

SERVICE BULLETIN REVISION TRANSMITTAL SHEET

MODEL BD-700-2A12 (BD-700)

Discard the Revision 01 of this Service Bulletin dated May 19/2023 and replace in its entirety with this Revision 02.

Service Bulletin No. 700-24-7507

Date of Basic Issue Mar 31/2023

Revision No. 01 Dated May 19/2023

Revision No. 02 Dated Oct 16/2023

This revision has no effect for aircraft on which the Basic Issue of this Service Bulletin was done thus no other action is necessary. Do not sign the log book if you have not done this revision. Keep the previous log book entry. You may make an entry as "Not Applicable" for this revision.

This revision is issued to:

1. Change, in Paragraph 1.K. .Modification Summary, R700T7400477 to Rev.B and add drawing GK2580002, Rev. A.
2. Add, in Paragraph 2.B.(2) and in Figure 1, the part no. ENM386519113C for the secondary blanket.
3. Make miscellaneous minor changes, as necessary, with no change of context.

SERVICE BULLETIN SUMMARY

This Service Bulletin is available at:
my.businessaircraft.bombardier.com

MODEL BD-700-2A12 (BD-700)

ATA 24-31

ELECTRICAL POWER

MODIFICATION – DC POWER CONVERSION – TRANSFORMER RECTIFIER UNIT (TRU) FAN CIRCUIT, PBIT, CBIT AND TURN-ON THRESHOLD CORRECTION

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

RECOMMENDED	COMPLIANCE TIME	
SPECIFIED TIME COMPLIANCE	See Paragraph 1.D.	
EFFECTIVITY: A/C Serial No. 70006 to 70166		
MANPOWER: Refer to Paragraph 1.F.		
CONTINUED AIRWORTHINESS (CAW) FLEET CAMPAIGN	YES ☒	NO ☐
AIRWORTHINESS LIMITATIONS (AWL)	YES ☐	NO ☒
KITS and/or PARTS	YES ☒	NO ☐
TOOLING/GSE	YES ☒	NO ☐
PLANNING INFORMATION: See important information at the start of Paragraph 1.	YES ☒	NO ☐
DEDICATED SCHEDULE	YES ☒	NO ☐
PREREQUISITE SERVICE BULLETINS: N/A		
NOTE: This Service Bulletin is subject to an Airworthiness Directive which makes it necessary to implement this Service Bulletin.		

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

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

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my.businessaircraft.bombardier.com

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ATA 24-31

ELECTRICAL POWER

MODIFICATION – DC POWER CONVERSION – TRANSFORMER RECTIFIER UNIT (TRU) FAN CIRCUIT, PBIT, CBIT AND TURN-ON THRESHOLD CORRECTION

RETROACTIVE ACTION

THE ACTION THAT FOLLOWS IS RECOMMENDED FOR AIRCRAFT ON WHICH THE BASIC ISSUE OF THIS SERVICE BULLETIN WAS DONE:

Remove and discard the secondary layer of insulation blanket in front of the TRU 2 fan air inlet in the cockpit underfloor RHS, as shown in Paragraph 2.B.(2).

1. PLANNING INFORMATION

- NOTES:**
1. **Before you do this Service Bulletin, examine all STC, STA or equivalent action changes to make sure that this Service Bulletin can be completed.**
 2. For any technical issues, contact CSE, Technical Support, Global Express by e-mail at SRPSA@aero.bombardier.com.

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.

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3. This Service Bulletin is covered by a dedicated schedule. Dedicated schedules are used to reserve and manage inventory due to limited availability of rotatable stock, parts and/or kits. Parts are limited, therefore, advance part scheduling with our In-Service Implementation Team (ISIT) is recommended prior to a maintenance visit. They can be reached at bacs_isit@aero.bombardier.com. The parts will be allocated on a first come first serve basis and priority will be given to incorporation of PART A of this Service Bulletin.

Should you require additional information, please contact your Regional Sales Manager (RM) or Field Service Representative (FSR).

For more information on dedicated schedules, refer to SB 700-00-7502.

A. Effectivity

BD-700-2A12 aircraft, Serial No. **70006 to 70166**.

All other subsequent BD-700-2A12 aircraft are scheduled for the modification in production (Ref.: Modification Summary 700T7095051).

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 Aviation Service Bulletin(s).

B. Reason

1. Condition:

It has been reported that the Transformer Rectifier Unit (TRU) may be exposed to inoperative fan conditions. The rising temperature of the TRU can lead to the activation of LOAD SHED, which is a procedure initiated once the TRU is overheated. Once LOAD SHED is initiated, the flight crew will be notified through a message from the EICAS. Note that the LOAD SHED can be activated by other conditions than the raised temperature of a TRU.

In addition, a design issue was uncovered where the FAN Power-up Built-in Test (PBIT) and Continuous Built-In-Test (CBIT) are not adequate to detect fan failure. The FAN PBIT is a test that is automatically performed once the aircraft is powered up. It initiates the fans to turn on regardless of the TRU temperature to test their functionality. The FAN CBIT is a function that detects fan failure during aircraft operation. Therefore, if FAN PBIT and/or CBIT are not reliable to detect a fan failure, inoperative fan conditions will remain dormant.

It was also identified that an insulation blanket located close to the TRU 2 fan air inlet may be leading to an eventual reduction of TRU 2 cooling efficiency.

2. Evidence:

The root cause for the FAN CBIT being unable to detect a fan failure is because the TRU control and protection board cannot transmit the FAN failure signal to DCLOG per actual TRU design.

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3. Objective/Benefit:

This Service Bulletin intends to replace the TRU No. 2 and Essential TRU with the new TRU Part No. G02404521-003. The TRU design changed to allow the inoperative fan detection during PBIT and CBIT, and correct the temperature threshold of the TRU FAN On/Off commands per system description.

This SB replaces the TRU No. 2 and Essential TRU and reduces the risk of cascading failures induced by potential undetected inoperative fans.

This SB also gives instruction to remove the secondary layer of insulation blanket in front of the TRU 2 fan air inlet in the cockpit underfloor RHS.

C. Description

This Service Bulletin gives instructions in PART A, to:

- Replace TRU No.2,
- Remove a secondary layer of insulation blanket in front of the TRU 2 fan air inlet, and
- Do the necessary tests to make sure that the system operate(s) correctly.

This Service Bulletin gives instructions in PART B, to:

- Replace ESS TRU and,
- Do the necessary tests to make sure that the system operate(s) correctly.

D. Compliance

For PART A: Recommended within 1500 flight-hours or 36 months from this Service Bulletin release date (Basic Issue).

For PART B: At operator's convenience and to be planned in consultation with ISIT. Refer to Planning Information, Paragraph 1, Note 3.

- NOTES:
1. Bombardier Aviation recommends that this Service Bulletin be done at the operator's earliest convenience, unless otherwise directed by the airworthiness authority of the operator.
 2. If it is not possible to complete all the instructions in this Service Bulletin because of the aircraft configuration, submit an SRPSA for analysis and to get an approved disposition to complete this Service Bulletin. Standard SRPSA fees may apply. Refer to the Services section of the Bombardier Customer Portal for the latest prices, rates and fees.
 3. The implementation of this Service Bulletin maintains all operational capabilities demonstrated with the latest software and hardware versions and has no effect on the existing Letters of Authorizations, including Required Navigation performance Approval Required (RNP AR) instrument procedures, obtained from applicable authorities.

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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 EASA under the Canada/EU bilateral Aviation Safety Agreement.

F. Manpower

- NOTES:
1. The man-hours given are to help you schedule the tasks given in this Service Bulletin. The man-hours 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, refer to SB 700-00-7502.

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 man-hours and should be considered for planning purposes before you schedule this Service Bulletin.
3. Labor hours are based on the fact that the modification will be done at the next scheduled maintenance task or inspection. Therefore no man-hours are allotted to prepare the aircraft for maintenance or to prepare for this Service Bulletin.

2 man-hours are necessary to do the PART A of this Service Bulletin.

1 man-hour is necessary to do the PART B of this Service Bulletin.

The labor required to do PART A and PART B of this Service Bulletin is at no cost if:

- the work is done at Bombardier Business Aviation Services (BBAS) or Authorized Service Facilities (ASF), and
- the PART A of this Service Bulletin is scheduled in less than 15 months from its release date (Basic Issue).

G. Material – Cost and Availability

The parts in Paragraph 3.B. are necessary to do this modification.

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For all parts transactions, Bombardier Aviation's current Spare Parts and Component Repair Price Catalogue General Terms and Conditions apply. These terms and conditions are found on the Bombardier Customer Portal at:

my.businessaircraft.bombardier.com

The parts are available at no cost if:

- a no-charge purchase order is sent to Bombardier Aviation in less than 15 months, from this Service Bulletin release date (Basic Issue) for PART A of this Service Bulletin.

This Service Bulletin is covered by a dedicated schedule. Dedicated schedules are used to reserve and manage inventory due to limited availability of rotatable stock, parts and/or kits. Parts are limited, therefore, advance part scheduling with our In-Service Implementation Team (ISIT) is recommended prior to a maintenance visit. They can be reached at bacs_isit@aero.bombardier.com. The parts will be allocated on a first come first serve basis and priority will be given to incorporation of PART A of this Service Bulletin.

Should you require additional information, please contact your Regional Sales Manager (RM) or Field Service Representative (FSR).

For more information on dedicated schedules, refer to SB 700-00-7502.

Send units for upgrade or disposal to Bombardier Aviation at one of the two addresses given below:

Learjet Inc. – Core Returns
251-A Wille Road
Des Plaines, Illinois
60018-1861
USA

or

Distribution Centre Frankfurt – Core Returns
Bombardier Aviation Company GmbH
Hans-Boeckler-Strasse 9
GROSS-GERAU Hesse 64521
Germany

Refer to your Material Return Authorization (MRA) form to find the applicable return address.

NOTE: Bombardier Aviation is maintaining a rotatable pool for the TRU replacement, to be supplied to the operators under the terms and conditions given below:

- The removed TRU must be returned to Bombardier Aviation, Parts Services in less than 10 days of receipt of replacement unit, with documentation showing the serial number of the aircraft.
- If the removed TRU is not returned in less than 10 days, the operator will be charged for the replacement unit.

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Smart Parts does not pay for this recommended Service Bulletin at any time.

H. Tooling

The equipment and tools listed below are necessary to do this modification:

GSE REFERENCE NO.	PART NO.	DESCRIPTION
20X-10-01	S4933959-501	Tag, Circuit Breaker
Commercially Available	–	Torque Wrench

- NOTES:**
1. Refer to the Global 7500 Illustrated Tool and Equipment Publication (ITEP) to make sure that you use the correct equipment configuration.
 2. Refer to the Liability Statement in the ITEP for the G7500 for acceptable GSE equivalents.
 3. This list is provided for quick reference. In case of discrepancy between this list and the tools called in the AMP, WM, Chapter 20, then the tools called in the AMP, WM prevail. Other approved alternative tools are acceptable and can also be used.

I. Weight and Balance

No change.

J. Electrical Load Data

No change.

K. References

- TCCA Airworthiness Directive, (pending).
- Bombardier Aviation, Top Modification Summary, 700T7095051, Rev. A.
- Bombardier Aviation, Modification Summary, R700T7400477, Rev. B.
- Bombardier Aviation, Kit Drawing GK2580002, Rev. A.
- Global 7500, Aircraft Maintenance Publication (AMP), Chapters 24 and 52.
- Global 7500, Illustrated Parts Data Publication (IPDP), Chapter 24.
- Global 7500, Advisory Wire AW700-24-0870 – TRU 1 FAIL (Advisory) Dispatchability.

L. Other Publications Affected

None.

M. Equivalent Service Bulletins

None.

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2. ACCOMPLISHMENT INSTRUCTIONS

- NOTES:**
1. All TASKs given in the procedures that follow are from the Global 7500 BD-700-2A12, Aircraft Maintenance Publication (AMP) unless otherwise specified.
 2. All references made to zones, access panels and/or doors, are from the Global 7500 BD-700-2A12 Aircraft Maintenance Publication (AMP), Chapter 6.

A. Aircraft Setup (Part A)

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Obey all electrical/electronic safety precautions. Refer to BD700-A-J24-00-00-00AAA-012A-A.
- (3) Obey all electrostatic-discharge safety precautions. Refer to BD700-A-J24-00-00-01AAA-012A-A.

CAUTION: OBEY ALL ELECTROSTATIC DISCHARGE-SENSITIVE (ESDS) PRECAUTIONS. STATIC VOLTAGES CAN CAUSE DAMAGE TO ESDS COMPONENTS.

- (4) On the AC electrical-power-center No. 2, open and tag the circuit breaker that follows. Refer to BD700-A-J24-00-00-02AAA-561A-A.

SYSTEM NAME	CIRCUIT BREAKER NAME
TRU 2	AC-EPC2-A01

- (5) Do the procedure to remove the forward equipment-compartment access-panel (132AR). Refer to BD700-A-J52-45-05-00AAA-520A-A.

B. Modification (Part A) – TRU No. 2 replacement

NOTE: If it is not possible to complete all the instructions in this Service Bulletin because of the configuration of the aircraft, submit an SRPSA for analysis and get an approved disposition to complete this Service Bulletin. Standard SRPSA fees may apply. Refer to the Services section of the Bombardier Customer Portal for the latest prices, rates and fees.

- (1) Remove the TRU No. 2 per BD700-A-J24-31-03-00AAA-520A-A.
- (2) At FS 197.75, pressure bulkhead, remove and discard the secondary insulation blanket (part no. ENM386519113C or ENM386519113D) as shown in Figure 1.
 - (a) Re-identify the blanket installation by ink stamp per best shop practice.
- (3) Install the new TRU No. 2 Part No. G02404521-003. Refer to BD700-A-J24-31-03-00AAA-720A-A.
 - (a) Do a check of the electrical bond resistance on the TRU. Refer to BD700-AJ51-80-00-00AAA-366A-A.

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C. Testing (Part A)

- (1) On the AC electrical-power-center No. 2, remove the tag and close the circuit breaker that follows. Refer to BD700-A-J24-00-00-02AAA-761A-A.

SYSTEM NAME	CIRCUIT BREAKER NAME
TRU 2	AC-EPC2-A01

- (2) Do the operation test for the transformer rectifier-unit No. 2. Refer to BD700-A-J24-31-03-00AAA-320A-A.

D. Close-out (Part A)

- (1) Remove all tools, equipment and unwanted materials from the aircraft.
- (2) Do the procedure to install the forward equipment-compartment access-panel (132AR). Refer to BD700-A-J52-45-05-00AAA-720A-A.

E. Aircraft Setup (Part B)

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Obey all electrical/electronic safety precautions. Refer to BD700-A-J24-00-00-00AAA-012A-A.
- (3) Obey all electrostatic-discharge safety precautions. Refer to BD700-A-J24-00-00-01AAA-012A-A.

CAUTION: OBEY ALL ELECTROSTATIC DISCHARGE-SENSITIVE (ESDS) PRECAUTIONS. STATIC VOLTAGES CAN CAUSE DAMAGE TO ESDS COMPONENTS.

- (4) On the circuit breaker panel, open and tag the circuit breaker that follows. Refer to BD700-A-J24-00-00-02AAA-561A-A.

SYSTEM NAME	CIRCUIT BREAKER NAME
ESS TRU	CBP-D04

- (5) Do the procedure to open the forward equipment-compartment door (212AR). Refer to BD700-A-J52-42-01-00AAA-540A-A.

F. Modification (Part B) – Essential TRU replacement

NOTE: If it is not possible to complete all the instructions in this Service Bulletin because of the configuration of the aircraft, submit an SRPSA for analysis and get an approved disposition to complete this Service Bulletin. Standard SRPSA fees may apply. Refer to the Services section of the Bombardier Customer Portal for the latest prices, rates and fees.

- (1) Remove the Essential TRU per BD700-A-J24-31-05-00AAA-520A-A.

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- (2) Install the new Essential TRU Part No. G02404521-003. Refer to BD700-A-J24-31-05-00AAA-720A-A.
 - (a) Do a check of the electrical bond resistance on the TRU. Refer to BD700-AJ51-80-00-00AAA-366A-A.

G. Testing (Part B)

- (1) On the circuit breaker panel, remove the tag and close the circuit breaker that follows. Refer to BD700-A-J24-00-00-02AAA-761A-A.

SYSTEM NAME	CIRCUIT BREAKER NAME
ESS TRU	CBP-D04

- (2) Do the operation test for the essential transformer-rectifier unit. Refer to BD700-A-J24-31-05-00AAA-320A-A.

H. Close-out (Part B)

- (1) Remove all tools, equipment and unwanted materials from the aircraft.
- (2) Do the procedure to close the forward equipment-compartment door (212AR). Refer to BD700-A-J52-42-01-00AAA-740A-A.

I. Recording

You can do each PART of this Service Bulletin independently. When any PART of this Service Bulletin is completed, make an entry in the aircraft log and send the attached Incorporation Notice to Bombardier Aviation Customer Services (BACS).

For information, corrections, comments and/or feedback regarding Service Bulletins released on the Customer Portal, please contact the Service Bulletin Group at the following email address:

bbad_SBgroup@aero.bombardier.com

3. MATERIAL INFORMATION

A. Kit

No kits required.

B. Parts

The parts that follow are necessary to do the Part A of this Service Bulletin and are available from Bombardier Aviation Parts Services, Montreal:

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NEW PART NO.	QTY	ITEM	USED PART NO.	INSTRUCTIONS - DISPOSITION
G02404521-003	1	Transformer Rectifier Unit (TRU)	G02404521-001	Refer to Paragraph 1.G,

The part that follow is necessary to do the Part B of this Service Bulletin and is available from Bombardier Aviation Parts Services, Montreal:

NEW PART NO.	QTY	ITEM	USED PART NO.	INSTRUCTIONS - DISPOSITION
G02404521-003	1	Transformer Rectifier Unit (TRU)	G02404521-001	Refer to Paragraph 1.G,

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

C. Material

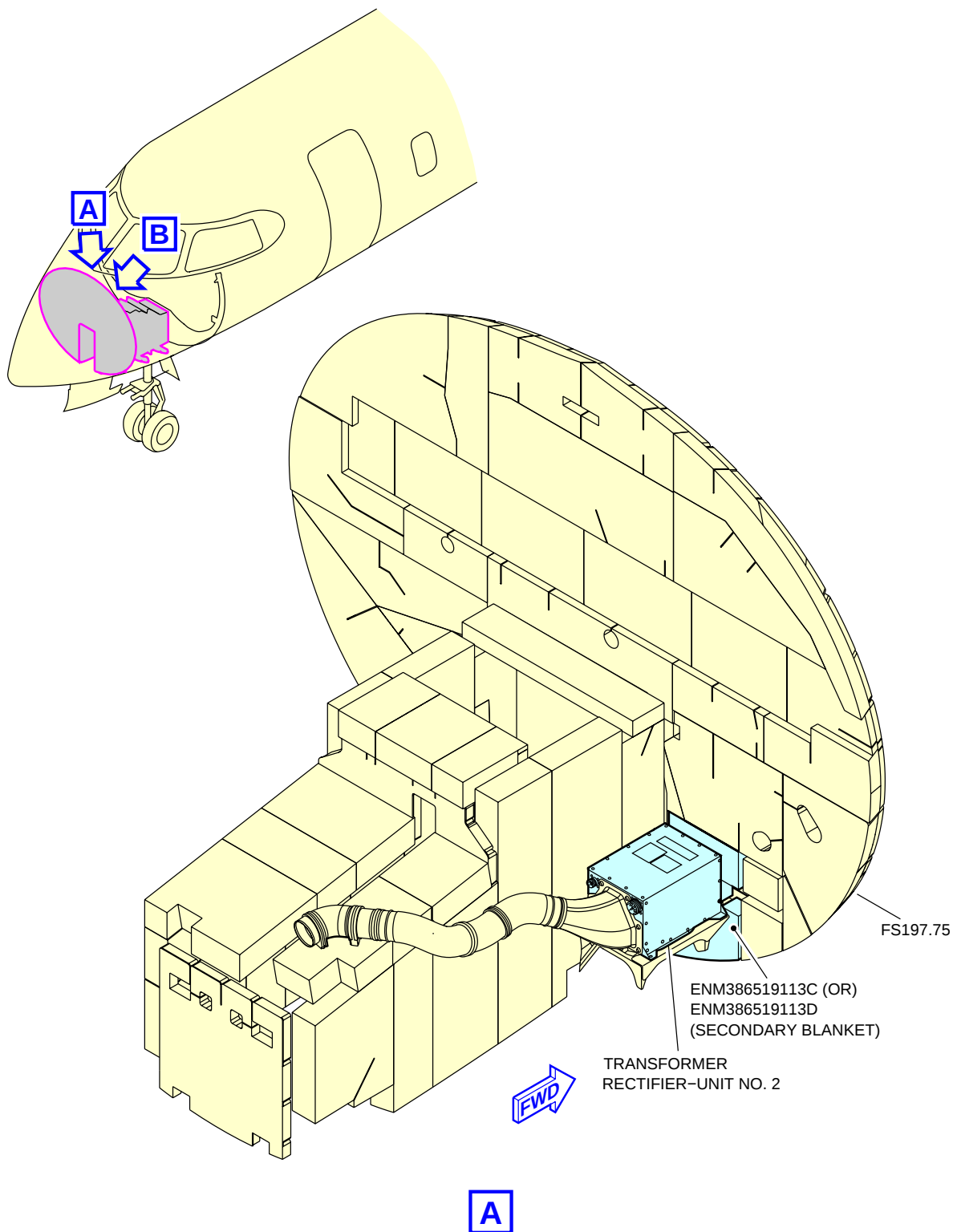
No materials required.

D. Publications

No publications required.

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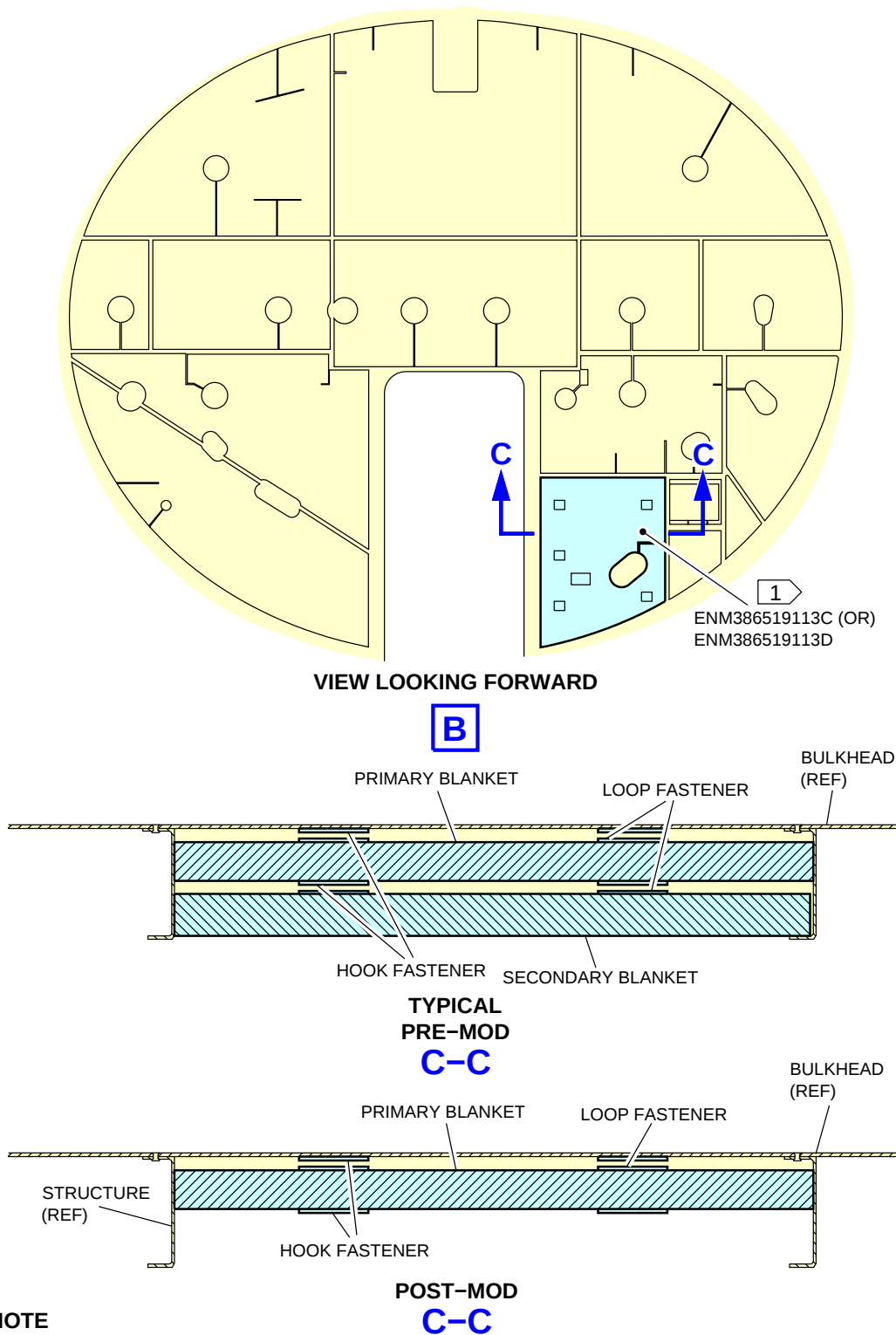


SB700-24-7507_001

Figure 1 – Removal and discard of the insulation blanket.
(Sheet 1 of 2)

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NOTE

- 1 Remove and discard the secondary blanket.

SB700-24-7507_002

Figure 1 – Removal and discard of the insulation blanket.
(Sheet 2 of 2)

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SERVICE BULLETIN EVALUATION FORM

(Your ideas will help us provide better bulletins)

SERVICE BULLETIN: 700-24-7507 **ISSUE:** Rev. 02 **DATED:** Oct 16/2023

TITLE: MODIFICATION – DC Power Conversion – Transformer Rectifier Unit (TRU)
Fan circuit, PBIT, CBIT and Turn-On Threshold correction

For any information, correction(s), comment(s) and/or feedback regarding Service Bulletins released on the Customer Portal, please contact the Service Bulletin Group at the following email address:

bbad_SBgroup@aero.bombardier.com

NOTE: Please use Salesforce **only** for troubleshooting issues or when Engineering deviation is necessary to accomplish the Service Bulletin modification.

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SERVICE BULLETIN INCORPORATION SHEET – "700-24-7507"

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 you're reporting Service Bulletin (SB) Incorporations to CAMP, sending this Incorporation Sheet to Bombardier is not mandatory. If your aircraft is on another tracking system, please contact Bombardier to make arrangements for automated data submission.
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Service Bulletin Number	Rev.	* Parts Completed	COMPLIED WITH			Remarks/Reason (Mandatory if N/A)
			YES	NO	N/A	
700-24-7507	02		☐	☐	☐	
			☐	☐	☐	
			☐	☐	☐	
			☐	☐	☐	
			☐	☐	☐	

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.
 - Fill in 'Remark/Reason' to explain compliance method when N/A is selected. (E.g. Part not installed, N/A by effectivity, N/A by Part Serial Number, etc.)
 - PCW means 'Previously Complied With'.

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	