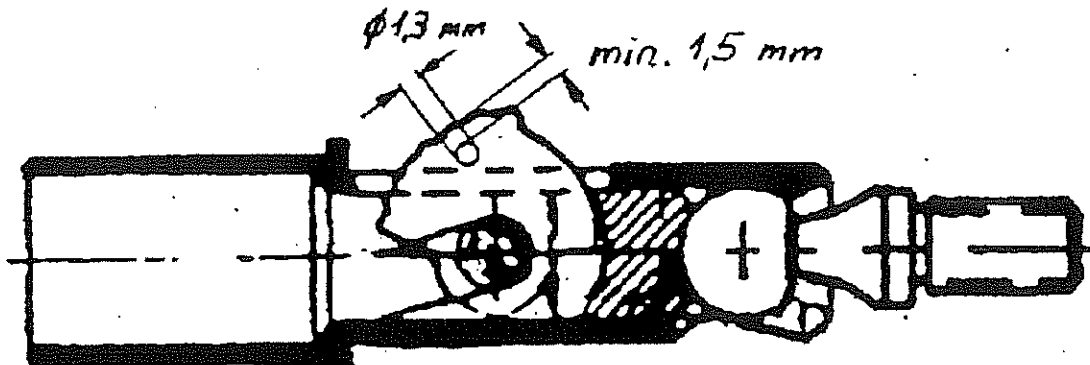
Information:

Type-related technical information already published by the manufacturer or by the product support organisation for L'Hotellier ball and swivel joints become part of this AD.

Working Instruction for Action 1:

For fitting the hole proceed as follows:

Drill the hole \varnothing 1,3 mm with the ball correctly inserted so that one edge of the hole is level with the main body of the joint and on the other side at least 1,5 mm of material is left (see also the following sketch).



Warning: When working on the joint please see to it that no borings get in between the ball and the socket.

The safety pins are available from:

- L'Hotellier: safety pin reference No. L'H 140-31
- manufacturers or product support organisations for the sailplane or powered sailplane types concerned
- others: safety pin \varnothing 1,2 mm
Ford reference No. 1473 931 (worldwide)

Accomplishment and log book entry:

Actions under No's.: 1 and 2 may be accomplished by a competent person or by an approved service station and to be checked and entered in the log by a licensed inspector.