



# AIRWORTHINESS DIRECTIVE

*This Airworthiness Directive (AD) is issued pursuant to Canadian Aviation Regulation (CAR) 521.427. No person shall conduct a take-off or permit a take-off to be conducted in an aircraft that is in their legal custody and control, unless the requirements of CAR 605.84 pertaining to ADs are met. Standard 625 - Aircraft Equipment and Maintenance Standards Appendix H provides information concerning alternative means of compliance (AMOC) to ADs.*

**Number:**

CF-2019-33

**Effective Date:**

27 September 2019

**ATA:**

32

**Type Certificate:**

A-177

**Subject:**

Landing Gear – Trailing Arm Assembly Axle Bore Corrosion

**Applicability:**

Bombardier Inc. model BD-700-1A10 and BD-700-1A11 aeroplanes, serial numbers 9001 through 9879 and 9998 and serial numbers 60001 and subsequent.

**Compliance:**

As indicated below, unless already accomplished.

**Background:**

Four main landing gear (MLG) trailing arm assemblies were found with compromised paint finish and/or corrosion on the axle bore inner diameters. An investigation concluded that the root cause was improper removal of contaminants during manufacturing. The affected trailing arm assemblies have the potential for improper adhesion between the anti-corrosion layers, which could lead to corrosion on the inner diameter of the MLG trailing arm assembly axle bore. This condition, if not corrected, could lead to MLG collapse.

Initially, this AD requires an inspection to determine if affected MLG trailing arm assemblies are installed. If an affected MLG trailing arm assembly is installed, to mitigate the risk of MLG collapse, affected MLG trailing arm assemblies are required to undergo a first and second inspection to detect surface finish discrepancies on the inner diameter of the MLG trailing arm assembly axle bore, reworking as required to correct any surface finish discrepancies discovered on the inner diameter of the MLG trailing arm assembly axle bore. The requirement to conduct a first and/or second inspection is terminated by the replacement of the paint and primer on the axle bore inner diameters of the affected MLG trailing arm assemblies or by the replacement of affected MLG trailing arm assemblies with conforming units. This AD also prohibits the installation of any affected, non-conforming MLG trailing arm assembly as a replacement part on BD-700-1A10 and BD-700-1A11 aeroplanes.

**Corrective Actions:**

Note: For the purpose of this AD, an affected MLG trailing arm assembly is a MLG trailing arm assembly of part number (P/N) 21410-107 with a serial number listed in Appendix 4 Table 1 of the Bombardier (BA) Service Bulletins (SBs) referenced in Table A below, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

**Part I – Applicable to BD-700-1A10 and BD-700-1A11 Aeroplanes, Serial Numbers 9001 through 9879 and 9998 – Inspection of MLG Trailing Arm Assembly P/N and Serial Number**

Within 7 months from the effective date of this AD, inspect for installation of affected MLG trailing arm assemblies, in accordance with Part A of the Accomplishment Instructions of the applicable BA Service Bulletin (SB) referenced in Table A below, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

**Part II – Applicable to BD-700-1A10 and BD-700-1A11 Aeroplanes, Serial Numbers 9001 through 9879 and 9998 – First Inspection of the MLG Trailing Arm Assembly Surface Finish**

Before the applicable “1<sup>st</sup> Inspection Due by Date (MM/DD/YY)” listed for each affected MLG trailing arm assembly serial number in Appendix 4 Table 1 of the applicable BA SB referenced in Table A below, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, for each affected MLG trailing arm assembly, inspect for surface finish discrepancies on the inner diameter of the affected MLG trailing arm assembly axle bore and rework as required, in accordance with Part B of the Accomplishment Instructions of the applicable, above-mentioned BA SB.

For aeroplanes with no affected MLG trailing arm assemblies installed, Part II of this AD is not required.

For aeroplanes that have satisfied the requirements of Part IV of this AD on all affected MLG trailing arm assemblies, Part II of this AD is not required.

**Part III – Applicable to BD-700-1A10 and BD-700-1A11 Aeroplanes, Serial Numbers 9001 through 9879 and 9998 – Second Inspection of the MLG Trailing Arm Assembly Surface Finish**

Within 33 months from the completion of the first inspection in Part II of this AD, for each affected MLG trailing arm assembly, inspect for surface finish discrepancies on the inner diameter of the affected MLG trailing arm assembly axle bore and rework as required, in accordance with Part C of the Accomplishment Instructions of the applicable BA SB referenced in Table A below, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

For aeroplanes with no affected MLG trailing arm assemblies installed, Part III of this AD is not required.

For aeroplanes that have satisfied the requirements of Part IV of this AD on all affected MLG trailing arm assemblies, Part III of this AD is not required.

**Part IV – Applicable to BD-700-1A10 and BD-700-1A11 Aeroplanes, Serial Numbers 9001 through 9879 and 9998 – Primer and Paint Replacement on the MLG Trailing Arm Assembly Axle Bore Inner Diameter**

Within 120 months of MLG trailing arm assembly entry into service, for each affected MLG trailing arm assembly, replace the primer and paint and apply the corrosion preventive compound on the inner diameter of the affected MLG trailing arm assembly axle bore, in accordance with Part D of the Accomplishment Instructions of the applicable BA SB referenced in Table A below, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

For aeroplanes with no affected MLG trailing arm assemblies installed, Part IV of this AD is not required.

Completion of Part IV of this AD on all affected MLG trailing arm assemblies terminates the requirements of Part II and Part III of this AD.

**Part V – Applicable to BD-700-1A10 and BD-700-1A11 Aeroplanes, Serial Numbers 9001 through 9879 and 9998 and Serial Numbers 60001 and Subsequent – Parts Installation Prohibition**

As of the effective date of this AD, it is prohibited for anyone to allow the installation of an affected MLG trailing arm assembly as a replacement part on BD-700-1A10 and BD-700-1A11 aeroplanes, unless that affected MLG trailing arm assembly is marked “SB700-32-041ABC” on its modification plate and near its P/N.

**Table A: SB References**

<b>Aeroplane Model</b>	<b>BA SB</b>
BD-700-1A10	SB 700-32-039 Basic Issue, dated 3 May 2019
BD-700-1A10	SB 700-32-6016 Basic Issue, dated 3 May 2019
BD-700-1A11	SB 700-1A11-32-026 Basic Issue, dated 3 May 2019
BD-700-1A11	SB 700-32-5016 Basic Issue, dated 3 May 2019

**Authorization:**

For the Minister of Transport,

*ORIGINAL SIGNED BY*

Rémy Knoerr  
Chief, Continuing Airworthiness  
Issued on 13 September 2019

**Contact:**

Hilary Ross, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail [AD-CN@tc.gc.ca](mailto:AD-CN@tc.gc.ca) or any Transport Canada Centre.