



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-2019-33R1

Effective Date:

6 February 2020

ATA:

32

Type Certificate:

A-177

Subject:

Landing Gear – Trailing Arm Assembly Axle Bore Corrosion

Revision:

Supersedes AD CF-2019-33, issued 13 September 2019

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.

AD CF-2019-33 required an inspection to determine if affected MLG trailing arm assemblies were installed. If an affected MLG trailing arm assembly was installed, to mitigate the risk of MLG collapse, AD CF-2019-33 required affected MLG trailing arm assemblies 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 was 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. AD CF-2019-33 also prohibited the installation of any affected, non-conforming MLG trailing arm assembly as a replacement part on BD-700-1A10 and BD-700-1A11 aeroplanes.

Since AD CF-2019-33 was issued, Transport Canada (TC) became aware that the compliance time of Part I of AD CF-2019-33 may not allow sufficient time for the completion of Part II of AD CF-2019-33 for the oldest affected MLG trailing arm assemblies. This AD revision, CF-2019-33R1, revises the compliance time of Part I to allow sufficient time for the completion of Part II. AD CF-2019-33R1 also revises Part I to clarify that a review of aeroplane maintenance records may be used to confirm if an affected MLG trailing arm assembly is installed.

Corrective Actions:

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, TC.

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 3 months from the release date of Revision 01 of the applicable BA Service Bulletin (SB) referenced in Table A below, 27 November 2019, inspect for installation of affected MLG trailing arm assemblies, in accordance with Part A of the Accomplishment Instructions of the applicable BA SB referenced in Table A below, or later revisions approved by the Chief, Continuing Airworthiness, TC.

A review of the aeroplane maintenance records is acceptable to make the identification required by Part I of this AD, if the P/N and serial numbers of the installed MLG trailing arm assemblies can be conclusively identified from that review.

Incorporation of Part A of the Accomplishment Instructions of the Basic Issue of the applicable BA SB referenced in Table A below, dated 3 May 2019, prior to the effective date of this AD, satisfies the requirements of Part I of this AD.

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 “1st 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, TC, 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.

Incorporation of Part B of the Accomplishment Instructions of the Basic Issue of the applicable BA SB referenced in Table A below, dated 3 May 2019, on each affected MLG trailing arm assembly, prior to the effective date of this AD, satisfies the requirements of Part II of this AD.

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, TC.

Incorporation of Part C of the Accomplishment Instructions of the Basic Issue of the applicable BA SB referenced in Table A below, dated 3 May 2019, on each affected MLG trailing arm assembly, prior to the effective date of this AD, satisfies the requirements of Part III of this AD.

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, TC.

Incorporation of Part D of the Accomplishment Instructions of the Basic Issue of the applicable BA SB referenced in Table A below, dated 3 May 2019, on each affected MLG trailing arm assembly, prior to the effective date of this AD, satisfies the requirements of Part IV of this AD.

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 AD CF-2019-33, 27 September 2019, it is prohibited to install 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

Aeroplane Model	BA SB
BD-700-1A10	SB 700-32-039 Revision 01, dated 27 November 2019
BD-700-1A10	SB 700-32-6016 Revision 01, dated 27 November 2019
BD-700-1A11	SB 700-1A11-32-026 Revision 01, dated 27 November 2019
BD-700-1A11	SB 700-32-5016 Revision 01, dated 27 November 2019

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 23 January 2020

Contact:

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