

# Advisory Wire

REFERENCE NO:	AW700-21-0703	INFORMATION TYPE:	Operational
ATA:	21-31	EFFECTIVITY:	Global Express / XRS (9002 - 9312, 9314 - 9380, 9384 - 9429) Global 5000 (9127 to 9383, 9389 to 9400, 9404 to 9431 and 9998) Global 5000 feat. Vision Flight Deck (9386, 9401, 9445 - 9997) Global 6000 (9381, 9432 -9997)
SUBJECT:	<b>Pressurization sequence during multiple steps approach</b>		

## 1. REFERENCES:

1.1. Bombardier [Airplane Flight Manual](#) (AFM) , CSP 700-1V

## 2. INTRODUCTION:

This Advisory Wire is to inform Operators about cabin pressure variations condition during approaches at airports that require multiple steps down.

## 3. DESCRIPTION:

Some Operators reported issues with the pressurization system, in flight, during approach to Teterboro airport (KTEB). This airport often requires flight crews to perform multiple levels off at low altitude. Based on the data retrieved from Flight Data Recorders (FDR), if the pressurization system is in primary mode, the cabin altitude may start to climb during a step and will adjust at the next descent with a greater cabin altitude rate of descent. This phenomenon may be perceived as a “pressure bump” felt by the flight crew and passengers.

The pressurization system has a single MANUAL mode and two AUTO modes. The MANUAL mode does not use the Cabin Pressure Controller (CPC) calculations and strictly relies on the crew to manually operate the outflow valves via the MAN ALT cockpit switch to achieve the desired cabin altitude.

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The two AUTO modes consist of a PRIMARY and a SECONDARY mode.

## PRIMARY MODE:

In flight, the primary mode is engaged as long as:

- AUTO PILOT and vertical navigation (VNAV) are engaged.
- FMS information is valid.
- LAND ELEV FMS / MAN selector switch is set to FMS.

The primary mode (or predictive) is designed to calculate a pressurization curve based on the top of climb (TOC), time to go, cruise flight level and landing field elevation. In this mode, the cabin altitude main source of calculation is the FMS information. If any of the primary criteria is not met, the system will revert to the secondary mode.

## SECONDARY MODE:

In secondary mode (or reactive), the CPC will adjust the cabin altitude with the actual aircraft altitude and vertical speed in accordance with its limitations based on the theoretical cabin altitude schedule.

During all phases of flight, if a transfer occurs from one AUTO mode to another, the cabin pressure will be re-adjusted based on the new calculation. This can cause the cabin altitude to climb or descend compared to the previous mode calculations.

The secondary mode is more efficient to prevent the cabin altitude variations when performing approaches to airports requiring step levels.

## 4. ACTION:

To alleviate the impact on the flight crew and passengers inherent to the condition described above, Operators should be aware of the different modes of operations of the CPC and observe the following recommendations:

- Reduce the switching between Primary and Secondary mode to reduce the cabin altitude re-calculation by the CPC.
- If a multiple steps down approach is expected, the crew may select the landing elevation manually with the LDG MAN/FMS switch prior to takeoff. This will leave the aircraft in Secondary mode for the duration of the flight.
- The use of the MANUAL mode in multiple steps down approaches is not recommended considering the addition of the pressurization control management responsibility to the flight crew's workload.

Bombardier recommend that flight crew's review and follow the appropriate Airplane Flight Manual (Ref 1.1) procedures associated with the pressurization.

Should you have any technical queries pertaining to this Advisory Wire, please contact your local [Field Service Representative](#) (FSR).