



AIRCRAFT
MAINTENANCE MANUAL

SWITCHES AND POTENTIOMETERS - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the typical procedures to remove/install:
- Toggle Switches.
 - Rotary Switches.
 - Potentiometers.
- B. 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
20-13-03-000-801-A	SWITCHES AND POTENTIOMETERS - REMOVAL (TYPICAL)	ALL
20-13-03-400-801-A	SWITCHES AND POTENTIOMETERS - IN- STALLATION (TYPICAL)	ALL



EMB145 – EMB135

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TASK 20-13-03-000-801-A

EFFECTIVITY: ALL

2. SWITCHES AND POTENTIOMETERS - REMOVAL (TYPICAL)

A. General

- (1) This task gives the typical procedures to remove the toggle switches, rotary switches, and potentiometers installed on the panels.

NOTE: This task is not applicable to the removal of a specific switch or potentiometer.

B. References

REFERENCE	DESIGNATION
AMM TASK 20-13-10-000-801-A/400	CONTROL PANELS - REMOVAL (TYPICAL)
WM 20-00-03	-
WM 20-30-00	-
WM 20-50-01	-

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	Where applicable

I. Preparation

SUBTASK 841-002-A

NOTE: This task is not applicable to the removal of a specific switch or potentiometer.

- (1) On the circuit breaker panel, open the correct circuit breaker and attach a DO-NOT-CLOSE tag to it.
- (2) Remove the panel, if applicable ([AMM TASK 20-13-10-000-801-A/400](#)).



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

SUBTASK 020-002-A

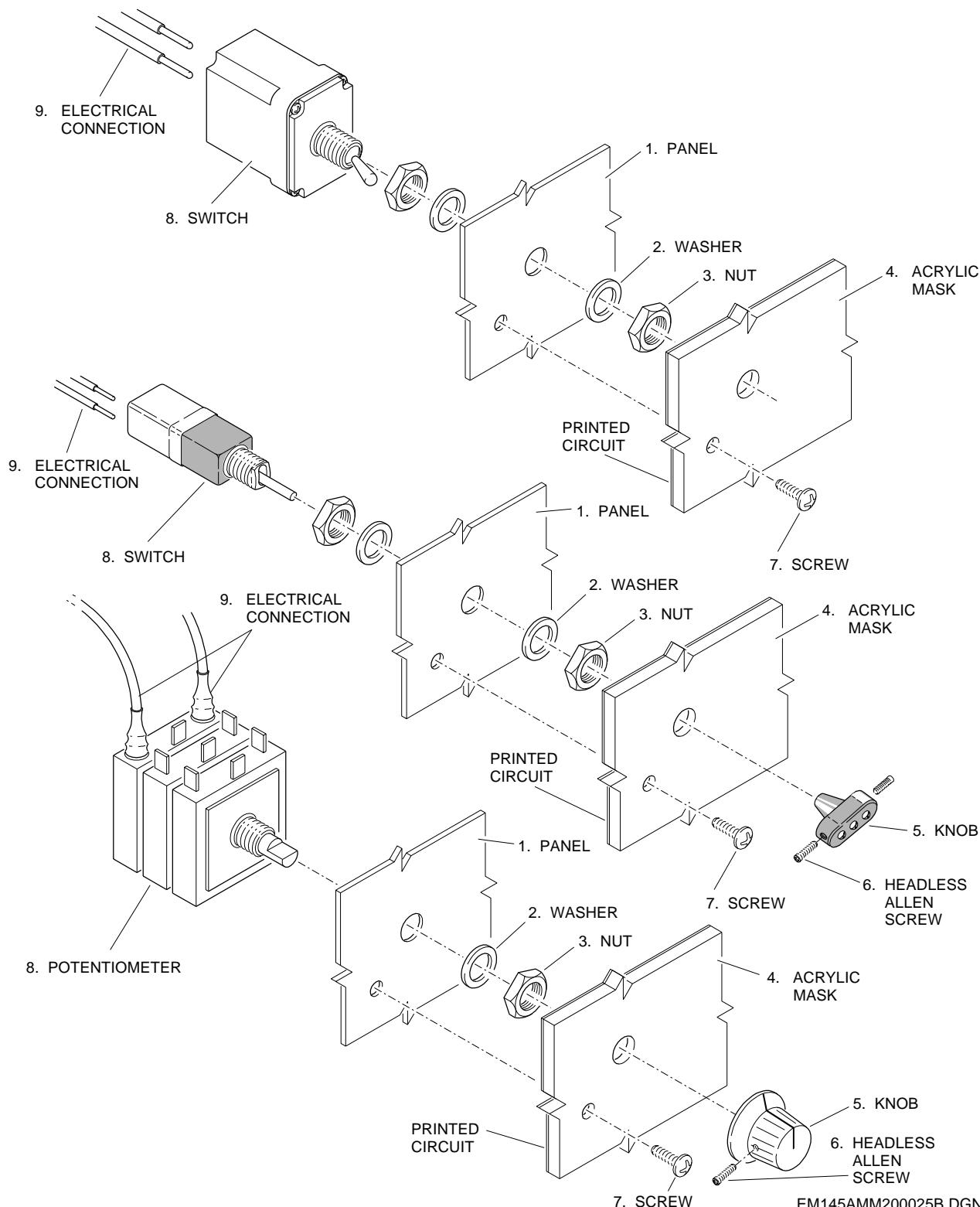
CAUTION: DURING THE REMOVAL OF THE PANEL ACRYLIC MASK, BE CAREFUL TO PREVENT DAMAGE TO ITS INSCRIPTION AND THE PRINTED CIRCUIT (PC).

- (1) Remove the knob (5) from the potentiometer (or switch) (8), if applicable. To do this, remove the headless Allen screws (6).
- (2) Remove the screws (7) which attach the acrylic mask (4) to the panel (1).
- (3) Remove the acrylic mask (4).
- (4) Remove the electrical connections (9) from the potentiometer (or switch) (8).
 - For soldering connections. To do these soldering procedures refer to WM 20-30-00.
 - For contacts and terminals connections. To do this, use a contact insertion/removal tool. Refer to WM 20-00-03 to identify the correct tool related to the different sizes of contacts or terminals. Also, refer to WM 20-50-01 to know how to use the contact insertion/removal tool.
- (5) Remove the nuts (3) and washers (2) which attach the potentiometer (or switch) (8) to the panel (1).
- (6) Remove the potentiometer (or switch) (8) from panel (1).

EFFECTIVITY: ALL

Switches and Potentiometers - Removal/Installation (Typical)

Figure 401



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TASK 20-13-03-400-801-A

EFFECTIVITY: ALL

3. SWITCHES AND POTENTIOMETERS - INSTALLATION (TYPICAL)

A. General

- (1) This task gives the typical procedures to install the toggle switches, rotary switches, and potentiometers installed on the panels.

NOTE: This task is not applicable to the installation of a specific switch or potentiometer.

B. References

REFERENCE	DESIGNATION
AMM TASK 20-13-10-400-801-A/400	CONTROL PANELS - INSTALLATION (TYPICAL)
WM 20-00-03	-
WM 20-30-00	-
WM 20-50-01	-

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	Where applicable

I. Installation (Figure 401)

SUBTASK 420-002-A

- (1) Put the potentiometer (or switch) (8) in position.
- (2) Install and tighten the washers (2) and nuts (3) which attach the potentiometer (or switch) (8) to the panel (1).
- (3) Install the electrical connections (9) back to the potentiometer (or switch) (8).
 - For soldering connections. To do these soldering procedures refer to WM 20-30-00

- For contacts or terminals connections. To do this, use a contact insertion/removal tool. Refer to WM 20-00-03 to identify the correct tool related to the different sizes of contacts or terminals. Also, refer to WM 20-50-01 to know how to use the contact insertion/removal tool.

CAUTION: DURING THE INSTALLATION OF THE ACRYLIC MASK ON THE PANEL, BE CAREFUL TO PREVENT DAMAGE TO THE MASK AND ITS INSCRIPTIONS.

- (4) Put the acrylic mask (4) on the panel (1) correctly.
- (5) Install and tighten the screws (7) which attach the acrylic mask (4) to the panel (1).
- (6) Put the knob (5) in the correct position and attach its headless Allen screws (6), if applicable.

J. Follow-on

SUBTASK 842-002-A

- (1) Install the panel, if applicable ([AMM TASK 20-13-10-400-801-A/400](#)).
- (2) On the circuit breaker panel, remove the DO-NOT-CLOSE tag from the correct circuit breaker and close it.
- (3) Do the operational test of the potentiometer or switch installed.