

SERVICE BULLETIN REVISION TRANSMITTAL SHEET

MODEL BD-700-1A10 (BD-700)

Discard the Revision 01 of this Service Bulletin dated Apr 30/2007 and the Info Sheet dated Jan 21/2008, and replace in its entirety with this Revision 02.

Service Bulletin No. 700-31-026

Date of Basic Issue Jul 25/2005

Revision No. 01 Dated Apr 30/2007

Revision No. 02 Dated Dec 14/2009

This revision has no effect for aircraft on which the Rev. 01 of this Service Bulletin was done thus no other action is necessary.

This revision is issued to:

1. Change, in Paragraph 1.K., the revision of the Modification Summary R700T400228 from C to D.
2. Change, in Paragraph 1.K., the revision of Kit Drawing KGC991-1294 from B to C.
3. Change, in Paragraph 2.B.(1)(a) and other subsequent steps, the part no. of the bracket sub-assembly KGC991-1294-3 to KGC991-1294-11.
4. Change, in Paragraph 2.B.(2)(f)(iii), the part no. of the bracket KGC991-1294-5 to -13.
5. Add, in Paragraph 2.B., step (7): "Install decal Part No. KGC991-1294-15 above cut out as shown on Kit Drawing KGC991-1294. Refer to TASK 20-80-01-0400-801."
6. Change Paragraph 2.C.(9), to read: "Do an electrical bonding test between the QAR aircraft side connector and the aircraft structure. Refer to TASK 51-80-00-760-801.", to incorporate the Information Sheet dated Jan 21/2008.
7. Change, in Paragraph 3.A., the part no. of the bracket KGC991-1294-5S to -13 or -13S.
8. Add, in Paragraph 3.A., DECAL Part No. KGC991-1294-15.
9. Replace revision B of Kit Drawing KGC991-1294 with revision C.
10. Make miscellaneous minor changes, as necessary, with no change of context.

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SERVICE BULLETIN SUMMARY

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

MODEL BD-700-1A10 (BD-700)

ATA 31-31

INDICATING/RECORDING SYSTEMS

MODIFICATION – FLIGHT DATA RECORDING-SYSTEM – INTRODUCTION OF A QUICK ACCESS RECORDER

The information below is provided for your reference. For full details, please see corresponding paragraph contained within this bulletin.

OPTIONAL OPERATIONAL ENHANCEMENT	COMPLIANCE TIME Not applicable	
EFFECTIVITY: A/C Serial No. 9002 to 9999		
MANPOWER: 40 man-hours		
KITS and/or PARTS	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
TOOLING/GSE	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
PLANNING INFORMATION: See important information at the start of Paragraph 1.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
DEDICATED SCHEDULE	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
PREREQUISITE SERVICE BULLETINS: N/A		

To place an order for parts or kits, please call Bombardier Parts Logistics at:

514-855-2999 or 1-866-538-1247

SERVICE BULLETIN

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www.cic.bombardier.com

MODEL BD-700-1A10 (BD-700)

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INDICATING/RECORDING SYSTEMS

MODIFICATION – FLIGHT DATA RECORDING-SYSTEM – INTRODUCTION OF A QUICK ACCESS RECORDER

1. PLANNING INFORMATION

A. Effectivity

BD-700-1A10 aircraft, Serial No. **9002** to **9999**.

NOTE: The instructions given 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 bulletin, examine all STC, STA or equivalent action changes to make sure that this bulletin can be completed.

B. Reason

This Service Bulletin introduces the Quick Access Recorder (QAR). The QAR is an independent recording device that records the same flight data as the FDR.

The main improvements achieved by the incorporation of this modification are:

- Improved accessibility,
- Common download format that allows for the use of a standard laptop,
- The large memory size of the QAR reduces the data download frequency by increasing the amount of recordable data, 750 hours on the QAR compared to 25 hours on the FDR, and
- Greater ease of operation, improving the maintenance task of data recovery for operators that need to comply with the recent amendment to JAR-OPS 1.037.

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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JAR-OPS 1.037 states that operators of aircraft with a maximum certificated take-off mass (MCTOM) in excess of 59 524 lb (27 000 kg) must establish and maintain a flight data monitoring program as part of their accident prevention and flight safety program.

A flight data-monitoring program is accomplished by downloading FDR data and analyzing the results. With the FDR, this task must be done before 25 hours of flight data is overwritten. Downloading the FDR data is a complex task that is time consuming and requires the use of specialized equipment.

NOTE: QAR component description is as follows:

- Model: Avionica, miniQAR MKII,
- Memory type: solid state, internal,
- Memory capacity: 1GB,
- Automatic detection of Words Per Second (WPS) transfer rate
- Capacity at 128 WPS = 1 500 flight hours
- Capacity at 256 WPS (most Global Express) = 750 flight hours
- Recording condition: when powered up, on reception of ARINC 717 input (same as FDR), and
- Small size: L 2.6 in (6.6 cm), W 2.2 in (5.6 cm) and H 1.8 in (4.6 cm).

C. Description

This Service Bulletin gives instructions to:

- Remove external avionics-compartment access-panel 140BB,
- Remove bulkhead panel 222ERW,
- Remove DAU4,
- Remove JB6,
- Install the new QAR system wiring,
- Install a new bracket sub-assembly and some hardware on bulkhead FS280.00,
- Do a cut out on bulkhead panel 222ERW,
- Install DAU 4 and return to service,
- Install JB6 and return to service,
- Do the necessary tests to make sure that the new QAR system is operating correctly,
- Install bulkhead panel 222ERW, and
- Install external avionics-compartment access-panel 140BB.

D. Compliance

Optional – Operational Enhancement

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E. 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.

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 700-00-002.

2. This Service Bulletin may require the use of 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.

40 man-hours are necessary to do this modification.

Bombardier Aerospace does not pay for the labor to do this modification.

G. Material - Cost and Availability

Kit 700K31-026 is necessary to do this modification. Only the U.S. Domestic price is shown:

KIT NO.	PRICE
700K31-026	\$5,269.00

The above price can change. For the price outside of the U.S., refer to the last applicable Spare Parts Price Catalog. This data is also available from Bombardier Business Aviation Services (BBAS) at the addresses shown in the catalog.

Sufficient kits will be kept for the estimated amount of orders.

In addition to the kit shown above, the parts given in Paragraph 3.B. are also necessary to do this Service Bulletin and to download QAR data.

Bombardier Aerospace does not pay for the kit to do this modification.

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H. Tooling

No equipment or special tools are necessary. Refer to Paragraph 3.B. for the QAR download kit.

I. Weight and Balance

WEIGHT	MOMENT
+0.87 lb (0.39 kg)	+277.4 lbf in (3.20 kgm)

J. Electrical Load Data

This modification increases the continuous load as follows:

BUS	AMPS	W	KVAR
DC 2	30 mA	0.84	-

K. References

- Bombardier Aerospace, Modification Summary, R700T400228, Rev. D.
- Bombardier Aerospace, Kit Drawing, KGC991-1293, Rev. - -.
- Bombardier Aerospace, Kit Drawing, KGC991-1294, Rev. C.
- Global Express Aircraft Maintenance Manual (AMM), Chapters 12, 20, 24, 25, 31, 51 and 52.
- Global Express Structural Repair Manual, (SRM), Chapter 51.
- Global Express Wiring Manual (WM), Chapters 20, 21, 31 and 33.
- Global BD-700 Illustrated Tool and Equipment Manual, Chapter 31.

L. Other Publications Affected

- Global Express Aircraft Maintenance Manual (AMM), Chapter 31.
- Global Express Illustrated Parts Catalog (IPC), Chapter 31.
- Global Express Wiring Manual (WM), Chapter 31.
- Global Express Flight Crew Operating Manual (FCOM).

M. Equivalent Service Bulletin

For the Global 5000 BD-700-1A11 aircraft, refer to SB 700-1A11-31-008.

2. ACCOMPLISHMENT INSTRUCTIONS

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

A. Aircraft Setup

- (1) Remove electrical power from the aircraft. Refer to TASK 24-00-00-861-802.
- (2) Remove external avionics-compartment access-panel 140BB. Refer to TASK 52-45-11-000-801.
- (3) Remove bulkhead panel 222ERW. Refer to TASK 25-12-13-000-801.
- (4) Obey all electrical/electronic safety precautions. Refer to TASK 24-00-00-910-801.
- (5) Set the circuit breakers that follow to OUT (on aircraft pre SB 700-24-045) or LOCKED (on aircraft, Serial No. 9123 and subsequent or aircraft post SB 700-24-045) (refer to TASK 24-00-00-863-801):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
IND/RECORD	DAU 4 CH A	BATT
IND/RECORD	DAU 4 CH B	DC 1
IND/RECORD	FDR	DC 2
IND/RECORD	FDR ACCELEROMETER	DC 2

- (6) Remove DAU 4 as necessary to gain access for the wiring installation. Refer to TASK 31-42-01-000-801.
- (7) Remove JB6 as necessary to gain access for the wiring installation. Refer to TASK 24-00-13-400-801.

NOTE: If it is necessary to gain further access to complete the modification, refer to the appropriate AMM TASKs.

B. Modification

- (1) Do the modification as given in Kit Drawing KGC991-1294 and as follows:

NOTE: The connector, Part No. M83723/71R1415N is included in the wire kit Part No. KGC991-1293-1/01. It must be mounted on the outside of the bracket sub-assembly as shown in zone 4D (Sheet 2) to ease removal for maintenance.

- (a) Temporarily position bracket sub-assembly KGC991-1294-11 on bulkhead FS280.00 and drill the holes that will be used to attach the bracket sub-assembly to the bulkhead.

NOTES: 1. Do not attach the bracket sub-assembly to the bulkhead at this time. Wires must be hooked up to connector A324J1 before the bracket sub-assembly is attached to the bulkhead.

2. The metric equivalent values for the applicable distances shown in the kit drawing are as follows: 1.5 in = 3.8 cm and 2.1 in = 5.3 cm.

- (b) Drill the hole for ground stud GS1434.

NOTE: The metric equivalent value for the applicable distance shown in the kit drawing is as follows: 1.58 in = 4.0 cm.

- (c) Install ground stud GS1434. Refer to TASK 51-80-00-910-803.

- (d) Install decal Part No. KGC991-1294-9. Refer to TASK 20-80-01-400-801.

- (2) Install wiring as follows (refer to Kit Drawing KGC991-1293);

NOTE: For the electrical connections, refer to the Wiring Manual, Chapter 20.

- (a) For existing wire pair FBM5071W-22 and FBM5071B-22, do as follows:

(i) Cut the wires as close as possible and to a maximum of 3 in (7.6 cm) from connector A31CP1.

(ii) Remove and discard the short end of the wires (ends connected to A31CP1, pin H3 and pin J3). Remove and discard the related connector pins as well.

(iii) Slide a shield terminator Part No. S063-2-55-22-5 over the loose end of the wire pair.

(iv) Connect the loose end of wire FBM5071W-22 to splice SP1226, and the loose end of wire FBM5071B-22 to splice SP1227.

- (b) For new wire pair FBMJ740W-22 and FBMJ740B-22, do as follows:

(i) Connect wire FBMJ740W-22 to splice SP1226 and to connector A31CP1, pin H3. Connect wire FBMJ740B-22 to splice SP1227 and to connector A31CP1 pin J3.

NOTE: For A31CP1, use contacts Part No. 030-2259-000.

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- (c) For new wire pair FBM7030W-22 and FBM7030B-22, do as follows:
- (i) Slide a shield terminator Part No. S063-2-55-22-5, over each end of the wire pair.
 - (ii) Connect wire FBM7030W-22 to splice SP1226 and to connector P212, pin 98. Connect wire FBM7030B-22 to splice SP1227 and to connector P212, pin 99.
- NOTES: 1. Route the wire pair along with existing wires FBM0128, FBM0130, FBM0132 and FBM 0134. Refer to the Wiring Manual, Chapter 31-44-00, Sheet 2 of 7.
2. For P212, use contacts Part No. M39029/56-348.
- (d) For new wire pair CBM7030W-22 and CBM7030B-22, do as follows:
- (i) Slide a shield terminator, Part No. S063-2-55-22-5, over each end of the wire pair.
 - (ii) Connect wire CBM7030W-22 to connector J212, pin 98, and to connector A324J1, pin 4. Connect wire CBM7030B-22 to connector J212, pin 99, and to connector A324J1, pin 5.
- NOTES: 1. Route the wire pair along with existing wires CBM0128. Refer to the Wiring Manual, Chapter 31-44-00, Sheet 2 of 7.
2. Connector A324J1 is part of the new bracket sub-assembly KGC991-1294-11.
3. For J212, use contacts Part No. M39029/58-360.
4. For A324J1, use contacts Part No. M39029/5-115.
- (e) Connect shield terminators to connectors A31CP1, P212 and J212 as follows:
- (i) Put the shield terminator in position and heat shrink it onto the shield braid of the applicable wire.
 - (ii) Crimp a terminal lug Part No. MS 25036-103 (4 required), to the loose end of the pigtail bonding wire.
- NOTE: Make sure that the length of the pigtail bonding wire is not more than 4 in (10.2 cm).
- (iii) Terminate the loose end of the pigtail bonding wire to one of the attachment screws of the applicable connector backshell
- (f) For the shield terminator closest to connector A324J1, do as follows:
- (i) Put the shield terminator in position and heat shrink it onto the shield braid of wire pair CBM7030W-22 and CBM7030B-22.
 - (ii) Crimp a terminal lug Part No. MS25036-103 to the loose end of the pigtail bonding wire.

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- (iii) Terminate the loose end of the pigtail bonding wire to the longest screw (Part No. MS35206-215) that attaches connector A324J1 to bracket Part No. KGC991-1294-13.
 - (g) For new wire FBF7031-20, do as follows:
 - (i) Connect the wire to connector P218, pin E, and to connector JB6BP1, pin 5.

NOTES: 1. Route the new wire along with existing wire FBF2272. Refer to the Wiring Manual, Chapter 21-52-00, Sheet 2 of 3.

2. For P218, use contact Part No. M39029/56-351.
 - 3. For JB6BP1, use contact Part No. 620310.
 - (h) For new wire CBF7031-20, do as follows:
 - (i) Connect the wire to connector A324J1, pin 7, and to connector J218, pin E.

NOTES: 1. Route the wire along with existing wire CBF3411. Refer to the Wiring Manual, Chapter 33-11-00, Sheet 4 of 10.

2. For A324J1, use contact Part No. M39029/5-115.
 - 3. For J218, use contact Part No. M39029/58-363.
 - (i) For new wire CBF7032N-20, connect one end of the wire to connector A324J1, pin 6.

NOTE: For A324J1, use contact Part No. M39029/5-115.
- (3) Attach bracket sub-assembly Part No. KGC991-1294-11 to bulkhead FS280.00. Refer to Kit Drawing KGC991-1294.

NOTE: Use blind rivets Part No. B0207005-4-02.
 - (4) For the loose end of new wire CBF7032N-20, do as follows:
 - (a) Crimp a terminal lug Part No. MS25036-103 to the loose end of the wire.
 - (b) Connect the loose end of the wire to ground stud GS1434. Refer to TASK 51-80-00-910-803.
 - (5) Install cable tie mount Part No. B0816033-002. Refer to Kit Drawing KGC991-1294.
 - (6) Do the applicable cut out on bulkhead panel 222ERW. The cut out must provide a 0.045 in (1.14 mm) clearance all around the QAR unit. Refer to Kit Drawing KGC991-1294.
 - (7) Install decal Part No. KGC991-1294-15 above cut out as shown on Kit Drawing KGC991-1294. Refer to TASK 20-80-01-0400-801.
 - (8) Install JB6. Refer to TASK 24-00-13-400-801
 - (9) Install DAU 4. Refer to TASK 31-42-01-400-801
 - (10) Install and re-test all other LRUs that may have been removed for wire routing and connection at FS280, and re-test per the appropriate AMM TASK.

C. Testing

- (1) Set the circuit breakers that follow to IN (refer to TASK 24-00-00-863-802):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
IND/RECORD	DAU 4 CH A	BATT
IND/RECORD	DAU 4 CH B	DC 1
IND/RECORD	FDR ACCELEROMETER	DC 2

- (2) Connect electrical power to the aircraft. Refer to TASK 24-00-00-861-801

- (3) Measure the voltage at connector A324J1, between pin 6 and pin 7. The measured voltage must be 0 volt.

- (4) Set the circuit breaker that follows to IN (refer to TASK 24-00-00-863-802):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
IND/RECORD	FDR	DC 2

- (5) Measure the voltage at connector A324J1, between pin 6 and pin 7. The measured voltage must be 28 VDC.

- (6) Set the circuit breakers that follow to OUT (on aircraft pre SB 700-24-045) or LOCKED (on aircraft, Serial No. 9123 and subsequent or aircraft post SB 700-24-045) (refer to TASK 24-00-00-863-801):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
IND/RECORD	FDR	DC 2

- (7) Remove electrical power from the aircraft. Refer to TASK 24-00-00-861-802.

- (8) Install the QAR unit, Part No. 804-0105, onto the new connector A324J1. Refer to Kit Drawing KGC991-1294.

- (9) Do an electrical bonding test between the QAR aircraft side connector and the aircraft structure. Refer to TASK 51-80-00-760-801.

NOTE: The measured resistance must be less than 2.5 milliohms.

- (10) Connect electrical power to the aircraft. Refer to TASK 24-00-00-861-801.

- (11) Set the circuit breaker that follows to IN (refer to TASK 24-00-00-863-802):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
IND/RECORD	FDR	DC 2

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- (12) Make sure that the QAR light emitting diode (LED) comes on.
- (13) Do an operational test of the FDR system. Refer to TASK 31-31-00-710-801.
- (14) Set the aircraft to weight on wheels mode and with external AC power on, press the pilot event marker button for 5 seconds to initialize DAU4B ARINC717 data transmission.
- (15) Make sure that the FDR FAIL CAS message is not shown and that the QAR LED extinguishes.
- (16) Set the circuit breakers that follow to OUT (on aircraft pre SB 700-24-045) or LOCKED (on aircraft, Serial No. 9123 and subsequent or aircraft post SB 700-24-045) (refer to TASK 24-00-00-863-801):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
IND/RECORD	DAU4 CHB	DC 1

- (17) Make sure that the CAS message FDR FAIL is shown and the QAR LED comes on.
- (18) Set the circuit breakers that follow to IN (refer to TASK 24-00-00-863-802):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
IND/RECORD	DAU4 CHB	DC 1

- (19) Remove electrical power from the aircraft. Refer to TASK 24-00-00-861-802.

D. Close-out

- (1) Install bulkhead panel 222ERW. Refer to TASK 25-12-13-400-801.
- (2) Install external avionics-compartment access-panel 140BB. Refer to TASK 52-45-11-400-801.
- (3) 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 Services (BBACS).

F. QAR Download

- (1) Operators can download the required QAR data as follows;
- (a) Set the circuit breakers that follow to OUT (on aircraft pre SB 700-24-045) or LOCKED (on aircraft, Serial No. 9123 and subsequent or aircraft post SB 700-24-045) (refer to TASK 24-00-00-863-801):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
IND/RECORD	FDR	DC 2

- (b) Connect one end of the download cable included with GSE 31X-31-04 to the connector on the front of the QAR and the other end to the laptop.
- (c) Download the QAR data as required using GSE 31X-31-04 installed on a laptop. Refer to the GSE 31X-31-04 user manual.
- (d) When the download is complete, disconnect the cable from the QAR front connector and from the laptop.
- (e) Set the circuit breaker that follows to IN (refer to TASK 24-00-00-863-801):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
IND/RECORD	FDR	DC 2

3. MATERIAL INFORMATION

A. Kit

Kit 700K31-026 is necessary to do this Service Bulletin and contains the parts that follow:

NEW PART NO.	QTY	ITEM	USED PART NO.	INSTRUCTIONS - DISPOSITION
B0207005-4-02	7	Blind Rivet	-	-
B0816033-002	2	Cable Tie Mount	-	-
KGC991-1293-1/01	1	Wire Kit	-	-
KGC991-1294-13 or (KGC991-1294-13S alternate part.)	1	Bracket	-	-
KGC991-1294-15	1	DECAL	-	-
KGC991-1294-9	1	Decal	-	-
MS35206-214	3	Screw	-	-
MS35206-215	1	Screw	-	-
MS35207-265	1	Ground Stud	-	-

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NEW PART NO.	QTY	ITEM	USED PART NO.	INSTRUCTIONS - DISPOSITION
MS35338-43	3	Lock Washer	-	-
MS35650-302	2	Nut	-	-
M85528/2-14A	1	Mounting Device	-	-
NAS1149D0332J	4	Washer	-	-
NAS1149DN432J	5	Washer	-	-

- 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 prepackaged quantities.

B. Parts

The part that follows is necessary to do this Service Bulletin and is available from Bombardier Aerospace Parts Logistics, Montréal:

ITEM	PART NUMBER	QUANTITY
QAR	804-0105	1

NOTE: The part number for the item listed above is subject to change without revision to this Service Bulletin. In case of discrepancy between this list and any other list, the Illustrated Parts Catalog prevails and shall be used to determine the latest part number.

The part that follows is necessary to download QAR data after the modification is done and is available from Bombardier Aerospace Parts Logistics, Montréal:

ITEM	PART NUMBER	QUANTITY
QAR Download Kit	805-0005	1

- NOTES:**
1. For operators that have more than one aircraft with a QAR installed, only one download kit is necessary.
 2. Refer to the BD-700 Illustrated Tool and Equipment Manual for information on related Ground Support Equipment (GSE) 31X-31-04.

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C. Material

The materials that follow, or equivalent, are necessary to do this Service Bulletin. These can be purchased from a local supplier. Bombardier Aerospace does not pay for these consumables.

DESCRIPTION	PART No./NAME	SPECIFICATION	QUANTITY	SUPPLIER (See Note)
Adhesive, Paste, Epoxy CT: 5 days	Hysol ® EA 9309.3NA	-	As Necessary	Code: A
Coating, Chemical Conversion CT: 3 minutes	Alodine 1000	MIL-C-81706	As Necessary	Code: A
Solvent	Diestone DLS or Diestone HFP or HFE-71DA	-	As Necessary	Code: B
Tie Wrap	-	-	As Necessary	Code: C

- NOTES:**
1. Refer to the table that follows for each supplier's address listed by codes.
 2. The Curing Time (CT), if applicable, for each consumable material is indicated with the description of each product.
 3. At time of release of this Service Bulletin, the information on the supplier was valid and accurate. In the event that this information has changed, the operator is encouraged to use the World Wide Web to find a local supplier.

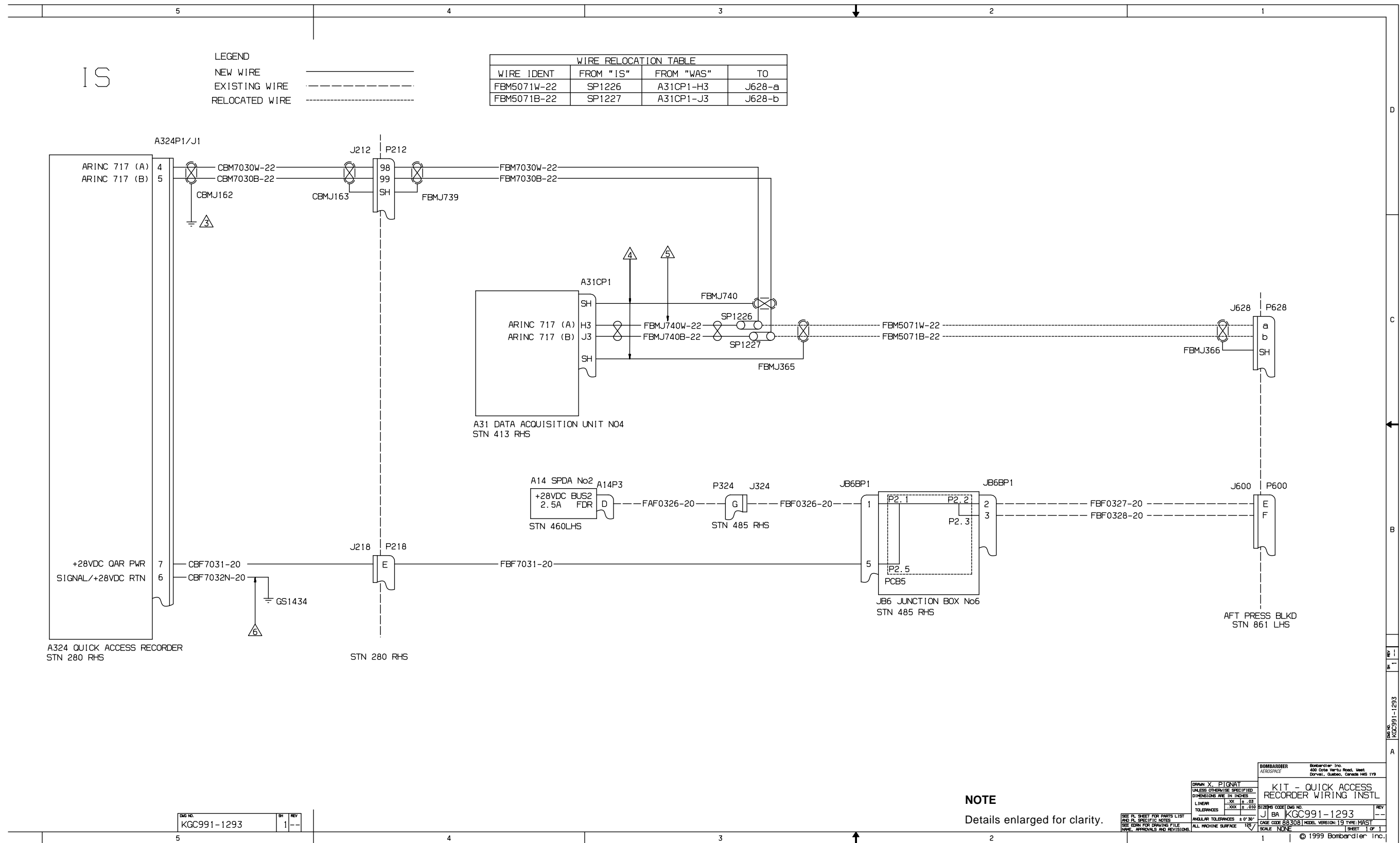
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SUPPLIERS ADDRESSES BY CODES	
<p>Code: A</p> <p>Henkel Corporation Aerospace Group 2850 Willow Pass Road Bay Point, CA 94565 U.S.A. Tel.. (925) 458-8000 Fax: (925) 458-8030 www.aerospace.henkel.com</p>	<p>Code: B</p> <p>MagChem Inc 1271 Ampere Boucherville, Que. Canada, J4B 5Z5 Tel.: (450) 655-1344 www.magchem.com or 3M Product Information Center 3M Center, Building 0304-01-01 St. Paul, MN 55144-1000 U.S.A. Tel.: 1-800-364-3577 Tel.: (612) 737-6501 www.3m.com</p>
<p>Code: C</p> <p>Commercially Available</p>	

D. Publications

No publications required.



KGC991-1293 – Kit – Quick Access Recorder Wiring Installation
 (Sheet 1 of 1, Rev.--)

Basic Issue: Jul 25/2005
 Revision 02: Dec 14/2009

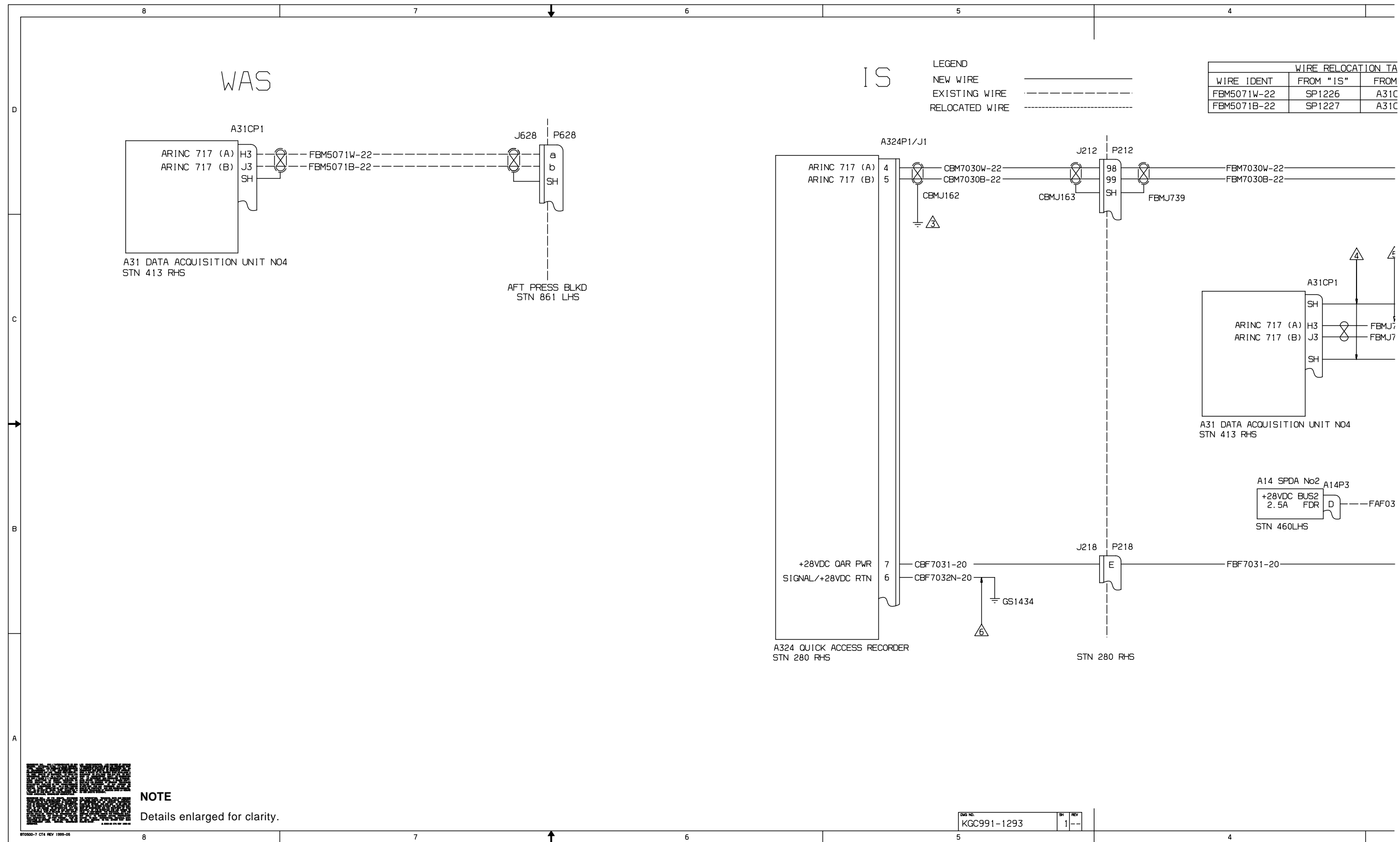
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DRINK X. PIGNAT
 (UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES)
 LINEAR: .100 ± .003
 ANGULAR TOLERANCES: ± 0°30'
 ALL MACHINE SURFACES: 125/10
 SCALE: NONE

BOMBARDIER AEROSPACE
 Bombardier Inc.
 400 Oracle Way - St. Louis, MO 63103
 Dorval, Quebec, Canada H4S 1Y9

KIT - QUICK ACCESS RECORDER WIRING INSTL
 JBA KGC991-1293
 CASE CODE 88308 | MODEL VERSION: 19 TYPE: MAST
 SHEET 1 OF 1
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SB700-31-008-1293-NC-S1-1



LEGEND

NEW WIRE —————

EXISTING WIRE - - - - -

RELOCATED WIRE - · - · - ·

WIRE RELOCATION TA		
WIRE IDENT	FROM "IS"	FROM
FBM5071W-22	SP1226	A31C
FBM5071B-22	SP1227	A31C

A31CP1
 ARINC 717 (A)
 ARINC 717 (B)
 H3
 J3
 SH

A31 DATA ACQUISITION UNIT NO4
 STN 413 RHS

J628 P628
 a
 b
 SH

AFT PRESS BLKD
 STN 861 LHS

A324P1/J1
 ARINC 717 (A) 4
 ARINC 717 (B) 5

CBM7030W-22
 CBM7030B-22
 CBMJ162

J212 P212
 98
 99
 SH

FBMJ163
 FBMJ739

FBM7030W-22
 FBM7030B-22

+28VDC QAR PWR
 SIGNAL/+28VDC RTN
 7
 6

CBF7031-20
 CBF7032N-20

GS1434

J218 P218
 E

FBF7031-20

A31CP1
 SH
 ARINC 717 (A)
 ARINC 717 (B)
 H3
 J3
 SH

FBMJ7
 FBMJ7

A31 DATA ACQUISITION UNIT NO4
 STN 413 RHS

A14 SPDA No2
 +28VDC BUS2
 2.5A FDR
 A14P3
 D --- FAF03
 STN 460LHS

A324 QUICK ACCESS RECORDER
 STN 280 RHS

STN 280 RHS

NOTE
 Details enlarged for clarity.

DWG NO.	REV
KGC991-1293	1--

KGC991-1293 – Kit – Quick Access Recorder Wiring Installation
 (Sheet 1 of 1, Rev. --, continued)

Basic Issue: Jul 25/2005
 Revision 02: Dec 14/2009

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SB700-31-008-1293-NC-S1-2

<p>BOMBARDIER AEROSPACE</p> <p>Bombardier Inc. 400 Cote Vertu Road, West Dorval, Quebec, Canada H4S 1Y9</p>	<p>DRAWN BY: C. WATSON</p> <p>CAGE CODE 3AB48</p>	<p>SHEET 3</p> <p>MODEL VERSION: 06</p>	<p>MS CODE BA</p> <p>MODEL TYPE: MAST</p>	<p>PL KGC991-1294</p>	<p>REV -C</p>
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NOTES:

1. THE PURPOSE OF THIS KIT IS TO INSTALL A QUICK ACCESS RECORDER ON BULKHEAD 280.
QTY OF 1 KIT PER AIRCRAFT.
2. FINISH CODES PER BD-700 SRM CHAPTER 51-01-04.
3. INSTALL SOLID RIVET PER BD-700 SRM CHAPTER 51-42-08.
4. SHEET METAL FORMING AND CUTTING PER BD-700 SRM CHAPTER 51-28.
5. ALL PILOT HOLES #40 (.098 DIA). LOCATE PILOT HOLES APPROXIMATELY AS SHOWN
ENSURING A MIN EDGE DISTANCE OF 2D AND A PITCH OF 4D.
- ⚠ ELECTRICAL BONDING PER BD-700 AMM CHAPTER 51-80-00. FINISH PER A047.
- ⚠ PREPARE SURFACES AND BOND CABLE TIE MOUNT WITH EPOXY PER BD-700 AMM
CHAPTER 51-22.
- ⚠ LOCATE KGC991-1294-11 BRACKET SUB-ASSY APPROXIMATELY AS SHOWN TO MAXIMIZE
CLEARANCE WITH EXISTING WIRING HARNESSES AND TO ACHIEVE A MIN PITCH OF 4D
WITH EXISTING FASTENERS. ENSURE A MIN CLEARANCE OF 0.5" BETWEEN
WIRE HARNESSES AND BRACKET SUB-ASSY (WITH OAR INSTALLED).
9. THE 2-D FLAT PATTERN IS THE SOLE AUTHORITY FOR THIS DRAWING.
10. INSTALL BLIND RIVETS PER BD-700 SRM CHAPTER 51-42-20.
11. INSTALL FASTENERS PER BD-700 SRM CHAPTER 51-41-04.
- ⚠ 10% SPARES INCLUDED.
13. THIS DRAWING IS TO BE DONE IN CONJUNCTION WITH WIRING KIT KGC991-1293.
- ⚠ CUT TRIM PANEL GC722-0147 (OR GC722-0047) TO PROVIDE .045" CLEARANCE WITH OAR (ALL AROUND).
REF VIEW B (ZONE 1A SHEET 1).

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870501-2 C14 REV 1999-01

ID: GX KGC991-1294 - C REL MAST 6 2008-07-17

SB700-31-026-1294-C-S3-PL

PL KGC991-1294 – Kit – Installation of Quick Access Recorder (QAR)
 (Sheet 3 of 4, Rev. C)

MODEL BD-700-1A10 (BD-700)

BOMBARDIER AEROSPACE	Bombardier, Inc. 400 Cote Vertu Road, West Dorval, Quebec, Canada H4S 1Y9	DRAWN BY: C. WATSON	SHEET 4	MS CODE BA	PL KGC991-1294	REV -C
		CAGE CODE 3AB48 MODEL VERSION: 06 MODEL TYPE: MAST				

NOTES CONT'D:

15. ROUTE WIRING AS FOLLOWS (WIRE ROUTING TO BE FINALIZED AT PROOF INSTALLATION):

- ROUTE NEW WIRES CBM7030 (REF KGC991-1293) ALONG EXISTING WIRES CBM0128 (REF BD-700 WIRING MANUAL CHAPTER 31-44) FROM QAR (P/N 804-0105) TO F.S.280 (RHS) (J212)
- ROUTE NEW WIRES FBM7030 (REF KGC991-1293) ALONG EXISTING WIRES FBM0128, FBM0130, FBM0132 & FBM0134 (REF BD-700 WIRING MANUAL CHAPTER 31-44) FROM F.S.280 (RHS) (P212) TO F.S.413 (DAU#4).
- ROUTE NEW WIRE CBF7031 (REF KGC991-1293) ALONG EXISTING WIRE CBF3411 (REF BD-700 WIRING MANUAL CHAPTER 33-11) FROM SIDE PLATE (GC547-0075) R.B.L 34.05 (ABOVE FLOOR) TO F.S.280 (RHS) (J218)
- ROUTE NEW WIRE FBF7031 (REF KGC991-1293) ALONG EXISTING WIRE FBF2272 (REF BD-700 WIRING MANUAL CHAPTER 21-52) FROM F.S.280 (RHS) (P218) TO F.S.485 (JB6)

△ LOCATE GROUND STUD APPROXIMATELY AS SHOWN ENSURING A MIN EDGE DISTANCE OF 2D. DRILL HOLE Ø.192/.198. INSTALL GROUND STUD PER BD-700 AMM CHAPTER 51-80-00.

△ INSTALL DECAL PER BD-700 AMM CHAPTER 20-80.

△ LETTERING TO BE .12" HIGH. COLOR BLACK ON WHITE BACKGROUND.

19. -1 INSTALLATION & -3 SUB-ASSY NOT SHOWN IN REV-C & SUBS. REFER TO REV-B FOR ANY INFORMATION ON PREVIOUS -1 INSTALLATION & -3 SUB-ASSY.

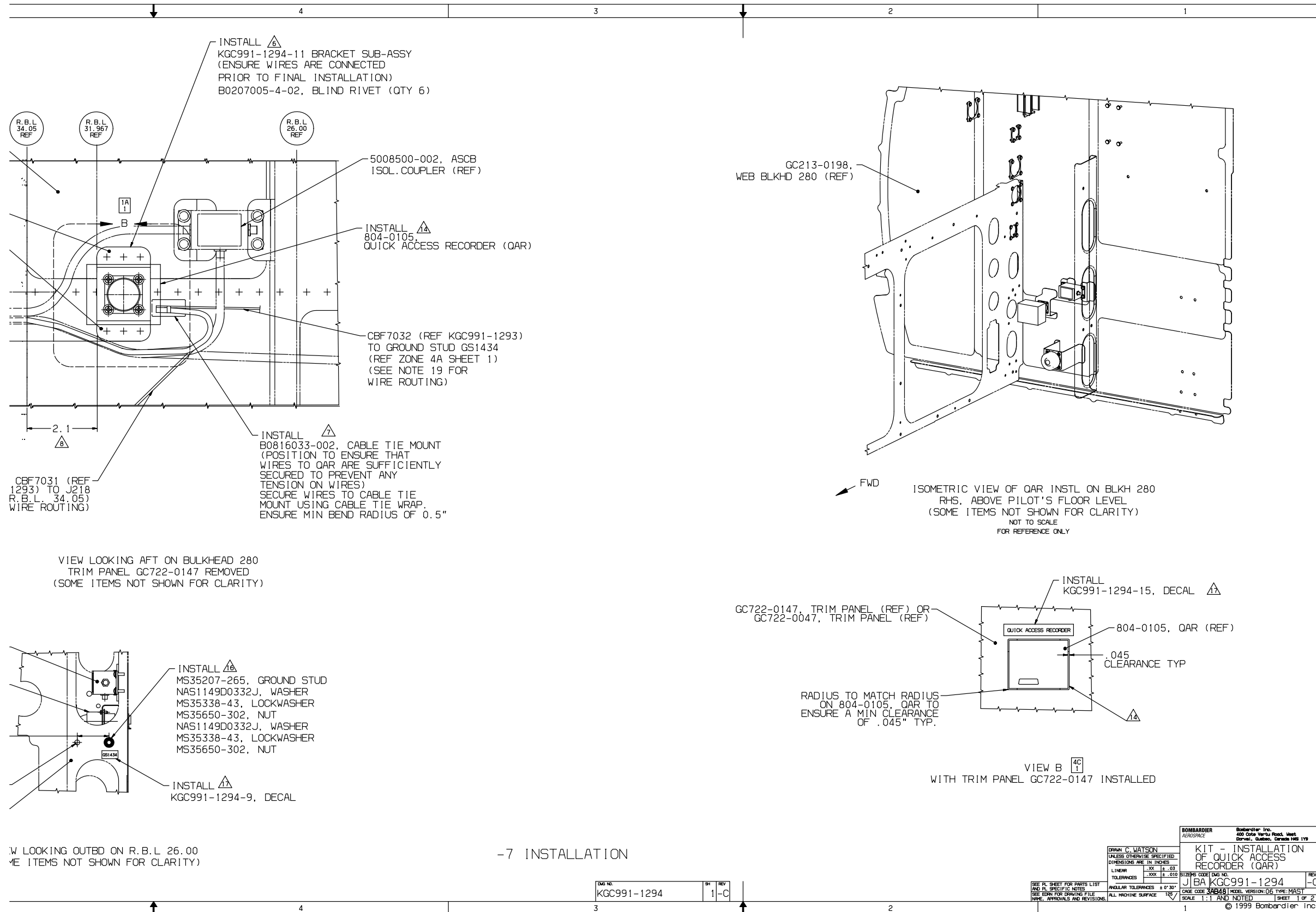
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870501-2 C14 REV 1999-01

ID: GX KGC991-1294 -C REL MAST 6 2008-07-17

SB700-31-026-1294-C-S4-PL

PL KGC991-1294 – Kit – Installation of Quick Access Recorder (QAR)
(Sheet 4 of 4, Rev. C)



VIEW LOOKING OUTBD ON R.B.L 26.00
(SOME ITEMS NOT SHOWN FOR CLARITY)

-7 INSTALLATION

DWG NO.	REV
KGC991-1294	1-C

SEE PL. SHEET FOR PARTS LIST AND PL. SPECIFIC NOTES	ALL MACHINE SURFACES	125
SEE FORM FOR DRAWING FILE NAME, APPROVALS AND REVISIONS	SCALE	1:1 AND NOTED

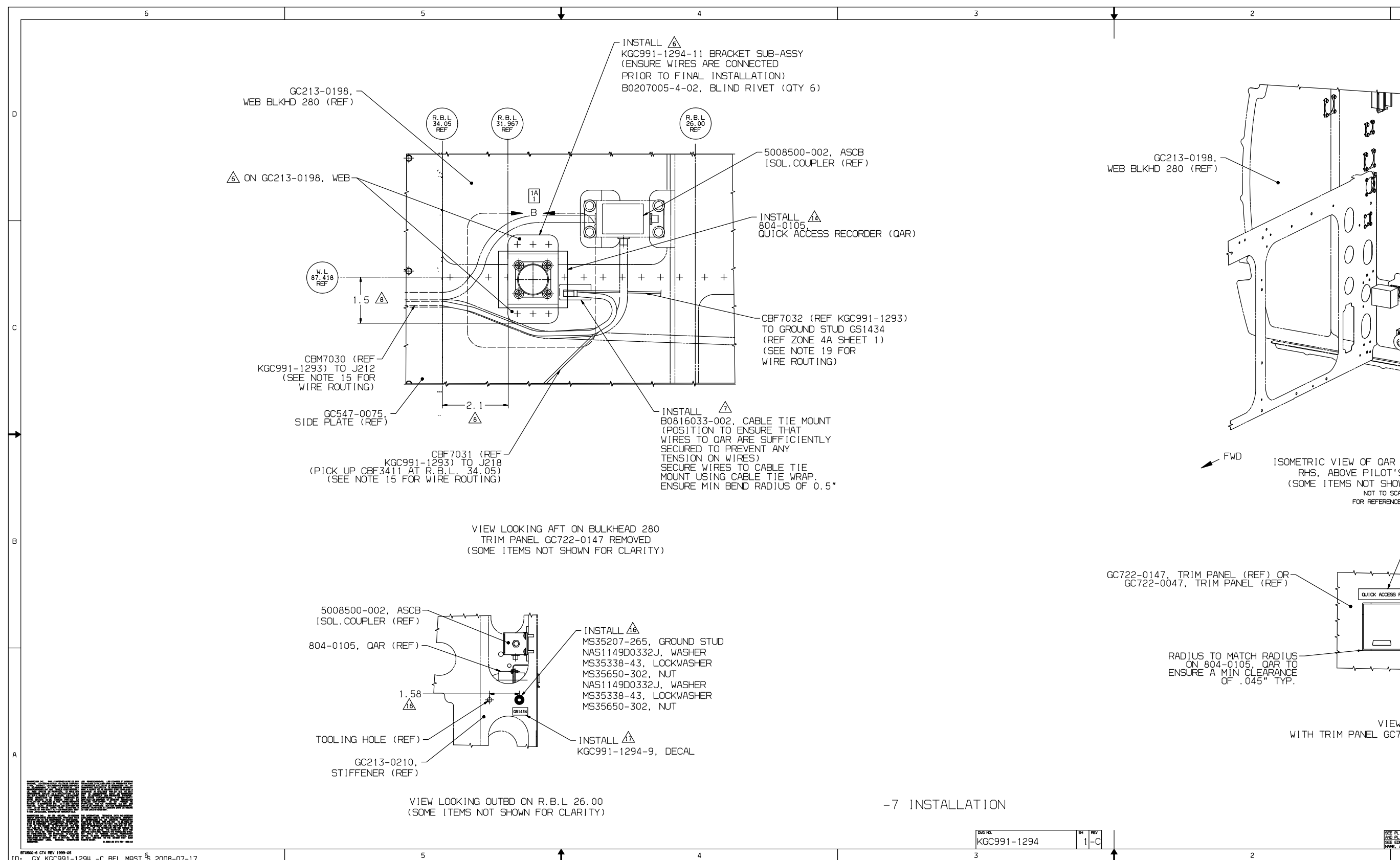
BOMBARDIER Aerospace		Bombardier Inc. 400 Queen Street West Toronto, Ontario, Canada M5G 1Y9	
KIT - INSTALLATION OF QUICK ACCESS RECORDER (QAR)			
DRWAL C. WATSON UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	LINEAR 1:100 ± 0.03	ANGULAR TOLERANCES ± 0° 30'	REV
TOLERANCES 1:100 ± 0.015	SIZE/NO CODE	DWG NO.	REV
		JBA KGC991-1294	-C
		SCALE	SHEET 1 OF 2
		© 1999 Bombardier Inc.	

KGC991-1294 – Kit – Installation of Quick Access Recorder (QAR)
(Sheet 1 of 2, Rev. C)

Basic Issue: Jul 25/2005
Revision 02: Dec 14/2009

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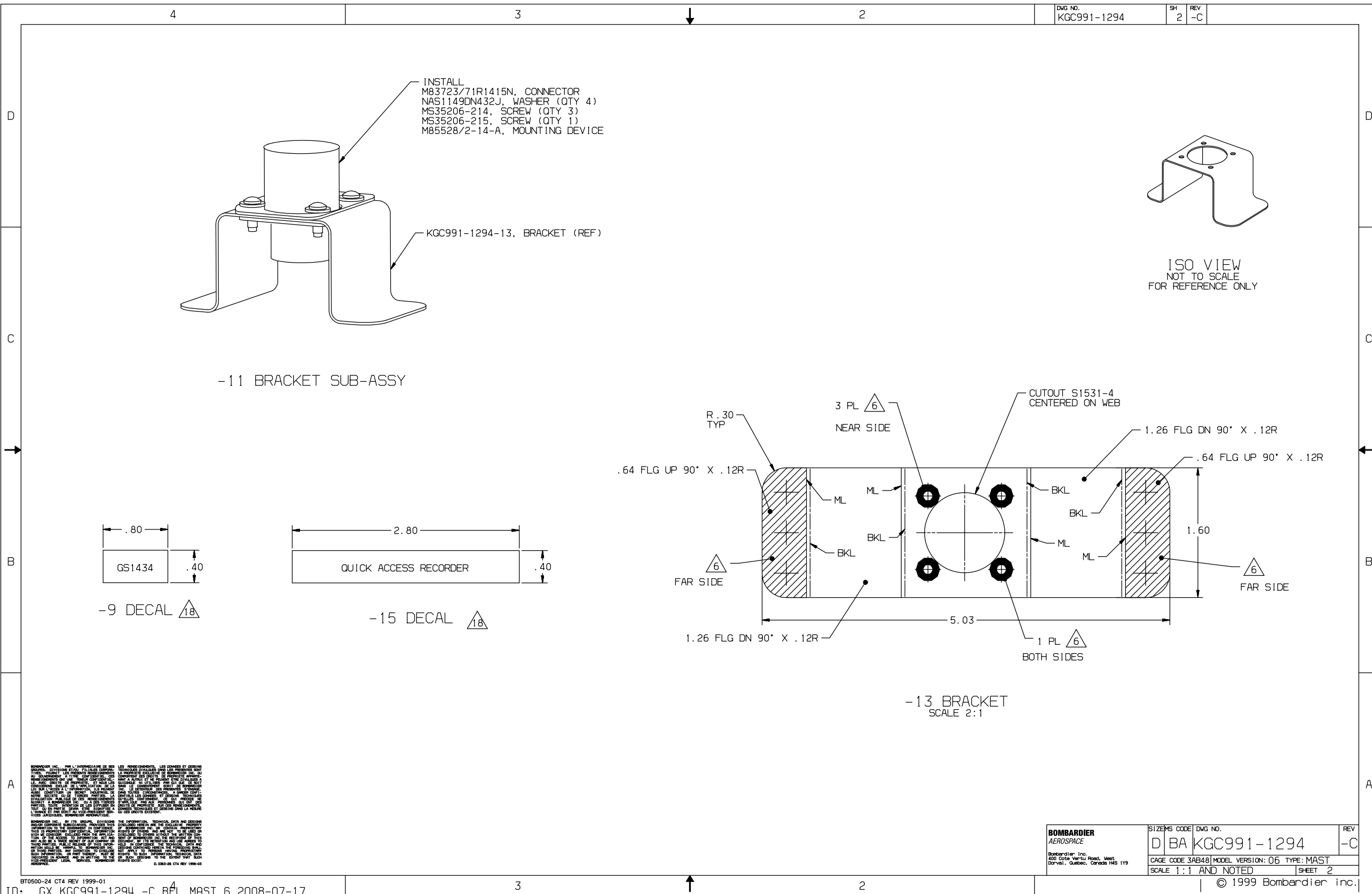
SB700-31-026-1294-C-S1-1



KGC991-1294 – Kit – Installation of Quick Access Recorder (QAR)
(Sheet 1 of 2, Rev. C - continued)

Basic Issue: Jul 25/2005
Revision 02: Dec 14/2009

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KGC991-1294 – Kit – Installation of Quick Access Recorder (QAR)
 (Sheet 2 of 2, Rev. C)

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SB700-31-026-1294-C-S2

SERVICE BULLETIN EVALUATION FORM

(Your ideas will help us provide better bulletins)

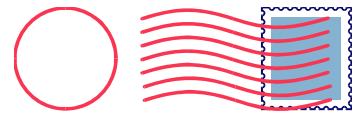
SERVICE BULLETIN: 700-31-026 **ISSUE:** Rev. 02 **DATED:** Dec 14/2009

TITLE: Modification – Flight Data Recording-System – Introduction of a Quick Access Recorder

- | | 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"> • If a kit was required, did the kit contents received agree with the contents listed in the 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 the 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"/> |

<i>For administrative use only</i>	PLEASE SUPPLY US WITH THE FOLLOWING DATA AND FAX TO: (514) 855-7634 or E-MAIL TO: MTL_BBAD_SB_Evaluation@aero.bombardier.com	
522LP02	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**



Bombardier Business Aircraft Customer Services (BBACS)

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

Attention: Supervisor, Service Bulletin Group
Department 631

SERVICE BULLETIN INCORPORATION SHEET – “700-31-026”

BOMBARDIER
SUBMISSION

Upon completion of the Service Bulletin, please fill-in, fax to (514) 855-8798 or e-mail to Fracas at fracas.montreal@aero.bombardier.com

If your aircraft is registered on CAMP and you are reporting to them, please do not send the incorporation sheet to Bombardier. If your aircraft is on another tracking system, please contact Bombardier to make arrangements for automated data submission.

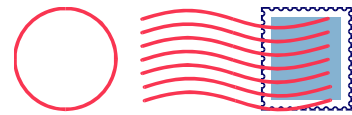
Service Bulletin Number	Rev.	* Parts Completed	<u>COMPLIED WITH</u>			Remarks/Reason
			YES	NO	N/A	
700-31-026	02	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Actual hours to accomplish Service Bulletin: _____

* NOTES:

- 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.
- For repetitive checks (usually PART A) only the initial check should be reported unless otherwise stated in the Service Bulletin.
- When more than one part is carried out at the same time, each part should be reported.

Aircraft Serial No. _____	Aircraft Reg. No. _____
Airframe Hours: _____	Airframe Landings _____
S.B. Incorporation date _____ (dd/mm/yy)	Service Order No. _____
Facility Incorporating S.B. _____	
Name _____	Signature _____ Date _____ (dd/mm/yy)
Signature not required if sent by E-Mail	



Bombardier Business Aircraft Customer Services (BBACS)

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

Attention: Maintenance Engineering
Department 051
