

Advisory Wire

REFERENCE NO: AW700-34-0687 Rev. 3

INFORMATION
TYPE:

Maintenance
Operational

ATA: 34-43

EFFECTIVITY:

Global 5000 feat. Vision Flight Deck
(9386, 9401, 9445 - 9862, and 9868 -
9997)
Global 6000
(9313, 9381, 9432 to 9860, 9863 -
9871, 9873 - 9997 and 60005 -
61999)
Global 5500, Global 6500
(9861, 9872, 60001 - 61999)
Global 7500 (70006 – 70999)

**SUBJECT: Surface Management System
(SMS) / Takeoff Landing
Awareness Function (TLAF) –
“NOT A RUNWAY” conditions**

1. REFERENCES:

- 1.1. Bombardier Service Bulletin (SB) 700-34-5001 / 700-34-6001, Modification – Surface Management System – Activation of Surface Management System (SMS) Takeoff and Landing Awareness Function (TLAF)
- 1.2. Bombardier Service Bulletin (SB) 700-34-5507 / 700-34-6507, Modification – Surface Management System – Activation of Surface Management System (SMS) Takeoff and Landing Awareness Function (TLAF)
- 1.3. Global 5000GVFD/5500/6000/6500 Bombardier Airplane Flight Manual (AFM) Supplement 41 – Surface Management System / Take-off and Landing Alert Function
- 1.4. Global 7500 Bombardier AFM 02-08 Limitations, System – Surface Management System / Take-off and Landing Alert Function
- 1.5. Global 5000GVFD/5500/6000/6500 Bombardier Flight Crew Operating Manual (FCOM) 2 – 17 - Navigation, 10 - Description, Surface Management System / Takeoff and Landing Awareness Function
- 1.6. Global 7500 Flight Crew Operating Manual (FCOM) 2 – 02 - Avionics, 55 - Description, Threat Awareness Systems - Surface Management System / Takeoff and Landing Awareness Function
- 1.7. Bombardier Quick Reference Handbook (QRH) Volume 1 – Normal Procedures (Flight Compartment Originating Check and Start Check)
- 1.8. Flight Operation Notifications Manual (FONM),
 - 1.8.1. AVNC-001 Unexpected “Not a Runway” Alert when Departing from a Runway Starter Extension
 - 1.8.2. AVNC-016 Unexpected “Not a Runway” Alert on the Ramp or during Taxi

- 1.9. Rockwell Collins Operator Guide, Flight Management System (FMS) Bombardier Global Vision 5000/5500/6000/6500, Surface Management System (SMS) section or,
Rockwell Collins Operator Guide, Flight Management System (FMS) Bombardier Global Vision 7500, Surface Management System (SMS) section

2. INTRODUCTION:

The revision of this Advisory Wire (AW) is associated to the release of FON AVNC-016 (Ref 1.8.2). As a result, only FON (Ref. 1.8.1 & 1.8.2) will be used to provide future updates on these conditions. In order to assist Bombardier's investigation, this AW continues to provide the approach / landing reporting questionnaire (see page 4) for the crew to fill out upon SMS inflight alert.

These in-service SMS/ TLAF observations are related to "NOT A RUNWAY" call out and associated displayed message on the Primary Flight Display (PFD) and Head-Up Display (HUD) in different situations both on the ground or in flight.

3. DESCRIPTION:

The SMS/TLAF system provides surface situational awareness at airports. The TLAF function provides an aural alert and visual indication on the PFD and HUD in the form of relevant advisory and warning information to the crew prior to committing to a takeoff or a landing.

3.1 "NOT A RUNWAY"

The observed conditions "NOT A RUNWAY" call out and associated displayed message on PFD/HUD can be classified under three (3) different phases of operation:

- Parked / Taxiing
- Takeoff
- Approach

3.1.1 Parked / Taxiing

Transferred to FON AVNC-016 (Ref. 1.8.2)

3.1.2 During takeoff events

Transferred to FON AVNC-001 (Ref. 1.8.1)

3.1.3 During approach / landing

The TLAF compares the aircraft's track and position to the runway of the destination airport entered into the FMS flight plan to ensure the landing is executed on the correct runway. However, observations were made by some flight crews that even when aligned with correct runway, the "NOT A RUNWAY" alert was triggered. These events were investigated and Flight Data Recorder (FDR) download were analyzed but did not identify any anomaly and therefor it is assumed that the system operated correctly.

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Flight crews should be familiar with the guidance and triggering logic as detailed in the different flight manuals (Ref. 1.3 to 1.8) and Rockwell Collins FMS Operator Guide (Ref. 1.9). In the event of such condition occurs, refer to the questionnaire at the end of this AW to report the condition and provide information to assist in the investigation.

The “NOT A RUNWAY” alert may also be triggered due to the geometry of some approaches and especially RNP-AR (Required Navigation Performance-Authorization Required) ones that could bring the aircraft out of the trapezoid-shaped detection zone (Ref. 1.5 & 1.6) during final approach. Flight crew may consider disabling the SMS alerting with the “RUNWAY” button on the TAWS/SMS aural alert panel in these cases in accordance with Rockwell Collins FMS Operator Guide (Ref. 1.9).

4. ACTION:

Operators should be familiar with the observation and associated information in the new FON (Ref. 1.8.1 & 1.8.2) and this AW as well as the guidance in references 1.3 to 1.7. As a reminder, in airspace not referenced to WGS-84 (World Geodetic System) or NAD-83 (North American Datum) and during QFE operations the SMS “RUNWAY” switch must be selected to “OFF” per the AFM (Ref. 1.3 & 1.4).

In order to assist Bombardier’s investigation, we would appreciate operators’ assistance when experiencing SMS inflight alerts during approach / landing by reporting the condition with details as per the questionnaire at the end of this AW. Electronic fillable PDF is also available with the AW on the Bombardier Customer Portal.

Should you have any queries pertaining to this AW or reporting an occurrence associated with the questionnaire, please contact your Bombardier Field Service Representative (FSR) or the Customer Response Center (CRC).

Questionnaire – Data Recording - SMS/TLAF “NOT A RUNWAY” on approach/final landing

Rev NC

- 1- A/C SN: _____
- 2- A/C Registration : _____
- 3- Contact name: _____
- 4- Phone number: _____
- 5- Contact email: _____
- 6- Aural message: NOT A RUNWAY ☐ SHORT RUNWAY ☐ Others ☐ _____
- 7- Phase of Flight: Approach ☐ Final ☐
- 8- Destination Airport: ID _____ A/C within 10 NM range: YES ☐ NO ☐
- 9- Runway ID programmed in FMS: Arrival _____ ALTN _____

Upon occurrence press Pilot Event Marker (PEM) and record:

- 10- Date of event (dd/mm/yyyy): _____
- 11- GMT Time: _____
- 12- A/C Distance to runway threshold: _____
- 13- A/C Heading: _____
- 14- A/C Track angle: _____
- 15- A/C Altitude: _____
- 16- A/C Position: Latitude: _____ Longitude: _____
- 17- Crosswind: Direction : _____ Intensity : _____
- 18- Other reported CAS messages or OMS fault messages: _____

Provide relevant AFD pictures of:

- GNSS sensor page showing Mode, HFOM/VFOM (Horizontal/Vertical Figure of Merit)
- Chart page showing highlighted runway
- Map page showing A/C position

Note: Video is also a good way to capture the above checks

After landing, download QAR (.QAR or .DAT file) preferred or FDR (.FDR or .DAT file) data

Note: Ensure proper file format, we received downloads that we were unfortunately not able to correctly review when sent in different formats

Additional comments: _____

Send to: tech.services.global.series@aero.bombardier.com