

REPRODUCED FOR INFORMATION OF CAA PERSONNEL

CULVER AIRCRAFT CORPORATION
WICHITA, KANSAS

MEMORANDUM TO CULVER LCA & LFA OWNERS

NO. 2

SUBJECT: INSPECTION AND MAINTENANCE OF THROTTLE INTERCONNECTION WITH LANDING GEAR CONTROL.

1. It has come to our attention that improper adjustment or operation of the throttle interconnection on one or two of the subject model airplanes has resulted in landings with the gear unlocked whereupon the gear retracted and the airplane settled on its bottom with minor damage resulting. This memorandum was prepared to provide each owner with detailed information for inspecting and adjusting his particular installation.

2. Operation of throttle interconnection.

The throttle interconnection is provided for the purpose of preventing inadvertent landings with the gear retracted, or with the gear extended but not locked. This purpose is accomplished by mechanically connecting the landing gear lock pin control to a device on the carburetor throttle which restricts the rearward or idling travel unless the gear is extended and locked. The adjustment at the factory provides for a minimum level flight R.P.M. of 1750, when the gear is retracted, which corresponds to a level flight speed of approximately 70 M.P.H. This setting is one which is an important part of the installation. A second and most important setting concerns the position of the plunger which travels from a position clearing the throttle quadrant when the gear is down and locked, to a position restricting the motion of the throttle quadrant when the lock pins are not in the locked position. A third important setting concerns the fore and aft position of the quadrant on the carburetor throttle arm in relation to the plunger when the landing gear is locked down and the engine throttled back to idling in order to prevent inadvertent locking of the throttle in the idling position if the landing gear should be unlocked before reopening the throttle. The plunger is actuated by a flexible control which connects with the lock pin push-pull control tube in the right wing.

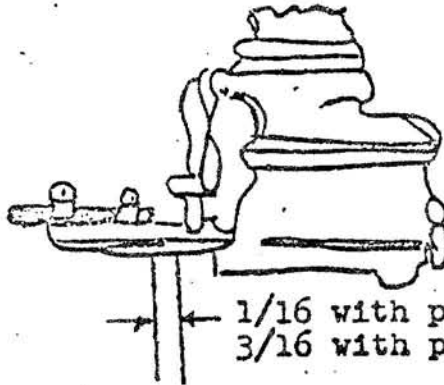
3. Inspection and adjustment of interconnection.

A careful inspection should be conducted to determine that all connections are in proper order. The clamps at either end of the cable housing should be checked to make absolutely sure that they are holding the housing secure against any possible chance of slippage, this being the most important part of this requested inspection. For this inspection to be sufficiently thorough, the airplane should be blocked up and the gear retracted, observing the action of the interconnection. The plunger position should be so adjusted that the throttle can not be pulled back unless the gear is down and locked. In this connection, a play of approximately 1/8" in the flexible control will be observed, and is to be expected in this type of control. The effect of the play is neutralized by adjusting the plunger to clear the throttle quadrant by 1/8" when the flexible control is stretched from the plunger end. When the control is pushed from this end the clearance will then be approximately 3/16". See Fig. 1.

Should the R.P.M. vary considerably from the stated value of 1750 the quadrant may be shifted on the throttle shaft until the correct value is obtained.

The plunger must not be able to go in front of the quadrant when the throttle is closed. This condition will not exist if the throttle stop is correctly adjusted to give 1750 R.P.M. in level flight. See Fig. 2

Fig. 1A



1/16 with play out
3/16 with play in.

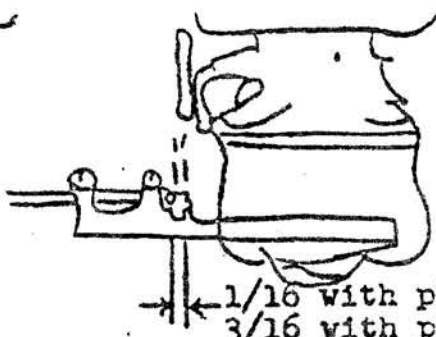
Model LCA
Half Travel
Indicated

Fig. 1B



NOTE: Plunger to be in this position when idling with reference to quadrant never to be in front

Fig. 2A



1/16 with play out
3/16 with play in.

Model LFA
Full out
indicated

Fig. 2B



NOTE: Plunger to be in this position when idling with reference to quadra Never to be in fron

ENGINEERING DEPARTMENT

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