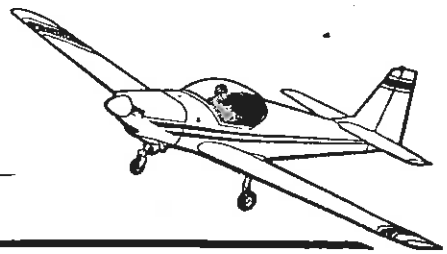
SLINGSBY ENGINEERING LIMITED
AIRCRAFT DIVISION



SERVICE BULLETIN

SB No. 003 Issue No. 1

TITLE	Bendix Magneto Impulse Couplings.
CLASSIFICATION	Compulsory.
COMPLIANCE	Inspection to be carried out within next 10 engine hours from receipt of this instruction.

APPLICABILITY : All Slingsby T67A aircraft fitted with Lycoming O-235-L2A engines and T67AM-M aircraft fitted with AE10-320 D1B engines.

ACTION : Impulse coupling to be inspected in accordance with Avco Lycoming Service Bulletin No. 464.

F.A.A. Vol. 1, Book 2 issue 82-20 directive 82-20-01 Bendix refers.

ISSUED BY: T.M. Billingham

for and on behalf of **SLINGSBY ENGINEERING LIMITED**

Kirkbymoorside, York YO6 6EZ, England Tel.0751 31751 Telex 57911

Date 13th October 1982

AVCO LYCOMING GMBH

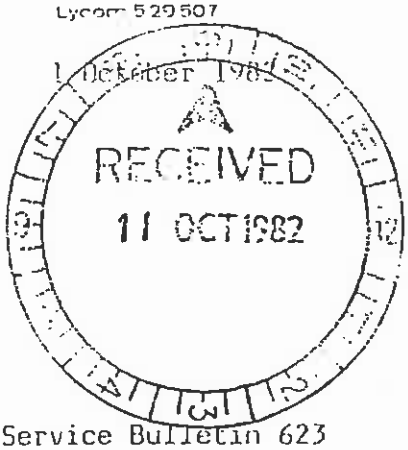
SCHUBERTSTRASSE 3 · 8000 MÜNCHEN 2

Telegramm
Lycoprey Muenchen

Telefon
089/53 70 71 53 59 27

Telex
Lycom 529 507

1 October 1982



Slingsby Aviation Ltd.

Mr. Tucker

Subject: Lycoming Service Bulletin 464 / Bendix Service Bulletin 623
Warranty Application and Labour for Magneto Inspection

Dear Sir,

Concerning warranty application and labour allowance for magneto inspection please proceed as follows:

Send a letter directly to

Mr. Carl Lundberg
Bendix International Service Corporation
Hahnstraße 40
D-6000 Frankfurt 71
Germany

Tel. (0611) 66740 Telex 413 233

The letter should contain Lycoming engine model, serial number of engine model and serial number of inspected magneto.

If a soft coupling is found send immediately telex with correct part number of coupling to Mr. Carl Lundberg at Bendix Frankfurt. Bendix will as soon as possible send new replacement part to your attention. After receipt of your letter Bendix will reimburse you for the work involved in complying with the Service Bulletin.

Please send a copy of the letter which you address to Bendix to our Munich office.

Sincerely yours,
AVCO LYCOMING GMBH

W. Mastellotto
Service Engineer

Service Bulletin

(L)

DATE: September 24, 1982

Service Bulletin No. 464
Engineering Aspects are
FAA Approved

SUBJECT: Bendix Service Bulletin No. 623

TIME OF COMPLIANCE: As required by subject Bendix Service Bulletin No. 623.

MODELS AFFECTED: Any of the following models that are equipped with Bendix Impulse Coupling Magnetos. Engine serial numbers include both narrow and wide cylinder flange models. For purposes of this bulletin, the engine serial numbers ending in -51 for example, also includes the -51A engines. All engine serial numbers listed below are to be read as "*up to and including*" unless otherwise noted.

O-235 Series, Serial No. L-23493-15 *Except* L-23339-15, L-23370-15, L-23420-15 and L-23464-15 thru L-23484-15 inclusive.

-C1, -C2A, -C2B, -E1, -E2A, -E2B, -F1, -F2A, -F2B, -G1, -G2A, -G2B, -J2A, -J2B, -K2A, -K2B, -L2A, -M1, -N2A, -N2C, -P1

O-290 Series, Serial No. L-8565-21.

-D, -11, -D2, -D2A, -D2B

O-320 Series, Serial No. L-49996-27 *Except* L-49980-27, L-49992-27, L-49993-27 and L-49994-27.

-A1A, -A2A, -A3A, -A1B, -A2B, -A3B, -E1A, -E2A, -E1C, -E2C, -E1F, -E2F, -E2H, -E3H

O-320 Series, Serial No. L-12823-39.

-B1A, -B2A, -B3A, -B1B, -B2B, -B3B, -C1A, -C1B, -C2A, -C2B, -C3A, -C3B, -D1A, -D2A, -D1C, -D2C, -D1F, -D2F

O-320 Series, Serial No. L-8219-76 *Except* L-8214-76 and L-8215-76.

-H1AD, -H2AD, -H3AD

(Some of the -76 engines will show the letter "T" in the serial number suffix on the nameplate. This identifies large tappet bore crankcases.)

IO-320-Series, Serial No. L-5863-55.

-B1A, -B1B, -B2A, -B1C, -C1A, -D1A, -D1B, -E1A, -E2A, -F1A

L[illegible] Series, Serial No. L-224-66.

B1A, -C1A

A[illegible]-320 Series, Serial No. L-108-65.

A1B, -A2B, -B1B, -C1B

[illegible]-320 Series, Serial No. L-5863-55.

-D1B, -D2B, -E1A, -E2A

O-340 Series, Serial No. L-438-30.

-A1A, -A2A

[illegible]-360 Series, Serial No. L-30354-36.

-A1A, -A1AD, -A1F, -A1F6, -A1F6D, -A1G, -A1G6, -A1G6D, -A1H, -A1LD, -A2A, -A3A, -A3AD, -A4A, -A4AD, -A5AD, -A2F, -A2G, -A4G, -A2H, -A4J, -B1A, -B2A, -C1A, -C2A, -C2B, -D1A, -D2A

O-360 Series, Serial No. L-547-77.

-E1A6D — (Some of the -77 engines will show the letter "T" in the serial number suffix on the nameplate. This identifies large tappet bore crankcases.)

LO[illegible] Series, Serial No. L-545-71.

-A1[illegible]D

LO 3[illegible] Series, Serial No. L-537-72.

-E1A[illegible] — (Some of the -72 engines will show the letter "T" in the serial number suffix on the nameplate. This identifies large tappet bore crankcases.)

HIO AEIO-360 Series, Serial No. L-23297-51 *Except* L-23122-51, L-23229-51, L-23235-51, L-23258-51, L-23259-51, L-23264-51, L-23273-51, L-23275-51, L-23277-51 and L-23296-51.

A1B, A1B6, -A1B6D, -A1D, -A1D6, -A1E, -A2B, -A3B6D, -B4A, -B1E, -B2E, -B1F, -B1F6, -B2F, -B2F6, C1C, -C1C6, -C1D6, -C1E6, -C1E6D, -C1F, -E1AD, -F1A, -J1AD, -J1A6D

[illegible]-360 Series, Serial No. L-1112-67.

[illegible]

A[illegible]-360 Series, Serial No. L-258-63.

A1B, -A2B, -B1B

TO-360 Series, Serial No. L-358-69.

-C1A6D, -C1A6D, -F1A6D

TO-360 Series, Serial No. L-198-73.	
-E1A6D	(Some of the -73 engines will show the letter "T" in the serial number suffix on the nameplate. This identifies large tappet bore crankcases.)
LTO-360 Series, Serial No. L-297-74.	
-E1A6D	(Some of the -74 engines will show the letter "T" in the serial number suffix on the nameplate. This identifies large tappet bore crankcases.)
VO-360 Series, Serial No. L-395-45.	
-A1A	
O-435 Series, Serial No. L-1290-17.	
-A, -A2	
GO-435 Series, Serial No. L-3344-11 BA.	
-C2, -C2A, -C2A2, -C2B, -C2B1, -C2B2, -C2B26, -C2E	
O, VO-435 Series, Serial No. L-3860-31.	
-A1A, -A1B, -A1C, -A1D, -21, -23, -23A, -23B, -23C, -6, -6A	
GO-480 Series, Serial No. L-1331-28.	
-B, -B1A6, -B1B, -B1C, -B1D	
GO-480 Series, Serial No. L-1358-35.	
-C1B6, -G1B6	
GO-480 Series, Serial No. L-647-37.	
-C1D6, -G1D6	
GO-480 Series, Serial No. L-1626-34.	
-C2C6, -C2D6, -C2E6, -F3A6, -F3B6, -G1H6, -G1J6, -G2D6	
GO-480 Series, Serial No. L-418-32.	
-D1A	
GO-480 Series, Serial No. L-636-29.	
-F6, -F1A6, -F2A6, -F2D6, -F4A6, -F4B6	
GO-480 Series, Serial No. L-272-42.	
-G1A6	

IGO-480 Series, Serial No. L-343-49.

-A1A6, -A1B6

GSO-480 Series, Serial No. L-3641-33.

-A1A6, -A1C6, -A2A6, -B1A6, -B1B3, -B1B6, -B1C6, -B1J6, -B2C6, -B2D6

O-480 Series, Serial No. L-3641-33A ("A" does not apply to cylinder flange)

-1, -1A, -1B

O-480 Series, Serial No. L-2147-44.

-3

IGSO-480 Series, Serial No. L-2147-44.

A1A6, -A1C6, -A1D6

O-540 Series, Serial No. L-23595-40 *Except* L-23545-40, L-23556-40, L-23563-40, L-23579-40, L-23581-40, L-23583-40 and L-23592-40.

-A1A, -A1A5, -A4A5, -A1B5, -A4B5, -A1C5, -A4C5, -A2B, -B1B5, -B4B5, -B2B5, -B2C5, -E4B5, -E4C5, -F1A5, -G1A5, -G2A5, -H1A5, -H1A5D, -H2A5, -H2A5D, -J1A5D, -J2A5D, -J3A5D, -J1C5D, -J2C5D, -J3C5D, -L3C5D

IO, HIO, AEIO-540 Series, Serial No. L-22023-48 *Except* L-21998-48, L-22002-48, L-22007-48, L-22008-48, L-22012-48 and L-22020-48.

-A1A, -C4D5D, -C2C, -D4B5, -G1C5, -G1D5, -G1F5, -K1A5, -K1A5D, -K1B5, -K1B5D, -K1E5, -K1E5D, -K1G5, -K1G5D, -K1H5, -K1K5, -L1A5, -L1A5D, -L1B5D, -M1B5D, -T4A5D, -T4B5D, -U1A5D, -U1B5D, -V4A5D, -W1A5D

VO-540 Series, Serial No. L-2604-43.

A1A, -A2A, -B1A, -B2A, -B1E, -B2E, -C1B, -C2B

TIO-540 Series, Serial No. L-8305-61.

-E1A, -H1A, -S1AD

Remanufactured engines, of all models listed above, shipped after September 13, 1982 are not affected.

Compensation for the work involved in complying with this service bulletin will be made in accordance with established warranty policy upon submission of a warranty claim through a currently authorized Bendix Products Division Distributor.

Bendix Engine Products Division

SERVICE BULLETIN NO. 623
Engineering Aspects are FAA Approved

Printed September 1982

AIRCRAFT

SUBJECT: Inspection of impulse coupling cam assemblies.

REASON FOR BULLETIN:

1. To alert all users of possible impulse coupling failure, with resultant possible engine damage or failure.

2. To provide an inspection procedure to preclude failure of the impulse coupling.

EQUIPMENT AFFECTED: All Bendix magnetos with type designations as follows:

S4LN-21/1225/1227
S4LN-200 P/N 10-163005-7
S6RN-21/23/25/1225/1227
D-3000 all
S4RN-21/1225/1227
S6LN-21/23/25/1225/1227
D-2021/2031

(Refer to Bendix Publication L-1147 Aircraft Impulse Coupling Cross Reference Data as required.)

Except Bendix Blue Label magnetos above S/N 8236001.

Except Bendix Red Label magnetos above serial numbers as indicated below:

S-20:	B-001171	or	A297043
S-200:	B-001732	or	A297043
S-1200:	B-001162	or	A297043
D-2000:	35550		
D-3000:	B-000249	or	5806

Maintenance (Spare) Parts Affected:

1. All impulse coupling cam assemblies.
2. All impulse coupling assemblies.
3. All spare magnetos incorporating an impulse coupling.

Compliance:

1. All magnetos having impulse couplings with less than 300 operating hours must be inspected and identified as having complied with this Service Bulletin prior to the next engine start.
2. All spare parts must be inspected and identified before being put into service.

General Information:

Some improperly heat treated (soft) flyweights have been reported on impulse couplings currently in service. If this condition exists and is not detected, impulse coupling failure could occur, causing possible engine damage or failure. The flyweights must be inspected in accordance with the instructions in this Service Bulletin and if defective (soft) the impulse coupling or cam assembly must be replaced immediately.

Detailed Instructions:

(Refer to appropriate Bendix Magneto Overhaul Instructions for the magneto series being inspected.)

Note

The magneto should be removed from the engine only to the extent necessary to perform the inspection described herein. Depending on the engine application, it may not be necessary to remove the harness from the magneto for the inspection procedure.

Note

All magnetos with the impulse coupling recessed into the magneto flange must have the impulse coupling removed from the magneto to perform the inspection. This is a bench operation and will require the magneto to be completely removed from the engine and the harness removed from the magneto.

Bendix Engine Products Division

SERVICE BULLETIN NO. 623

Printed September 1982
Page 2 of 2 Pages

Note

Whenever an impulse coupling is removed from a magneto, it must be removed following published procedures, paying strict attention to notes and cautions. Upon reassembly, the castellated nut securing the impulse coupling to the drive shaft must be torqued to 15–25 ft lb. The cotter pin, Bendix P/N 10-90751-18, removed during disassembly, must be discarded and replaced.

1. Following published procedures remove the magneto from the engine.

2. Place the magneto in a suitable work stand with the impulse coupling facing up.

3. Use finger pressure to push inward on the toe (see figure 1) of each flyweight so that the flyweight heel protrudes outward.

4. Using a fine # 1, double cut, ½ inch wide file, at least 3/32 inch thick, pass the file across the heel of the flyweight attempting to remove material. (See figure 1). If the flyweight has been properly heat treated the file will "glide" smoothly over the heel of the flyweight, removing no material. If the flyweight is not properly heat treated (soft), the file will not "glide" easily across the surface of the flyweight heel, and material will be removed.

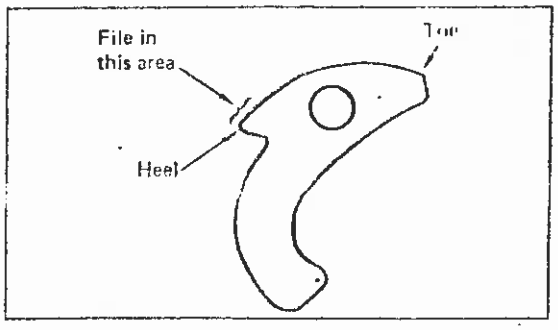


Figure 1

5. If an improperly heat treated (soft) flyweight is found, immediately remove and replace the cam assembly and/or the impulse coupling assembly **following procedures in the magneto overhaul** instructions, and paying strict attention to notes and cautions.

6. Inspect the impulse coupling stop pins for wear and replace as necessary.

7. After flyweights and stop pins have been inspected and the impulse coupling reinstalled on the magneto (if removed), identify the magneto by stamping a 1/16 inch letter "F" in the upper right corner of the identification plate to indicate this Service Bulletin has been complied with.

8. Reinstall the magneto on the engine following published procedures.

9. Make an appropriate engine log book entry, recording magneto serial number, to indicate that this Service Bulletin has been complied with.

10. Inspect all spare parts assemblies, including magnetos, following the same procedures described in steps 3 and 4 of the Detailed Instructions of this Service Bulletin. If both flyweights are found acceptable, identify the cam assembly by applying yellow Dykem or yellow lacquer to the heel of each flyweight. On magneto spares, stamp a 1/16 inch letter "F" in the upper right corner of the identification plate to indicate this Service Bulletin has been complied with.

11. Any cam assembly with an improperly heat treated (soft) flyweight should be returned to the manufacturer through a currently Authorized Bendix Engine Products Division Distributor for warranty replacement or credit.

Warranty Consideration:

All impulse coupled magnetos in service less than one year will be covered by warranty for inspection of the impulse coupling cam assembly, allowing up to one hour at a maximum labor charge of $22 for shallow flange magnetos, and allowing one and one quarter hours at a maximum labor charge of $27.50 for deep flange mangetos. Compensation for the work involved in complying with this Service Bulletin will be made in accordance with established warranty policy upon submission of a Warranty Claim submitted no later than March 31, 1983 through a currently Authorized Bendix Engine Products Division Distributor.

Note

Warranty replacement of cam assembly will not be made if cam assembly passes the inspection described in this Service Bulletin.

Special Tools Required:

Refer to applicable manuals

Man Hours Required:

1.0 hour per engine with shallow flange mag.
1.25 hours per engine with deep flange mag.

Weight Change:

None