

SUBJECT: PROPELLER (TWO-BLADE), RECONDITIONING OF SENSENICH PROPELLERS

SYNOPSIS OF CHANGES IN REVISION 1: To change ACCOMPLISHMENT and AIRCRAFT AFFECTED

AIRCRAFT AFFECTED: BEECHCRAFT Musketeer B23, serials M-1095 through M-1266, M-1268 through M-1280, M-1282 through M-1284; Model C23, serials M-1285 through M-1290 and M-1292.

REASON FOR COMPLIANCE: To recondition Sensenich propellers on the subject aircraft to comply with Sensenich Corporation Service Bulletins R-13 and R-14. (Attached).

ACCOMPLISHMENT: As required by Sensenich Corporation Service Bulletins R-13 and R-14.

DESCRIPTION: On the above noted aircraft, the propellers should be inspected and reconditioned as set forth in Sensenich Corporation Service Bulletins R-13 and R-14 to prevent possible propeller blade failures.

Propellers which have been reconditioned in accordance with Sensenich Service Bulletins R-13 and R-14 are identified by a "K" suffix after the propeller serial number and aircraft which are equipped with propellers having this "K" suffix are not affected by this Service Instruction.

After the propellers have been reconditioned as specified in Sensenich Service Bulletins R-13 and R-14, normal overhaul and repair procedures apply and may be accomplished by any FAA approved propeller overhaul facility when required.

After complying with these service instructions, make an appropriate entry in the engine log book and return a compliance card to Beech Aircraft Corporation.

- a. Man-hours to accomplish modification: 1.0 hours.
- b. Number of men required to accomplish modification: 1 man.

COMPLIANCE CARD RETURN REQUIRED.

None

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R 670

Beech Aircraft Corporation issues service information for the benefit of owners and fixed base operators in the form of three classes of Service Instructions. CLASS I (Red Border) are changes, inspections, and modifications that could affect safety. The factory considers compliance mandatory. CLASS II (Green Border) covers changes, modifications, improvements or inspections the factory feels will benefit the owner and although highly recommended, they are not considered mandatory compliance, unless specified at the time of issuance. Class I and II are mailed to:

- (a) BEECHCRAFT Aero or Aviation Centers and International Distributors and Dealers.
- (b) Owners of record on the FAA Registration list and the

BEECHCRAFT International Owner Notification Service List.
(c) Those having a publications subscription.

CLASS III (No Border) covers changes which are optional, maintenance aids, product improvement kits and miscellaneous service information. Compliance is at the owner or operator's prerogative. Copies of Class III are distributed per a and c above. Information on Owner Notification Service or Subscriptions can be obtained through any BEECHCRAFT Aero or Aviation Center, International Distributor and Dealer, or the Factory. As Service Instructions are issued, temporary notation in the index should be made until the index is revised. Warranty will be allowed only when specifically defined in the Service Instructions and in accordance with Beech Warranty Policy.

PROPELLER BULLETIN

Sensenich Corp.



Lancaster, Pa.

SERVICE BULLETIN NO. R-14

MARCH 23, 1970

TO: AFFECTED AIRCRAFT OWNERS, AIRFRAME MANUFACTURERS; FAA APPROVED PROPELLER REPAIR STATIONS, AND SENSENICH DISTRIBUTORS.

SUBJECT: METAL FATIGUE IN MODELS M76EMM-0, M76EMMS-0, 76EM8-0, AND 76EM8S5-0 PROPELLERS ON ALL LYCOMING 0-360 SERIES ENGINES EXCEPT MODELS 0-360-A4A AND 0-360A4G (SOLID CRANKSHAFT ENGINES).

AIRCRAFT MODELS AFFECTED:

BEECH	B23	PIPER	PA-28-180
C.A.A.R.P.	CP 1310	SOCATA	COMMODORE 180CV
CENTER EST	JODEL DR 253	SOCATA	HORIZON 180CV
PARTENAVIA	P64B	WASSMER	WA41

REFERENCE: SERVICE BULLETIN NO. R-13 DATED 11 APRIL 1969
AIRWORTHINESS DIRECTIVE NO. 69-9-3 DATED 9 MAY 1969

DISCUSSION:

Service Bulletin No. R-13 (copy on reverse side) discussed fatigue-type failures of this propeller and recommended specific steps to prevent them.

Since it is possible that some of these propellers had already used up a significant portion of their endurance life by the accumulation of fatigue cycles in the placarded rpm range, further precautions are recommended.

Recent research has shown that metal specimens, which have been fatigue-cycled to 50% of their endurance life, can be restored to original condition by the removal of a thin layer of surface metal.

This reduction of blade thickness affords a further important benefit by shifting the 2nd order-1st mode resonance peak, now at 2250 rpm, downward in the rpm range.

RECOMMENDED ACTION:

Propellers with 500 hours or more of flight time should be returned for factory inspection and reconditioning. This reconditioning will include smoothing out all nicks and cuts and the removal of the layer of fatigued metal from the entire surface of the blades. The propeller will then be re-anodized and re-finished.

DISTRIBUTION:

1. Affected Aircraft Owners
2. Affected Aircraft Manufacturers
3. FAA Regional Offices, Domestic and Foreign
4. Propeller Repair Stations
5. Sensenich Distributors
6. Lycoming Division, AVCO Corporation

SENSENICH CORPORATION

ADJACENT TO THE LANCASTER MUNICIPAL AIRPORT

AREA CODE 717
PHONE—569-0435
CABLE—"SENSNIK"



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Lancaster, Pa., U.S.A.
17604

PROPELLER SERVICE LETTER

MARCH 23, 1970

TO: AFFECTED AIRCRAFT OWNERS, AIRFRAME MANUFACTURERS; FAA APPROVED
PROPELLER REPAIR STATIONS, AND SENSENICH DISTRIBUTORS

SUBJECT: RETURN OF 76EM SERIES PROPELLERS TO FACTORY FOR RECONDITIONING
IN ACCORDANCE WITH SERVICE BULLETIN NO. R-14

REFERENCE: SERVICE BULLETIN NO. R-13 DATED 11 APRIL 1969
AIRWORTHINESS DIRECTIVE NO. 69-9-3 DATED 9 MAY 1969

Regular inspection and proper care and maintenance of propellers is vitally important at all times to assure good performance and safety. This becomes more significant as service life increases.

Service Bulletin R-14 refers to metal fatigue of propellers which can lead to mid-blade or tip failure under the conditions described.

Factory reconditioning of the propeller models in use on aircraft with the engines as listed in the Service Bulletin, after 500 hours of flight time, is strongly recommended. Since this involves removal of fatigued metal on all blade surfaces to precision limits and special template fit, it must be done at the factory under controlled conditions.

To assist you in making this correction with a minimum of delay, the following alternatives are available:

1. Ship your propeller in a suitable carton freight prepaid via UPS, REA, or motor freight to Sensenich Corporation, Airport Road, Lancaster, Pa. Specify whether you want a reconditioned exchange unit or your own prop reconditioned and returned. If, subject to our inspection, the returned unit is suitable for reconditioning we will:

- (1) Ship you an exchange unit within 3 working days (under normal conditions) at a cost of \$50.00 for a propeller with spacer and \$46.00 for a propeller without spacer, F.O.B., factory. Shipment will be made COD, unless other arrangements are made.

OR

- (2) If you want your unit reconditioned and returned, you should allow 7-10 days for processing prior to shipment. The cost and terms would be the same.
- (3) If our inspection indicates the propeller is beyond repair, you will be notified and requested to advise disposition.

Sensenich Corporation
Lancaster, Pa.

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- (4) All reconditioning will include complete inspection, refinishing of all surfaces to remove fatigued metal, nicks and cuts, anodized and painted in like-new appearance. Blade straightening, if required, is extra.

OR

2. If you have a spare propeller, by switching props you can have the one with 500 or more hours of flight time reconditioned as above without the personal inconvenience of having your plane out of service. If you want to have a spare, you can order a new prop from your dealer and proceed as above with reconditioning.

OR

3. If you want to first order a reconditioned unit direct from the factory, have installed on your plane and then return your present prop for credit, this can be done as follows:

- (1) Send in your order with certified check or specify COD shipment:

<u>MODEL</u>	<u>Reconditioned Price FOB Factory</u>
M76EMM-0 or 76EM8-0 (no spacer)	\$255.00
M76EMMS-0 or 76EM8S5-0 (with spacer)	\$270.00

NOTE: Be sure to specify the correct model number when ordering.

- (2) Shipment will be made freight collect and COD if applicable.
(3) Return your present prop to us (in same carton if re-usable).
(4) Subject to our inspection as outlined above, we will allow you credit and mail you a check for the difference between the price you paid for the reconditioned unit less the cost of reconditioning and blade straightening, if required.

(5) For example:

	<u>Propeller</u>	
	<u>Without Spacer</u>	<u>With Spacer</u>
a. Reconditioned price you paid	\$255.00	\$270.00
b. Less: Cost of Reconditioning	<u>46.00</u>	<u>50.00</u>
c. Credit we will allow you	\$209.00	\$220.00

- (6) If our inspection indicates your unit cannot be reconditioned no credit will be allowed. You will be so notified and requested to advise disposition of your unit.

* * * *

Please include a notation showing the "N" Registration number of the aircraft and the total hours on the propeller with your return shipment.

You are urged to act promptly on this in complying with Service Bulletin R-14.