

Service Bulletin

TO: Aircraft Manufacturers, Aircraft Engine Manufacturers, Distributors, Dealers, Engine Maintainers, Engine Overhaul Facilities, Owners and Operators of Slick Aircraft Magnetos.

SUBJECT: Mandatory inspection of impulse coupled Slick by Champion magnetos.

**MAGNETO MODELS
AFFECTED:**

The following magneto models with serial numbers between 15021147 and 19020180: 4301, 4303, 4316, 4330, 4333, 4354, 4371, 4372, 4373, 4374, 4381, 4392, 4755, 6310, 6314, 6320, 6324, 6331, 6351, 6355, 6361, 6362, 6364, 6367, 6377, 6379, 6380, 6382, 6399, 6755. In addition, any 4200/6200 series impulse coupled magneto which had the impulse coupling changed with an impulse coupling manufactured between February 2015 and February 2019.

NOTE: 15021147 = S/N manufacture date of February 2015
19020180 = S/N manufacture date of February 2019

Impulse coupling replacement kits manufactured between Feb. 26, 2015 and Feb. 1, 2019. If it is not possible to confirm the manufactured date of the impulse coupling that is installed on a given magneto from maintenance records, the magneto must be removed from the engine in order to have the impulse coupling inspected.

**ENGINE MODELS
AFFECTED:**

Engines utilizing Slick 4200, 4300, and 4700 series (LASAR) magnetos.
Engines utilizing Slick 6200, 6300, and 6700 series (LASAR) magnetos.

**AIRFRAME MODELS
AFFECTED:**

Aircraft utilizing Slick 4200, 4300, and 4700 series (LASAR) magnetos.
Aircraft utilizing Slick 6200, 6300, and 6700 series (LASAR) magnetos.

**BACKGROUND
INFORMATION:**

There have been limited reports in which impulse coupling rivets have loosened relative to the factory placement. A loose or broken rivet could potentially enter the gear train of the engine resulting in damage to the gear train or damage to engine accessories and could potentially cause catastrophic engine failure.

This service bulletin has been updated to add the "TIO" engines to category 2 and make both alternative methods of compliance applicable to either category 1 or 2.

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COMPLIANCE:

	Description	Initial Inspection	Recurring Inspection	Alternative Method of Compliance/Terminating Action
Category 1	All affected magnetos except those covered in Category 2	Within the next 100 hours Time in Service (TIS) but <u>not to exceed</u> 400 hours total TIS	Every 400 hours TIS until terminating action	Replace with approved model magneto or impulse coupling replacement kit outside the affected serial number or date range. Document compliance.
Category 2	Affected Magnetos installed on Lycoming O/IO/TIO-540 Engines with 5th Order Counter weight	Within the next 25 hours TIS but <u>not to exceed</u> 100 hours total TIS	Every 100 hours TIS	or If applicable, replace impulse magneto with FAA-PMA approved retard-breaker Slick by Champion magneto and SureSTART ignition booster.

PROOF OF COMPLIANCE:

Appropriate logbook entries. Magnetos returned to Champion Aerospace for repair will be stamped with the letter "B" on the dataplate. See SB2-19A COMPLIANCE and WARRANTY INFORMATION.

MAINTENANCE PARTS AFFECTED:

Any 4200/4300/4700 series or 6200/6300/6700 series impulse coupled magnetos which have had the impulse coupling replaced with impulse coupling replacement kit dated Feb. 26, 2015 through Feb. 1, 2019.

PARTS REQUIRED PER BULLETIN:

Replacement impulse coupling as required.

TOOLS REQUIRED:

T-118 magneto timing pin, T-106 I/C puller, T-155 I/C rivet gauge, magneto timing light, and standard shop tools.

WEIGHT CHANGE:

None.

REQUIRED SERVICE LITERATURE:

Refer to the latest revision of Champion Slick F-1100 Master Service Manual or L-1500 LASAR Master Service Manual, as applicable, when performing the detailed instructions contained in this Service Bulletin.

WARRANTY INFORMATION:

Affected magnetos that fail the required inspection within the DETAILED INSTRUCTIONS (rivets are found loose) have two options for warranty resolution:

Option 1: If unit fails required inspection, order and install an Impulse Coupling Replacement Kit through an authorized Champion Aerospace Distributor. Initiate a warranty return with the Distributor for warranty credit. Distributor will provide a warranty form for completion. **Champion Aerospace reserves the right to reject warranty for any returns that are:**

- 1) **Are not manufactured within the affected range.**
- 2) **Are subsequently found to pass the required inspection.**
- 3) **Are not returned with a Warranty Form.**

Option 2: If unit fails required inspection, remove all drive gears and ship the magneto with impulse coupling to Champion Aerospace for repair. Champion will repair the Magneto by installing a new Impulse Coupling and return it to the customer at no-charge. No other repairs or inspections will be performed during this process. Customer is required to cover all inbound freight expense and ship the affected unit with an accompanying return form to:

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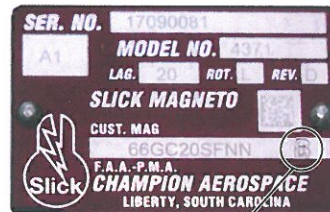
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SB2-19A Returns
Champion Aerospace Repair Station
1230 Old Norris Rd
Liberty, SC 29657 USA

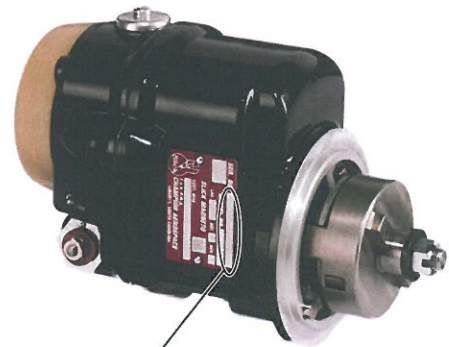
The magneto must have all drive gears, tach pickups, or other accessories removed and must be shipped with a completed return authorization form. **Magnetos not shipped with the completed return form or magnetos returned with drive gears or accessories installed will be rejected for repair and returned to the customer.** Repaired magnetos will be stamped with the letter "B" on the dataplate to document compliance.

DETAILED INSTRUCTIONS:

1. Locate magneto serial number on magneto dataplate or purchase date of replacement impulse coupling kits. If the magneto serial number or impulse coupling purchase date is determined to be within the range specified in this bulletin and the dataplate is not stamped with the letter "B" per the WARRANTY description above, remove the magneto from engine in accordance with the latest revision of the engine manufacturer's manual(s).



LETTER "B" INDICATES
REPAIRED MAGNETO



SERIAL NUMBER LOCATED
ON MAGNETO DATAPLATE



MANUFACTURED DATE
LOCATED ON IMPULSE
COUPLING REPLACEMENT KIT

2. Remove, disassemble, and clean the impulse coupling per current revision of applicable magneto manual and per current revision of F-1100 Master Service Manual or L-1500 LASAR Master Service Manual.
3. Inspect the impulse coupling per the maintenance manual. If any movement is found in the rivets, the impulse coupling must be rejected. Reference WARRANTY INFORMATION for resolution options.

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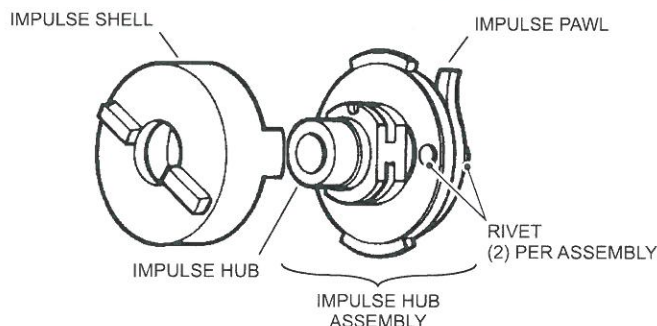
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4. Repeat this recurring inspection per the requirements listed in the COMPLIANCE section.
5. In no instance shall a repair of the impulse coupling be attempted for loose rivets.
6. Liberally oil ALL new or removed impulse couplings with clean engine oil prior to installation. Make sure all castellated drive nuts are torqued to 120-320 in-lbs. Reference Champion Service Letter SL1-17 for additional information.

NOTE: This repair does not affect normal inspection and maintenance intervals as defined in the latest revision of the F-1100 Master Service Manual or L-1500 LASAR Master Service Manual.

WARNING: Slick impulse couplings are manufactured as matched assemblies. Under no circumstances should a subassembly part from one impulse coupling be used with the mating part from another impulse coupling. The maintenance practice of mixing subassembly parts, even within the same impulse coupling assembly model numbers, is not approved and can lead to impulse coupling failure and subsequent magneto and engine stoppage.

Champion Slick Technical Publication Website: www.championaerospace.com/champion-technical-publications
Champion Slick Piston Products Technical Support E-mail: sllicksupport@champaero.com

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