

CULVER AIRCRAFT CORPORATION
WICHITA, KANSAS

9-21-41

AIRPLANES AFFECTED: MODELS LCA & LFA, Serials 101 to 363 Inc.

SUBJECT: Flight Load Information and Inspection Requirements.

REFERENCE: C.A.A. Airworthiness Maintenance Bulletin No. 56, Dated Aug. 21, 1941.

1. Introduction.

Recent flight test research with a V-G Recorder on the subject models coupled with service information from the field has conclusively shown the need for a more controlled operation of Culvers from the acrobatic standpoint. In order to clearly understand the general subject of acrobatic loadings, a copy of Civil Aeronautics Aircraft Airworthiness Section Report No. 10 is included herewith and made a part of this bulletin. While this report was generally distributed some time ago through C.A.A. channels it is believed that few pilots, owners, and operators seriously studied and understood this information if they read it at all.

Culver airplanes are of clean aerodynamic design and are capable of developing higher loads when roughly handled than are airplanes of less speed and maneuverability. It appears, therefore, that some amount of acrobatic restriction for these airplanes is in order, as is the case with most similar, fast, modern, efficient airplanes. A careful study of Report No. 10 will explain more fully the reasons therefore. In this connection it is at once apparent that a reduction of speed in entering and accomplishing maneuvers at the same time avoiding the abrupt use of controls is the only way in which acrobatics and maneuvering load factors may be reduced to moderate and entirely safe values. This statement particularly applies to abrupt maneuvers such as snap rolls and pull-ups from dives.

It is possible that a certain percentage of Culvers now in the hands of owners have been subjected to excessive loads as a result of maneuvers at high speeds or severe ground loads. As a preventative measure, therefore, inspections as outlined below are to be conducted on each airplane. The inspection shall be conducted by a qualified mechanic, repair station, or at the factory and the log books shall have an appropriate entry made by the supervising mechanic, for the information of the C.A.A. Inspector.

In conclusion to part 1, it may be stated that further flight investigations are being conducted by the factory and it is possible that some control modifications may be made available at a future date which will tend to reduce the load factors obtainable in flight. Such action however will be the subject of a later memorandum should it prove practical.

2. Inspection Procedure.

(a) Place the airplane on horses as shown on Fig. 1, taking care to get horses directly under spar to prevent damage to ribs and fabric.

(b) Remove cover plate and strut housing channel together with the section of fabric shown on Fig. 2.

(c) Remove the two lower bolts thru spar which hold lower drag brace channel and landing gear hinge spar channel, and the two bolts holding the hinge pin in landing gear bracket as shown on Fig. 3.