



AIRCRAFT MAINTENANCE MANUAL

AUTOPILOT SWITCHES - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove/install the AP/TRIM/PUSHER Disc and the AP/FD TCS switches.
- 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
22-11-07-000-801-A	AP/TRIM/PUSHER DISC SWITCH - REMOVAL	ALL
22-11-07-400-801-A	AP/TRIM/PUSHER DISC SWITCH - INSTALLATION	ALL
22-11-07-000-802-A	AP/FD TCS SWITCH - REMOVAL	ALL
22-11-07-400-802-A	AP/FD TCS SWITCH - INSTALLATION	ALL
22-11-07-000-803-A	GO AROUND SWITCH - REMOVAL	ALL
22-11-07-400-803-A	GO-AROUND SWITCH - INSTALLATION	ALL



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TASK 22-11-07-000-801-A

EFFECTIVITY: ALL

2. AP/TRIM/PUSHER DISC SWITCH - REMOVAL

A. General

- (1) This task gives the procedures to remove the AP/TRIM/PUSHER Disc switch.

B. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223		Control wheel - LH
224		Control wheel - RH

C. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
P/N 15150 - 7"	Pliers	To loosen/tighten the AP/TRIM/PUSHER Disc nut	
Standard	Screwdriver or Similar	To remove the AP/TRIM/PUSHER Disc placard	

D. Auxiliary Items

Not Applicable

E. Consumable Materials

Not Applicable

F. Expandable Parts

Not Applicable

G. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Control wheel

H. Preparation

SUBTASK 841-002-A

- (1) Open the following circuit breakers and attach a DO-NOT-CLOSE tag to them.
- AP1 (Location Tip: DC BUS 1/FLIGHT CONTROLS).
 - PITCH TRIM 2 (Location Tip: ESSENTIAL DC BUS 2).

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

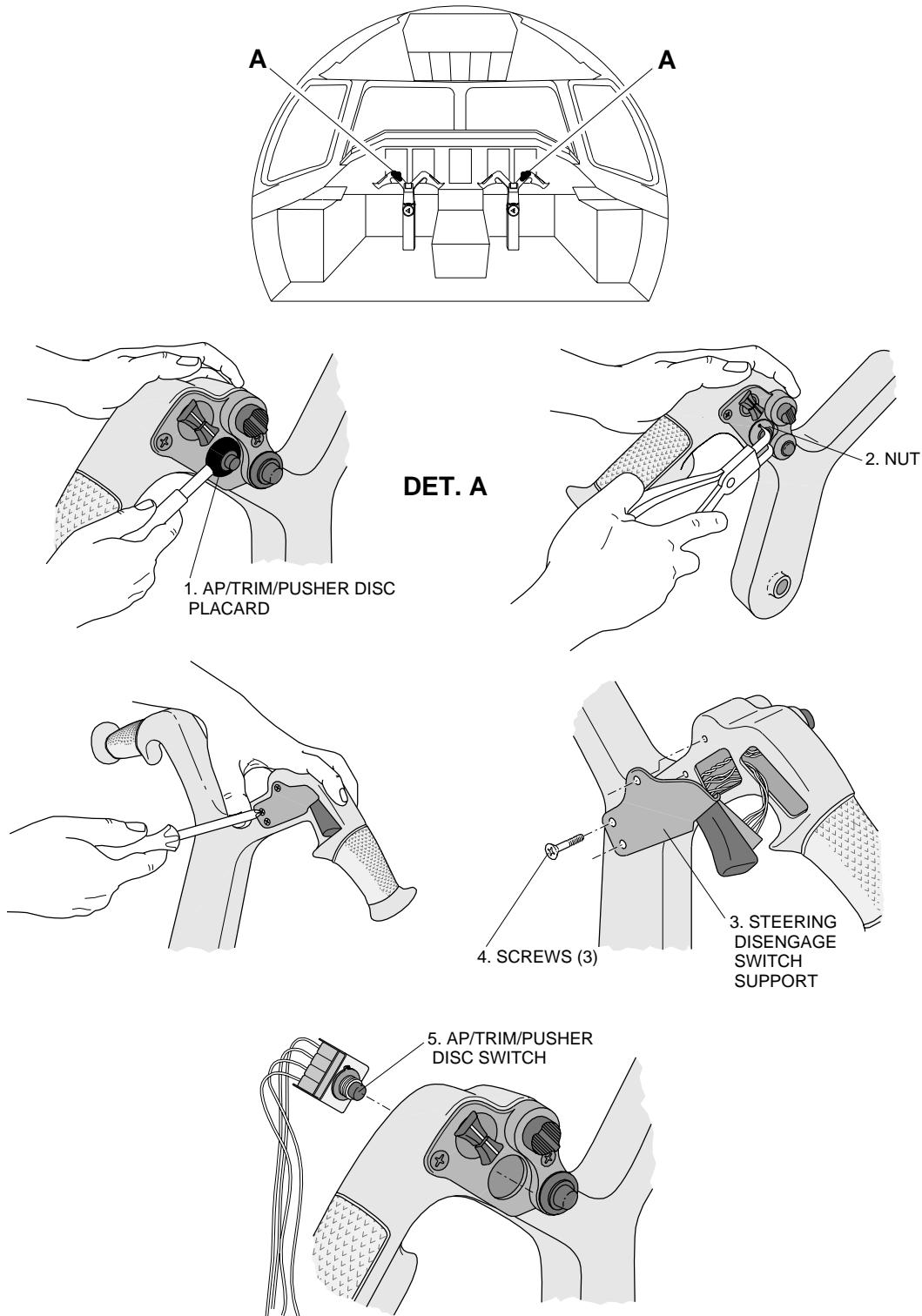
SUBTASK 020-002-A

- Remove the AP/TRIM/PUSHER Disc placard (1).
- Loosen the nut (2) from the AP/TRIM/PUSHER Disc switch.



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- (3) Loosen the screws (4) from the Steering Disengage switch support (3).
- (4) Carefully remove the AP/TRIM/PUSHER Disc switch (5) from its housing.
NOTE: The washer of the switch can fall into the control wheel.
- (5) Unsolder the electrical connections from the AP/TRIM/PUSHER Disc switch.
NOTE: Identify the unsoldered wires to avoid incorrect connections during the installation.

EFFECTIVITY: ALL
AP/TRIM/PUSHER Disc Switch - Removal/Installation
Figure 401


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TASK 22-11-07-400-801-A

EFFECTIVITY: ALL

3. AP/TRIM/PUSHER DISC SWITCH - INSTALLATION

A. General

(1) This task gives the procedures to install the AP/TRIM/PUSHER Disc switch.

B. References

REFERENCE	DESIGNATION
AMM TASK 20-12-01-930-801-A/200	-
AMM TASK 22-11-00-700-803-A/500	AUTOPilot - FUNCTIONAL TEST
IPC 11-31-02	PLACARDS, CONTROL YOKE
SWPM 20-30-00	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223		Control wheel - LH
224		Control wheel - RH

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
P/N 15150 - 7"	Pliers	To loosen/tighten the AP/TRIM/PUSHER Disc nut	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MIL-I-23053	Heat-shrinkable Sleeve RNF-100 1/8-9	AR
QQ-S-571	Solder RO 60	AR

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
AP/TRIM/PUSHER Disc placard	IPC 11-31-02	1

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Control wheel



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I. Installation (Figure 401)

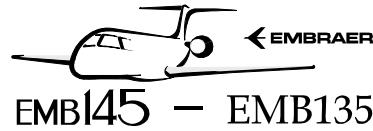
SUBTASK 420-002-A

- (1) **NOTE:** The solder points must be protected with heat-shrinkable sleeves (SWPM 20-30-00).
Solder the electrical connections to the AP/TRIM/PUSHER Disc switch (5).
- (2) Carefully insert the AP/TRIM/PUSHER Disc switch into its housing.
NOTE: The washer of the switch can fall into the control wheel.
- (3) Fasten the screws (4) of the Steering Disengage switch support (3).
- (4) Fasten the nut (2) on the AP/TRIM/PUSHER Disc switch.
- (5) Install the AP/TRIM/PUSHER Disc placard (1) (IPC 11-31-02) (AMM TASK 20-12-01-930-801-A/200).

J. Follow-on

SUBTASK 842-002-A

- (1) Close the following circuit breakers and remove the DO-NOT-CLOSE tag from them.
 - (a) AP1 (Location Tip: DC BUS 1/FLIGHT CONTROLS).
 - (b) PITCH TRIM 2 (Location Tip: ESSENTIAL DC BUS 2).
- (2) Do the Autopilot Functional Test ([AMM TASK 22-11-00-700-803-A/500](#)).



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TASK 22-11-07-000-802-A

EFFECTIVITY: ALL

4. AP/FD TCS SWITCH - REMOVAL

A. General

- (1) This task gives the procedures to remove the AP/FD TCS switch.

B. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223		Control wheel - LH
224		Control wheel - RH

C. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
P/N 15150 - 7"	Pliers	To loosen/tighten the AP/TRIM/PUSHER Disc nut	
Standard	Screwdriver or Similar	To remove the AP/TRIM/PUSHER Disc placard	

D. Auxiliary Items

Not Applicable

E. Consumable Materials

Not Applicable

F. Expandable Parts

Not Applicable

G. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Control wheel

H. Preparation ([Figure 402](#))

SUBTASK 841-003-A

- (1) Open the AP1 circuit breaker (Location Tip: DC BUS 1/FLIGHT CONTROLS) and attach a DO-NOT-CLOSE tag to it.

I. Removal ([Figure 402](#))

SUBTASK 020-003-A

- (1) Remove the AP/TRIM/PUSHER Disc placard (1).
- (2) Loosen the nut (2) from the AP/TRIM/PUSHER Disc switch.
- (3) Loosen the screws (4) from the switch support (3) and pull it to obtain access to its back side.



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- (4) Unsolder the electrical connections from the AP/FD TCS switch (5).

NOTE: Identify the unsoldered wires to avoid incorrect connections during the installation.

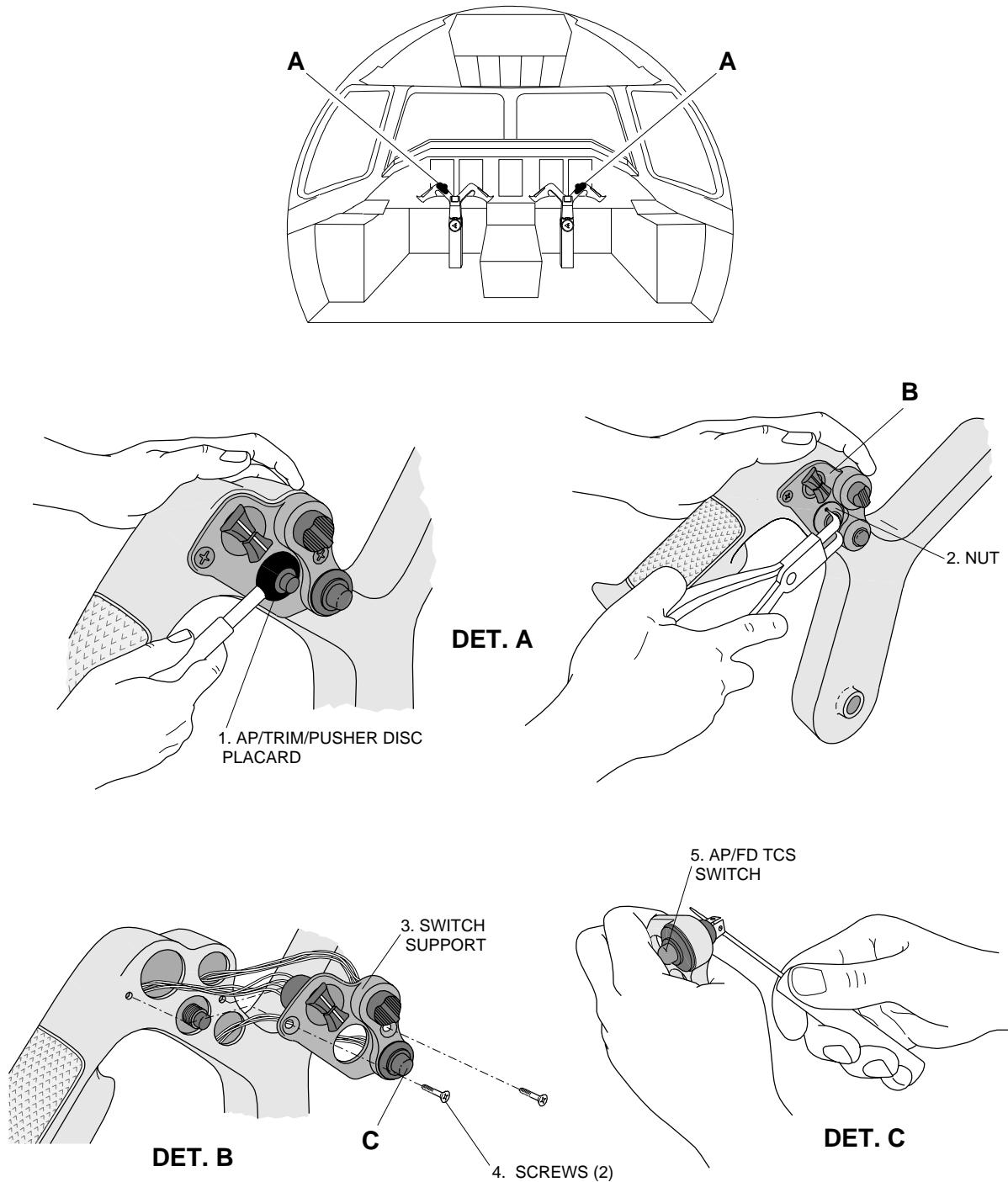
- (5) With the aid of a tool between the terminals of the AP/FD TCS switch, loosen it from the switch support.

NOTE: The thread of the AP/FD TCS switch is locked with adhesive.

EFFECTIVITY: ALL

AP/FD TCS Switch - Removal/Installation

Figure 402



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TASK 22-11-07-400-802-A

EFFECTIVITY: ALL

5. AP/FD TCS SWITCH - INSTALLATION

A. General

(1) This task gives the procedures to install the AP/FD TCS switch.

B. References

REFERENCE	DESIGNATION
AMM TASK 20-12-01-930-801-A/200	-
AMM TASK 22-11-00-700-803-A/500	AUTOPILOT - FUNCTIONAL TEST
IPC 11-31-02	PLACARDS, CONTROL YOKE

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223		Control wheel - LH
224		Control wheel - RH

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
P/N 15150 - 7"	Pliers	To loosen/tighten the AP/TRIM/PUSHER Disc nut	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

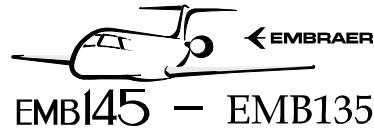
SPECIFICATION (BRAND)	DESCRIPTION	QTY
Commercially available	Loctite 221 Type I	AR
MIL-I-23053	Heat-shrinkable Sleeve RNF-100 1/8-9	AR
QQ-S-571	Solder RO 60	AR

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
AP/TRIM/PUSHER Disc placard	IPC 11-31-02	1

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Control wheel



I. Installation (Figure 402)

SUBTASK 420-003-A

- (1) Apply the minimum quantity of locking-adhesive on the AP/FD TCS switch thread.
- (2) Manually screw down the AP/FD TCS switch (5) to the switch support (3) and, with the aid of a tool, lightly move the switch to its complete tightened position.
- (3) **NOTE:** The solder points must be protected with heat-shrinkable sleeves.
Solder the electrical connections to the AP/FD TCS switch (5).
- (4) Install the switch support (3) on its place and fasten the screws (4).
- (5) Fasten the nut (2) on the AP/TRIM/PUSHER Disc switch.
- (6) Install the AP/TRIM/PUSHER Disc placard (1) (IPC 11-31-02) (AMM TASK 20-12-01-930-801-A/200).

J. Follow-on

SUBTASK 842-003-A

- (1) Close the AP1 circuit breaker (Location Tip: DC BUS 1/FLIGHT CONTROLS) and remove the DO-NOT-CLOSE tag from it.
- (2) Do the Autopilot Functional Test ([AMM TASK 22-11-00-700-803-A/500](#))



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TASK 22-11-07-000-803-A

EFFECTIVITY: ALL

6. GO AROUND SWITCH - REMOVAL

A. General

- (1) This task gives the procedures to remove the Go Around switch.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM TASK 29-10-00-860-802-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH EMDP
AMM TASK 32-00-02-910-801-A/200	SAFETY PIN OF THE NLG DOORS SOLENOID VALVE - INSTALLATION AND REMOVAL
SB145-32-0036	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223/224		Thrust lever

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
	Screwdriver	To remove the circlip and cover disc	1
	Straight nose pliers	To loosen/ tighten the switch nut	1
	Soldering iron	To unsolder/ solder the switch wires	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Thrust lever

I. Preparation

SUBTASK 841-004-A

- (1) On the circuit breaker panel, open the IC-1 and IC-2 circuit breakers and attach a DO-NOT-CLOSE tag to them.

- (2) (Applicable to aircraft PRE-MOD [SB145-32-0036](#)) Release the hydraulic system 1 pressure ([AMM TASK 29-10-00-860-802-A/200](#)).
- (3) (Applicable to aircraft POST-MOD [SB145-32-0036](#)) Install the safety pin of the NLG-door solenoid valve ([AMM TASK 32-00-02-910-801-A/200](#)).
- (4) Remove access panel 114BZ (AMM MPP 06-41-01/100) to get access to the backup battery relay box.
- (5) On the backup battery relay box, open the IC-1 circuit breaker and attach a DO-NOT-CLOSE tag to it.

J. Removal (Figure 403)

SUBTASK 020-004-A

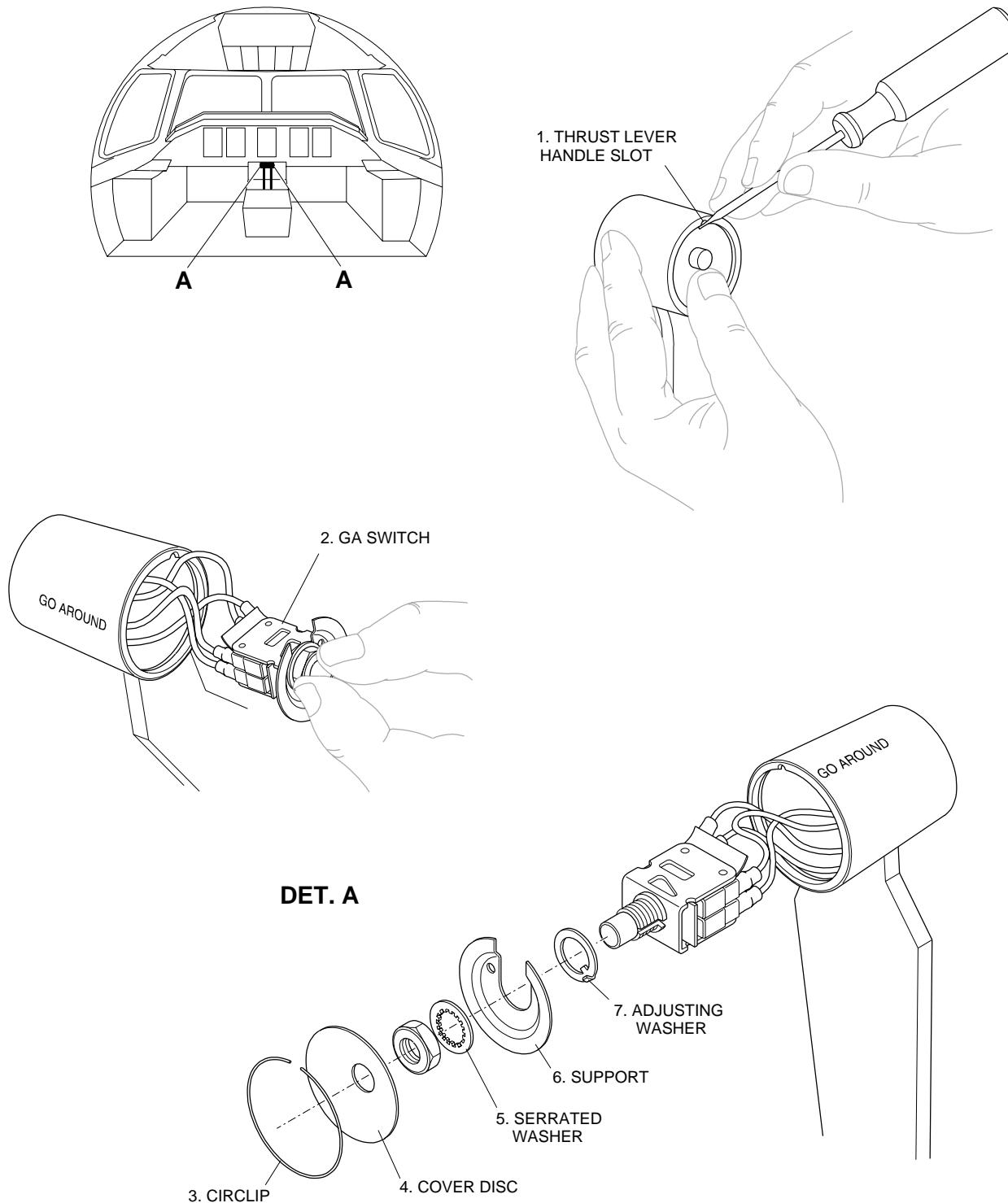
- (1) Put the screwdriver inside the thrust lever handle slot (1) and remove the circlip (3) and cover disc (4).
- (2) Carefully remove the go-around switch (2) from its housing.
- (3) Hold the switch with a hand and loosen its nut with the pair of straight nose pliers.
- (4) Remove the serrated washer (5), the support (6) and the adjusting washer (7).
- (5) **NOTE:** Identify the unsoldered wires to avoid incorrect connections during the installation.

Unsolder the electrical connections from the go-around switch.

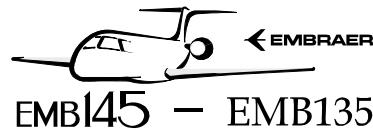
EFFECTIVITY: ALL

Go-Around Switch - Removal/ Installation

Figure 403



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TASK 22-11-07-400-803-A

EFFECTIVITY: ALL

7. GO-AROUND SWITCH - INSTALLATION

A. General

(1) This task gives the procedures to install the Go-Around switch.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM SDS 24-60-00/1	
AMM TASK 22-11-00-700-801-A/500	AUTOPILOT GO-AROUND MODE - OPERATIONAL CHECK
AMM TASK 32-00-02-910-801-A/200	SAFETY PIN OF THE NLG DOORS SOLENOID VALVE - INSTALLATION AND REMOVAL
SB145-32-0036	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223/224		Thrust lever

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Straight nose pliers	To loosen/ tighten the switch nut	1	
Soldering iron	To unsolder/ solder the switch wires	1	

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MIL-I-23053	Heat-shrinkable Sleeve RNF-100 1/8-9	AR
QQ-S-571	Solder RO 60	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Thrust lever



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I. Installation (Figure 403)

SUBTASK 420-004-A

- (1) NOTE: The solder points must be protected with heat-shrinkable sleeves.
Solder the electrical connections to the Go-Around switch.
- (2) Install the adjusting washer (7) on the switch. Insert its inner tab into the switch slot.
- (3) Connect the support circular hole (6) to the adjusting washer outer tab.
- (4) Install the serrated washer (5) and the nut. Tighten totally.
- (5) Carefully insert the Go-Around switch (2) into its housing.
- (6) Install the cover disc (4) and the circlip (3).

J. Follow-on

SUBTASK 842-004-A

- (1) On the circuit breaker panel, close the IC-1 and IC-2 circuit breakers and remove the DO-NOT-CLOSE tag from them.
- (2) On the backup battery relay box, close the IC-1 circuit breaker and remove the DO-NOT-CLOSE tag from it ([AMM SDS 24-60-00/1](#)).
- (3) Install panel 114BZ (AMM MPP 06-41-01/100).
- (4) (Applicable to aircraft POST-MOD [SB145-32-0036](#)) Remove the safety pin of the NLG-door solenoid valve ([AMM TASK 32-00-02-910-801-A/200](#)).
- (5) Do the Go-Around Mode Functional Test ([AMM TASK 22-11-00-700-801-A/500](#)).