Airworthiness Directive Schedule

Aeroplanes

Twin Commander 500 and 600 Series

30 May 2013

Notes

1. This AD schedule is applicable to Twin Commander 500 and 600 series aircraft manufactured under Federal Aviation Administration (FAA) Type Certificate Numbers:

Aircraft Model:	FAA TC No:	Known Name:
500	6A1	Commander 500
500-A	6A1	Commander 500
500-S	6A1	Shrike Commander
680F	2A4	Grand Commander
690	2A4	Turbo Commander
690A	2A4	Turbo Commander
690B	2A4	Turbo Commander
695A	2A4	Commander 1000

2. The Federal Aviation Administration (FAA) is the National Airworthiness Authority (NAA) responsible for the issue of State of Design Airworthiness Directives (ADs) for Twin Commander 500 and 600 series aircraft. State of Design ADs applicable to these aircraft can be obtained directly from the FAA web site. The link to the FAA web site is available on the CAA web site at http://www.caa.govt.nz/Airworthiness_Directives/states_of_design.html

3. The date above indicates the amendment date of this schedule.

4. New or amended ADs are shown with an asterisk *

Contents

DCA/AC/101 Cancelled - purpose fulfilled

DCA/AC/102 Carburettor Vent Lines - Modification

Applicability: Model 680 series S/N 231 through 580

Requirement: Modify per Aero Commander SB 45

Compliance: By 1 July 1958

DCA/AC/103 Horizontal and Vertical Stabilisers - Modification

Applicability: Models 500 and 680 S/N 151 through 710

Requirement: Modify per Aero Commander SB 50

Compliance: By 31 March 1959

DCA/AC/104 Main Landing Gear Actuating Cylinders - Modification

Applicability: All models with S/N 231 through 892

Requirement: Modify per Aero Commander SB 65

Compliance: By 31 January 1961

DCA/AC/105 Main Landing Gear Torque Scissors - Inspection and Modification

Applicability: All models with S/N 231 through 892 equipped with Electrol 400 series MLG

Requirement: Inspect and modify per Aero Commander SB 67A

Compliance: Within the next 100 hours TIS and thereafter reinspect at intervals not exceeding 100 hours TIS

DCA/AC/106 Flap Pulley Assembly - Inspection and Modification

Applicability: All models with S/N 231 through 710

Requirement: Inspect and modify per Aero Commander SB 55

Compliance: By 31 March 1959

DCA/AC/107 Oil Shut-off Valve CB - Modification

Applicability: All models with S/N 245 through 710

Requirement: Modify per Aero Commander SB 58

Compliance: By 31 August 1959

DCA/AC/109 Power Brake Valve - Modification

Applicability: All models with S/N 75, and 91 through 650 and any others with nosewheel steering

Requirement: Modify per Aero Commander SB 48

Compliance: By 31 October 1958

DCA/AC/110 Cancelled - purpose fulfilled

DCA/AC/111 Cancelled - purpose fulfilled

DCA/AC/112 Fuel Line Routing - Modification

Applicability: All models with S/N 231 through 690

Requirement: Modify per Aero Commander SB 54

Compliance: By 31 March 1959

DCA/AC/113 Cancelled - purpose fulfilled

DCA/AC/114 Heater Warning Placard - Modification

Applicability: All models with S/N 231 through 892 equipped with fuel vent heaters

Requirement: Modify per Aero Commander SB 64

Compliance: By 30 September 1960

DCA/AC/116 Cancelled - purpose fulfilled

DCA/AC/117 Cancelled - purpose fulfilled

DCA/AC/118 Cancelled - purpose fulfilled

DCA/AC/120 Cancelled - purpose fulfilled

DCA/AC/123 Cancelled - purpose fulfilled

DCA/AC/124 Horizontal Stabiliser Forward Spar - Inspection and Modification

Applicability: Models 500, 500A, 680F, 680FL with S/N 618 through 1420 except 1395, 1403, 1410, 1413 and 1416

Requirement: Inspect and modify per Aero Commander SB 85

Compliance: Within the next 100 hours TIS

Effective Date: 30 June 1964

DCA/AC/128 Main Landing Gear Piston - Lock Pin Replacement

Applicability: All models with S/N 871, 875 and 893 through 1535 as detailed in SB 83A

Requirement: Replace lock pins per Aero Commander SB 83A

Compliance: Within the next 25 hours TIS

Effective Date: 31 August 1965

DCA/AC/129 Cancelled - purpose fulfilled

DCA/AC/130 Cancelled - purpose fulfilled

DCA/AC/132 Magnesium Fuel Sump - Replacement

Applicability: All models (except 500A, 500B, 500U, 680T and 1121) with S/N 231 through 1450

Requirement: Replace fuel sump per Aero Commander SB 91

Compliance: By 31 May 1968

DCA/AC/133 Rudder Torque Tube - Modification

Applicability: All models with S/N 2 through 1727

Requirement: Incorporate drain hole per Aero Commander SL 203

Compliance: Within the next 100 hours TIS

Effective Date: 31 August 1967

DCA/AC/134 Wing Front Spar Lower Cap - Modification

Applicability: All models with S/N 1 through 1492 except 1490, 1495 and 1500

Requirement: Modify per Aero Commander Service Change 81B

Compliance: Before further flight

Effective Date: 31 December 1967

DCA/AC/135 Engine Mounts - Modification

Applicability: All model 500

Requirement: Modify per Aero Commander SB 68A

Compliance: By 30 September 1968

DCA/AC/136 Fuel Drain Lines - Modification

Applicability: All models with S/N 1 through 1170 except as detailed in SB 78

Requirement: Modify per Aero Commander SB 78

Compliance: Before further flight

Effective Date: 31 August 1968

DCA/AC/137 Circuit Breaker, Panel Insulator - Inspection

Applicability: All models with S/N 1 through 892

Requirement: Inspect per Aero Commander SL 123

Compliance: At intervals not exceeding 100 hours TIS until replaced per SL 123

Effective Date: 31 August 1968

DCA/AC/138 Elevator Torque Tube - Inspection and Modification

Applicability: All models with S/N 1 through 1230

Requirement: Inspect and modify per Aero Commander SL 124

Compliance: Within the next 100 hours TIS

Effective Date: 31 August 1968

DCA/AC/139 Cancelled - purpose fulfilled

DCA/AC/140A Front Spar Lower Cap - Inspection

Applicability: All model 500, 500A, 500B, 500S, 500U, 520, 560, 560A, 560E, 560F, 680, 680E, 680F, 680FL(P), 680FL, 680T, 680V, 680W, 681, and 720.

Requirement: To prevent failure of the wing structure caused by cracks in the lower front spar cap, accomplish the following:

Inspect the wing front spar lower cap at left and right wing station 24 per Twin Commander SB 90C. If cracks are found, prior to further flight, replace the wing front spar lower cap per SB 90C.

(FAA AD 94-04-13 refers)

Compliance: Within next 50 hours TIS, or 500 hours after the wing lower cap was replaced, whichever occurs later, and thereafter at intervals not to exceed 500 hours TIS.

Effective Date: DCA/AC/140 - 30 April 1970
DCA/AC/140A - 13 May 1994

DCA/AC/141 Main Landing Gear Axle - Modification

Applicability: Models 500 and 680, series as detailed in SL 244

Requirement: Modify per Rockwell International SL 244

Compliance: At next wheel removal

Effective Date: 31 May 1972

DCA/AC/142 Fuel Cap Assemblies - Replacement

Applicability: Models 500 and 680, series with S/N 231 through 1854; Model 680FL, S/N 1261 through 1738

Requirement: Embody Aero Commander Custom kit no. 87A.

(FAA AD 73-06-02 refers)

Compliance: By 31 July 1973

DCA/AC/143 Elevators - Modification

Applicability: Models 500 and 680, series with S/N 231 through 3155

Requirement: Install bob-weights per Rockwell International SB 128 or SB 129, as applicable.

(FAA AD 75-12-09 refers)

Compliance: By 31 October 1974

DCA/AC/144 Elevator Bob-Weight Installation - Modification

Applicability: Models 500 and 680, series with S/N 1 through 3155 that complied with SB 129 prior to Rev 2

Requirement: Modify per Rockwell International SB 152

Compliance: By 31 October 1974

DCA/AC/145 Flexible Fuel Tanks - Inspection

Applicability: All model 500, 680 and 690 series

Requirement: Accomplish the following:

1. Inspect per Part II of Rockwell International SB 165

2. If Goodyear BTC-39 tanks found fitted, inspect per Part I of Rockwell International SB 165

(Goodyear SB FT-77-1 and FAA AD 78-05-06 also refer)

Compliance: 1. Within the next 25 hours TIS or 30 days whichever is the sooner

2. Within the next 100 hours TIS or 6 months, whichever is the sooner, thereafter at intervals not exceeding 12 months

Effective Date: 12 May 1978

DCA/AC/146 Rudder and Elevator Trim Controls - Inspection and Modification

Applicability: All model 500, 680, 690 series

Requirement: Inspect and modify per Rockwell international SL 317

Compliance: Within the next 100 hours TIS, unless already accomplished

Effective Date: 23 June 1978

DCA/AC/147 Elevator Bob-Weight Installation - Inspection and Modification

Applicability: All model 500, 500A, 500S and 680F

Requirement: Inspect and modify per Rockwell International SB 179 Parts I and II respectively

Compliance: Inspection - at intervals not exceeding 25 hours TIS until modified

Modification - within the next 100 hours TIS

Effective Date: 3 April 1981

DCA/AC/148 Elevator Trim Tab - Inspection

Applicability: Models 500 and 680 series S/N 1 through 1854; 500S S/N 1755 through 1876 and 3050 through 3323; 690 series S/N 11001 through 11566 and 695A S/N 96001 through 96055, 96059, 96060, 96063 through 96069, 96072, 96075, 96078 and 96085

Requirement: Inspect per Gulfstream Aerospace SB 198A Part I. Repair cracked ribs per Part II before further flight

Compliance: At intervals not exceeding 100 hours TIS until Gulfstream Aerospace SB 198A Part II embodied

Effective Date: 13 December 1985

DCA/AC/149 Operating Limitation - Placard

Applicability: All model 690, 690A, 690B, 690C, 690D, 695, 695A, and 695B, with ignition systems having a continuous duty cycle of less than 1 hour

Requirement: To prevent engine flame out, fabricate a placard which, in letters not less than 2.5 mm high reads, 'THIS AIRCRAFT IS PROHIBITED FROM FLIGHT INTO KNOWN ICING" and install it on instrument panel in full view of pilot.

Note: Operating limitation no longer applicable when one of the following is accomplished:

1. Ignition systems modified to increase continuous duty cycle to 1 hour or more per Gulfstream SI -211 and -212 or
2. Automatic relight ignition systems installed per Gulfstream Custom Kits 138 or 139 (as applicable).

(FAA AD 87-24-07 refers)

Compliance: Within the next 50 hours TIS

Effective Date: 18 March 1988

DCA/AC/150A Wing Lower Spar - Inspection

Applicability The following model and S/N aircraft that do not have the wing spar lower cap replaced per one of the three modifications specified within the requirement of this airworthiness directive.

Models	S/Ns
500U, 680FL, 680FL(P), 680W	1731 through 1854
500S	1755 through 3323
681	6001 through 6072
685	12000 through 12066
690, 690A, 690B	11001 through 11566

Requirement: To prevent wing structural damage that if not detected and corrected could progress to the point of failure, accomplish the following:-

Ultrasonically inspect each area of the wing front spar lower cap for corrosion per Twin Commander SB 208A. If corrosion is found to be greater than 100% of the allowable service limits referenced in Table 1 of SB 208A, prior to further flight, replace the wing front spar lower cap in accordance with one of the following modifications:

(i) Twin Commander Custom Kit CK-144, Revision A for models 685, 690, 690A and 690B.

(ii) Twin Commander Custom Kit CK-145 for models 500S, 500U, 680W, 681, 680FL and 680FL(P).

(iii) AVIADESIGN, Inc. STC SA5740NM, for models 690, 690A and 690B.

(FAA AD 94-04-14 refers)

Compliance: Within next 3 months unless already accomplished and thereafter at intervals not to exceed;

36 months if no corrosion is found

30 months if corrosion is found that is less than 50% of the allowable service limits referenced in Table 1 of SB 208A

12 months if corrosion is found between 50 to 100% of the allowable service limits referenced in Table 1 of SB 208A

Effective Date: DCA/AC/150 9 September 1988
DCA/AC/150A 10 May 1996

DCA/AC/151A Flap System - Inspection

Applicability: All model;

500	500-A	500-B	500-S	500-U
520	560	560-A	560-E	560-F
680	680-E	680-F	680FL	680FL(P)
680FP	680T	680V	680W	681
685	690	690A	690B	690C
690D	695	695A	695B	720

Requirement: To prevent failure of a flap system cable caused by fatigue, which could result in loss of control of the airplane, accomplish the following:-

1. Perform the following per the ACCOMPLISHMENT INSTRUCTIONS section of Twin Commander SB 226, Revision 1.

Inspect all flap system cable grooves for the correct width;

Inspect all flap system pulleys for rubbing on the support brackets;

Inspect all flap pulley cable assemblies for frayed wires; and

Mark pulleys that have been inspected and have the correct groove radius with two parallel lines as specified in the service bulletin.

2. If any of the above discrepancies are found, prior to further flight after the inspections required by paragraph 1, rework or replace the affected part per Twin Commander SB 226, Revision 1.

3. A pulley that does not meet the following criteria shall no longer be fitted to any aircraft.

A pulley that has been inspected, found acceptable, and marked with two parallel lines in accordance with paragraph (a), including all subparagraphs, of this AD;

A pulley that has been reworked in accordance with an FAA-approved procedure and is marked “SB 226”; or

A new pulley that is marked “SB 226-NEW”.

(FAA AD 98-07-17 refers)

Compliance: 1. Within next 300 hours TIS.

2. Prior to further flight after the inspections required by paragraph 1.

3. From 5 June 1998

Effective Date: DCA/AC/151 - 13 May 1994
DCA/AC/151A - 5 June 1998

DCA/AC/152 Wing Rib - Inspection and Modification

Applicability: Model 685 S/N 12000 through 12066; models 690, 690A and 690B S/N 11001 through 11566.

Requirement: To prevent failure of the wing structure caused by a cracked wing front spar lower cap or cracked or deformed wing rib at Wing Station (WS) 39, accomplish the following:-

1. Modify the wing ribs at WS 39 per Twin Commander SB 211.

2. Eddy current inspect the wing front spar lower cap and lower wing stringer No. 7 at WS 39 for cracks and corrosion per SB 211. Prior to further flight treat or replace the wing front spar lower cap as necessary per SB 211.

(FAA AD 94-04-12 refers)

Compliance: Within next 50 hours TIS.

Effective Date: 13 May 1994

DCA/AC/153 Vertical Stabiliser - Inspection and Modification

Applicability Model 685 S/N 1200 through 12066, model 690 S/N 11000 through 11079, model 690A S/N 11100 through 11344, model 690B S/N 11350 through 11566, model 690C S/N 11600 through 11735, model 690D S/N 15001 through 15042, model 695 S/N 95000 through 95084 and model 695A S/N 96001 through 96100.

Requirement: To prevent failure of the vertical stabiliser, accomplish the following:-

Inspect the vertical stabiliser for cracks per Twin Commander SB 218 Revision 2.

If damage or cracks are found within the limits of figures 1 and 2 of SB 218 Rev 2, before further flight modify the vertical stabiliser per Part II of SB 218 Rev 2.

If damage or cracks are found outside the limits figures 1 and 2 of SB 218 Rev 2, or if cracks intersect, before further flight, replace the damaged parts with new parts per the applicable maintenance manual instructions. The requirements of this AD still apply when damaged parts are replaced, unless the stabiliser is modified per Part II of SB 218 Rev 2.

If no cracks are found; reinspect at intervals not to exceed 500 hours TIS, or before further flight modify the vertical stabiliser per Part II of SB 218 Rev 2. The modification may be accomplished before further flight after any repetitive inspection as terminating action for the repetitive inspections provided no cracks are found.

(FAA AD 95-13-02 refers)

Compliance: At 2000 hours TIS on vertical stabiliser or within next 50 hours TIS, whichever is the later. Thereafter inspect at intervals not to exceed 500 hours TIS until modified per Part II of SB 218 Rev 2.

Effective Date: 1 September 1995

DCA/AC/154 Flight in Turbulence - Speed Reduction

Applicability Model 690B S/N 11350 through 11566.

Requirement: To prevent structural damage caused by flight in turbulence, which could result in the loss of the aircraft, install the placard and revise the aircraft flight manual per Twin Commander Kit No. SB220-7.

(FAA AD 95-19-18 refers)

Compliance: Within next 50 hours TIS.

Effective Date: 24 November 1995

DCA/AC/155A Wing Leading Edge Attachment - Inspection and Modification

Applicability: Models 500, 500A, 500B, 500S, 500U, 520, 560, 560A, 560E, 560F, 680, 680E, 680F, 680FL, 680FLP, 680FP, 680T, 680V, 680W, 681, 685, 690, 690A, 690B, 690C, 690D, 695, 695A, 695B and 720.

Requirement: To prevent cracks at the wing to fuselage attach points, which, if not detected and corrected, could cause structural failure and loss of the aircraft, accomplish the following:-

(a) For all models except Models 520, 560, 690C and 695, accomplish the actions in the following table per the Compliance section and PART I, II, and III of the ACCOMPLISHMENT INSTRUCTIONS sections of Twin Commander SB 223, Revision 2.

	A	B	C
PART I	Upon the accumulation of 6,000 hours TTIS or within the next 100 hours TIS, whichever occurs later, install access holes in left and right wing leading edges and inspect the forward attach brackets and straps for cracks. For any aircraft that have wings modified with titanium leading edges through an STC, remove the wing root farings to accomplish the required inspections, in lieu of installing the access holes. (Accomplish per PART I of Compliance Section in Twin Commander SB 223, Rev 2.	If cracked, prior to further flight, replace the brackets and straps or repair the part by an approved repair scheme (see paragraph (b) of this AD). Then accomplish PART II of this AD. (Accomplish per PART I of Compliance Section in Twin Commander SB 223 Rev 2.	If no cracks are found, repeat inspection at intervals not to exceed 1,000 hours until cracks are found, replace the cracked part or repair by an approved repair scheme (see paragraph (b) of this AD), then accomplish PART II. (Accomplish per PART I of Compliance Section in Twin Commander SB 223 Rev 2.

PART II	Inspect for cracks at the wing leading edge close-outs, upper & lower return flange radius, fuselage frame where tee bracket attaches, inboard side of attach bracket and frame tee bracket. (Accomplish per PART II of Compliance Section in Twin Commander SB 223 Rev 2.	If cracked, prior to further flight, replace any cracked part or repair the part with an approved repair scheme (see paragraph (b) of this AD). If no cracks are found, continue to repetitively inspect at 1,000 hour TIS intervals. (Accomplish per PART II of Compliance Section in Twin Commander SB 223 Rev 2.	After repair or replacement is accomplished, continue to inspect at intervals not to exceed 6,000 hours. (Accomplish per PART II of Compliance Section in Twin Commander SB 223 Rev 2.
PART III	For pressurised airplanes, at 6,000 hr,. total TIS or within the next 100 hours TIS whichever occurs later, inspect fuselage station (F.S.) 100 for cracks. For non-pressurised aircraft, at 12,000 hours TTIS or within the next 100 hours TIS whichever occurs later, inspect F.S. 100 for cracks. (Accomplish per PART III of Compliance Section in Twin Commander SB 223 Rev 2.	If cracked, prior to further flight, repair with an approved repair scheme (see paragraph (b) of this AD), and continue to inspect at intervals not to exceed 1,000 hours. (Accomplish per PART III of Compliance Section in Twin Commander SB 223 Rev 2.	If no cracks, repeat inspection at intervals not to exceed 1,000 hours until cracks are found, then accomplish PART III B of this AD. (Accomplish per PART III of Compliance Section in Twin Commander SB 223 Rev 2.

(b) Obtain an FAA-approved repair scheme from the manufacturer.

(c) For Twin Commander Models 520 and 560 upon the accumulation of 6,000 hours total TIS or within the next 100 hours TIS, whichever occurs later, accomplish PART II of the table in paragraph (a) of this AD. Accomplish PART III per the compliance times in the above table of paragraph (a). These models are excluded from the wing leading edge access hole installation in PART I of the table in paragraph (a) of this AD.

(d) For Twin Commander Models 690C and 695, accomplish PARTS I and II per the compliance times in the above table of paragraph (a). These Models are excluded from PART III of the table in paragraph (a) of this AD.

(FAA AD 98-08-19 refers)

Compliance: Compliance is required at the times specified within the requirement of this airworthiness directive, unless already accomplished per DCA/AC/155.

Effective Date: DCA/AC/155 - 29 August 1997
DCA/AC/155A - 5 June 1998

DCA/AC/156 Severe Icing Conditions - Flight Manual Revision

Applicability: Models 500, 500-A, 500-B, 500-S, 500-U, 520, 560, 560-A, 560-E, 560-F, 680, 680-E, 680FL(P), 680T, 680V, 680W, 681, 685, 690, 690A, 690B, 690C, 690D, 695, 695A, 695B, and 720.

Requirement: To minimise the potential hazards associated with operating the aircraft in severe icing conditions (by providing more clearly defined procedures and limitations associated with such conditions), incorporate the following into the Aircraft Flight Manual (AFM):-

1. Limitations Section of the Aircraft Flight Manual

"WARNING

Severe icing may result from environmental conditions outside of those for which the aircraft is certificated. Flight in freezing rain, freezing drizzle, or mixed icing conditions (supercooled liquid water and ice crystals) may result in ice build-up on protected surfaces exceeding the capability of the ice protection system, or may result in ice forming aft of the protected surfaces. This ice may not be shed using the ice protection systems, and may seriously degrade the performance and controllability of the aircraft.

• During flight, severe icing conditions that exceed those for which the aircraft is certificated shall be determined by the following visual cues. If one or more of these visual cues exists, immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the icing conditions.

- Unusually extensive ice accumulation on the airframe and windshield in areas not normally observed to collect ice.

- Accumulation of ice on the upper surface of the wing aft of the protected area.

- Accumulation of ice on the engine nacelles and propeller spinners farther aft than normally observed.

• Since the autopilot, when installed and operating, may mask tactile cues that indicate adverse changes in handling characteristics, use of the autopilot is prohibited when any of the visual cues specified above exist, or when unusual lateral trim requirements or autopilot trim warnings are encountered while the aircraft is in icing conditions.

• All wing icing inspection lights must be operative prior to flight into known or forecast icing conditions at night. This supersedes any relief provided by the Master Minimum Equipment List (MMEL)."

2. Normal Procedures Section of the Aircraft Flight Manual

"THE FOLLOWING WEATHER CONDITIONS MAY BE CONDUCIVE TO SEVERE IN-FLIGHT ICING:

• Visible rain at temperatures below 0 degrees Celsius ambient air temperature.

• Droplets that splash or splatter on impact at temperatures below 0 degrees Celsius ambient air temperature.

PROCEDURES FOR EXITINGTHE SEVERE ICING ENVIRONMENT:

These procedures are applicable to all flight phases from takeoff to landing. Monitor the ambient air temperature. While severe icing may form at temperatures as cold as -18 degrees Celsius, increased vigilance is warranted at temperatures around freezing with visible moisture present. If the visual cues specified in the Limitations Section of the AFM for identifying severe icing conditions are observed, accomplish the following:

• Immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the severe icing conditions in order to avoid extended exposure to flight conditions more severe than those for which the aircraft has been certificated.

• Avoid abrupt and excessive manoeuvring that may exacerbate control difficulties.

• Do not engage the autopilot.

• If the autopilot is engaged, hold the control wheel firmly and disengage the autopilot.

• If an unusual roll response or uncommanded roll control movement is observed, reduce the angle-of-attack.

• Do not extend flaps when holding in icing conditions. Operation with flaps extended can result in a reduced wing angle-of-attack, with the possibility of ice forming on the upper surface further aft on the wing than normal, possibly aft of the protected area.

• If the flaps are extended, do not retract them until the airframe is clear of ice.

• Report these weather conditions to Air Traffic Control."

Note: This may be accomplished by inserting a copy of this AD in the AFM or by incorporating a manufacturer's flight manual revision that contains the wording per this AD.

3. Flight Crew Notification
Operators must ensure that flight crew are aware of the flight manual revision.

(FAA AD 98-20-34 refers)

Compliance: By 30 November 1998

Effective Date: 23 October 1998

DCA/AC/157 Ice Protection Systems – Flight Manual Revision

Applicability: Models 680, 680E, 680F, 680FL, 680FL(P), 680T, 680V, 680W, 681, 690, 685, 690A, 690B, 690C, 690D, 695, 695A, and 695B equipped with pneumatic de-icing boots.

Requirement: To prevent reduced controllability of the aircraft due to adverse aerodynamic effects of ice adhering to the aircraft prior to the first deicing cycle, revise the Limitations Section of the Aircraft Flight Manual (AFM) to include the following:-

"Except for certain phases of flight where the AFM specifies that deicing boots should not be used (e.g., take-off, final approach, and landing), compliance with the following is required.

Wing and Tail Leading Edge Pneumatic Deicing Boot System, if installed, must be activated:

- At the first sign of ice formation anywhere on the aircraft, or upon annunciation from an ice detector system, whichever occurs first; and

- The system must either be continued to be operated in the automatic cycling mode, if available; or the system must be manually cycled as needed to minimize the ice accretions on the airframe.

The wing and tail leading edge pneumatic deicing boot system may be deactivated only after leaving icing conditions and after the aircraft is determined to be clear of ice."

(FAA AD 2000-02-30 refers)

Note: This may be accomplished by inserting a copy of this AD in the AFM or by incorporating a manufacturer's flight manual revision that contains the wording per this AD. Operators must ensure that flight crew are aware of the flight manual revision.

Compliance: By 27 May 2000

Effective Date: 27 April 2000

DCA/AC/158 Aileron Hinge Fittings – Inspection and Repair

Applicability: All model 690, 690A and 690B aircraft.

Requirement: To detect and correct cracks in the support structures of the inboard and center aileron hinge fittings on both wings, which could result in aileron failure, inspect per Twin Commander Aircraft LLC Alert Service Bulletin (ASB) 236A or ASB 238, as applicable.

If no cracks are found, reinforce the support structures, per ASB 236A or ASB 238, as applicable, before further flight.

If cracks are found, replace and reinforce the support structure, per ASB 236A or ASB 238, as applicable, before further flight.

(FAA AD 2006-15-01 refers)

Note: After reinforcement of the support structure, or replacement and reinforcement of the support structure, no further action is required.

Compliance: Within the next 150 hours TIS or by 31 August 2007, whichever occurs sooner.

Effective Date: 31 August 2006

DCA/AC/159 Engine Mount Beam Support Straps – Inspection and Modification

Applicability: Model 690 aircraft, all S/N

Model 690A aircraft, all S/N except 11195 and 11279

Model 690B aircraft, all S/N except 11361, 11383, 11527 and 11536

Requirement: To prevent failure of the engine mount beam due to possible corrosion of the engine mount beam support straps and upper wing skins, which could result in the loss of an engine and loss of aircraft control, acccomplish the following:

Inspect the surface between the left hand (LH) and right hand (RH) upper wing skins and the engine mount beam support straps for any signs of corrosion and determine the extent of the corrosion per the instructions in pages 1 through to 14 in Twin Commander Aircraft LLC ASB No. 237, dated 13 May 2005, and

Install modification access holes in the LH and RH lower wing skins per the instructions in steps 1 through to 4 and 6 through to 9 of Twin Commander Aircraft Corporation Custom Kit No. 150 dated 8 July 1994 as specified in ASB No. 237, before further flight.

If corrosion damage is found embody the modification per Part II, Options A, B, or C, on pages 15 through to 29 and 31 in ASB No. 237, before further flight.

If no corrosion damage is found, replace the upper steel straps per Part II, Option D, on pages 30 and 31 of ASB No. 237, before further flight.

Install additional wing fasteners on the LH and RH wing per Gulfstream American Corporation SB No. 182, dated 2 March 1981, before further flight.

Note: Although not a requirement of this AD, the CAA highly recommends compliance with the Engine Nacelle Firewall Reinforcement modification specified in Twin Commander Aircraft Corporation SB No. 217, revision 1, dated 26 May 1993, and compliance with the Outboard Flap–Inboard Hinge Inspection & Reinforcement modification specified in Twin Commander Aircraft LLC ASB No. 239, dated 13 February 2006.

(FAA AD 2009-25-02 refers)

Compliance: Within the next 150 hours TIS, or by 8 January 2011, whichever occurs sooner.

Effective Date: 8 January 2010

From 1 October 2012 the Civil Aviation Authority of New Zealand (CAA) will no longer rewrite the text of State of Design ADs. Applicable State of Design ADs will be listed below and can be obtained directly from the National Airworthiness Authority (NAA) web site. The link to the NAA web site is available on the CAA web site at http://www.caa.govt.nz/Airworthiness_Directives/states_of_design.html
If additional NZ ADs need to be issued when an unsafe condition is found to exist in an aircraft or aeronautical product in NZ they will be added to the list below.

*** 2013-09-05 Structural Components – Inspection**

Effective Date: 29 May 2013