
AIRWORTHINESS DIRECTIVE

On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/CESSNA 208/16 and issues the following AD under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

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**AD/CESSNA 208/16
Amdt 1**

Flap System Bellcranks

3/2005

Applicability: Group 1 aircraft: This AD retains the actions from AD/CESSNA 208/14 (FAA AD 2003-21-04), and adds all flap bellcranks to the applicability:

Model 208 aircraft, serial numbers 20800001 through 20800369.

Model 208B aircraft, serial numbers 208B0001 through 208B1014, 208B1017, 208B1018, 208B1020 through 208B1024, 208B1026, and 208B1029 through 208B1033.

Group 2 aircraft: This AD retains the requirement of AD/CESSNA 208/13 (FAA AD 2002-22-17), of repetitive inspections of the inboard forward flap bellcranks for cracks, and eventual replacement; and provides the option of installing the new design flap bellcrank to increase the life limits and terminate the repetitive inspections:

Models 208 and 208B aircraft, all serial numbers.

Requirement: 1. For Group 1 aircraft:

- a. Inspect the right inboard forward flap bellcrank assembly for cracks, deformation, and missing/incomplete welds, in accordance with Cessna Caravan Service Bulletin (SB) No. CAB03-11 Revision 1, dated 24 September 2003.

The affected flap bellcrank incorporates one of the following part numbers:

2622083-18, 2622281-2, 2692001-2, or 2622281-12.

- b. Inspect the left inboard forward bellcrank for cracks, deformation, and missing/incomplete welds, in accordance with SB No. CAB03-11 Revision 1.

The affected flap bellcrank incorporates one of the following part numbers:

2622083-15 or 2622281-1.

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- c. Inspect the inboard aft bellcrank for cracks, deformation, and missing incomplete welds, in accordance with SB No. CAB03-11 Revision 1.

The affected flap bellcrank incorporates one of the following part numbers:

2622267-1, 2622267-2, 2622267-7, 2622267-8, 2622083-1, or 2622083-2.

- d. Inspect the outboard bellcrank for cracks, deformation, and missing/incomplete welds, in accordance with SB No. CAB03-11 Revision 1.

The affected flap bellcrank incorporates one of the following part numbers:

2622091-1, 2622091-2, 2622091-9, 2622091-10, 2622091-17, or 2622091-18.

- e. If cracks, deformation, or missing/incomplete welds are found during the inspections required by Requirements 1.a. through 1.d.; accomplish one of the following:

(i) Replace the bellcrank with a new bellcrank; or,

(ii) Prohibit the use of flaps through the actions of Requirement 3 of this Directive.

For the replacement, action in accordance with the Accomplishment Instructions of SB No. CAB02-12 Revision 1, dated 27 January 2003, and the Accomplishment Instructions of Cessna Caravan Service Kit No. SK208-148A, dated 27 January 2003, or refer to the Maintenance Manual, Chapter 27, Flap System - Maintenance Practices, for bellcrank removal and installation procedures.

For the flap prohibition, use the information in the Temporary Revision 208PHTR02, dated 23 September 2003.

2. For Group 2 aircraft:

- a. Repetitive Inspections: Inspect, using eddy current method, any inboard forward flap bellcrank part number 2622281-2, 2622281-12, 2692001-2, or FAA-approved equivalent part number for cracks, in accordance with the Inspection Instructions of Cessna Caravan Service Bulletin (SB) No. CAB02-1, dated 11 February 2002, and the applicable maintenance manual.

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- b. Initial replacement: Replace any inboard forward flap bellcrank, part number 2622281-2, 2622281-12, 2692001-2, or FAA-approved equivalent part number, in accordance with the Instructions of SB No. CAB02-1, and the applicable maintenance manual. For new flap bellcrank part number 2622311-7 or FAA-approved equivalent part number, follow the Accomplishment Instructions of SB No. CAB02-12 Revision 1, and the Accomplishment Instructions of Service Kit No. SK208-148A. Replace with either (i) or (ii) below, or prohibit the use of the flaps through the actions of Requirement 3 of this Directive:
 - (i) a new flap bellcrank with the same part number 2622281-2, 2622281-12, 2692001-2, or FAA-approved equivalent part number; or,
 - (ii) a new flap bellcrank part number 2622311-7 or FAA-approved equivalent part number.
- c. Life Limits (Repetitive Replacements):
 - (i) The life limit for the inboard forward flap bellcranks part number 2622281-2, 2622281-12, 2692001-2, or FAA-approved equivalent part number is 7,000 landings. Repetitive inspections every 500 landings begin at 4,000 landings (refer Requirement 2.a.).
 - (ii) The life limit for the inboard forward flap bellcranks part number 2622311-7 or FAA-approved equivalent part number is 40,000 landings. No repetitive inspections are required on these bellcranks.

Accomplish replacements in accordance with Requirement 2.b. service information.

Note 1: Inboard forward flap bellcranks part number 2622281-2, 2622281-12, or 2692001-2 with 7,000 landings or more do not have to be replaced until 75 landings after 20 February 2003 (the effective date of AD/CESSNA 208/13).

- 3. Insert Temporary Revision, 208PHTR02, into the applicable pilot's operating handbook and approved aircraft flight manual. Make an entry into the aircraft records showing compliance with this requirement.
 - a. This procedure applies to Models 208 and 208B land aircraft. For other aircraft configurations (for example, amphibians and floatplanes), the aircraft must be operated with the flaps up per the appropriate aircraft flight manual supplement.

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- b. This procedure allows for applicable deviation from the Master Minimum Equipment List (MMEL) for these aircraft until the flap bellcrank is replaced. The applicable MMEL requirements go back into effect at the time of flap bellcrank replacement.

Note 2: Corrected FAA AD 2004-17-01 Amdt 39-13772 refers.

- Compliance:
- 1.a. Within 25 landings after 29 October 2003 (the effective date of AD/CESSNA 208/14). If landings are unknown, hours time in service multiplied by 1.25 is acceptable. For the purposes of this Directive, substitution of 20 hours time in service for 25 landings is acceptable.
 - 1.b. Within 25 landings after 29 September 2004. If landings are unknown, hours time in service multiplied by 1.25 is acceptable. For the purposes of this Directive, substitution of 20 hours time in service for 25 landings is acceptable.
 - 1.c. Within 25 landings after 29 September 2004. If landings are unknown, hours time in service multiplied by 1.25 is acceptable. For the purposes of this Directive, substitution of 20 hours time in service for 25 landings is acceptable.
 - 1.d. Within 25 landings after 29 September 2004. If landings are unknown, hours time in service multiplied by 1.25 is acceptable. For the purposes of this Directive, substitution of 20 hours time in service for 25 landings is acceptable.
 - 1.e. Replace or do the flap prohibition actions before further flight after the inspection findings. If the flap prohibition option is chosen, the replacement must be accomplished within 200 hours time in service after the inspection findings. After the new flap bellcrank is installed, the Temporary Revision 208PHTR02 should be removed.
 - 2.a. Initially inspect upon the accumulation of 4,000 landings on the bellcrank or within 250 landings after 20 February 2003 (the effective date of AD/CESSNA 208/13), whichever occurs later. Repetitively inspect thereafter at intervals not to exceed 500 landings until 7,000 landings are accumulated; at which time replace as required in Requirements 2.b. and 2.c. of this Directive. No repetitive inspections are required when a part number 2622311-7 (or FAA-approved equivalent part number) inboard forward flap bellcrank is installed.
 - 2.b. If cracks are found, replace or do the flap prohibition actions before further flight after the Requirement 2.a. inspection. If the flap prohibition option is chosen, the replacement must be accomplished within 200 hours time in service after the inspection findings. After the new flap bellcrank is installed, the Temporary Revision 208PHTR02 should be removed. If no cracks are found, initially replace upon the accumulation of 7,000 landings on the bellcrank or within 75 landings after 20 February 2003 (the effective date of AD/CESSNA 208/13), whichever occurs later.

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2.c. Replace at the applicable referenced life limits.

3. As required.

Note 3: The compliance times of this Directive are presented in landings instead of hours time in service. If the number of landings is unknown, hours time in service may be used by multiplying the number of hours time in service by 1.25.

The compliance times remain unchanged by this issue.

This Amendment becomes effective on 17 March 2005.

Background: This Directive is the result of (since FAA issued AD 2002-22-17) Cessna's design of a new flap bellcrank with a life limit of 40,000 landings (instead of 7,000 landings), and (since FAA issued AD 2003-21-04) further analysis and examination of cracks and missing/incomplete welds in all of the bellcranks. The actions specified in this Directive are intended to prevent failure of any bellcrank due to cracks, deformation, or missing/incomplete welds. This failure could lead to damage to the flap system and surrounding structure and result in reduced or loss of control of the aircraft.

Amendment 1 is issued in response to the issue of a corrected copy of the related FAA AD, which corrects certain parts of the text. The only part requiring correction of this Directive was Requirement 1.d. part number 2622091-18, which was previously stated as 2622091-28.



David Punshon
Delegate of the Civil Aviation Safety Authority

4 February 2005