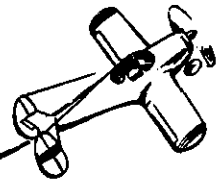


Ercoupe INFORMATION

ERCOUPE
INFORMATION
LETTER

No. **1**

SUBJECT: Conversion of Ercoupes to Later Models



Jan. 1, 1956

The Model 415-D Ercoupe was developed under F.A.A. regulation Part No. 03, and permitted the gross weight of 1400 pounds on the Ercoupe under these regulations. In order to obtain satisfactory stability conditions with power on, it was necessary to limit the up elevator travel to 9°. In the opinion of the factory, this limitation seriously affected landing qualities of the Ercoupe. For this reason, the 415-CD was produced instead. The 415-CD had all the modifications other than the elevator travel necessary for 415-D, but was licensed under the 03 category, which still restricted it to 1260 pounds.

In order to convert a Model 415-CD to a Model D, it is necessary to limit the up elevator to 9°, add placards to the instrument panel prohibiting smoking and prohibiting aerobatics, and require that the airplane be flown in accordance with limitations in the Approved Flight Manual. It is necessary to supply the suitable flight manual as well.

A Model 415-CD can be converted to a Model E and achieve the 1400 pounds gross weight and, at the

same time, improve the landing qualities instead of destroying them by the use of the cut-out or "split" elevator. With this elevator satisfactory stability is retained and the landing characteristics improved with the up travel of 20° with the reduced area elevator. The Model E has an 85-h.p. engine and it, therefore, is necessary to convert the engine to this power, changing or modifying the propeller as necessary for the higher power. The other modifications given above, and including the Model E Flight Manual, are required for this conversion.

The changes necessary to convert the Model 415-C to Model 415-D or a Model E depend upon the serial number of the airplane, however, in all cases it is necessary to install the stainless steel skin over the fuselage gas tank and to make the other changes indicated for the Model 415-CD. The instrument panel should be changed to the late type and it is desirable to modernize the airplane in other respects but these items are not required by F.A.A. for the increased gross weight.

CHANGES NECESSARY TO CONVERT CD TO D MODEL

1. Change stop on control wheel shaft so that up movement of elevator is limited to 9°.
2. Change placard of baggage compartment to read as follows: (C.A.R. 03)
Pilot and no passenger 65 pounds
Pilot and passenger—maximum fuel . . 65 pounds
Pilot and passenger—minimum fuel . . 58 pounds
Maximum baggage never to exceed . . 65 pounds
Minimum fuel 12 gallons
3. Paint markings on the dial face of the instruments to read:

AIRSPEED INDICATOR

Green arc from 48.5 m.p.h. to 114 m.p.h.
Yellow arc from 114 m.p.h. to 144 m.p.h.
Red line at 144 m.p.h.
Arc width 3/32''
Lines 1/32'' x 5/8''

TACHOMETER

Green arc from 2050 r.p.m. to 2275 r.p.m.
Red line at 2275 r.p.m.
Arc width 5/32''
Lines 1/32'' x 5/8''

OIL TEMPERATURE

Green arc from 100° to 220°
Yellow arc from 90° to 100°
Red line at 220°
Arc width 3/32''
Lines 1/32'' x 5/8''

OIL PRESSURE

Green arc from 30 p.s.i. to 40 p.s.i.
Yellow arc from 10 p.s.i. to 30 p.s.i. and
from 40 p.s.i. to 50 p.s.i.
Red lines at 10 p.s.i. and 50 p.s.i.
Arc width 3/32''
Lines 1/32'' x 5/8''
4. Change nameplate so that it reads "Model 415-D". Must also include date of conversion.
5. The top section of the fuselage between the firewall and Frame "B", which is under the top engine cowl, must be covered with a sheet of .015 stainless steel, part number 415-31245-5.
6. The following placards must be displayed on the instrument panel in full view of the pilot:
 - a. This airplane must be operated in accordance with the F.A.A. approved Airplane Flight Manual.
 - b. This airplane characteristically incapable of spinning.
 - c. No aerobatic maneuvers of any kind approved.
7. All Ercoupes serial 113 to 812, inclusive, must have the Main Landing Gear Orifice in the oleo piston assembly changed from a No. 40 (.098) to a No. 50 (.070).
8. After changes noted above have been completed, an F.A.A. inspector will have to inspect the airplane.