

SERVICE BULLETIN

This Service Bulletin is available at:
www.cic.bombardier.com

MODEL BD-700-1A11 (BD-700)

ATA 34-44

NAVIGATION

MODIFICATION – RADIO ALTIMETER SYSTEM – RADIO ALTIMETER ANTENNA CORROSION PROTECTION

1. PLANNING INFORMATION

A. Compliance

Recommended

B. Approval

The technical content of this Service Bulletin has been approved under the authority of Transport Canada Civil Aviation (TCCA) Design Approval Organization (DAO) No. DAO #93-Q-02.

- NOTES:
1. The technical content of this Service Bulletin is accepted by the FAA under the Canada/USA bilateral Aviation Safety Agreement.
 2. The technical content of this Service Bulletin is accepted by the JAA and by EASA in accordance with established procedures.

C. Effectivity

BD-700-1A11 aircraft, Serial No. **9127** to **9139**.

All other subsequent BD-700-1A11 aircraft are scheduled for the modification in production (Ref.: Modification Summary 700T01784).

NOTE: The instructions in this Service Bulletin are only applicable to the systems and parts installed at the time of delivery of the aircraft or as changed by Bombardier Aerospace Service Bulletin(s).

Before you do this Service Bulletin, examine all STC, STA or equivalent action changes to make sure that this Service Bulletin can be completed.

Refer to applicable governmental agency regulations and requirements and make sure that the work described in this Service Bulletin is performed in compliance with manufacturer's recommendations and/or acceptable industry standards. This document is proprietary to Bombardier Inc. and/or its affiliates and may not be reproduced or copied in any form or by any means without the prior written consent of Bombardier Inc. and/or its affiliates.
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D. Reason

Water may collect around the radio altimeter's transmitter and receiver antennas. This water may cause corrosion of the connectors and premature failure of the radio altimeter antennas.

This Service Bulletin introduces self-contouring sealing pads and water deflectors to prevent corrosion, divert water and prevent premature failure of the antennas.

E. Description

This Service Bulletin gives instructions to:

- Get access to the radio altimeter transmitter and receiver antennas,
- Remove the radio altimeter transmitter and receiver antennas,
- Do the modification to the radio altimeter transmitter and receiver antennas, and
- Do the necessary tests to make sure that the system operates correctly.

F. Manpower

NOTES: 1. The man-hours given are estimates to help you schedule the tasks given in this bulletin. The estimates are for direct labor performed by an experienced crew and do not include the time for familiarization, planning, aircraft preparation in hangar such as towing and positioning of scaffolds, removal of interior furnishings, repainting, supervision and inspection.

For more information related to the manpower estimates, refer to SB 700-1A11-00-002.

2. This Service Bulletin may require consumable materials that have specific curing times (refer to paragraph 3.). The accumulated curing time is not included in the labor estimates and should be considered for planning purposes before you schedule this Service Bulletin.

8 man-hours are necessary to do this modification.

For aircraft in new aircraft warranty, labor is at no cost if the work is done at Bombardier Business Aviation Services (BBAS) or Authorized Service Facilities. For Bombardier Aerospace to pay for the labor, this Service Bulletin must also be scheduled in less than 12 months from its release date.

G. Material - Cost and Availability

Kit 700K34-023 is necessary to do this modification. For material data, refer to paragraph 3.

Sufficient kits will be kept for the estimated orders.

For aircraft in new aircraft warranty, this kit is available at no cost if a no-charge purchase order is sent to Bombardier Aerospace in less than 12 months from this Service Bulletin release date.

During or after the above free period, Smart Parts Plus does not pay for the kit.

H. Tooling - Price and Availability

No equipment or special tools are necessary.

I. Weight and Balance

No change

J. Electrical Load Data

No change

K. References

- Bombardier Aerospace, Modification Summary R700T400127, Rev. C
- Bombardier Aerospace, Kit Drawing KGC991-1134, Rev. B
- Global 5000 BD-700 Aircraft Maintenance Manual (AMM), Chapters 6, 20, 34, and 51
- Global 5000 BD-700 Aircraft Illustrated Parts Catalog (IPC), Chapter 34
- Global 5000 BD-700 Structural Repair Manual (SRM), Chapter 34.

NOTE: If the Global 5000 BD-700 SRM is not available, use the BD-700 SRM instead.

L. Other Publications Affected

- Global 5000 BD-700 Aircraft Illustrated Parts Catalog (IPC), Chapter 34.

M. Other Publications Affected

None

N. Equivalent Service Bulletin

For the Global Express BD-700-1A10 aircraft, use SB 700-34-023.

2. ACCOMPLISHMENT INSTRUCTIONS

- NOTES:
1. All TASKs referenced in the procedures that follow are from the Global 5000 BD-700 Aircraft Maintenance Manual, unless otherwise specified.
 2. All references made to zones, access panels and/or doors, are from the Global 5000 BD-700 Aircraft Maintenance Manual, Chapter 6.

A. Aircraft Setup

- (1) Obey all electrical/electronic safety precautions. Refer to TASK 24-00-00-910-801.
- (2) Set the circuit breakers that follow to LOCKED (refer to TASK 24-00-00-863-801):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
NAV	RAD ALT 1	DC 1
NAV	RAD ALT 2	DC 2
ELEC	APU BATT HEAT	AC BUS 4
ELEC	APU BATT CHGR	AC BUS 3
ELEC	APU BATT CHGR LD	APU BATT DIR BUS

- (3) Open the aft equipment bay door 311BB.

B. Modification – Radio Altimeter Antennas

CAUTION: OBEY ALL ELECTROSTATIC DISCHARGE SAFETY PRECAUTIONS WHEN YOU DO MAINTENANCE ON ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) COMPONENTS. STATIC VOLTAGE CAN CAUSE DAMAGE TO ESDS COMPONENTS.

- (1) Obey all electrostatic discharge safety precautions. Refer to TASK 24-00-00-910-802.
- (2) Remove the APU battery to gain access to the transmitter antenna connectors. Refer to TASK 24-32-09-000-801.
- (3) Remove the access panel, Part No. GD297-1500-9 that supports the transmitter antenna. Refer to the Illustrated Parts Catalog (IPC), Chapter 53-61-09, Figure 7.
- (4) Remove the radio altimeter antennas (transmitter and receiver). Refer to TASK 34-44-05-000-801.
- (5) Remove and discard the packing, Part No. M25988/1-025, from the receiver and transmitter antennas.
- (6) Rework the adapter plates, Part No. GD517-4352-1 for the radio altimeter receiver antennas as given in Kit Drawing KGC991-1134.
- (7) Re-identify reworked parts as KGC991-1134-3.

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- (8) Rework the adapter plates, Part No. GD517-4351-1 for the radio altimeter transmitter antennas as given in Kit Drawing KGC991-1134.
 - (9) Re-identify reworked parts as KGC991-1134-11.
 - (10) Install a new packing, Part No. M25988/1-025 on each receiver antenna.
 - (11) Install the self-sealing contour pads on the receiver antennas between the antennas, adapter plates and the aircraft skin. Refer to TASK 51-23-00-390-821 and to Kit Drawing KGC991-1134.
 - (12) Install the radio altimeter receiver antennas. Refer to TASK 34-44-05-400-801.
 - (13) Install a new packing, Part No. M25988/1-025 on each transmitter antenna.
 - (14) Install the self-sealing contour pads on the radio altimeter transmitter antennas between the antennas, adapter plates and access panel, Part No. GD297-1500-9. Refer to TASK 51-23-00-390-821 and to Kit Drawing KGC991-1134.
 - (15) Make the water dam with the raw material, Part No. MS21266-8N provided in the kit. Refer to Kit Drawing KGC991-1134.
 - (16) Install the water dam on the transmitter and receiver antennas. Refer to TASK 51-21-21-340-801 and to Kit Drawing KGC991-1134.
- NOTE: For ease of installation, a heat gun may be used to pre-form the water dam prior to application of sealant.
- (17) Install the radio altimeter transmitter antennas and access panel, Part No. GD297-1500-9 that was removed for access. Refer to TASK 34-44-05-400-801.
 - (18) Install the APU battery. Refer to TASK 24-32-09-400-801.
 - (19) Set the circuit breakers that follow to IN (refer to TASK 24-00-00-863-802):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
NAV	RAD ALT 1	DC 1
NAV	RAD ALT 2	DC 2
ELEC	APU BATT HEAT	AC BUS 4
ELEC	APU BATT CHGR	AC BUS 3
ELEC	APU BATT CHGR LD	APU BATT DIR BUS

C. Testing

Do an operational test of the radio altimeter system. Refer to TASK 34-44-00-710-801.

D. Close-out

- (1) Close the aft equipment bay door 311BB.
- (2) Remove all tools, equipment and unwanted materials from the aircraft.

E. Recording

When this Service Bulletin is completed, make an entry in the aircraft log and send the attached Incorporation Notice to Bombardier Business Aircraft Customer Support (BBACS).

3. MATERIAL INFORMATION

A. Kit

Kit 700K34-023 is necessary to do this Service Bulletin and contains the parts that follow:

NEW PART NO.	QTY	KEY WORD	USED PART NO.	INSTRUCTIONS - DISPOSITION
MS21266-8N	4 ea (12.5 in lengths)	Grommet, Caterpillar	-	-
M25988/1-025	4	Packing	Same	Discard

- NOTES:**
1. In case of discrepancy between this list and the "Service Bulletin Kit Parts List" contained in the respective kit, then the latter list prevails.
 2. The actual quantity for some of the hardware contained in the kit can be greater than the amount shown in the table as these items are supplied in pre-packaged quantities.

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B. Material

The materials that follow, or equivalent, are necessary to do this Service Bulletin. These can be purchased from a local supplier or from Bombardier Business Aviation Services:

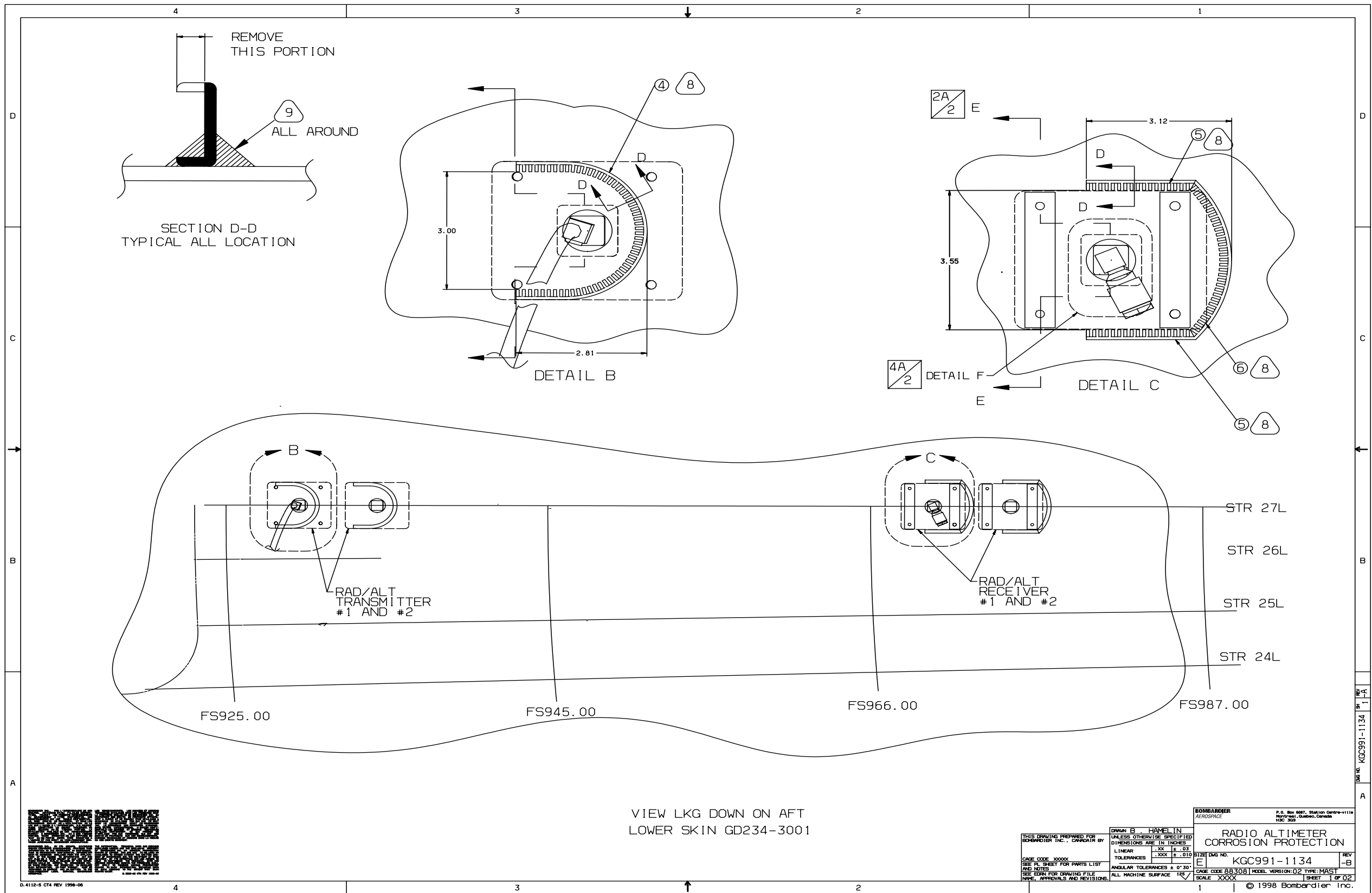
DESCRIPTION	PART No./ NAME	SPECIFICATION	QUANTITY	SUPPLIER
Primer	-	MIL-P-23377B	As Necessary	Code: A
Adhesive Sealant CT: 48 hours	Pro Seal 870	MIL-PRF-81733 Type I	As Necessary	Code: B
Adhesive Sealant CT: 48 hours	-	MIL-A-46106 Type I, Grade 1	As Necessary	Code: C
Release Agent	MS-122DF	-	As Necessary	Code: D
Tape, Pressure Sensitive	Richmond HS8171-PS	CMS541-09, Class B, Type II	As Necessary	Code: E
Cloth, No-Lint	-	-	As Necessary	Code: G
Gloves, Cotton White	-	-	As Necessary	Code: G
Scaper, Non-Metalic	-	-	1	Code: G
Brush, Paint	-	-	1	Code: G
Paper, Craft	-	-	As Necessary	Code: G
Spatula	-	-	1	Code: G
Tape, Masking	-	-	As Necessary	Code: G
Cleaner, Toluene	-	AA 59107	As Necessary	Code: G
Naptha, Aliphatic	-	TT-N-95	As Necessary	Code: G
Solvent	Diestone DLS or Diestone HFP or HFE-71DA	-	As Necessary	Code: F
Solvent	DS-108 Wipe Solvent	-	As Necessary	Code: G

NOTE: Refer to the next table for each supplier's address listed by codes.

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SUPPLIERS ADDRESSES BY CODES	
<p>Code: A</p> <p>Tempo Aerospace Inc. 205 Fenmar Drive West Toronto, Ontario Canada</p> <p>☎: (416) 746-2233</p>	<p>Code: B</p> <p>PRC-Desoto International 5676 Timberlea Blvd Mississauga, Ontario L4W 4M6 Canada</p> <p>☎: (905) 629-7999</p>
<p>Code: C</p> <p>Dow Corning Corp. 6747 Campobello Road Mississauga, Ontario M5W 2M1</p> <p>☎: (905) 826-9600</p>	<p>Code: D</p> <p>Miller Stevenson Chemical Co. P.O. Box 950 Danbury, CT 06810 U.S.A.</p> <p>☎: (203) 743-4447</p>
<p>Code: E</p> <p>Richmond Aircraft Products 13503 Pumice Street Norwalk, CA 90650 U.S.A.</p> <p>☎: (310) 404-2440</p>	<p>Code: F</p> <p>MagChem Inc 1271 Ampere Boucherville, Québec J4B 5Z5 Canada</p> <p>☎: (450) 655-1344</p> <p>or</p> <p>3M Product Information Center 3M Center Building 0304-01-01 St. Paul, MN 55144-1000 U.S.A.</p> <p>☎: 1-888-364-3577 Fax: 1-800-713-6329</p>
<p>Code: G</p> <p>Commercially Available</p>	

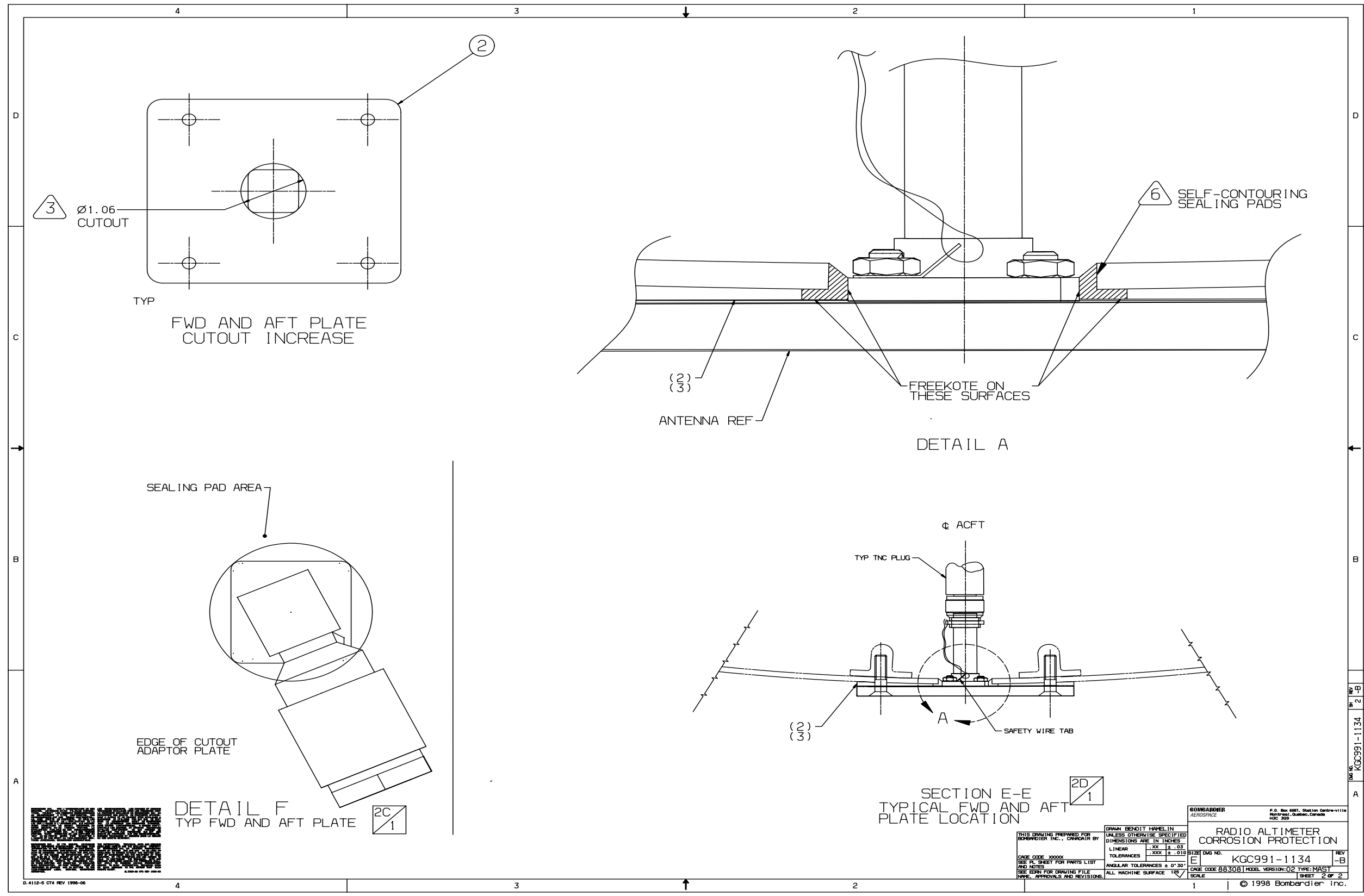


KGC991-1134 – Kit – Radio Altimeter Corrosion Protection
(Sheet 1 of 2, Rev. B)

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DETAIL F
TYP FWD AND AFT PLATE

SECTION E-E
TYPICAL FWD AND AFT
PLATE LOCATION

THIS DRAWING PREPARED FOR
BOMBARDIER INC., CANADA BY
DRAWN: BENOIT HAMELIN
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
LINEAR ± .001
TOLERANCES ± .001
ANGULAR TOLERANCES ± 0° 30'
SEE LIST FOR DRAWING FILE
NAME, APPROVALS AND REVISIONS.

BOMBARDIER AEROSPACE		P.O. Box 9827, Station Centre-ville Montreal, Quebec, Canada H3C 3G9	
RADIO ALTIMETER CORROSION PROTECTION		SIZE	DWG NO.
CASE CODE 883008		E	KGC991-1134
MODEL VERSION: 02 TYPE: MAST		SCALE	1
SHEET 2 OF 2		REV -B	

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KGC991-1134 – Kit – Radio Altimeter Corrosion Protection
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SERVICE BULLETIN EVALUATION FORM
(YOUR IDEAS WILL HELP US PROVIDE BETTER BULLETINS)

SERVICE BULLETIN <u>700-1A11-34-008</u>	ISSUE: <u>Basic</u>	DATED: <u>Dec 15/2004</u>
TITLE: <u>Modification – Radio Altimeter System – Radio Altimeter Antenna Corrosion Protection</u>		

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
<ul style="list-style-type: none"> • Instructions to do the Service Bulletin were accurate. Comments: 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Illustration(s), figure(s), and/or kit drawing(s) were helpful to carry out instructions. Comments: 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • The kit(s) and/or the parts, (except consumable material), were accurately listed to accomplish this Service Bulletin. Comments: 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • The loose parts listed under paragraph 3., were easily procured. • Comments: 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Work was accomplished in prescribed time. • Comments: 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Overall, I was satisfied with this Service Bulletin. Comments: 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FORWARD ALL INQUIRIES TO:	PLEASE SUPPLY US WITH THE FOLLOWING DATA:
NAME: Mathieu Desroches TELEPHONE: (514) 855-5001 X 59405 FACSIMILE: (514) 855-7894	OPERATOR: _____ AIRCRAFT SERIAL NO.: _____ TELEPHONE: _____ FACSIMILE: _____ NAME (Please print) _____

THANK YOU FOR ANSWERING THIS EVALUATION FORM!
UPON COMPLETION OF THIS EVALUATION FORM, PLEASE FOLD, AND RETURN

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Bombardier Business Aircraft Customer Support (BBACS)

P.O. Box 6087, Station Centre-ville
Montréal, Québec, Canada H3C 3G9

Attention: Supervisor, Service Bulletin Group
Department 631

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SERVICE BULLETIN INCORPORATION SHEET

“700-1A11-34-008”

Upon completion of the Service Bulletin, please fill-in, fold and return/or fax to (514) 855-8798.
Attention: Dept. 051

NOTE: For configuration control purposes, please fill out one form for each Service Bulletin.

Service Bulletin Number	Rev.	* Parts Completed	Further Action Required	
			YES	NO
700-1A11-34-008	Basic	-	<input type="checkbox"/>	<input type="checkbox"/>
-	-	-	<input type="checkbox"/>	<input type="checkbox"/>
-	-	-	<input type="checkbox"/>	<input type="checkbox"/>
-	-	-	<input type="checkbox"/>	<input type="checkbox"/>
-	-	-	<input type="checkbox"/>	<input type="checkbox"/>
-	-	-	<input type="checkbox"/>	<input type="checkbox"/>

* **NOTES:** 1. Where the Service Bulletin is divided into a number of parts (e.g., PARTS A, B, C, D, etc.) which can be carried out separately, indicate only those parts completed at this time.

2. For repetitive checks (usually PART A) only the initial check should be reported unless otherwise stated in the Service Bulletin.

3. When more than one part is carried out at the same time, each part should be reported.

Is the aircraft enrolled on the CAMP computerized maintenance program?	Yes	No
	<input type="checkbox"/>	<input type="checkbox"/>

Aircraft Serial No. _____	Aircraft Reg. No. _____
Airframe Landings _____	Airframe Hours _____
Date of Incorporation _____	Service Order No. _____
Facility & Location Incorporation Bulletin _____	
SIGNED: _____	DATE: _____

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Bombardier Business Aircraft Customer Support (BBACS)

P.O. Box 6087, Station Centre-ville
Montréal, Québec, Canada H3C 3G9

Attention: Maintenance Engineering
Department 051

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