



EMB145 - EMB135

AIRCRAFT  
MAINTENANCE MANUAL

**WINDSHIELD TEMPERATURE CONTROLLER - REMOVAL/INSTALLATION**

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the windshield temperature controllers.
- B. These procedures are applicable to windshield temperature controllers 1 and 2.
- 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
30-42-01-000-801-A	WINDSHIELD TEMPERATURE CONTROL- ALL LER - REMOVAL	
30-42-01-400-801-A	WINDSHIELD TEMPERATURE CONTROL- ALL LER - INSTALLATION	
30-42-01-040-801-A	WINDSHIELD HEATING SYSTEMS DEAC- ALL TIVATION	
30-42-01-440-801-A	WINDSHIELD HEATING SYSTEMS REAC- ALL TIVATION	



EMB145 - EMB135

AIRCRAFT  
MAINTENANCE MANUAL

TASK 30-42-01-000-801-A

EFFECTIVITY: ALL

2. WINDSHIELD TEMPERATURE CONTROLLER - REMOVAL

A. General

- (1) This procedure gives the instructions to remove the windshield temperature controller.
- (2) (PRE-MOD [S.B.145-30-0033](#)) Windshield temperature controller 1 is installed in the LH side console and windshield temperature controller 2 is installed in the RH side console.
- (3) (POST-MOD [S.B.145-30-0033](#)) Windshield temperature controller 1 is installed below the cockpit floor, to the left of the pilot's seat, and windshield temperature controller 2 is installed to the right of the copilot's seat.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-02/100	-
<a href="#">AMM MPP 06-41-03/100</a>	- COMPONENT LOCATION
<a href="#">AMM TASK 53-01-01-000-801-A/400</a>	COCKPIT FLOOR PANELS - REMOVAL
<a href="#">S.B.145-30-0033</a>	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
221	221CF	Cockpit floor, LH side
222	222BF	Cockpit floor, RH side
223	223FLW	LH console
224	224FRW	RH console

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Cockpit floor, RH or LH side



EMB145 – EMB135

AIRCRAFT  
MAINTENANCE MANUAL

I. Preparation

SUBTASK 841-002-A

- (1) On the overhead Circuit Breaker Panel, open these circuit breakers and attach DO-NOT-CLOSE tags to them:
  - WSHLD TEMP 1 (Location tip: DC BUS 1/ICE AND RAIN PROTECTION/WSHLD TEMP 1).
  - WSHLD TEMP 2 (Location tip: SHED DC BUS 2/WSHLD TEMP 2).
- (2) (PRE-MOD [S.B.145-30-0033](#)) Open access panel 223FLW for windshield temperature controller 1 or access panel 224FRW for windshield temperature controller 2 ([AMM MPP 06-41-03/100](#)).
- (3) (POST-MOD [S.B.145-30-0033](#)) Remove access panel 221CF for windshield temperature controller 1 or access panel 222BF for windshield temperature controller 2 (AMM MPP 06-41-02/100) and ([AMM TASK 53-01-01-000-801-A/400](#)).

J. Removal ([Figure 401](#)) ([Figure 402](#)) ([Figure 403](#))

SUBTASK 020-002-A

- (1) For aircraft PRE-MOD [S.B.145-30-0033](#), do as follows:
  - (a) Disconnect the two electrical connectors (4).
  - (b) Remove the four screws (2) and washers (1).
  - (c) Remove the windshield temperature controller (3).
- (2) For aircraft POST-MOD [S.B.145-30-0033](#), do as follows:

**CAUTION:** DO NOT TOUCH THE ELECTRICAL PINS OF THE CONNECTORS.  
DAMAGE CAN OCCUR TO THE INTERNAL ESDS COMPONENTS.

  - (a) Disconnect the electrical connector (4) from the windshield temperature controller (9).
  - (b) Install protective caps to the disconnected electrical connectors.
  - (c) Hold the windshield temperature controller (9) and remove the four screws (2) and washers (1).
  - (d) Remove the terminal block cover (6) from the terminal block (8).
  - (e) Remove the nuts (3) to disconnect the electrical cables (7) from the terminal block (8).
- (3) For aircraft POST-MOD [S.B.145-30-0033/06](#) or aircraft POST-MOD S.B. 145-30-0043, do as follows:

**CAUTION:** DO NOT TOUCH THE ELECTRICAL PINS OF THE CONNECTORS.  
DAMAGE CAN OCCUR TO THE INTERNAL ESDS COMPONENTS.

  - (a) Disconnect the electrical connector (4) from the windshield temperature controller (9).

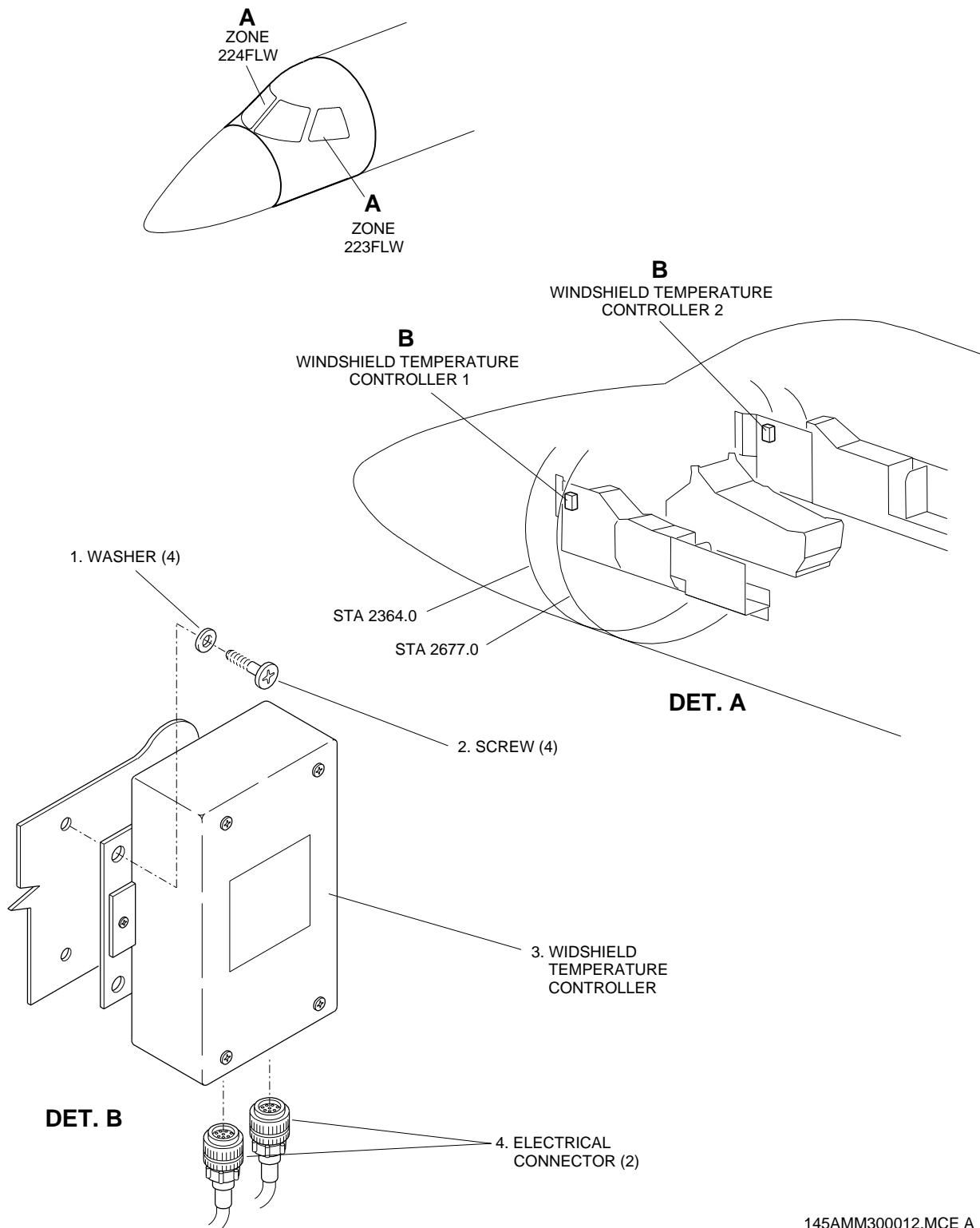


EMB145 – EMB135

AIRCRAFT  
MAINTENANCE MANUAL

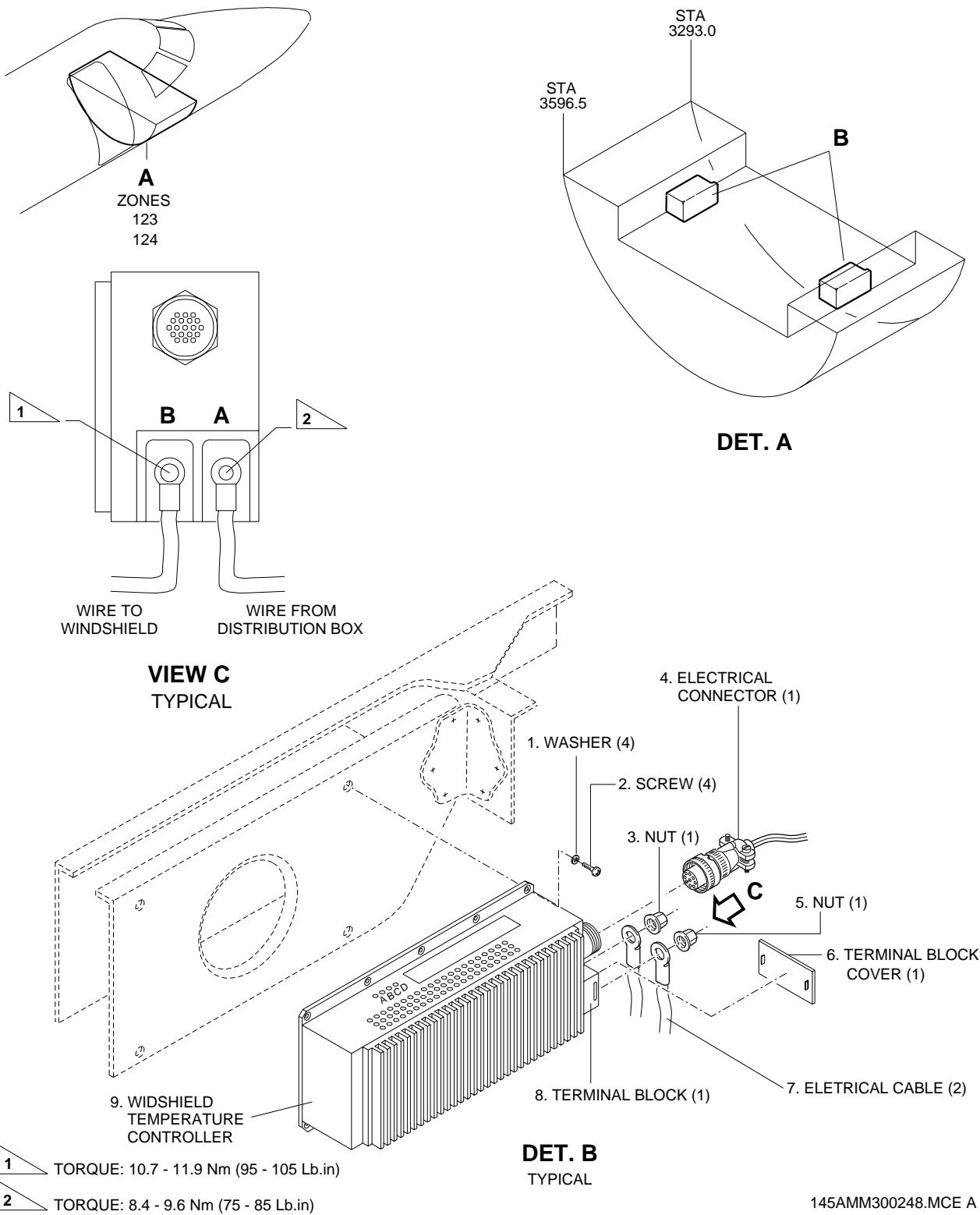
- (b) Install protective caps to the disconnected electrical connectors.
- (c) Hold the windshield temperature controller (9) and remove the four screws (2) and washers (1).
- (d) Remove the terminal block cover (6) from the terminal block (8).
- (e) Remove the nuts (3), the lock washer (11) and the flap washer (10) to disconnect the electrical cables (7) from the terminal block (8).

**EFFECTIVITY: PRE-MOD S.B. 145-30-0033**  
**Windshield Temperature Controller - Removal/Installation**  
**Figure 401**

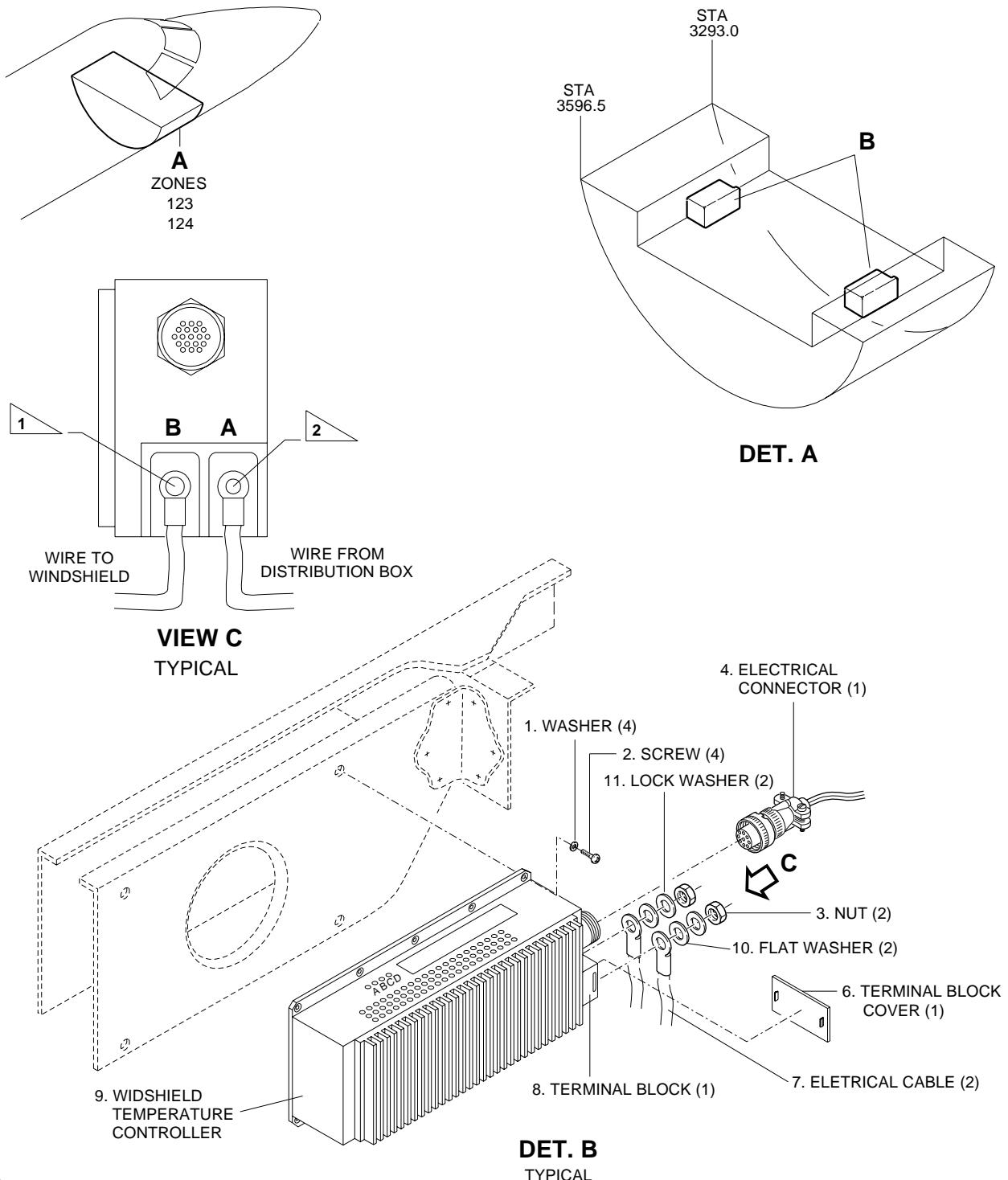


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**EFFECTIVITY: POST-MOD S.B. 145-30-0033**  
**Windshield Temperature Controller - Removal/Installation**  
**Figure 402**



**EFFECTIVITY: POST-MOD S.B. 145-30-0033/06 or POST-MOD S.B. 145-30-0043**  
**Windshield Temperature Controller - Removal/Installation**  
**Figure 403**



EM145AMM300156A.DGN  
 000-801-A/400  
 Page 7 of 12  
 Rev 48 - Oct 30/15

**TASK 30-42-01-400-801-A**
**EFFECTIVITY: ALL**

### 3. WINDSHIELD TEMPERATURE CONTROLLER - INSTALLATION

#### A. General

- (1) This procedure gives the instructions to install the windshield temperature controller.
- (2) (PRE-MOD [S.B.145-30-0033](#)) Windshield temperature controller 1 is installed in the LH side console and windshield temperature controller 2 is installed in the RH side console.
- (3) (POST-MOD [S.B.145-30-0033](#)) Windshield temperature controller 1 is installed below the cockpit floor, to the left of the pilot's seat, and windshield temperature controller 2 is installed to the right of the copilot's seat.

#### B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-02/100	-
<a href="#">AMM MPP 06-41-03/100</a>	- COMPONENT LOCATION
AMM TASK 28-41-00-200-801-A/600	-
<a href="#">AMM TASK 30-42-00-700-801-A/500</a>	WINDSHIELD HEATING - OPERATIONAL CHECK
<a href="#">AMM TASK 30-42-00-700-802-A/500</a>	WINDSHIELD HEATING - FUNCTIONAL TEST
<a href="#">AMM TASK 53-01-01-400-801-A/400</a>	COCKPIT FLOOR PANELS - INSTALLATION
<a href="#">S.B.145-30-0033</a>	-
WM 30-42-50	-
WM 30-42-51	-

#### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
221	221CF	Cockpit floor, LH side
222	222BF	Cockpit floor, RH side
223	223FLW	LH console
224	224FRW	RH console

#### D. Tools and Equipment

Not Applicable

#### E. Auxiliary Items

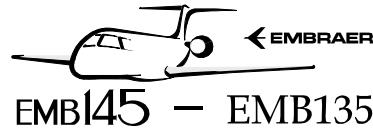
Not Applicable

#### F. Consumable Materials

Not Applicable

#### G. Expandable Parts

Not Applicable



EMB145 - EMB135

AIRCRAFT  
MAINTENANCE MANUAL

## H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Cockpit floor, RH or LH side

## I. Installation (Figure 401) (Figure 402) (Figure 403)

## SUBTASK 420-002-A

- (1) For aircraft PRE-MOD [S.B.145-30-0033](#), do as follows:
  - (a) Put the windshield temperature controller (3) in position in the side console.
  - (b) Install the four screws (2) and washers (1).
  - (c) Connect the two electrical connectors (4).
- (2) For aircraft POST-MOD [S.B.145-30-0033](#), do as follows:
  - (a) Connect the electrical cables (7) to the terminal block (8) with the nuts (3). Apply the necessary torque as given in figures 402 and 403.

**CAUTION:** • DO NOT TOUCH THE ELECTRICAL PINS OF THE CONNECTORS. DAMAGE CAN OCCUR TO THE INTERNAL ESDS COMPONENTS.

  - IT IS VERY IMPORTANT THAT YOU APPLY THE CORRECT TORQUE. AN INCORRECT TORQUE CAN CAUSE POOR CONTACT AND, AS A CONSEQUENCE, SMOKE/SMELL CONTAMINATION IN THE CABIN.
  - (b) Remove the protective caps from the disconnected electrical connectors.
  - (c) Connect the electrical connector (4) to the windshield temperature controller (9).
  - (d) Do the functional test of the windshield heating system ( [AMM TASK 30-42-00-700-802-A/500](#) ).
  - (e) Install the terminal block cover (6) to the terminal block (8).
  - (f) Put the windshield temperature controller (9) in position and install the four screws (2) and washers (1).
- (3) For aircraft POST-MOD [S.B.145-30-0033/06](#) or aircraft POST-MOD S.B. 145-30-0043, do as follows:
  - (a) Connect the electrical cables (7) to the terminal block (8) with the nuts (3), the lock washer (11) and the flap washer (10). Apply the necessary torque (WM 30-42-50) (WM 30-42-51).

**CAUTION:** • DO NOT TOUCH THE ELECTRICAL PINS OF THE CONNECTORS. DAMAGE CAN OCCUR TO THE INTERNAL ESDS COMPONENTS.

• IT IS VERY IMPORTANT THAT YOU APPLY THE CORRECT TORQUE. AN INCORRECT TORQUE CAN CAUSE POOR CONTACT AND, AS A CONSEQUENCE, SMOKE/SMELL CONTAMINATION IN THE CABIN.

- (b) Remove the protective caps from the disconnected electrical connectors.
- (c) Connect the electrical connector (4) to the windshield temperature controller (9).
- (d) Do the functional test of the windshield heating system ( [AMM TASK 30-42-00-700-802-A/500](#)).
- (e) Install the terminal block cover (6) to the terminal block (8).
- (f) Put the windshield temperature controller (9) in position and install the four screws (2) and washers (1).

J. Follow-on

**SUBTASK 842-002-A**

- (1) On the overhead Circuit Breaker Panel, remove the DO-NOT-CLOSE tags from these circuit breakers and close them:
  - WSHLD TEMP 1 (Location tip: DC BUS 1/ICE AND RAIN PROTECTION/WSHLD TEMP 1).
  - WSHLD TEMP 2 (Location tip: SHED DC BUS 2/WSHLD TEMP 2).

- (2) Do an operational test of the windshield heating system ( [AMM TASK 30-42-00-700-801-A/500](#)).
- (3) Do an inspection on the fuel quantity indication harness (AMM TASK 28-41-00-200-801-A/600).

**NOTE:** The inspection of fuel quantity indication harness is a part of Critical Design Configuration Control Limitations (CDCCL) in the Airworthiness Limitations (Section 6) of the Maintenance Review Board Report (MRB).

- (4) (PRE-MOD [S.B.145-30-0033](#)) Close access panel 223FLW or 224FRW ( [AMM MPP 06-41-03/100](#)).
- (5) (POST-MOD [S.B.145-30-0033](#)) Install access panel 221CF or 222BF (AMM MPP 06-41-02/100) and ( [AMM TASK 53-01-01-400-801-A/400](#)).

**TASK 30-42-01-040-801-A**

**EFFECTIVITY: ALL**

**4. WINDSHIELD HEATING SYSTEMS DEACTIVATION**

**A. General**

- (1) This task gives the procedures to deactivate the Windshield Heating Systems.

**B. Zones and Accesses**

Not Applicable

**C. Tools and Equipment**

Not Applicable

**D. Auxiliary Items**

Not Applicable

**E. Consumable Materials**

Not Applicable

**F. Expandable Parts**

Not Applicable

**G. Persons Recommended**

<i>QTY</i>	<i>FUNCTION</i>	<i>PLACE</i>
1	Does the task	Cockpit

**H. Deactivation Procedure**

**SUBTASK 040-002-A**

- (1) On the overhead circuit breaker panel, open the WSHLD TEMP circuit breaker associated with the inoperative windshield and attach a DO-NOT-CLOSE tag to it.



EMB145 – EMB135

AIRCRAFT  
MAINTENANCE MANUAL

TASK 30-42-01-440-801-A

EFFECTIVITY: ALL

5. WINDSHIELD HEATING SYSTEMS REACTIVATION

A. General

- (1) This task gives the procedures to deactivate the Windshield Heating Systems.

B. References

REFERENCE	DESIGNATION
FIM TASK 30-42-00-810-801-A-2	-
FIM TASK 30-42-00-810-802-A-2	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Cockpit

I. Reactivation Procedure

SUBTASK 440-002-A

- (1) Do the applicable troubleshooting FIM TASK 30-42-00-810-801-A-2 or FIM TASK 30-42-00-810-802-A-2.
- (2) After the correction action of the troubleshooting, close the WSHLD TEMP circuit breaker on the overhead circuit breaker panel.