SERVICE BULLETIN

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MODEL BD-700-1A10 (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.

This Service Bulletin is also accepted by the FAA under the Canada/USA Bilateral Aviation Safety Agreement and by the JAA in accordance with the JAA/TCCA Post-Type Validation Procedures.

C. Effectivity

BD-700-1A10 aircraft, Serial No. **9002** to **9139**.

All other subsequent BD-700-1A10 aircraft are scheduled for the modification in production (Ref.: Modification Summary R700T400127).

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.

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

NOTE: 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, curing times for consumable materials, repainting, supervision and inspection.

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

Eight 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.

13 kits were available when this Service Bulletin was released. 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
- BD-700 Aircraft Maintenance Manual, Chapters 6, 20, 34, and 51
- BD-700 Aircraft Illustrated Parts Catalog (IPC), Chapter 34
- BD-700 Structural Repair Manual (SRM), Chapter 34.

L. Other Publications Affected

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

NOTE: It is recommended that you record the new part(s) added by this Service Bulletin in Chapter 34-44-05, Figure 1 of your IPC. The IPC will include these changes in a future revision.

M. Other Publications Affected

None

N. Equivalent Service Bulletin

None

2. ACCOMPLISHMENT INSTRUCTIONS

NOTES: 1. All TASKs referenced in the procedures that follow are from the BD-700 Aircraft Maintenance Manual, unless otherwise specified.

2. All references made to zones, access panels and/or doors, are from the 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) On the electrical control panel, installed on the overhead panel, set the BATT MASTER switch to ON.

WARNING: ON AIRCRAFT PRE SB 700-24-045, MAKE SURE YOU DO NOT SET THE EMS CDU CIRCUIT BREAKERS TO 'LOCK'. IF YOU DO THIS AND YOU APPLY ELECTRICAL POWER, THE CIRCUIT BREAKERS WILL AUTOMATICALLY BE SET TO THEIR ORIGINAL POSITION. THIS WILL PUT THE AIRCRAFT IN A DANGEROUS CONDITION FOR MAINTENANCE.

(3) For aircraft pre SB 700-24-045, set the BATT MASTER switch to ON and on the Electrical Management System (EMS) Control Display Unit (CDU), installed on the pilot's and co-pilot's side panel, set the circuit breakers that follow to OUT:

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

(4) For aircraft post SB 700-24-045, set the BATT MASTER switch to EMS and on the pilot's and co-pilot's EMS CDU, set the circuit breakers in the table above to LOCKED.

NOTE: All other electrical power must be removed from the aircraft to set circuit breakers to LOCKED.

(5) Set the BATT MASTER switch to OFF.

(6) 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.

(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 AMM, 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 AMM, 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 perform 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.

C. Testing

(1) Connect and energize the external ac power. Refer to TASK 24-41-00-861-801.

(2) Set the BATT MASTER switch to ON.

(3) For aircraft post SB 700-24-045, set the BATT MASTER switch to EMS and on the pilot's or co-pilot's EMS CDU, set the circuit breakers that follow that are in the LOCKED position to OUT:

NOTES: 1. All other electrical power must be removed from the aircraft to unlock circuit breakers.

2. It is necessary to make the selection of each circuit breaker two times: the first time to show the status (LOCKED) and the second time to change the status from LOCKED to OUT.

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

(4) Connect and energize ac power (refer to TASK 24-41-00-861-801) and on the pilot's or co-pilot's EMS CDU, set the circuit breakers in the table above to IN.

NOTE: For aircraft post SB 700-24-045, if one or more of the above circuit breakers was forgotten in the LOCKED position, it will be necessary to remove the external ac power to set the BATT MASTER switch to EMS and to set the LOCKED circuit breakers to OUT. Circuit breakers cannot be set from LOCKED to IN.

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

(6) Remove the external ac power. Refer to TASK 24-41-00-861-802.

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 Aviation Services.

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.

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	Pro Seal 870	MIL-PRF-81733 Type I	As Necessary	Code: B
Adhesive Sealant	-	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 2	As Necessary	Code: E
Cloth, No-Lint	-	-	As Necessary	Code: F
Gloves, Cotton White	-	-	As Necessary	Code: F
Scaper, Non-Metalic	-	-	1	Code: F
Brush, Paint	-	-	1	Code: F
Paper, Craft	-	-	As Necessary	Code: F
Spatula	-	-	1	Code: F
Tape, Masking		-	As Necessary	Code: F
Cleaner, Toluene	-	AA 59107	As Necessary	Code: F
Naptha, Aliphatic	-	TT-N-95	As Necessary	Code: F
Solvent	Methyl Ethyl Ketone (MEK)	ASTM-D740	As Necessary	Code: F
Solvent	DS-108 Wipe Solvent	-	As Necessary	Code: F

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

SUPPLIERS ADDRESSES BY CODES	
Code: A Tempo Aerospace Inc. 205 Fenmar Dr. West Toronto, Ontario Canada **Tel.: (416) 746-2233**	**Code: B** PRC-Desoto International 5676 Timberlea Blvd Mississauga, Ontario Canada, L4W 4M6 **Tel.: (905) 629-7999**
Code: C Dow Corning Corp. 6747 Campobello Road Mississauga, Ontario M5W 2M1 **Tel.: (905) 826-9600**	**Code: D** Miller Stevenson Chemical Co. P.O. Box 950 Danbury, CT06810 U.S.A. **Tel.: (203) 743-4447**
Code: E Richmond Aircraft Products 13503 Pumice Street Norwalk, CA 90650 U.S.A. **Tel.: (310) 404-2440**	**Code: F** Commercially Available

BOMBARDIER
AEROSPACE

P.O. Box 6087, Station Centre-ville
Montreal, Quebec, Canada H3C 3G9

DRAWN BY:	SHEET	PL KGC991-1134	REV
BENOIT HAMELIN	1 OF 01		-B

CONTROL CODE	TITLE
I [X] R [X] C [X]	RADIO ALTIMETER CORROSION PROTECTION

CAGE CODE 88308 | MODEL VERSION: 02 MODEL TYPE: MAST

FIND NO.	QTY REQ	CAGE CODE	PART, DASH OR IDENTIFYING NO.	DESCRIPTION	SIZE	MATERIAL SPEC	FINISH CODE	PCN	ZONE SHEET	ATA NUMBER	NOTE
1		88308	KGC991-1134-1	KIT							
2	2		KGC991-1134-3	AFT PLATE ADAPTOR		M/F GD517-4352					
3	2		KGC991-1134-11	FWD PLATE ADAPTOR		M/F GD517-4351					
4	2		KGC991-1134-5	GROMMET CATERPILLAR		M/F MS21266-8N					(8)
5	4		KGC991-1134-7	GROMMET CATERPILLAR		M/F MS21266-8N					(8)
6	2		KGC991-1134-9	GROMMET CATERPILLAR		M/F MS21266-8N					(8)

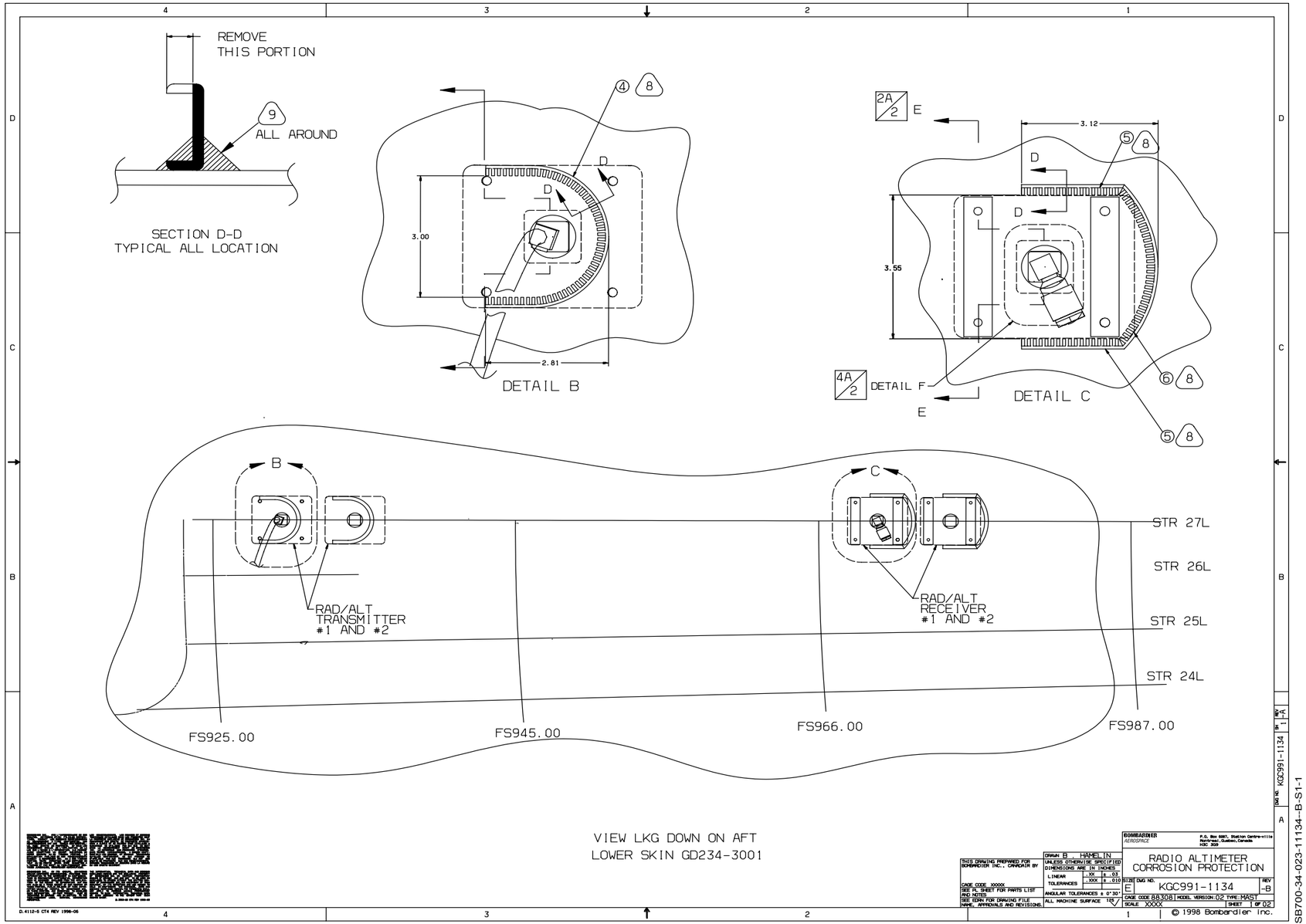
NOTES

1. QUANTITY OF ONE KIT REQUIRED PER AIRCRAFT.
2. REMOVE AND RE-INSTALL ANTENNA PER BD700 AMM CH. 34-44-05.
3. INCREASE CUTOUT ON ADAPTOR PLATE AS SHOWN TO PERMIT INSTALLATION OF SELF CONTOURING SEALING PADS PER NOTE 6.
4. SHEET METAL CUTTING PER BD-700 SRM CH. 51-28-28.
5. TOUCH UP BARE METAL AFTER TRIMMING PER BD-700 SRM CH. 51-01-04.
6. SELF CONTOURING SEALING PADS AS PER BD-700 AMM CH. 51-23-00.
7. BREAK SHARP EDGES AND CORNERS .015"
8. CEMENTING OF CATERPILLAR GROMMET PER AMM CH. 51-21-21.
9. BEAD SEAL PER BD-700 SRM CH. 51-23-04 USING MIL-S-81733 TYPE II SEALANT

D.4094-1 CT4 REV 1998-06

sb700-34-023-11134-b-s1-pl

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



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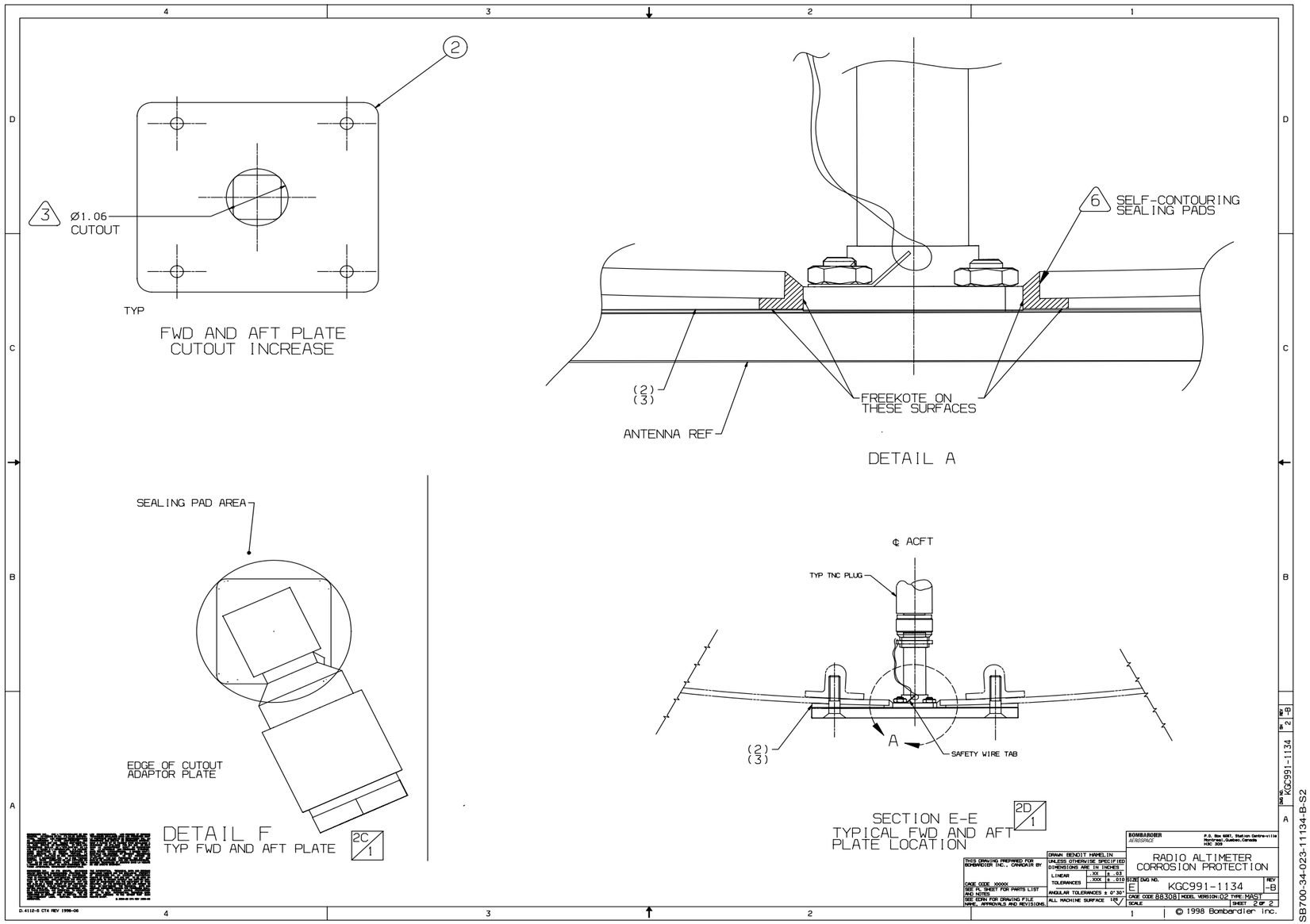
KGC991-1134
Kit –Radio Altimeter Corrosion Protection
(Sheet 1 of 2, Rev B)



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

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BOMBARDIER BUSINESS AVIATION SERVICES

SERVICE BULLETIN EVALUATION FORM

(YOUR IDEAS WILL HELP US PROVIDE BETTER BULLETINS)

SERVICE BULLETIN: 700-34-023	**ISSUE:** Basic	**DATED:** Apr 30/2003
TITLE: Modification – Radio Altimeter System – Radio Altimeter Antenna Corrosion Protection		

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
• **How easy is the bulletin to understand?** Comments:	❑	❑	❑	❑	❑
• **Does the bulletin tell you all you need to know about the job?** Comments:	❑	❑	❑	❑	❑
• **Do you think the bulletin conveys the best way to do the job?** Comments:	❑	❑	❑	❑	❑
• **How realistic are the man-hour estimates?** Comments:	❑	❑	❑	❑	❑
• **What is your appreciation of the illustration(s), figure(s), and/or kit drawing(s)?** Comments:	❑	❑	❑	❑	❑

FORWARD ALL INQUIRIES TO:		**PLEASE SUPPLY US WITH THE FOLLOWING DATA:**	
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FACSIMILE:	(514) 855-7894	**TELEPHONE:**	
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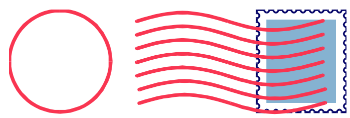

Bombardier Business Aviation Services

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Attn: Supervisor, Service Bulletin Group
Department 631

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SERVICE BULLETIN INCORPORATION SHEET

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

Service Bulletin Number	Rev.	* Parts Completed	Further Action Required YES	NO
			☐	☐
			☐	☐
			☐	☐
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* 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 CIMMS computerized maintenance program?	**Yes**	**No**
	☐	☐

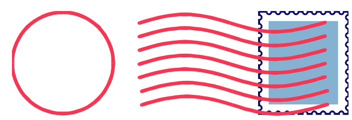
Aircraft Serial No. _____ Aircraft Reg. No. _____

Airframe Landings _____ Airframe Hours _____

Date of Incorporation _____ Service Order No. _____

Facility & Location Incorporation Bulletin _____

SIGNED: _____ DATE: _____



Bombardier Business Aviation Services

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Attn: Maintenance Engineering
Department 051