

# Advisory Wire

REFERENCE NO: AW300-21-0413

EFFECTIVITY

Challenger 300  
Challenger 350  
Challenger 3500

ATA: 21-50

**SUBJECT: Air Cycle Machine (ACM) –  
Investigation of Failures  
Causing Smoke/Smell Events**

## 1. REFERENCES:

1.1 Liebherr Service Information Letter (SIL) LS3471-21-01 - Failure of Air Cycle Machine PN 3471A020000 potentially causing smoke/smell event (attached).

## 2. INTRODUCTION:

This Advisory Wire (AW) is to inform operators that Liebherr has issued a Service Information Letter (SIL) (Ref. 1.1) to gather data related to ACM failures leading to smoke/smell entering the cabin/flight compartment.

## 3. DESCRIPTION:

In April 2022, Liebherr released VSB 3471-21-01 to introduce new and improved Thrust Bearings PN S1018A035 and S1019A035 into the ACM. This modification is identified with the letter Amdt 'A' engraved on the ACM identification plate.

The reason for the VSB is to resolve smoke/smell entering the aircraft caused by ACM failures at the thrust bearing level. As of today, approximately 70 ACM units post Amdt 'A' are operating in the field. In the last several months, Bombardier and Liebherr have received notice that four of these Amdt 'A' units have failed prematurely, causing a smoke/smell events in the cabin.

Bombardier and Liebherr are currently investigating all ACM failures (pre or post Amdt 'A') leading to smoke/smell entering into the cabin and flight compartment. So far, the investigations were unable to confirm the cause of the smoke/smell events. Therefore, to heighten awareness of the issue and to gather data, this AW is being published along with the attached Liebherr SIL (Ref. 1.1) which will help us in our investigation.

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#### 4. ACTION:

Bombardier recommends operators to familiarize themselves with the content of this AW and the Liebherr SIL (Ref. 1.1) to ensure that Bombardier and Liebherr can gather the necessary data being requested.

Should you have any questions pertaining to this AW or require additional information, please contact your Bombardier Field Service Representative (FSR) or the Customer Response Center (CRC 24/7) team.