

Bombardier Inc.
P.O. Box 6087, Station Centre-Ville
Montréal, Québec,
Canada H3C 3G9
Telephone (514) 855-7469
Fax (514) 855-7072
<http://www.cic.bombardier.com>

BOMBARDIER
AEROSPACE



Business Aircraft

ADVISORY WIRE

AW300-27-34-0010

DATE: August 9, 2004

PAGE: 1 OF 3

FROM: BOMBARDIER BUSINESS AIRCRAFT CUSTOMER SUPPORT

ADVISORY WIRE

REFERENCE NO: AW300-27-34-0010

SUBJECT: Integrated Standby Instrument (ISI) Airspeed
Indication Fluctuation & Potential STALL
PROTECT FAIL and/or RUDDER LIMITER
FAULT Message(s)

EFFECTIVITY: BD100-1A10 (20006 & Subs)

ATA: 27-31/ 27-32 /34-22

To obtain this document by e-mail,
report transmission errors or update your distribution profile; please contact (514) 855-7469.
If you require technical information concerning this wire, please call your Field Service

ADVISORY WIRE

AW300-27-34-0010

DATE: August 9, 2004

PAGE: 2 OF 3

1.0 INTRODUCTION:

This Advisory Wire is to inform Operators of a potential condition while encountering moisture in flight, where the Integrated Standby Instruments (ISI) airspeed indication may fluctuate, sometimes associated with Crew Alerting System (CAS) messages “STALL PROTECT FAIL” caution and “RUDDER LIMITER FAULT” advisory.

2.0 DESCRIPTION:

Flight crews have reported that while encountering precipitation and/or icing conditions, the ISI airspeed was observed to fluctuate and would subsequently resume normal operation in dry air. This fluctuation would randomly be associated with a “STALL PROTECT FAIL” caution message and in other cases, the “RUDDER LIMITER FAULT” advisory message will also be posted.

Early investigation findings have revealed that the P-3 pitot probe water ingestion/drainage capacity may have been exceeded, resulting in momentary (less than 1 second) loss of the total air pressure affecting airspeed readout of the ISI system only.

If a “STALL PROTECT FAIL” caution message occurs during the above condition, the Maintenance Data Computer (MDC) fault history for that flight will report an “ISI/ADC MACH DISAGREE” under the SPC, indicating that a difference of Mach 0.05 or more between the ISI and the Air Data Computer (ADC) was detected.

The “RUDDER LIMITER FAULT” advisory message may also be posted if the Horizontal Stabilizer Electronic Control Unit (HSTECU) detects a difference of 20 knots or more between the ISI and the MADC. In this case the “RUDDER LIMITER FAULT” message would be preceded by a “STALL PROTECT FAIL” message.



ADVISORY WIRE

AW300-27-34-0010

DATE: August 9, 2004

PAGE: 3 OF 3

3.0 ACTION:

There is no action for the Operators to take at this time. Bombardier is investigating the root cause in order to provide an effective solution to rectify this nuisance condition. We will keep you inform of any new developments as they arise.

Note that if the “STALL PROTECT FAIL” and /or “RUDDER LIMITER FAULT” message is permanently posted, it should **not** be considered a nuisance condition and troubleshooting of the failed system is required using SmartFix associated with the following procedure for the “STALL PROTECT FAIL”.

If the “STALL PROTECT FAIL” is permanently posted on the ground troubleshooting should include:

- 1) Visual inspection of the drain tube for the P-3 pitot line per AMM TASK 34-11-09-616-801 to ensure that no moisture is present.
- 2) Verification of MADC and ISI airspeed values displayed on the ground, if difference of 25 knots or more is observed or the “NO ISI CAS INPUT” message is in the MDC current faults.

Note that the Primary Flight Displays (PFD) and ISI minimum static airspeed numerical value is set to 40 knots, therefore it may be necessary to simulate airspeed above 40 knots (i.e.: 100 knots) to actually see the split between the PFDs airspeed display and ISI while on ground.

If conditions are satisfied it may be indicative of ISI failure.

Note: SmartFix troubleshooting models will be updated to version "27-32_STALL_BD100-004" & 27-21_RUDDER_CTRL_BD100-002 to reflect the subject Advisory Wire.