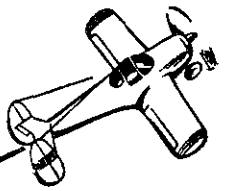
Ercoupe MEMORANDUM

ERCOUPE SERVICE MEMORANDUM No. 37



SUBJECT: Approval of additional propellers for Ercoupes

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1. In addition to the Sensenich propellers with which the Ercoupe 415-C is equipped, the following propellers have been approved by the C.A.A. for installation on the Ercoupe as indicated below. These propellers will *not* be available for order from ERCO.

For Ercoupe 415-C with A-65 engine:

Manufacturer	*Type*	*Model*	*Diameter (Max.)*	*Diameter (Min.)*	*Pitch settings at 27" station*	
Beech-(Roby)	Controllable	R002-101 (Hub) R002-205-72 (Blade)	72"	70.5	Low 12½°	High 19½°

For Ercoupe 415-C with C-75 HP engine:

Beech-(Roby)	Controllable	R-003-100 (Hub) R-003-201-72T (Blade)	72"	70.5	Low 15½°	High 24½°
Lewis	Fixed wood	L55C-49				
McCauley	Fixed Alum. alloy	1A90				

NOTE 1.

Before installation of any of the above propellers consult applicable C.A.A. publications for operating limitations, weight and balance changes.

NOTE 2.

The C.A.A. has recently approved static RPM and diameter for fixed wood propellers for the Ercoupe 415-C with the Continental C-75 engine as follows:

	Static RPM	*Diameter*
Maximum	2050	74"
Minimum	1900	72"

APPENDIX A

MEMORANDUM No. 37

Propeller Performance Data

1. Quoted below are excerpts from an engineering report covering the range of propellers for the Ercoupe. As you will note, no performance data is available as yet from our Engineering Department on the Beech Roby propeller installation.

QUOTE: The standard propeller that has been furnished with all C-75 Ercoupes (Sensenich 74FC48T) has been selected to give good take-off and climb performance at the sacrifice of some cruising performance. In order to permit a choice of propellers giving improved cruising performance, C.A.A. approval has recently been obtained to use on the Ercoupe any fixed pitch wood propeller that is approved for the Continental C-75 engine, and that falls within a static R.P.M. range of 1900 to 2050. Fifty R.P.M. additional is allowed at each end of the range to cover instrument errors and variable conditions, making the total range permissible in field operation 1850 to 2100.

2. Two other propellers also now have C.A.A. approval for use on the Ercoupe, these being the fixed pitch aluminum alloy McCauley propeller Model 1-A-90 and the controllable pitch Beech-Roby propeller Model R003-201-72T.

3. A set of performance tests has recently been run under excellent conditions with representative wood propellers and the McCauley metal propeller. A typical production Ercoupe was used loaded to a gross weight of 1260 lb. for all of the tests. The instruments were calibrated, and the air conditions were very close to standard for the duration of the tests. The speeds were measured on a course 3.57 miles long.

4. A summary of the test results is given in the following table:

Propeller	*Sensenich 74FC48T (Standard Equipment)*	*Sensenich 74FC52T*	*Lewis L55C 72" Dia., 49" Pitch*	*McCauley 1-A-90 73" Dia., 51" Pitch*
Cruising Speed at 2275	103 MPH	108 MPH	111 MPH	109 MPH
Maximum Speed	121 MPH	120 MPH	118 MPH	122 MPH
R.P.M. at Maximum Speed	2600	2520	2420	2500
Maximum Rate of Climb at Sea Level	700'/min.	680'/min.	610'/min.	710'/min.
Take-Off distance,Turf, Zero Wind	560 Ft.	620 Ft.	600 Ft.	520 Ft.

UNQUOTE.