

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>

# ADVISORY WIRE

## AW700-32-0138, Rev. 2

<b>DATE:</b> January 21, 2004	<b>PAGE:</b> 1 OF 18
<b>ADDRESS TO:</b>	<b>A/C:</b>
<b>FAX NUMBER:</b>	
<b>FROM:</b> Bombardier Business Aviation Services	
<b>ADVISORY WIRE</b>	
<b>REFERENCE NO:</b> AW700-32-0138, Rev.2	
<b>SUBJECT:</b> Loss of Normal Braking Upon Landing	
<b>EFFECTIVITY:</b> BD700-1A10 (9002 and Subs.)	
<b>ATA:</b> 32-43	
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# ADVISORY WIRE

## AW700-32-0138, Rev. 2

**DATE:** January 21, 2004

**PAGE** 2 OF 18

### 1.0 REFERENCES

- 1.1 AW700-32-0138 Loss of Normal Braking Upon Landing issued December 12, 2003
- 1.2 AW700-32-0138 Rev.1 Loss of Normal Braking Upon Landing issued December 24, 2003
- 1.3 Draft Aircraft Flight Manual (AFM) Temporary Revision (TR) 700/37-1 attached: CSP 700-1 for 96,000 lb MTOW and CSP 700-1A for 98,000 lb MTOW.

### 1.0 INTRODUCTION

Revision 2 of this Advisory Wire informs Operators that the draft AFM TR BD 700/37 issued with reference 1.2, has been amended to draft TR BD 700/37-1 (reference 1.3).

### 3.0 DESCRIPTION

TR 700/37-1 notifies Operators of revised procedures to verify proper brake operation. The test can be done during either:

- Flight Compartment Safety Check – First Flight of the day
- Taxi Check– First Flight of the day

TR 37-1 also includes a change to the Non-Normal Procedures when a BRAKE FAULT message is posted on EICAS.

Please note that this TR has been approved by Transport Canada only; approval by FAA and JAA is in progress.

### 4.0 ACTION

Operators are encouraged to follow reference 1.3 procedures until the AFM revisions are officially released. Bombardier and Hydro-Aire are continuing to investigate this issue and further information will be communicated as it becomes available.

## RECORD OF TEMPORARY REVISIONS

TR No.	Subject	DOT Approval	Incorporated By / Date
TR BD700/34-1	Temporary revision to advise the flight crew of maximum operating airspeed in RVSM airspace, and clarify that the 200 ft maximum altimeter difference to remain in RVSM airspace must be between the coupled altimeter and either of the other two primary altimeters. <Re-issued>	W. Jupp Dec 01/2003	
TR BD700/35	Temporary revision to advise the flight crew that headsets must be worn during ferry flights.	W. Jupp Apr 01/2003	Superseded by TR BD700/35-1
TR BD700/35-1	Temporary revision to advise the flight crew that headsets must be worn during ferry flights. <Re-issued>	W. Jupp Dec 01/2003	
TR BD700/36	Temporary revision to introduce -8 / -9 FMQGC.	W. Jupp Nov 28/2003	Superseded by TR BD700/36-1
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TR BD700/37	Cancelled prior to issue.		Superseded by TR BD700/37-1
TR BD700/37-1	Temporary revision to advise the flight crew of a new procedure to verify proper brake operation pre-flight, and to revise the NORM BRAKE FAIL and BRAKE FAULT procedures. <Applicable to Canadian registered airplanes only>	W. Jupp Jan 16/2004	

**LETTER OF TRANSMITTAL**

**REASON FOR ISSUE**

Temporary revision to advise the flight crew of a new procedure to verify proper brake operation pre-flight, and to revise the NORM BRAKE FAIL and BRAKE FAULT procedures.

**EFFECTIVITY**

- Applicable to Canadian registered airplanes only.

**INSTRUCTIONS FOR INSERTION OF THIS TEMPORARY REVISION**

- (1) Insert the Record of Temporary Revisions in the front portion of the Airplane Flight Manual.
- (2) Insert the pages of this Temporary Revision in the Airplane Flight Manual as instructed at the top of each page.
- (3) Record the date of insertion of this Temporary Revision on the Record of Temporary Revisions Page.
- (4) Retain this page for record purposes.

**LIST OF PAGES AFFECTED BY THIS TEMPORARY REVISION**

- 03-13-3
- 04-02-1
- 04-02-5
- 05-16-2.

INSERT IN EMERGENCY PROCEDURES  
FACING PAGE 03-13-3

**REASON FOR ISSUE**

Temporary revision to advise the flight crew of a new procedure to verify proper brake operation pre-flight, and to revise the NORM BRAKE FAIL and BRAKE FAULT procedures.

**EFFECTIVITY**

- Applicable to Canadian registered airplanes only.

**ACTION**

Replace content of paragraph C. **NORM BRAKE FAIL (Warning)** with the following:

**C. NORM BRAKE FAIL (Warning) or Loss of Normal Braking**



Loss of normal braking may be indicated by BRAKE FAULT (Advisory) and subsequent lack of deceleration, without a NORM BRAKE FAIL (Warning). If BRAKE FAULT advisory message is posted, normal braking may not be available.

**On approach:**

- (1) Actual landing distance ..... Increase as applicable by factor given below:

WITHOUT THRUST REVERSERS	WITH THRUST REVERSERS
1.95 (95%)	1.78 (78%)

**After touchdown:**

- (1) PARK / EMER BRAKE handle .....Pull gradually until stopped.

Tire blowout may occur if emergency braking is applied aggressively.

Gradual pulling of the parking / emergency brake handle, will allow direct braking, without anti-skid. This will assist in achieving a slow deceleration roll out and complete stop.

Exercise caution when operating the parking / emergency brake handle. A slow gradual pull is recommended, to attain the most effective results.

- (2) Use of maximum thrust reverse is recommended.

**A. Flight Compartment Safety Check — First Flight of the Day (Cont'd)**

- 22. Brakes..... Press
  - Motion of inboard brake calipers..... Verify
- 23. BRAKE CTL CH A circuit breaker..... IN
  - BRAKE FAULT (Advisory)..... Verify cleared
- 24. BRAKE CTL CH B circuit breaker..... OUT
  - BRAKE FAULT (Advisory)..... Verify displayed
- 25. Brakes..... Press
  - Motion of inboard brake calipers..... Verify
- 26. BRAKE CTL CH B circuit breaker..... IN
  - BRAKE FAULT (Advisory)..... Verify cleared
- 27. Parking brake..... ON
- 28. IRS (all)..... NAV
- 29. FMS / NDU (Lasertrack)..... Programmed / On
- 30. Clocks..... Set

INSERT IN NORMAL PROCEDURES  
FACING PAGE 04-02-1

**REASON FOR ISSUE**

Temporary revision to advise the flight crew of a new procedure to verify proper brake operation pre-flight, and to revise the NORM BRAKE FAIL and BRAKE FAULT procedures.

**EFFECTIVITY**

- Applicable to Canadian registered airplanes only.

**ACTION**

Replace content of paragraph **A. Flight Compartment Safety Check – First Flight of the Day** with the following:

**A. Flight Compartment Safety Check — First Flight of the Day**

1. Airplane and flight publications .....On board
2. Circuit breakers / Fuel / Oil panels..... Closed / OFF
3. Flight compartment emergency equipment ..... Checked
4. Fire discharge handles (3) .....In / Vertical
5. Hydraulic pumps ..... OFF
6. NOSE STEER switch..... OFF
7. Landing gear lever ..... Down
8. Flight spoiler lever..... Retracted, set to 0
9. Thrust levers .....IDLE
10. ENG RUN switches ..... OFF
11. Weather radar (both) ..... OFF
  - Lightning Sensor System (if installed)..... OFF
12. Slat / Flap lever ..... Matched
13. RAT manual release handle .....Stowed
14. Landing gear manual release handle .....Stowed
15. Battery master switch ..... ON / checked
16. EMS circuit breakers..... Checked / acknowledge
17. Lamp, aural warning and fire tests..... Accomplish
18. NAV lights ..... ON
19. APU ..... START
20. Hydraulic pump 3A ..... ON

**NOTE**

Steps 21 thru 26 may be omitted, but the brake operation **MUST** then be verified during the Taxi Check.

21. BRAKE CTL CH A circuit breaker..... OUT
  - BRAKE FAULT (Advisory) ..... Verify displayed



**A. Taxi Check (Cont'd)**

- 10. Fuel quantity and balance..... Checked
  - XFEED SOV ..... Closed
- 11. Slat / Flap lever.....Set for departure
- 12. Trims.....Set for departure
- 13. Weather radar (LSS)..... SBY

INSERT IN NORMAL PROCEDURES  
FACING PAGE 04-02-5

**REASON FOR ISSUE**

Temporary revision to advise the flight crew of a new procedure to verify proper brake operation pre-flight, and to revise the NORM BRAKE FAIL and BRAKE FAULT procedures.

**EFFECTIVITY**

- Applicable to Canadian registered airplanes only.

**ACTION**

Replace content of paragraph **4.A. Taxi Check** with the following:

**A. Taxi Check**



Be prepared to use the PARKING EMER BRAKE if the brakes do not function properly during the following check.

**NOTE**

If not verified during the Safety Check, the brake operation must be verified (First Flight of the day) on each brake control channel during the Taxi Check.

The airplane must be stationary when the BRAKE CTL CH A (B) circuit breakers are being reset and remain stationary until the BRAKE FAULT (advisory) message clears.

Steps 1 thru 6 may be omitted if brake operation verified during the Safety Check.

1. BRAKE CTL CH A circuit breaker..... OUT
  - BRAKE FAULT (Advisory) ..... Verify displayed
2. Brakes..... Checked to a full stop
3. BRAKE CTL CH A circuit breaker..... IN
  - BRAKE FAULT (Advisory) ..... Verify cleared
4. BRAKE CTL CH B circuit breaker..... OUT
  - BRAKE FAULT (Advisory) ..... Verify displayed
5. Brakes..... Checked to a full stop
6. BRAKE CTL CH B circuit breaker..... IN
  - BRAKE FAULT (Advisory) ..... Verify cleared
7. Brakes..... Checked
8. Thrust Reversers (First Flight of the Day)..... Checked
9. Flight instruments .....Checked and set
  - Flight director ..... Set for take-off



INSERT IN NON-NORMAL PROCEDURES  
FACING PAGE 05-16-2

**REASON FOR ISSUE**

Temporary revision to advise the flight crew of a new procedure to verify proper brake operation pre-flight, and to revise the NORM BRAKE FAIL and BRAKE FAULT procedures.

**EFFECTIVITY**

- Applicable to Canadian registered airplanes only.

**ACTION**

Replace content of paragraph **I. BRAKE FAULT (Advisory)** with the following:

**I. BRAKE FAULT (Advisory)**



Loss of normal braking may be indicated by BRAKE FAULT (Advisory) and subsequent lack of deceleration, without a NORM BRAKE FAIL (Warning). If BRAKE FAULT advisory message is posted, normal braking may not be available.

- (1) AUTOBRAKE switch .....OFF

**On approach:**

- (2) Actual landing distance ..... Increase as applicable by factor given below:

WITHOUT THRUST REVERSERS	WITH THRUST REVERSERS
1.95 (95%)	1.78 (78%)

**After touchdown:**

- (3) PARK / EMER BRAKE handle ..... Prepare to use if normal braking is unavailable.

Tire blowout may occur if emergency braking is applied aggressively.

Gradual pulling of the parking / emergency brake handle, will allow direct braking, without anti-skid. This will assist in achieving a slow deceleration roll out and complete stop.

Exercise caution when operating the parking / emergency brake handle. A slow gradual pull is recommended, to attain the most effective results.

- (4) Use of maximum thrust reverse is recommended.

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TR BD700/36-1	Temporary revision to introduce -8 / -9 FMQGC. <Re-issued>	W. Jupp Dec 01/2003	Superseded by REV 40, dtd Dec 15/2003
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- 04-02-5
- 05-16-2.

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FACING PAGE 03-13-3

**REASON FOR ISSUE**

Temporary revision to advise the flight crew of a new procedure to verify proper brake operation pre-flight, and to revise the NORM BRAKE FAIL and BRAKE FAULT procedures.

**EFFECTIVITY**

- Applicable to Canadian registered airplanes only.

**ACTION**

Replace content of paragraph **C. NORM BRAKE FAIL (Warning)** with the following:

**C. NORM BRAKE FAIL (Warning) or Loss of Normal Braking**



Loss of normal braking may be indicated by BRAKE FAULT (Advisory) and subsequent lack of deceleration, without a NORM BRAKE FAIL (Warning). If BRAKE FAULT advisory message is posted, normal braking may not be available.

**On approach:**

- (1) Actual landing distance ..... Increase as applicable by factor given below:

WITHOUT THRUST REVERSERS	WITH THRUST REVERSERS
1.95 (95%)	1.78 (78%)

**After touchdown:**

- (1) PARK / EMER BRAKE handle .....Pull gradually until stopped.

Tire blowout may occur if emergency braking is applied aggressively.

Gradual pulling of the parking / emergency brake handle, will allow direct braking, without anti-skid. This will assist in achieving a slow deceleration roll out and complete stop.

Exercise caution when operating the parking / emergency brake handle. A slow gradual pull is recommended, to attain the most effective results.

- (2) Use of maximum thrust reverse is recommended.

**A. Flight Compartment Safety Check — First Flight of the Day (Cont'd)**

- 22. Brakes..... Press
  - Motion of inboard brake calipers..... Verify
- 23. BRAKE CTL CH A circuit breaker..... IN
  - BRAKE FAULT (Advisory)..... Verify cleared
- 24. BRAKE CTL CH B circuit breaker..... OUT
  - BRAKE FAULT (Advisory)..... Verify displayed
- 25. Brakes..... Press
  - Motion of inboard brake calipers..... Verify
- 26. BRAKE CTL CH B circuit breaker..... IN
  - BRAKE FAULT (Advisory)..... Verify cleared
- 27. Parking brake..... ON
- 28. IRS (all)..... NAV
- 29. FMS / NDU (Lasertrack)..... Programmed / On
- 30. Clocks..... Set

INSERT IN NORMAL PROCEDURES  
FACING PAGE 04-02-1

**REASON FOR ISSUE**

Temporary revision to advise the flight crew of a new procedure to verify proper brake operation pre-flight, and to revise the NORM BRAKE FAIL and BRAKE FAULT procedures.

**EFFECTIVITY**

- Applicable to Canadian registered airplanes only.

**ACTION**

Replace content of paragraph **A. Flight Compartment Safety Check – First Flight of the Day** with the following:

**A. Flight Compartment Safety Check — First Flight of the Day**

1. Airplane and flight publications .....On board
2. Circuit breakers / Fuel / Oil panels..... Closed / OFF
3. Flight compartment emergency equipment ..... Checked
4. Fire discharge handles (3) .....In / Vertical
5. Hydraulic pumps ..... OFF
6. NOSE STEER switch..... OFF
7. Landing gear lever ..... Down
8. Flight spoiler lever..... Retracted, set to 0
9. Thrust levers .....IDLE
10. ENG RUN switches ..... OFF
11. Weather radar (both) ..... OFF
  - Lightning Sensor System (if installed)..... OFF
12. Slat / Flap lever ..... Matched
13. RAT manual release handle .....Stowed
14. Landing gear manual release handle .....Stowed
15. Battery master switch ..... ON / checked
16. EMS circuit breakers..... Checked / acknowledge
17. Lamp, aural warning and fire tests..... Accomplish
18. NAV lights ..... ON
19. APU ..... START
20. Hydraulic pump 3A ..... ON

**NOTE**

Steps 21 thru 26 may be omitted, but the brake operation **MUST** then be verified during the Taxi Check.

21. BRAKE CTL CH A circuit breaker..... OUT
  - BRAKE FAULT (Advisory) ..... Verify displayed



**A. Taxi Check (Cont'd)**

- 10. Fuel quantity and balance..... Checked
  - XFEED SOV ..... Closed
- 11. Slat / Flap lever.....Set for departure
- 12. Trims.....Set for departure
- 13. Weather radar (LSS)..... SBY

INSERT IN NORMAL PROCEDURES  
FACING PAGE 04-02-5

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**EFFECTIVITY**

- Applicable to Canadian registered airplanes only.

**ACTION**

Replace content of paragraph **4.A. Taxi Check** with the following:

**A. Taxi Check**



Be prepared to use the PARKING EMER BRAKE if the brakes do not function properly during the following check.

**NOTE**

If not verified during the Safety Check, the brake operation must be verified (First Flight of the day) on each brake control channel during the Taxi Check.

The airplane must be stationary when the BRAKE CTL CH A (B) circuit breakers are being reset and remain stationary until the BRAKE FAULT (advisory) message clears.

Steps 1 thru 6 may be omitted if brake operation verified during the Safety Check.

1. BRAKE CTL CH A circuit breaker..... OUT
  - BRAKE FAULT (Advisory) ..... Verify displayed
2. Brakes..... Checked to a full stop
3. BRAKE CTL CH A circuit breaker..... IN
  - BRAKE FAULT (Advisory) ..... Verify cleared
4. BRAKE CTL CH B circuit breaker..... OUT
  - BRAKE FAULT (Advisory) ..... Verify displayed
5. Brakes..... Checked to a full stop
6. BRAKE CTL CH B circuit breaker..... IN
  - BRAKE FAULT (Advisory) ..... Verify cleared
7. Brakes..... Checked
8. Thrust Reversers (First Flight of the Day)..... Checked
9. Flight instruments .....Checked and set
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INSERT IN NON-NORMAL PROCEDURES  
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**ACTION**

Replace content of paragraph **I. BRAKE FAULT (Advisory)** with the following:

**I. BRAKE FAULT (Advisory)**



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- (1) AUTOBRAKE switch .....OFF

**On approach:**

- (2) Actual landing distance ..... Increase as applicable by factor given below:

WITHOUT THRUST REVERSERS	WITH THRUST REVERSERS
1.95 (95%)	1.78 (78%)

**After touchdown:**

- (3) PARK / EMER BRAKE handle ..... Prepare to use if normal braking is unavailable.

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