



SERVICE NEWS

AIRCOOLED MOTORS INC.
SYRACUSE 6, NEW YORK

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NO. 10

SUBJECT: CRANKCASE FOR MODEL 6A4-165-B3 FRANKLIN ENGINE

We have received several crankcases from the Franklin Model 6A4-165-B3 engines and examination indicates that after a protracted period of time, small cracks may develop at the rear and center main bearing webs. These cracks have usually been noted during Zyglo inspection of the crankcase at major overhaul.

In view of our findings, we have substantiated and received approval for the use of a reinforced crankcase, part #18925. Beginning with engine serial #33046, all engines manufactured have the reinforced crankcase. All engines overhauled in our factory since November 11, 1948 have been modernized by incorporating the reinforced crankcase. All crankcases shipped by our Spare Parts Division after November 11, 1948 are of the reinforced type.

In view of our investigation, it is strongly recommended that the Franklin Model 6A4-165-B3 engine, using the early type crankcase, be major overhauled at 600 hours and that thorough Zyglo inspection of the crankcase be completed during the overhaul procedure. In the event cracks are found at overhaul, the crankcase should be replaced with a crankcase of the reinforced type.

Attention is directed to Civil Aeronautics Administration Airworthiness Directive 51-15-2, appearing on Page 134 of Airworthiness Directive Summary dated January 1, 1952. The following is a copy of this directive.

51-15-2 FRANKLIN ENGINES -----
Applies to all Franklin 6A4-165-B3 engines serially numbered 33046 and below incorporating original

crankcase (Left half No. 18305; Right half No. 18306). These two parts form crankcase assembly, P/N 18553. The number of each crankcase half is located on each casting below the Number 1 and 6 cylinder location.

TO BE ACCOMPLISHED BY JULY 15, 1951.

Effective on and after this date, all applicable crankcases with 500 hours of operation since new or 250 hours since last overhaul should be inspected as follows: Remove crankcase cover and visually inspect the webbing near the main journal area for cracks.

(1) Crankcases found to be free of cracks should be inspected at 250-hour intervals thereafter. In the event that the conditions described in (2) and (3) are detected, the provisions of (2) and (3) will apply.

(2) Crankcases found with (a) surface indications, hairline cracks, or small wall cracks and (b) cracks starting at main bearing stud hole on the opposite side from main bearing support, may be operated further at the option of the owner. Such crankcases should be inspected at 50-hour intervals thereafter to determine progress of cracks.

(3) Crankcases found fractured or with cracks that have progressed to the extent that they enter the main bearing supports (usually from back near (a) main bearing stud hole and (b) drilled oil hole) indicate that a complete break soon will occur. Such crankcases should be replaced with the reinforced crankcase assembly, P/N 18925, at which time no further inspection is required.

Crankcase assembly P/N 18925 may be identified by casting No. 18905 appearing below No. 1 cylinder location and casting No. 18906 appearing below No. 6 cylinder location. (Franklin Service News No. 10 also covers this subject.)

We call attention to paragraphs (2) and (3) of the Directive, since the information contained therein will assist owners in determining the need for crankcase replacement.