



AIRCRAFT MAINTENANCE MANUAL

THERMAL INSULATION - MAINTENANCE PRACTICES

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to repair the thermal insulation of the cooling pack system.
- B. These procedures are applicable to the LH and RH cooling packs.
- C. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	DESCRIPTION	EFFECTIVITY
21-51-11-900-801-A	THERMAL INSULATION OF COOLING PACK SYSTEM - REPAIR	004-169
21-51-11-960-801-A	THERMAL INSULATION OF COOLING PACK SYSTEM - REPLACEMENT	170 AND ON



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TASK 21-51-11-900-801-A

EFFECTIVITY: 004-169

2. THERMAL INSULATION OF COOLING PACK SYSTEM - REPAIR

A. General

- (1) This task gives the instructions to repair the thermal insulation of the cooling pack system.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM TASK 21-51-11-960-801-A/200	THERMAL INSULATION OF COOLING PACK SYSTEM - REPLACEMENT
IPC 21-51-00	COOLING PACK SYSTEM

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
191	191EL	LH side of the forward lower fairing
191	191FR	RH side of the forward lower fairing

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Ceramic Fiber Insulation (Kaowool)	IPC 21-51-00	AR
Tape, large (50 mm)	IPC 21-51-00	AR
Tape, narrow (19 mm)	IPC 21-51-00	AR

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	LH or RH cooling pack system

I. Preparation (Figure 201)

SUBTASK 841-002-A

- (1) On the overhead circuit breaker panel, open the PACK 1 and/or PACK 2 circuit breaker(s), as applicable, and attach (a) DO-NOT-CLOSE tag(s) to it (them).

- (2) Open access panel(s) 191EL and/or 191FR (AMM MPP 06-41-01/100), as applicable.
- J. Repair the Thermal Insulation of the Cooling Pack System ([Figure 201](#)) ([Figure 202](#))
SUBTASK 900-002-A

**WARNING: DO NOT TOUCH THE COOLING PACK SYSTEM DUCTS OR
COMPONENTS IMMEDIATELY AFTER THE SYSTEM IS TURNED OFF. THE
HIGH AIR TEMPERATURE CAN CAUSE INJURY TO PERSONS.**

**CAUTION: IF IT IS NECESSARY TO REMOVE A DUCT SECTION OR COMPONENT TO
REPAIR THE THERMAL INSULATION, PUT PLASTIC PLUGS AT THE DUCT
ENDS AS A PROTECTION.**

- (1) **NOTE:** If the damaged area of the thermal insulation is too large, you can optionally remove the old thermal insulation and install the new insulation type, as installed on aircraft S/N 170 and on. Refer to IPC 21-51-00 and [AMM TASK 21-51-11-960-801-A/200](#).

If necessary, remove the duct or component to do the repair.

- (2) Remove the damaged portion of the thermal insulation.
- (3) Apply a layer of ceramic fiber insulation to the part to be repaired.
- (4) Attach the duct ceramic fiber insulation with tape. Make sure that the part to be repaired is covered and attached with tape.

NOTE: Attach the duct ceramic fiber insulation with tapes as follows:

- On straight parts, use large tape.
- On the curved parts, use narrow tape.

- (5) At the ducts, air cycle machine (ACM), or dual heat exchanger, wind tape around the ceramic fiber insulation, until the blanket is totally covered and attached.

NOTE: The new turns must make correct overlaps on the old turns.

- (6) Insulation finishing at tube ends ([Figure 202](#)):
- Use narrow tape.
 - Start the tape application on the layer of large tape, and do one complete rotation parallel to the end of the insulation fiber layer.
 - Continue to apply the tape to the metallic surface of the tube, and do two complete rotations, while you hold the tape firmly.
 - Go with the tape rearward to above the insulation (ceramic fiber insulation + tape), and do two complete rotations.
 - Cut the tape and make sure that the tape end bonds well to the insulation.



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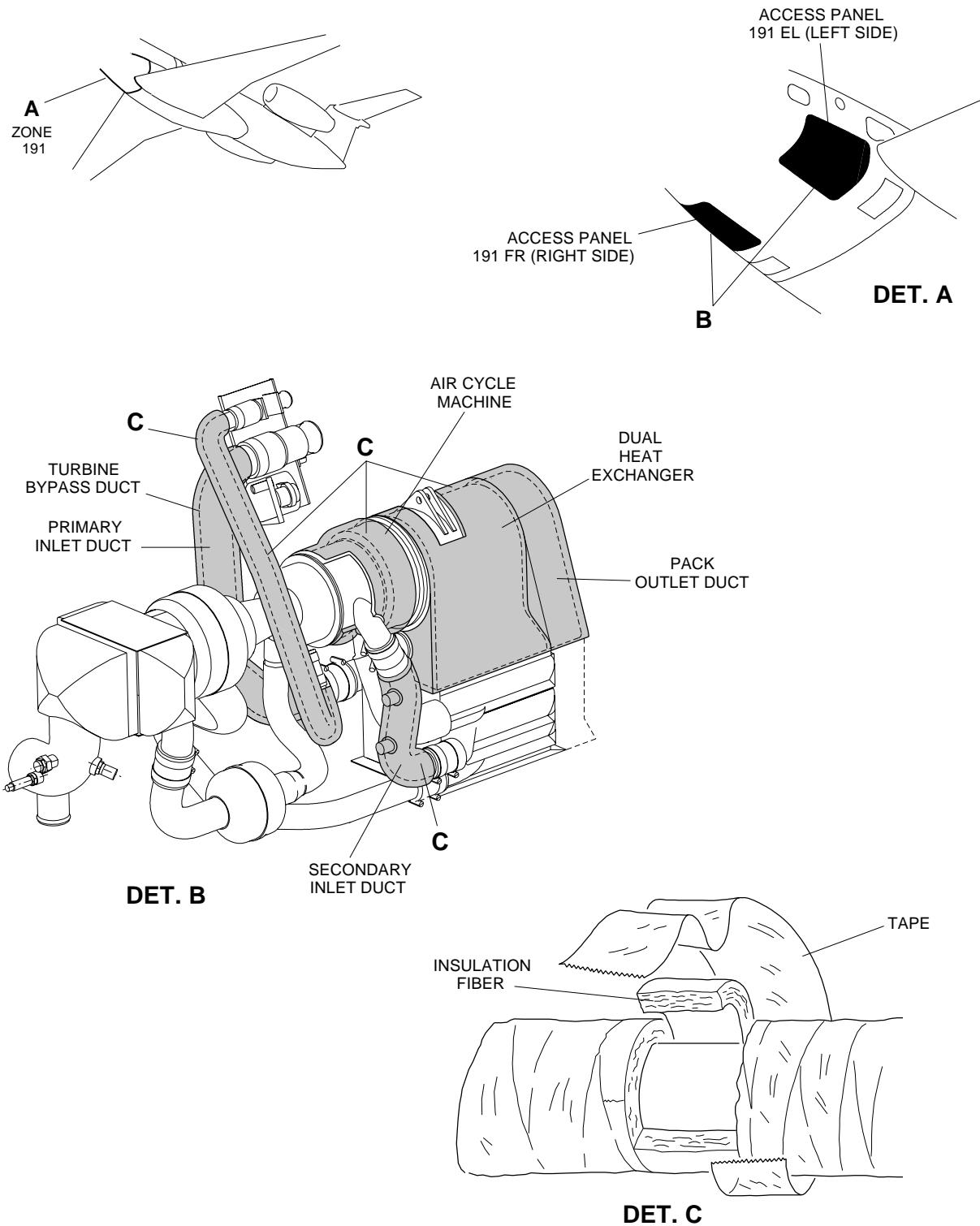
K. Follow-on ([Figure 201](#))

SUBTASK 842-002-A

- (1) On the overhead circuit breaker panel, close the PACK 1 and/or PACK 2 circuit breaker(s), as applicable, and remove the DO-NOT-CLOSE tag(s) from it (them).
- (2) Close access panel(s) 191EL and/or 191FR (AMM MPP 06-41-01/100), as applicable.

EFFECTIVITY: 004-169

Thermal Insulation of Cooling Pack System - Repair
Figure 201

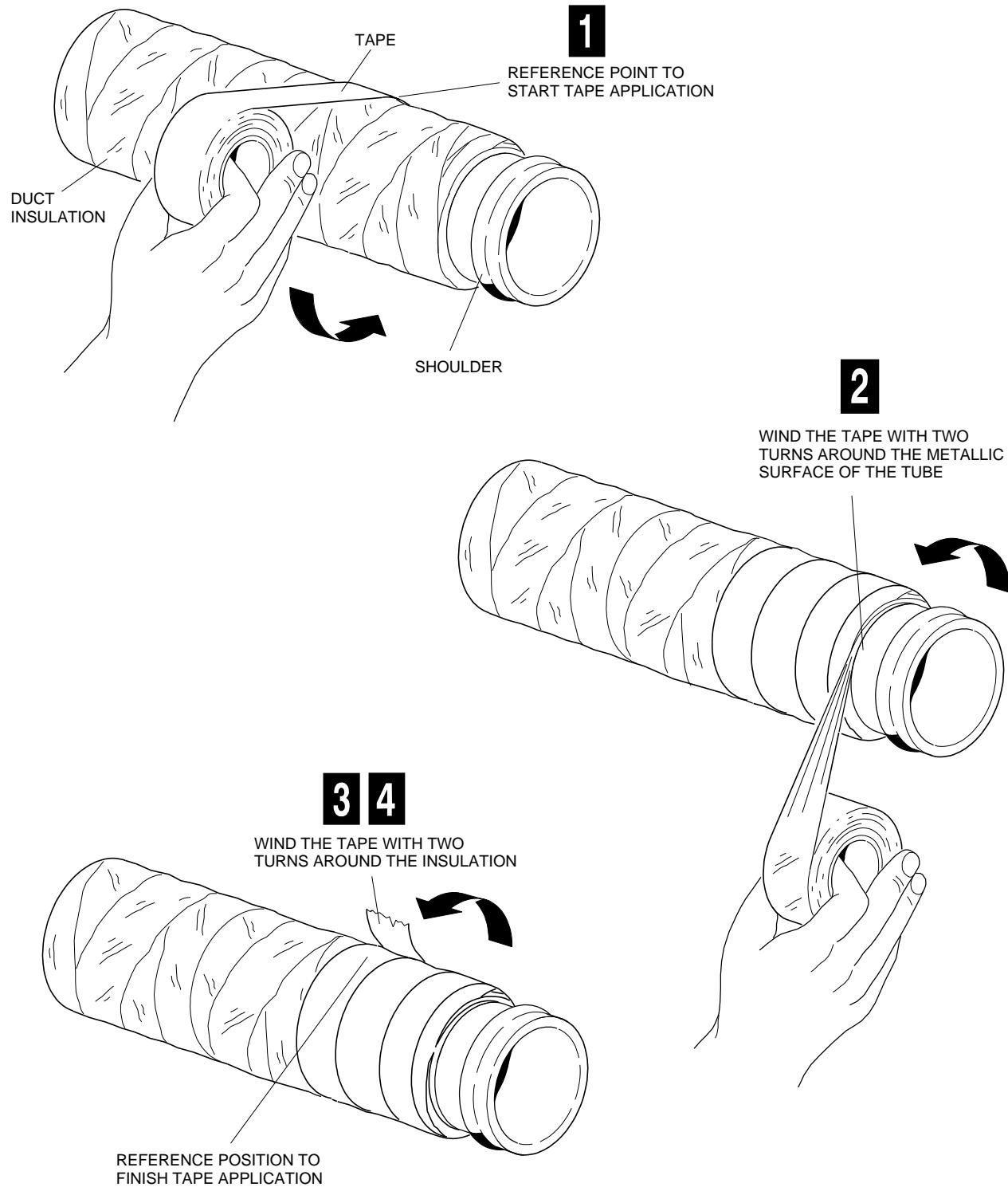


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EFFECTIVITY: 004-169

Insulation Finishing at Tube Ends - Repair

Figure 202



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TASK 21-51-11-960-801-A
EFFECTIVITY: 170 AND ON
3. THERMAL INSULATION OF COOLING PACK SYSTEM - REPLACEMENT
A. General

- (1) This task gives the instructions to replace the thermal insulation of the cooling pack system.

B. References

<i>REFERENCE</i>	<i>DESIGNATION</i>
AMM MPP 06-41-01/100	-
AMM TASK 21-51-02-000-801-A/400	DUAL HEAT EXCHANGER - REMOVAL
AMM TASK 21-51-03-000-801-A/400	AIR CYCLE MACHINE (ACM) - REMOVAL
IPC 21-51-00	COOLING PACK SYSTEM

C. Zones and Accesses

<i>ZONE</i>	<i>PANEL/DOOR</i>	<i>LOCATION</i>
191	191EL	LH side of the forward lower fairing
191	191FR	RH side of the forward lower fairing

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expendable Parts

<i>ITEM</i>	<i>IPC REFERENCE (VENDOR REFERENCE)</i>	<i>QTY</i>
Insulation	IPC 21-51-00	AR

H. Persons Recommended

<i>QTY</i>	<i>FUNCTION</i>	<i>PLACE</i>
1	Does the task	LH or RH cooling pack system

I. Preparation (Figure 201)
SUBTASK 841-003-A

- (1) On the overhead circuit breaker panel, open the PACK 1 and/or PACK 2 circuit breaker(s), as applicable, and attach (a) DO-NOT-CLOSE tag(s) to it (them).
- (2) Open access panel(s) 191EL and/or 191FR (AMM MPP 06-41-01/100), as applicable.



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J. Replace the Thermal Insulation of the Cooling Pack System (Figure 201)

SUBTASK 960-002-A

WARNING: DO NOT TOUCH THE COOLING PACK SYSTEM DUCTS OR COMPONENTS IMMEDIATELY AFTER THE SYSTEM IS TURNED OFF. THE HIGH AIR TEMPERATURE CAN CAUSE INJURY TO PERSONS.

CAUTION: IF IT IS NECESSARY TO REMOVE A DUCT SECTION TO REPLACE THE THERMAL INSULATION, PUT PLASTIC PLUGS AT THE DUCT ENDS AS A PROTECTION.

- (1) If the damaged insulation section is installed on a duct, remove the duct, replace the insulation section, and reinstall the duct.
- (2) If the damaged insulation section is installed on the air cycle machine (ACM), disconnect the compressor inlet and outlet ducts, replace the insulation section, and reinstall the compressor inlet and outlet ducts ([AMM TASK 21-51-03-000-801-A/400](#)).
- (3) If the damaged insulation section is installed on the dual heat exchanger, disconnect the upper support rod, replace the insulation section, and reinstall the upper support rod ([AMM TASK 21-51-02-000-801-A/400](#)).

K. Follow-on (Figure 201)

SUBTASK 842-003-A

- (1) On the overhead circuit breaker panel, close the PACK 1 and/or PACK 2 circuit breaker(s), as applicable, and remove the DO-NOT-CLOSE tag(s) from it (them).
- (2) Close access panel(s) 191EL and/or 191FR (AMM MPP 06-41-01/100), as applicable.