



CF34 TURBOFAN (BUSINESS JET)

GE Aircraft Engines

ALERT SERVICE BULLETIN

OIL - Lube and Scavenge Components (79-00-00) - Field Management Program to Prevent B-sump Oil Release Events

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TRANSMITTAL INFORMATION

SERVICE BULLETIN (CF34-BJ) 79-A0015, REVISION 1

This section transmits Revision 1 to Service Bulletin (CF34-BJ) 79-A0015, dated August 23, 2001.

This revision is issued to revise the cleaning procedures in paragraph 3., ACCOMPLISHMENT INSTRUCTIONS and also to change the Follow-On Intervals in Table 1. This revision also changes the recommended leak check procedure that follows the B-sump screen inspection.

The revision bars in the left margin identify changes.

1. PLANNING INFORMATION

A. Effectivity

This Service Bulletin is applicable to all CF34-3A1 and CF34-3B turbofan engines.

B. Concurrent Requirements

None.

C. Description

This Alert Service Bulletin introduces a field program to prevent potential B-sump oil release events associated with B-sump scavenge screen blockage.

D. Compliance

Category 1

GE recommends that the initial and follow-on inspections or checks directed by this Alert Service Bulletin be accomplished within the operating intervals specified in Paragraph 3, and Table 1.

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APPENDIX D



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If CF34 Turbofan Service Bulletin (CF34-AL) 79-A0014, (Airline Service application), Field Management Program to Prevent B-sump Oil Release Events, has been complied with, the intent of this Service Bulletin has been accomplished.

E. Reason

This Service Bulletin introduces a field program to inspect and clean the B-sump scavenge screens. There have been a total of five in-flight shutdowns in the CF34 RJ fleet which have been associated with loss of scavenge capacity in the B-sump and subsequent oil release from the B-sump into the secondary air system.

All of the five B-sump oil release event engines were determined to have B-sump scavenge screens that were significantly blocked with coke. The coke in the B-sump screens is believed to be the result of hot soakback temperatures in the sump after shutdown. Significant scavenge screen blockage can prevent the lube and scavenge pump from effectively scavenging the oil from the B-sump, resulting in oil accumulation in the sump. This can result in oil loss out of the sump across the carbon seals and subsequent ignition of oil in the secondary air system.

The maintenance actions in this Alert Service Bulletin are recommended to eliminate the potential for blockage caused by coke being captured in the B-sump scavenge screens, by either the elimination of the screens or by the repetitive inspection and cleaning of the screen fittings until the screens are eliminated.

F. Approval

Technical aspects FAA approved June 12, 2001

Revision 1 - Technical aspects FAA approved August 23, 2001

G. Manpower

An estimate of the labor cost to accomplish this Service Bulletin may be obtained from any GE Aircraft Engines authorized Service or Overhaul facility. Labor cost is the responsibility of the operator.

H. Weight and Balance

Weight and balance are not affected.

I. References

CF34 Turbofan Engine Service Record

GEK 9250, Commercial Engine Standard Practices Manual

SEI-779, CF34 Illustrated Parts Catalog

SEI-780, CF34 Turbofan Service Manual

SEI-782, CF34 Turbofan Heavy Maintenance Manual

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Service Bulletin (CF34-AL) 79-A0014, (Airline Service application), Field Management Program to Prevent B-sump Oil Release Events

J. Publications Affected

CF34 Turbofan Engine Service Record

K. Interchangeability

Not applicable.

2. MATERIAL INFORMATION

A. Material - Price and Availability

(1) Parts necessary to do this Service Bulletin:

<u>Part Number</u>	<u>Part Name</u>	<u>Qty/ Eng</u>
M83248-1-905	Packing, Preformed	1
J221P905	Packing, Preformed	ALT
M83248-1-908	Packing, Preformed	2
J221P908	Packing, Preformed	ALT
327B486P008	Washer, Backup	1
4047T95P01	Nipple, Tube Screen Insert	1
5054T86G02	Tee, Scavenge Filter Screen Bulkhead	1

(2) Consumables:

None.

B. Industry Support Information

Operators with affected engines are encouraged to work with their respective GE Field Service Representative for assistance if required.

Materials required to accomplish this Service Bulletin are listed in paragraph 2. A. Material - Price and Availability.

Material and labor cost estimates may be obtained from any GE Aircraft Engines authorized service or overhaul facility upon request. Material and labor costs are the responsibility of the operator.

C. Configuration Chart

Not applicable.

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D. Parts Disposition

Not applicable.

E. Tooling - Price and Availability

Flexible flashlight with approximately 1/4-inch diameter bulb (small enough to fit inside B-sump scavenge fitting cone-shaped screen) - (Performance Tool No. 80700 or equivalent).

3. ACCOMPLISHMENT INSTRUCTIONS

A. General

Do the following checks. Refer to Table 1 for a summary of engines affected and initial and follow-on inspection intervals.

NOTE: GE plans to introduce a B-sump scavenge fitting which does not incorporate a scavenge screen. GE also plans to introduce a rework procedure which will allow operators to rework existing scavenge screen fittings to eliminate the screens. Until these parts are available, conduct periodic screen checks to keep them clear as specified in Table 1 (APPENDIX).

(1) B-sump Scavenge Screen Inspection/Removal.

CAUTION: THE B-SUMP FORWARD SCAVENGE SCREEN FITTING TUBE SCREEN INSERT NIPPLE (79-00-00-10-265) AND THE C-SUMP FORWARD SCAVENGE SCREEN FITTING (79-00-00-10-70) HAVE THE SAME PART NUMBER. IF C-SUMP SCREENS WILL BE REMOVED (FOR OTHER MAINTENANCE UNRELATED TO THIS S/B) AT THE SAME TIME AS THE B-SUMP SCREENS ARE REMOVED, BE CAREFUL TO PROPERLY LABEL THE SCREENS AND DO NOT MIX UP THE B-SUMP AND C-SUMP SCREEN DATA.

Refer to Table 1 for initial and follow-on check intervals.

- (a) Use the instructions in SEI-780 (MAINTENANCE PRACTICE 28) and remove the tube screen insert nipple (79-00-00-10-265) and the scavenge filter screen bulkhead tee (79-00-00-10-315A).

CAUTION: COKE TENDS TO ACCUMULATE FIRST ALONG THE EDGES OF THE CONE-SHAPED SCREEN. BE SURE TO CHECK THE OUTSIDE EDGES OF THE CONE-SHAPED SCREEN FOR PRESENCE OF COKE PARTICLES, USING A BRIGHT LIGHT INSERTED INTO THE OPEN END OF THE SCREEN. CORRECT SCREEN COKE INSPECTION CAN NOT BE MADE WITHOUT A FLASHLIGHT BULB SMALL ENOUGH TO BE INSERTED UP INSIDE THE SCREEN.

- (b) Inspect the screens for presence of coke particles. Use a flexible flashlight (or equivalent) with a bulb small enough to fit inside the open end of the screen. Insert the light into the open end of the screen, and inspect for coke particles by looking down into the closed end of the

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screen toward the light source. Be sure to inspect the entire screen, including both sides of the cone-shaped screen, for coke particles. Refer to Figures 1 and 2.

- (c) Record whether there is any evidence of coke particles accumulated in the screen. If coke is present in the screen, record screen blockage percentage (refer to Figure 1 for interpretation). GE requests that the screen blockage data be provided to GE via your local GE rep, assigned Product Support Engineer, or Customer Support Manager. Include screen blockage percentage, ESN, TSN/CSN, and date of inspection.
- (d) Clean the tube screen insert nipple (79-00-00-10-265) and the scavenge filter screen bulkhead tee (79-00-00-10-315A) or obtain a new or previously cleaned tube screen insert nipple (79-00-00-10-265) and the scavenge filter screen bulkhead tee (79-00-00-10-315A). To clean the screens, do as follows:
 - 1 Loosen and dislodge the coke particles as much as possible with a dental pick or equivalent tool.

WARNING: USE OF COMPRESSED AIR TO DISLUDGE OBJECTS MAY BE HAZARDOUS. EYES CAN BE PERMANENTLY DAMAGED BY OBJECTS BEING EXPLOSIVELY PROPELLED BY COMPRESSED AIR AT ANY PRESSURE. PERSONAL PROTECTIVE EQUIPMENT REQUIRED WHEN HANDLING OR USING THIS MATERIAL.

- 2 Remove any loose particles that remain by blowing the screens with compressed air or flushing with an approved fluid cleaner in the direction opposite from the flow of oil through the screen. Refer to GEK 9250.
 - 3 Use the ultrasonic cleaning method (GEK 9250, TASK 70-21-15-130-001) and remove any coke that remains on the screen.
 - 4 Screens that have large amounts of coke may need to have the coke removed by the baking method. If required, bake the screens. Refer to SEI-782 (72-09-01, SPECIAL PROCEDURE 25).
- (e) Use the instructions in SEI-780 (MAINTENANCE PRACTICE 28) and re-install the cleaned screens.
 - (f) Perform follow-on screen checks as specified in Table 1 until a screenless fitting can be installed. Once a screenless fitting has been installed (see Note above), the scavenge fitting inspections are no longer required.

B. Testing

Following the removal and replacement of the scavenge screens, do a leak check at 85% N₂ minimum for a minimum of 3 minutes. Refer to SEI-780, (72-00-00, TESTING).

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C. Service Record Entry

- (1) Make an entry in the CF34 Turbofan Service Record as follows:
 - (a) Record compliance with this Service Bulletin in the Engine Service Record, Section II (Service Bulletins).
 - (b) Send a copy of compliance entry data to:

GE Aircraft Engines
1000 Western Avenue
Lynn, Massachusetts 01910
USA
Attention: Lynn Product Data Center
Mail Zone MZ 34022
CF34 Service Bulletin Coordinator

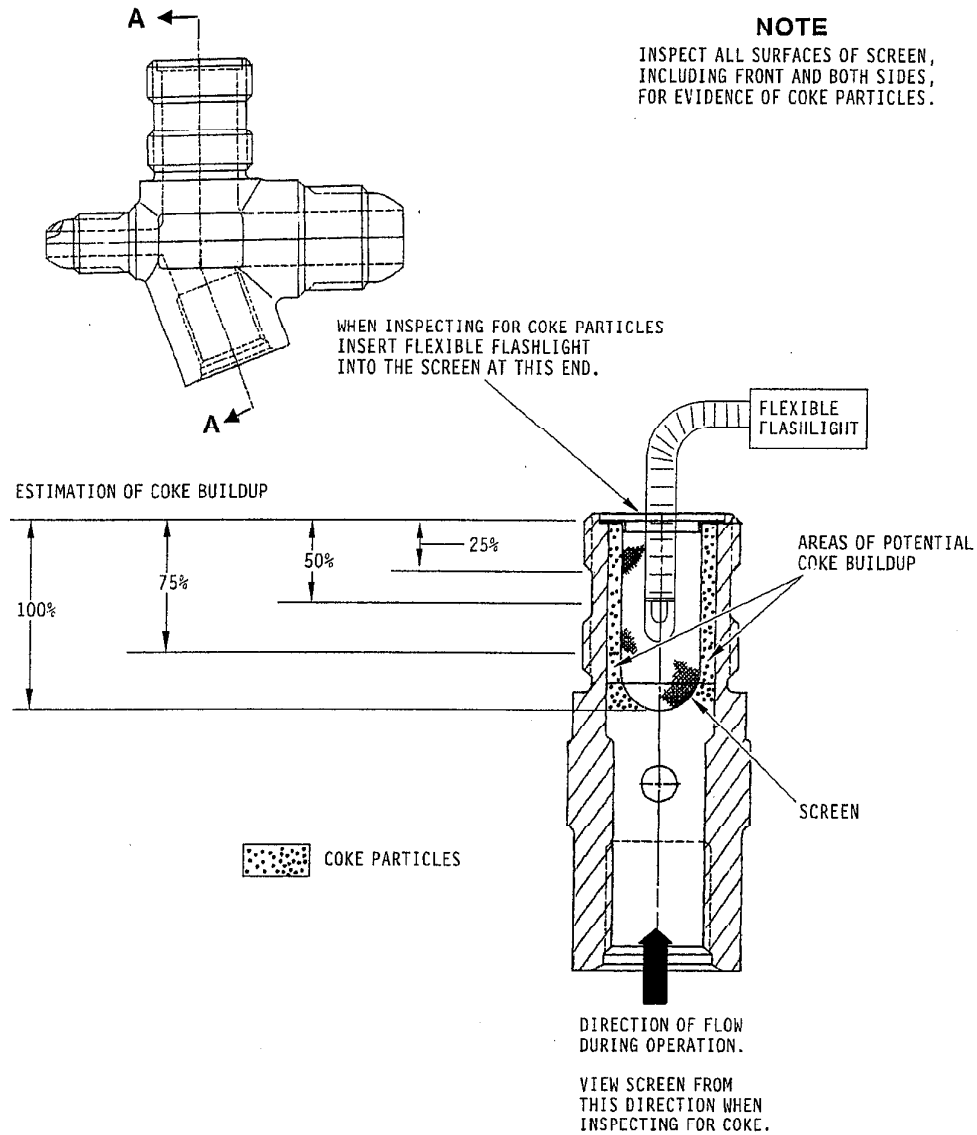


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SECTION A-A

Inspection of Scavenge Filter Screen Bulkhead Tee PN 5054T86G02
Figure 1

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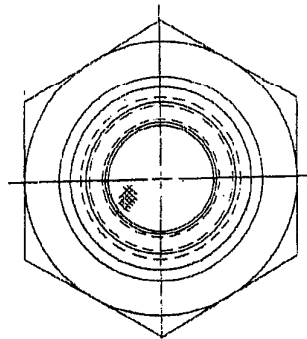
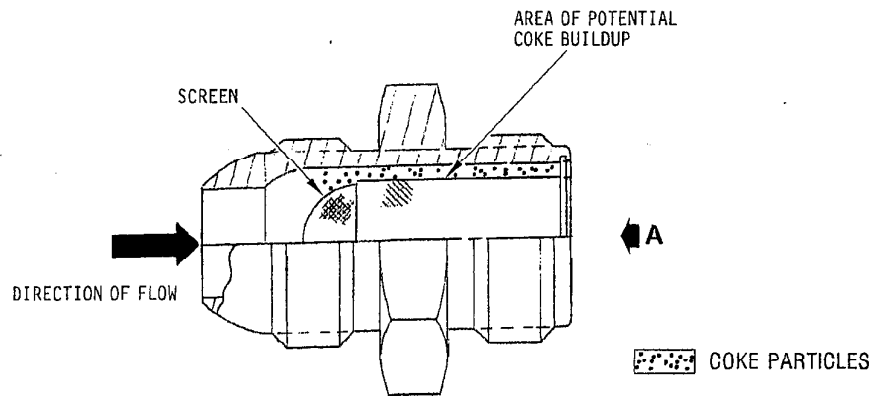
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NOTE

INSPECT ALL SURFACES OF THE SCREEN, INCLUDING FRONT AND BOTH SIDES, FOR EVIDENCE OF COKE PARTICLES.



VIEW IN DIRECTION OF A

Inspection of Tube Screen Insert Nipple PN 4047T95P01
Figure 2

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4. APPENDIX

Table 1. Inspections and Checks

<u>Inspection/Check:</u>	<u>Effectivity:</u>	<u>Initial Interval:</u>	<u>Follow-on Intervals:</u>	<u>Ending Action:</u>
Refer to step 3. A. (1). Remove B-sump screens, clean and re-install, or install screenless fittings, when available.	All CF34-3A1 and CF34-3B engines	By 4,000 hours engine TSN.* Engines with 8,000 hours or more TSN*: Within the next 100 hours. Engines with more than 4,000 hours but with less than 8,000 hours TSN*: At next A-check or no later than 500 hours.	Coke found in screen: inspect/clean screens again in 100 hours. If there is no evidence of coke found during the 100-hour follow-on check, inspect/clean the screens at every A-check or no later than every 500 hours until the screens are eliminated. No coke found in screen: inspect/clean the screens at the next A-check or not later than 500 hours, until the screens are eliminated. If coke is found subsequently, perform the next screen inspection again within 100 hours. If there is no evidence of coke found during the 100-hour follow-on check, inspect/clean the screens at every A-check or not later than every 500 hours until screens are eliminated.	No further inspections are required after B-sump scavenge fittings with eliminated screens are installed, when available.

* Or engine time since shop visit if it can be confirmed both that the B-sump scavenge screens were cleaned and that the B-sump was removed from the engine and cleaned at the prior shop visit.