

SERVICE BULLETIN

Customer
Support

ATA SYSTEM: 24-30

S. B. NUMBER: S.B.MS17976-2-24-001

SUBJECT: Electrical Power - DC Generation - Transformer Rectifier Unit (TRU) AC Filter Capacitor Inspection

1. Planning Information.

A. Effectivity.

- (1) Units Affected: MS17976-2 Champion P/N: 28VS100Y-10A, -10B
Effective Date: Nov. 94 - Nov. 98

B. Reason.

- (1) Problem/Condition.

The MS17976-2 TRU's AC input filter capacitors are loosening under certain vibratory conditions.

- (2) Evidence.

Instances have been reported in service.

C. Description.

This service bulletin is provided to identify the potentially affected TRU's. In addition, this service bulletin outlines the procedures to evaluate units in the field, and defines the policy for returning or repairing the faulty TRU's.

D. Compliance.

Federal-Mogul Aviation Products requires that this service bulletin be completed within a 18 month period or 4000 flight hours which ever occurs first from issue date on this service bulletin. To expedite the documentation of the field inspection process, **Federal-Mogul Aviation, Inc. must receive the "Operator's Field Inspection Report" in order to document the inspection result.** The attached inspection report form must be completed and received prior to reimbursement for the modification procedure. Please complete the attached form for operator records and detach from this service bulletin. A photocopy of the form should be maintained for the operator records. The original form should be returned to the address shown on the form.

ATA SYSTEM: 24-30

S. B. NUMBER: S.B.MS17976-2-24-001

E. Approval.

This service bulletin contains no modification information that revises the approved configuration and therefore does not require governmental or other regulatory agency approval.

F. Manpower.

Approximately 1.0 man-hour per aircraft † will be required to complete this service bulletin. This estimate is for direct labor done by an experienced crew and it does not include planning, familiarization, part fabrication or lost time.

† Warranty.

Federal-Mogul Aviation, Inc. will reimburse the operator for parts and labor required to repair each of the affected TRU's (MS17976-2) that are covered within the 48 month warranty (effective date: Nov. 94 - Nov. 98). Federal-Mogul Aviation, Inc. will reimburse \$58.00 per aircraft.

G. Weight and Balance.

Not Affected.

H. Electrical Load Data.

Not Affected.

I. References.

Component Maintenance Manual 24-31-03, dated 10-25-96

J. Other Publications Affected.

Component Maintenance Manual 24-31-03, dated 10-25-96

K. Material - Price and Availability.

Description	Part Number	Cost
GE RTV109, Gray	Champion (306163)	\$8.00
Labor 1.0 man-hour per/aircraft	N/A	\$50.00/hour (Max)

L. Price and Availability.

None.

2. Accomplishment Instructions.

NOTE: These procedures can be accomplished without removing the MS17976-2 TRU from the aircraft.

NOTE: Refer to Component Maintenance Manual 24-31-03, dated 10-25-96 for IPL and figure numbers (attached).

WARNING: TURN ALL AIRCRAFT POWER "OFF" WHEN DOING MAINTENANCE ON OR NEAR ELECTRICAL/ELECTRONIC EQUIPMENT TO AVOID PERSONAL INJURY AND/OR EQUIPMENT DAMAGE.

ATA SYSTEM: 24-30

S. B. NUMBER: S.B.MS17976-2-24-001

A. Disassembly.

- (1) Refer to IPL Figure 1.
- (2) Locate and remove the three self locking nuts (10) from converter end bell (5).
- (3) Remove converter end bell (5).
- (4) Refer to IPL Figure 3.
- (5) Locate AC filter capacitors (80) on motor ring assembly (175).

B. Inspection/Check.

- (1) Inspect each capacitor (80) connection to motor ring assembly (175). Apply light finger torsional force to each capacitor (80) in a **(clockwise)** rotation.
- (2) If any of the three capacitors (80) rotate in a **(clockwise)** direction, converter is identified as having loose capacitor condition.
- (3) Perform the same inspection/check on the bench for those units in spares inventory.
- (4) MS17976-2 TRU's that have less than, or equal to 1/8 turn of rotation, may be repaired as installed in the aircraft. Spare TRU's may be repaired on the bench. For operators that have the appropriate AMO facilities, repairs shall be performed per procedures outlined in this document. The repair may be scheduled at operator's earliest convenience or next routine maintenance activity.
- (5) MS17976-2 TRU's that have more than 1/8 turn of rotation, should be immediately removed from aircraft. Replacement TRU's may be obtained from unaffected spares stock or from the manufacturer or his agent. (See Operator's Field Inspection Report).
- (6) For operators that do not have the appropriate AMO facility, repairs and replacement of TRU's may be obtained from unaffected spares stock, or from the manufacturer or his agent.

C. Repair.

The repair to the unit(s) may be accomplished in three (3) parts:

- (1) TRU's with capacitors that **are not loose**, only require the addition of an adhesive to help secure the capacitors in place. This may be done with the TRU's installed, or on a repair bench.
- (2) TRU's with capacitors that **are less than, or equal** to 1/8 turn of rotation, require the capacitors to be tightened prior to the addition of an adhesive to help secure the capacitors in place. This may be done with the TRU's installed, or on a repair bench.
- (3) TRU's with the capacitors **loose more than** 1/8 turn, require further disassembly. Return affected units to Federal-Mogul Aviation, Inc. for domestic carriers or Allied International for international carriers.

ATA SYSTEM: 24-30

S. B. NUMBER: S.B.MS17976-2-24-001

NOTE: Refer to Component Maintenance Manual 24-31-03, dated 10-25-96 for IPL and figure numbers (Attached).

NOTE: Refer to attached illustration CH431.T.SB.01, Figure 1 when noted.

Tightening of Capacitors.

NOTE: The total capacitor rotation for the following step shall be no more than 1/8 turn.

- (1) Using a pair of soft-jaw pliers, grip one of the outside AC filter capacitors (80) near the base. Without damaging the capacitor (80), rotate clockwise to firmly seat capacitor (80) on motor ring assembly (175).
- (2) Repeat step C.1 for the other outside capacitor (80).
- (3) Repeat step C.1 for the middle capacitor (80) with the following exception: Using soft-jaw pliers, grip capacitor (80) towards the end and tighten in the same manner.

Application of Adhesive.

NOTE: GE RTV109 (Champion P/N: 306163) has been qualified for this modification process and is the only approved compound for this procedure.

- (1) Surface clean the area around the base of the capacitors and the motor ring with isopropyl alcohol using cotton swab or lint-free cloth.
- (2) Using GE RTV109 (Champion P/N: 306163), apply compound to crosshatched area as shown in CH431.T.SB.01, Figure 1.
- (3) Make sure no RTV compound has been applied to the seating portion of the motor ring assembly (175) where the converter end bell (5) is attached to the converter assembly.
- (4) Allow RTV compound to cure for one (1) hour (min) before the reassembly of the unit.
- (5) Position converter end bell (5) to converter assembly and replace self locking nuts (10).
- (6) Secure self-locking nuts (10).

D. Testing

The following test requirements only apply to units that have been repaired for loose capacitors where the turning is no greater than 1/8 turn.

- (1) Field repaired units - as installed in the aircraft. Test repaired TRU's (MS17976-2) per respective AMM tasks.
- (2) For spare units temporarily or permanently install in the aircraft, test per respective AMM task.
- (3) Upon completion of mechanical and electrical testing, TRU's may be returned to service, or to spares storage.

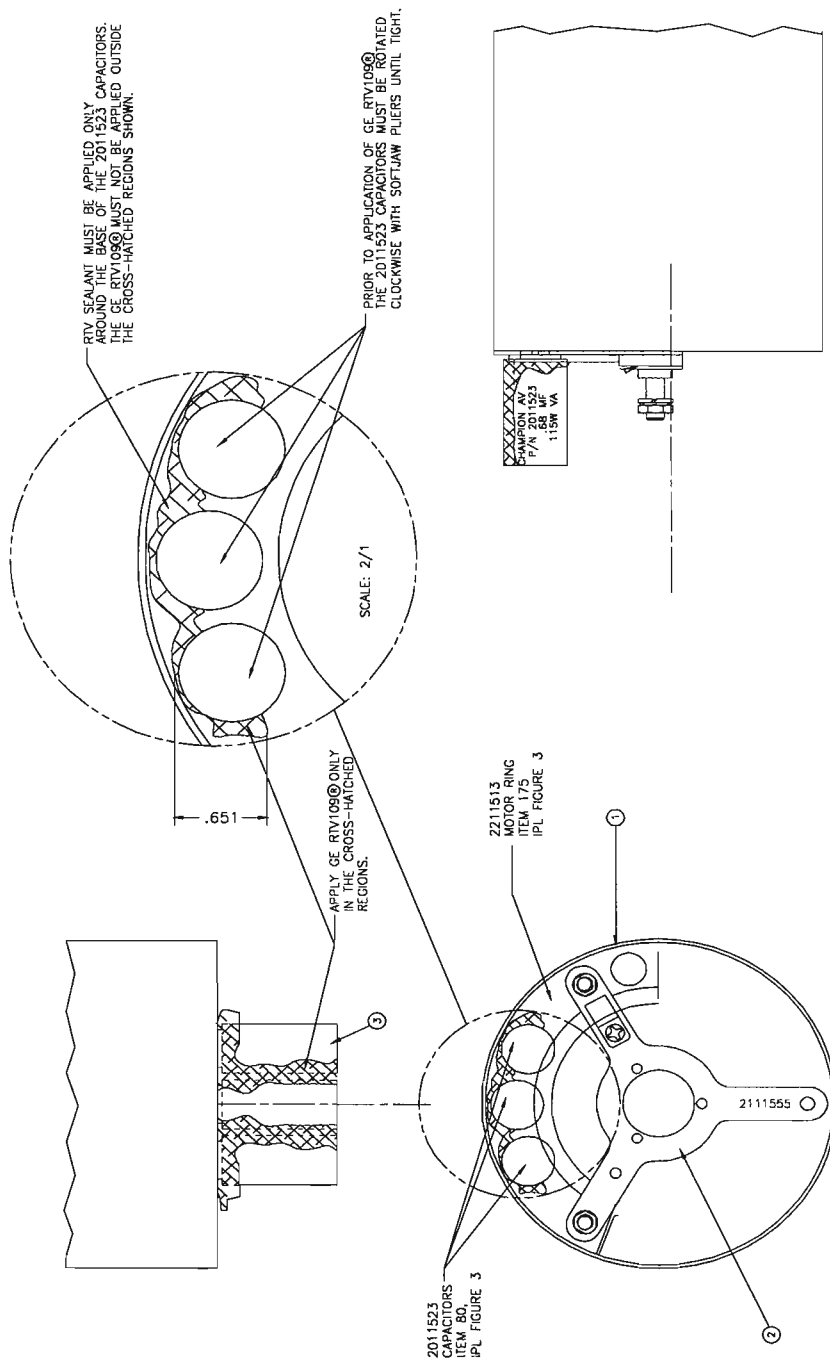
ATA SYSTEM: 24-30

S. B. NUMBER: S.B.MS17976-2-24-001

E. Return Policy

This policy shall be used for units that are being returned to Federal-Mogul Aviation, Inc., or its authorized agent, Allied International, where it has been accepted that the repairs are not being performed by the end user of the TRU's and/or the capacitors require factory replacement.

- (1) Allied International will coordinate the logistical details of all repairs and returns.
- (2) Using the attached form, all TRU's inspected and repaired shall be reported.
- (3) The person to contact for normal or AOG service is Product Support (pager number 1-888-581-5448).
- (4) Return Authorization (RA) shall be obtained through Allied International.
- (5) A rotatable pool of TRU's is established with Allied International to support operators requiring repair and/or exchange.



QTY	REV	DATE	BY	DESCRIPTION
3	3	2011523		CAPACITOR
1	2	2111555		MOTOR RING
1	1	2211512		CONVERTER

PART NUMBER: 2011523

AMSON PRODUCTS
1200 OLD NORRIS ROAD
LIBERTY, SOUTH CAROLINA 29657

TITLE: LIN_1
DATE: LIN_2
DRAWN: LIN_3
CHECKED: LIN_4

BY: DATEBY
CHKR: DATECHK
DCSN: DATEDCSN

DWG. NUMBER: 2111555
SHEET NUMBER: 6
SCALE: DAF1.4

SIMILAR

ATA SYSTEM: 24-30

S. B. NUMBER: S.B.MS17976-2-24-001

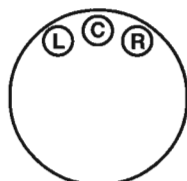
OPERATOR'S FIELD INSPECTION REPORT

INSTRUCTIONS: Complete this field inspection report, detach and return to the address listed at the bottom.

TRU DATE CODE:

TRU S/N

CAPACITORS (LOOSE/TIGHT)



Looking Inboard

AIRCRAFT NUMBER: _____ AIRCRAFT MODEL: _____

DATE CHECKED: _____ INSPECTED BY: _____

OPERATOR: _____ SPARES STOCK S/N: _____

TECHNICAL ISSUES: Any additional technical issues or inquiries that arise regarding this alert service bulletin, should be addressed directly to: Federal-Mogul Aviation Products at (864) 843-5400 or fax (864) 843-9163.

<p><u>North America/US Customers</u></p> <p>Federal-Mogul Aviation Products 1230 Old Norris Road Liberty, South Carolina, U.S.A. 29657-0686 (864) 843-5400 Fax: (864) 843-9163 Attn: Product Support Department</p>	<p><u>International Customers</u></p> <p>Allied International Corporation 7 Hill Street Bedford Hills, New York, U.S.A 10507-1811 (914) 241-6900 Fax: (914) 241-6985 Attn: Linda Birkmann</p>
--	--