



EMB145 – EMB135

AIRCRAFT  
MAINTENANCE MANUAL

**MEASURING STICK ASSEMBLY - REMOVAL/INSTALLATION**

**EFFECTIVITY: ALL**

**1. General**

- A. This section gives the procedures to remove/install the measuring stick assembly.
- B. The measuring stick assembly has two components: the measuring stick and the float.
- 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
28-42-01-000-801-A	MEASURING STICK ASSEMBLY - REMOVAL	ACFT WITH WET WINGSTUB
28-42-01-400-801-A	MEASURING STICK ASSEMBLY - INSTALLATION	ACFT WITH WET WINGSTUB
28-42-01-000-802-A	MEASURING STICK ASSEMBLY - REMOVAL	ACFT WITH DRY WINGSTUB
28-42-01-400-802-A	MEASURING STICK ASSEMBLY - INSTALLATION	ACFT WITH DRY WINGSTUB



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TASK 28-42-01-000-801-A

EFFECTIVITY: ACFT WITH WET WINGSTUB

2. MEASURING STICK ASSEMBLY - REMOVAL

A. General

(1) This task is applicable to the LH fuel tank and to the RH fuel tank.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 06-44-00/100	- COMPONENT LOCATION
AMM MPP 28-00-00/200	- MAINTENANCE PRACTICES
AMM TASK 28-11-01-000-801-A/400	FUEL-TANK ACCESS PANELS - REMOVAL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
155	155BZ	LH Wing stub undersurface
156	156BZ	RH Wing stub undersurface
192	192AL/192BR	Center lower fairing
531	531CB	LH Underwing area
541	541BB	LH Underwing area
631	631CB	RH Underwing area
641	641BB	RH Underwing area

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

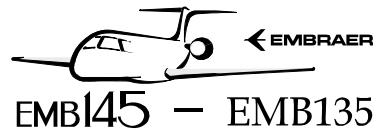
Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	LH/RH Underwing area/Wing stub undersurface



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I. Preparation

SUBTASK 841-002-A

**WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN AMM MPP 28-00-00/200 TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.**

NOTE: This preparation is applicable to the measuring stick removal.

- (1) Remove access panels 192AL/192BR (AMM MPP 06-41-01/100) and ( [AMM TASK 28-11-01-000-801-A/400](#)) to get access to the wing stub undersurface, if applicable.

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

SUBTASK 020-002-A

- (1) Turn the measuring stick latch (1) counterclockwise and permit the measuring stick (4) to slip out.
- (2) Remove the snap ring (2) and retaining plate (3).
- (3) Remove the measuring stick (4) and pull the springs (5) and (6) to remove them from their housing.

K. Preparation

SUBTASK 841-003-A

**WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN AMM MPP 28-00-00/200 TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.**

NOTE: This preparation is applicable to the float removal.

- (1) Remove the access panels (7) ( [AMM MPP 06-44-00/100](#)), (AMM MPP 06-41-01/100) and ( [AMM TASK 28-11-01-000-801-A/400](#)) shown below, as applicable.
  - (a) LH fuel tank:
    - 531CB/541BB.
  - (b) RH fuel tank:
    - 631CB/641BB.
  - (c) Center lower fairing.
    - 192AL/192BR.
  - (d) LH Wing stub undersurface.
    - 155BZ.
  - (e) RH Wing stub undersurface.
    - 156BZ.



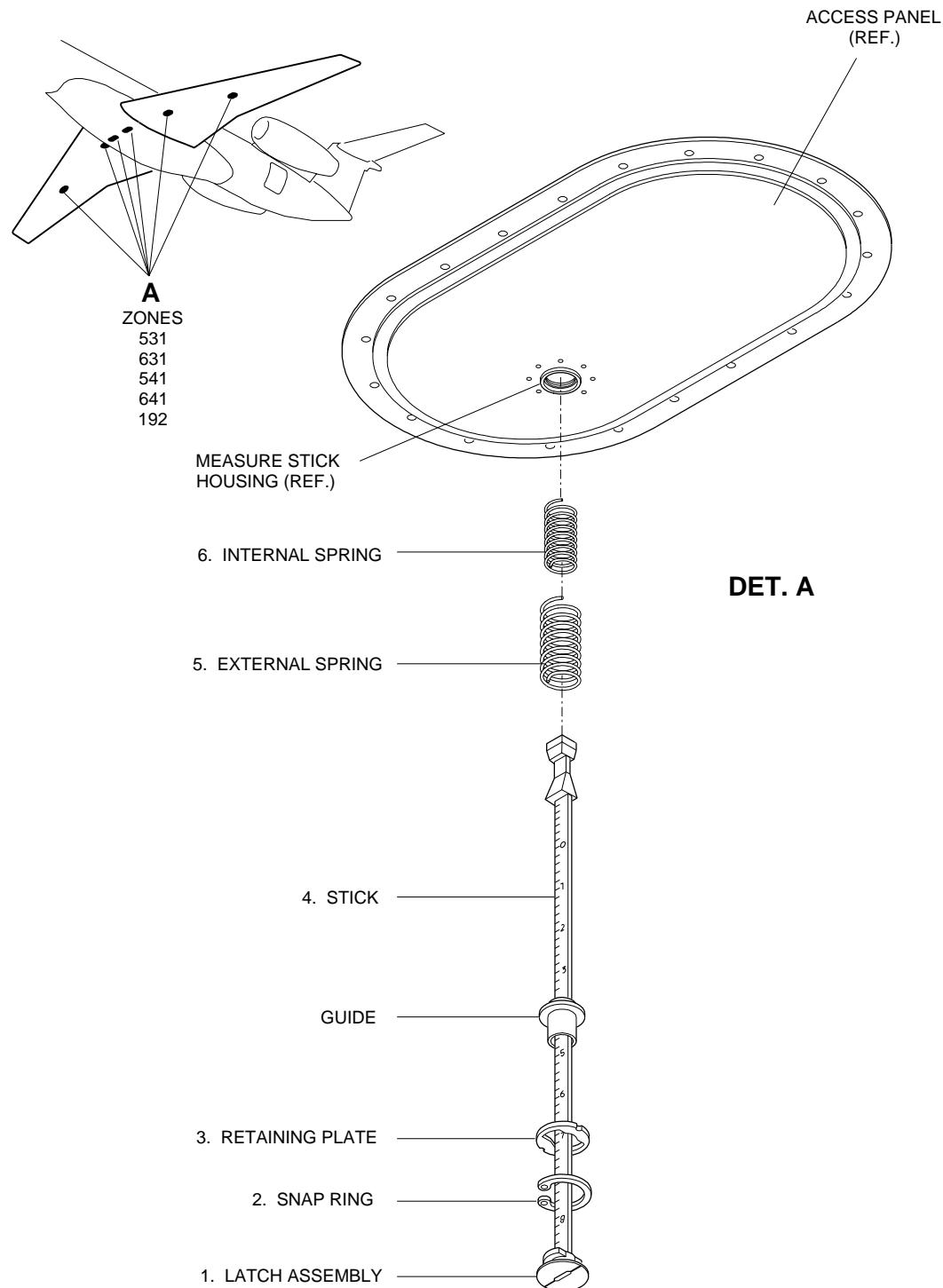
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L. Float Removal ([Figure 401](#))

SUBTASK 020-003-A

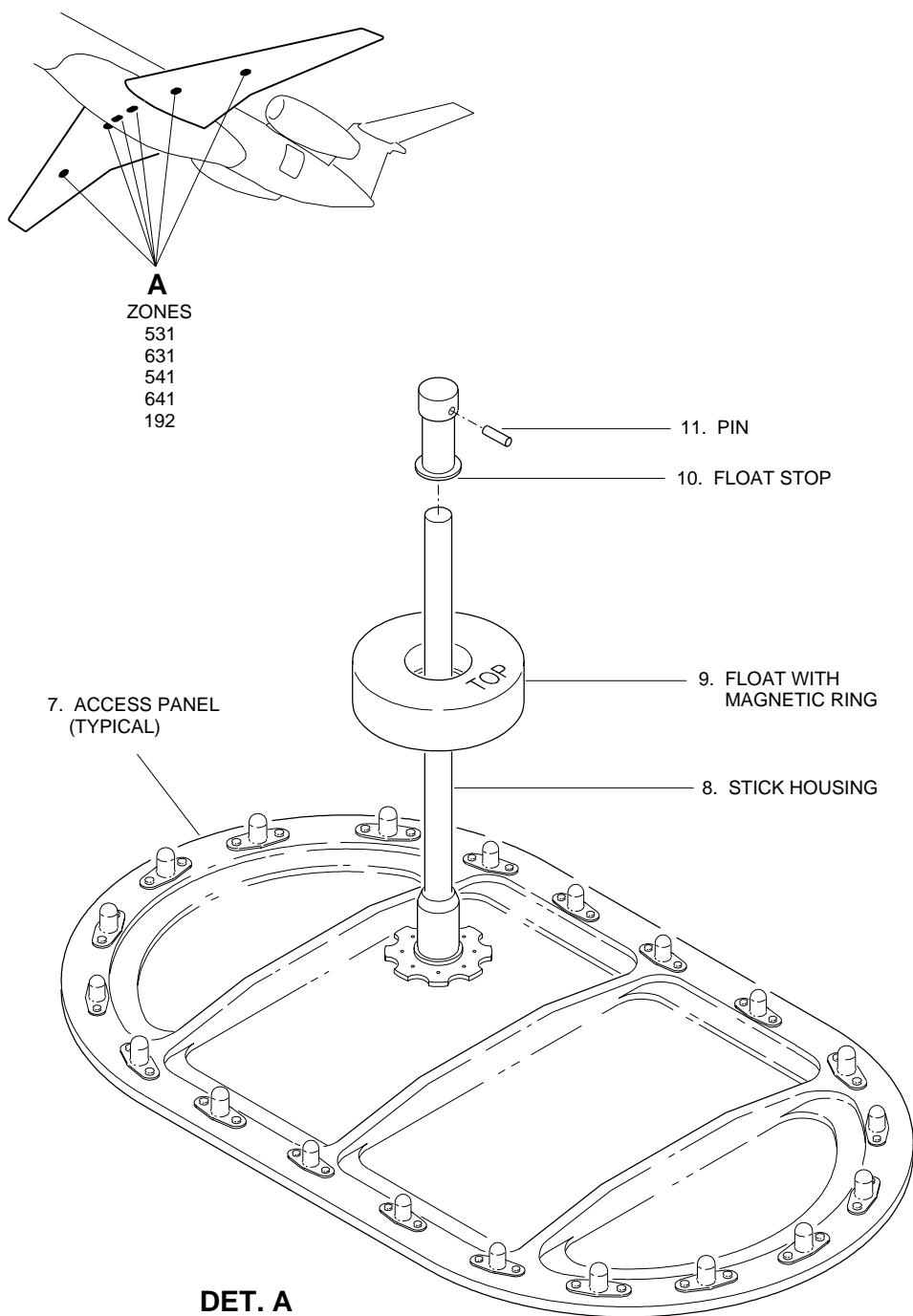
- (1) Remove the pin (11) and then remove the float stop (10) from the stick housing (8).
- (2) Remove the float (9).

**EFFECTIVITY: ACFT WITH WET WINGSTUB**  
 Measuring Stick Assembly - Removal/Installation  
 Figure 401 - Sheet 1

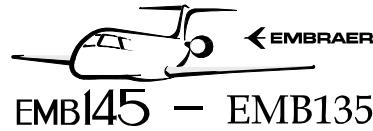


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**EFFECTIVITY: ACFT WITH WET WINGSTUB**  
**Measuring Stick Assembly - Removal/Installation**  
**Figure 401 - Sheet 2**



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TASK 28-42-01-400-801-A

EFFECTIVITY: ACFT WITH WET WINGSTUB

3. MEASURING STICK ASSEMBLY - INSTALLATION

A. General

(1) This task is applicable to the LH fuel tank and to the RH fuel tank.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 06-44-00/100	- COMPONENT LOCATION
AMM MPP 28-00-00/200	- MAINTENANCE PRACTICES
AMM TASK 12-11-01-600-801-A/300	FUEL-TANK PRESSURE REFUELING - SERVICING
AMM TASK 28-11-01-400-801-A/400	FUEL-TANK ACCESS PANELS - INSTALLATION
AMM TASK 28-41-00-200-801-A/600	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
155	155BZ	LH Wing stub undersurface
156	156BZ	RH Wing stub undersurface
192	192AL/192BR	Center lower fairing.
531	531CB	LH Underwing area
541	541BB	LH Underwing area
631	631CB	RH Underwing area
641	641BB	RH Underwing area

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

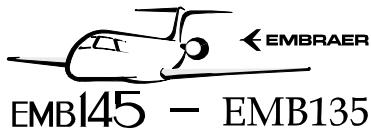
Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	LH/RH Underwing area/Wing stub undersurface



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I. Measuring Stick Installation (Figure 401)

SUBTASK 420-002-A

**WARNING:** • BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN **AMM MPP 28-00-00/200** TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.

• BEFORE YOU INSTALL THE PARTS, MAKE SURE THEY ARE CLEAN AND THE STICK CAN MOVE FREELY. IF STICK DOES NOT MOVE FREELY, A WRONG FUEL MEASUREMENT WILL OCCUR.

- (1) Install the internal and external springs (5) and (6), respectively, and the measuring stick (4) into the housing.

**CAUTION:** BEFORE YOU INSTALL THE SNAP RING (2), MAKE SURE THAT THE SLOT GUIDES OF THE RETAINING PLATE ARE IN THE CORRECT POSITION IN THE MEASURING STICK HOUSING.

- (2) Install the retaining plate (3) and the snap ring (2) in the measuring stick housing.
- (3) Turn the measuring stick latch (1) and its base clockwise.

J. Follow-on

SUBTASK 842-002-A

**NOTE:** This follow-on is applicable to the measuring stick installation.

- (1) 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 of the Maintenance Review Board Report (MRB).

- (2) Install access panels 192AL/192BR (AMM MPP 06-41-01/100) on the center lower fairing.

K. Float Installation (Figure 401)

SUBTASK 420-003-A

**WARNING:** BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN **AMM MPP 28-00-00/200** TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.

- (1) Do a check on the stick housing for no dents or bends.
- (2) Do a check on the float magnet for effectiveness.

**NOTE:** There is a deterioration in the magnet because of its constant contact with fuel.  
Do a check before you install and replace the float if necessary.

**CAUTION:** MAKE SURE THAT THE WORD "TOP", ON THE FLOAT BODY, IS TURNED UP, AS SHOWN IN FIGURE 401. IF NOT, YOU WILL HAVE INCORRECT INDICATIONS.

- (3) Install the float (9) on the stick housing (8).



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- (4) Install the float stop (10) and lock it with the pin (11).

L. Follow-on

SUBTASK 842-003-A

NOTE: This follow-on is applicable to the float installation.

- (1) 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 of the Maintenance Review Board Report (MRB).

- (2) Install the access panels (7) ([AMM MPP 06-44-00/100](#)), (AMM MPP 06-41-01/100) and ([AMM TASK 28-11-01-400-801-A/400](#)) shown below, as applicable.

(a) LH fuel tank:

- 531CB/541BB.

(b) RH fuel tank:

- 631CB/641BB.

(c) Center lower fairing.

- 192AL/192BR.

(d) LH Wing stub undersurface.

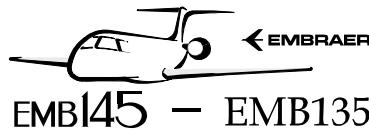
- 155BZ.

(e) RH Wing stub undersurface.

- 156BZ.

- (3) Refuel the tanks ([AMM TASK 12-11-01-600-801-A/300](#)) as applicable.

- (4) Examine for fuel leakage the access panels which were removed. Correct as necessary.



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TASK 28-42-01-000-802-A

EFFECTIVITY: ACFT WITH DRY WINGSTUB

4. MEASURING STICK ASSEMBLY - REMOVAL

## A. General

- (1) This task is applicable to the LH fuel tank and to the RH fuel tank.

## B. References

REFERENCE	DESIGNATION
AMM MPP 06-44-00/100	- COMPONENT LOCATION
AMM MPP 28-00-00/200	- MAINTENANCE PRACTICES
AMM TASK 28-11-01-000-802-A/400	FUEL-TANK ACCESS PANELS - REMOVAL

## C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
531	531CB	LH Underwing area
541	541BB	LH Underwing area
631	631CB	RH Underwing area
641	641BB	RH Underwing area

## D. Tools and Equipment

Not Applicable

## E. Auxiliary Items

Not Applicable

## F. Consumable Materials

Not Applicable

## G. Expandable Parts

Not Applicable

## H. Persons Recommended

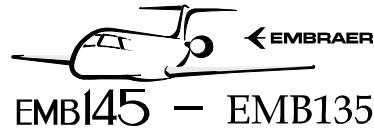
QTY	FUNCTION	PLACE
1	Does the task	LH/RH Underwing area

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

SUBTASK 020-004-A

**WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN AMM MPP 28-00-00/200 TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.**

- (1) Turn the measuring stick latch (1) anticlockwise and permit the measuring stick (4) to slip out.



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- (2) Remove the snap ring (2) and retaining plate (3).
- (3) Remove the measuring stick (4) and pull the springs (5) and (6) to remove them from their housing.

### J. Preparation

#### SUBTASK 841-004-A

**WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN AMM MPP 28-00-00/200 TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.**

NOTE: This preparation is applicable to the float removal.

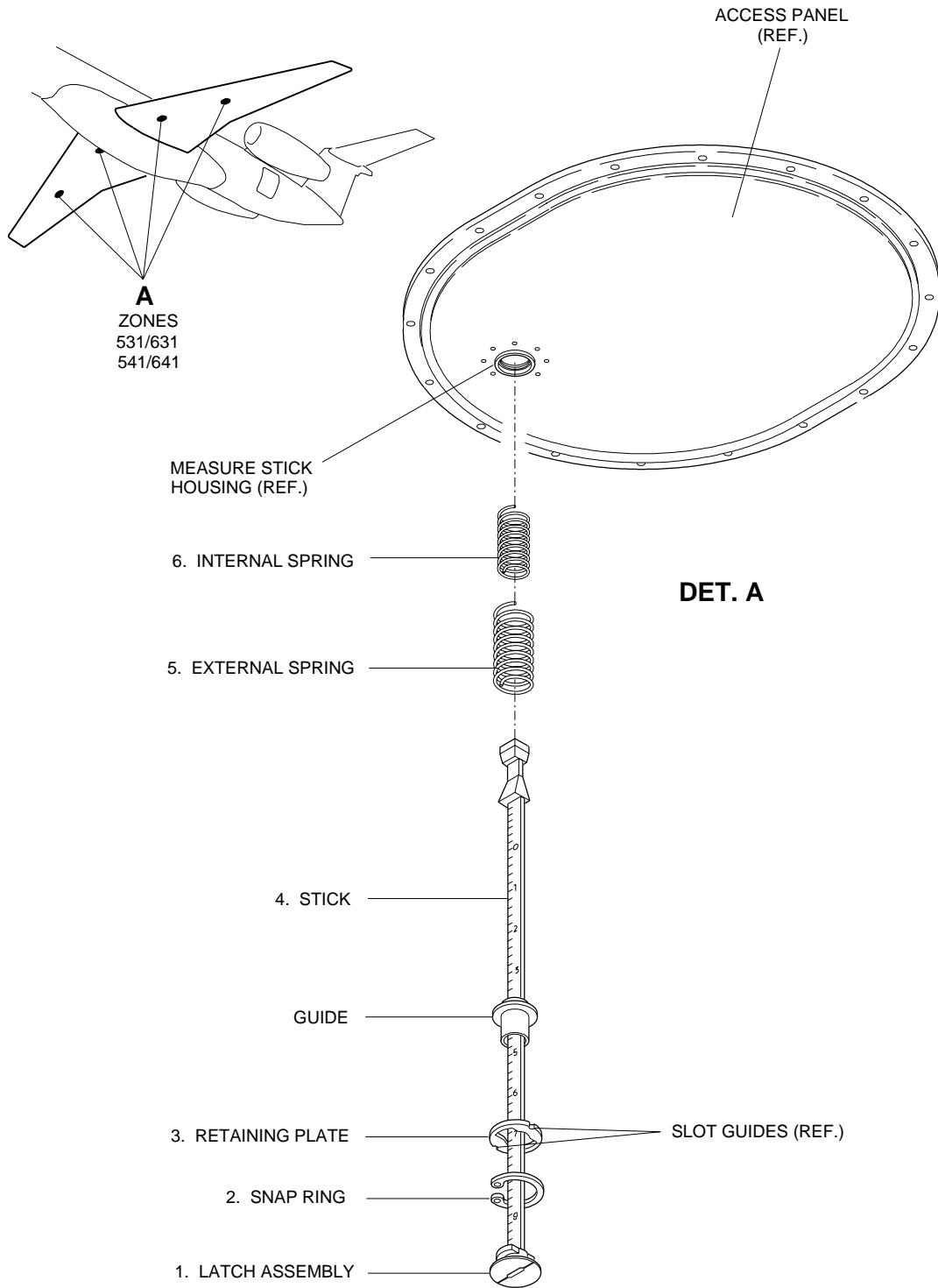
- (1) Remove the access panels (7) ([AMM MPP 06-44-00/100](#)) and ([AMM TASK 28-11-01-000-802-A/400](#)) shown below, as applicable.
  - (a) LH fuel tank:
    - 531CB/541BB.
  - (b) RH fuel tank:
    - 631CB/641BB.

### K. Float Removal ([Figure 402](#))

#### SUBTASK 020-005-A

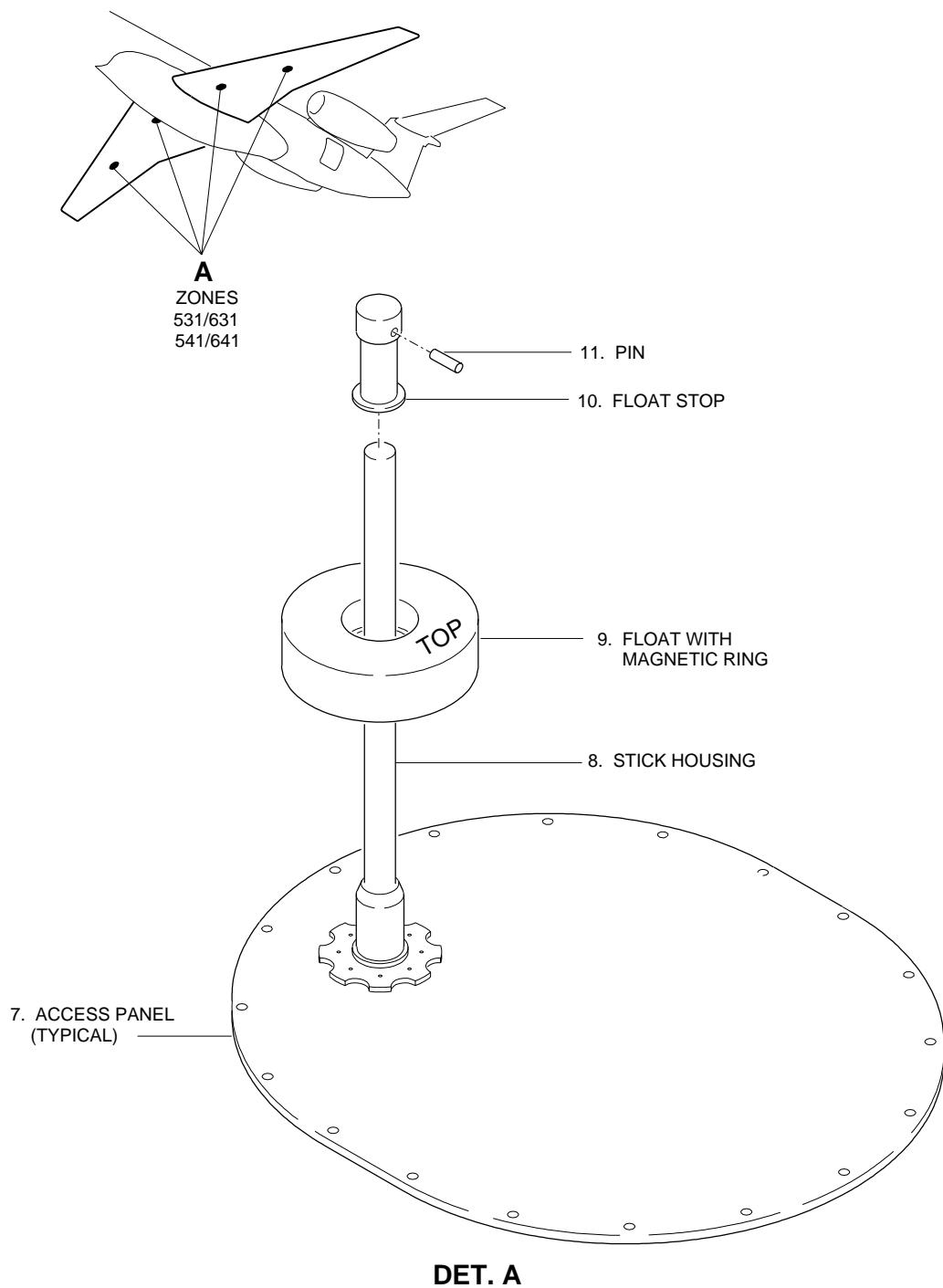
- (1) Remove the pin (11) and remove the float stop (10) from the stick housing (8).
- (2) Remove the float (9).

**EFFECTIVITY: ACFT WITH DRY WINGSTUB**  
 Measuring Stick Assembly - Removal/Installation  
 Figure 402 - Sheet 1



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**EFFECTIVITY: ACFT WITH DRY WINGSTUB**  
**Measuring Stick Assembly - Removal/Installation**  
**Figure 402 - Sheet 2**



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TASK 28-42-01-400-802-A

EFFECTIVITY: ACFT WITH DRY WINGSTUB

5. MEASURING STICK ASSEMBLY - INSTALLATION

A. General

(1) This task is applicable to the LH fuel tank and to the RH fuel tank.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-44-00/100	- COMPONENT LOCATION
AMM MPP 28-00-00/200	- MAINTENANCE PRACTICES
AMM TASK 12-11-01-600-801-A/300	FUEL-TANK PRESSURE REFUELING - SERVICING
AMM TASK 28-11-01-400-802-A/400	FUEL-TANK ACCESS PANELS - INSTALLATION

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
531	531CB	LH Underwing area
541	541BB	LH Underwing area
631	631CB	RH Underwing area
641	641BB	RH Underwing area

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	LH/RH Underwing area

I. Measuring Stick Installation

SUBTASK 420-004-A

- WARNING:** • BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN **AMM MPP 28-00-00/200** TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.
- BEFORE YOU INSTALL THE PARTS, MAKE SURE THEY ARE CLEAN AND THE STICK CAN MOVE FREELY. IF STICK DOES NOT MOVE FREELY, A WRONG FUEL MEASUREMENT WILL OCCUR.

- (1) Install the internal and external springs (5) and (6), respectively, and the measuring stick (4) into the housing.

**CAUTION:** BEFORE YOU INSTALL THE SNAP RING (2), MAKE SURE THAT THE SLOT GUIDES OF THE RETAINING PLATE ARE IN THE CORRECT POSITION IN THE MEASURING STICK HOUSING.

- (2) Install the retaining plate (3) and the snap ring (2) in the measuring stick housing.  
(3) Turn the measuring stick latch (1) and its base clockwise.

J. Float Installation (Figure 402)

SUBTASK 420-005-A

- WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN AMM MPP 28-00-00/200 TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.**

- (1) Do a check on the stick housing for no dents or bends.  
(2) Do a check on the float magnet for effectiveness.

**NOTE:** There is a deterioration in the magnet because of its constant contact with fuel.  
Do a check before you install and replace the float if necessary.

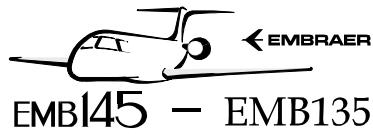
**CAUTION:** MAKE SURE THAT THE WORD "TOP", ON THE FLOAT BODY, IS TURNED UP, AS SHOWN IN FIGURE 401. IF NOT, YOU WILL HAVE INCORRECT INDICATIONS.

- (3) Install the float (9) on the stick housing (8).  
(4) Install the float stop (10) and lock it with the pin (11).

K. Follow-on

SUBTASK 842-004-A

- (1) Install the access panels (7) (**AMM MPP 06-44-00/100**) and (**AMM TASK 28-11-01-400-802-A/400**) shown below as applicable.
- (a) LH fuel tank:  
• 531CB/541BB.
- (b) RH fuel tank:



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- 631CB/641BB.
- (2) Refuel the tanks ( [AMM TASK 12-11-01-600-801-A/300](#) ) as applicable.
- (3) Examine for fuel leakage the access panels which were removed. Correct as necessary.