

## PITOT SENSOR TUBING - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

### 1. General

- A. This section gives the procedures to remove and install the pitot sensors tubing.
- B. These procedures are applicable to pitot sensors 1 and 2.
- C. The pitot sensors are installed on the top of the aircraft nose.
- D. Use the applicable torque wrench for the correct torque application. If it is necessary to use extensions, the torque wrench must be adjusted to make an allowance for the torque value increase or decrease. Refer to the torque connection method in ([AMM MPP 20-10-01/200](#)).
- E. 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
<a href="#">34-13-05-000-801-A</a>	PITOT SENSOR TUBING - REMOVAL	ALL
<a href="#">34-13-05-400-801-A</a>	PITOT SENSOR TUBING - INSTALLATION	ALL

TASK 34-13-05-000-801-A

EFFECTIVITY: ALL

## 2. PITOT SENSOR TUBING - REMOVAL

### A. General

(1) This procedure gives the instructions to remove the pitot sensor tubing.

### B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
<a href="#">AMM TASK 29-10-00-860-802-A/200</a>	HYDRAULIC SYSTEM - PRESSURIZATION WITH EMDP
<a href="#">AMM TASK 30-31-03-000-801-A/400</a>	PITOT LINES HEATER - REMOVAL
<a href="#">AMM TASK 32-00-02-910-801-A/200</a>	SAFETY PIN OF THE NLG DOORS SOLENOID VALVE - INSTALLATION AND REMOVAL
<a href="#">AMM TASK 34-13-01-000-801-A/400</a>	PITOT SENSOR - REMOVAL
<a href="#">S.B.145-30-0056</a>	-
<a href="#">S.B.145-32-0036</a>	-

### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
213	113CZ	Electronic compartment
214	113CZ	Electronic compartment

### 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	Top of the aircraft nose/Forward electronic compartment

### I. Preparation

**SUBTASK 841-002-A**

- (1) On the LH electrical-power control/distribution box, open the HEATING/PITOT 1 circuit breaker and attach a DO-NOT-CLOSE tag to it.

- (2) On the RH electrical-power control/distribution box, open the HEATING/PITOT 2 and attach a DO-NOT-CLOSE tag to it.
- (3) (PRE-MOD [S.B.145-32-0036](#)) Make sure that the pressure in hydraulic system 1 is fully released ( [AMM TASK 29-10-00-860-802-A/200](#)).
- (4) (POST-MOD [S.B.145-32-0036](#)) Install the safety pin of the NLG door solenoid valve ([AMM TASK 32-00-02-910-801-A/200](#)).
- (5) Open access door 113CZ (AMM MPP 06-41-01/100).

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

*SUBTASK 020-002-A*

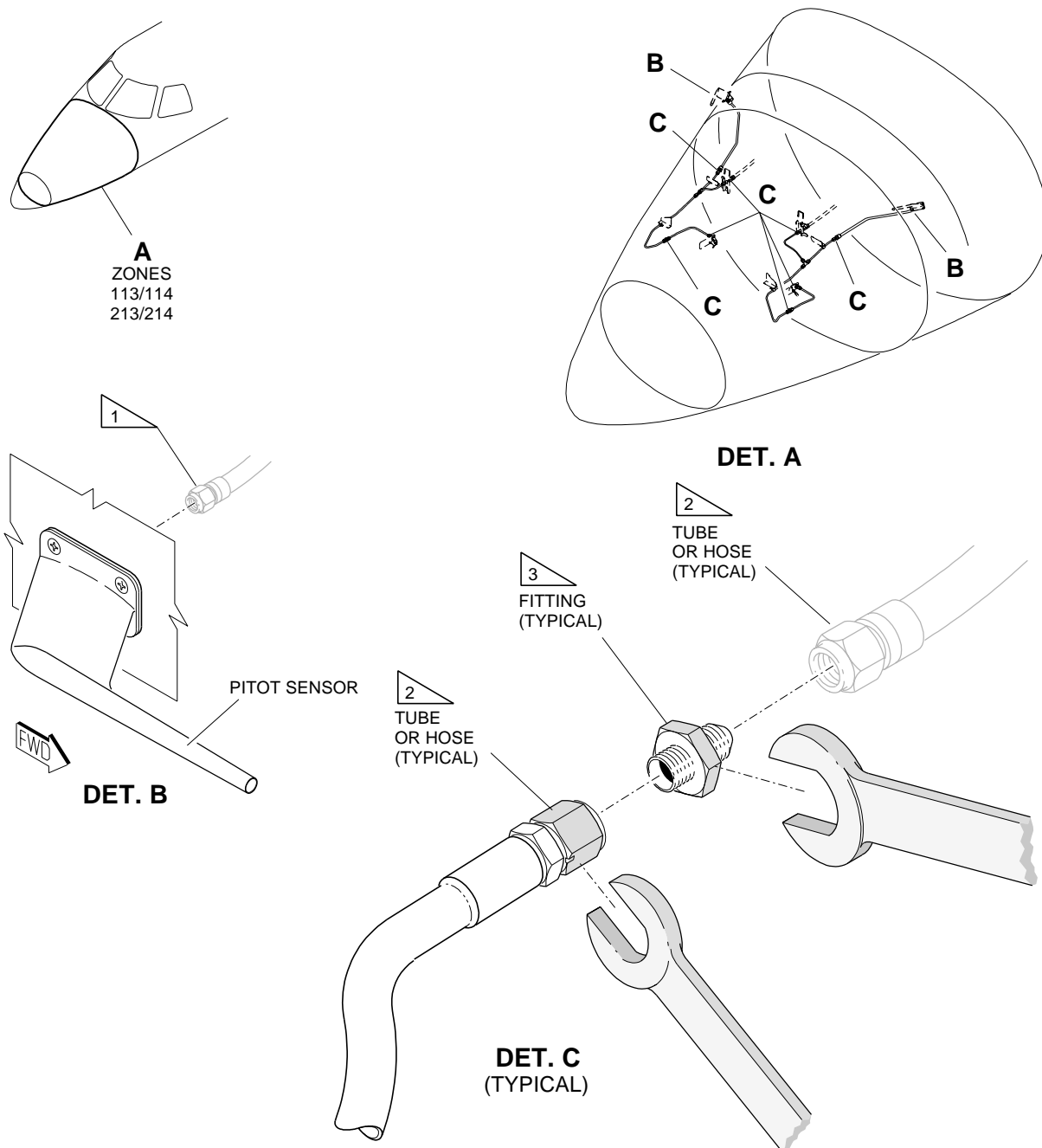
**WARNING: DO NOT TOUCH THE PITOT SENSOR IMMEDIATELY AFTER ITS HEATER WAS TURNED OFF TO PREVENT INJURY TO PERSONS.**

- (1) Get access to the tubing assembly.
- (2) (PRE-MOD [S.B.145-30-0056](#)) If applicable, do the steps that follow:
  - (a) Remove the covering blanket from the fuselage ( [AMM TASK 34-13-01-000-801-A/400](#)).
  - (b) Remove the insulation blanket and, if applicable, the heaters from the tubes ( [AMM TASK 30-31-03-000-801-A/400](#)).
- (3) (POST-MOD [S.B.145-30-0056](#)) If applicable, remove the heaters from the tubes ( [AMM TASK 30-31-03-000-801-A/400](#)).
- (4) If applicable, remove the clamps that support the tube, and, if necessary, the adjacent tube or hose.
- (5) Loosen the nuts and remove the tube or hose.
- (6) Install protection caps at the ends of removed tube or hose and system fittings.

EFFECTIVITY: PRE-MOD S.B. 145-34-0008

Pitot Sensor Tubing - Removal/Installation

Figure 401



1 TORQUE: 7.9 – 10.2 N.m (70 – 90 lb.in)

2 FOR THE 5/16 IN. TUBE NUT THAT CONNECTS TO FITTING,  
APPLY TORQUE 7.9 – 10.2 N.m (70 – 90 lb.in)  
FOR THE 1/4 IN. TUBE NUT THAT CONNECTS TO FITTING,  
APPLY TORQUE 5.6 – 7.3 N.m (50 – 65 lb.in)

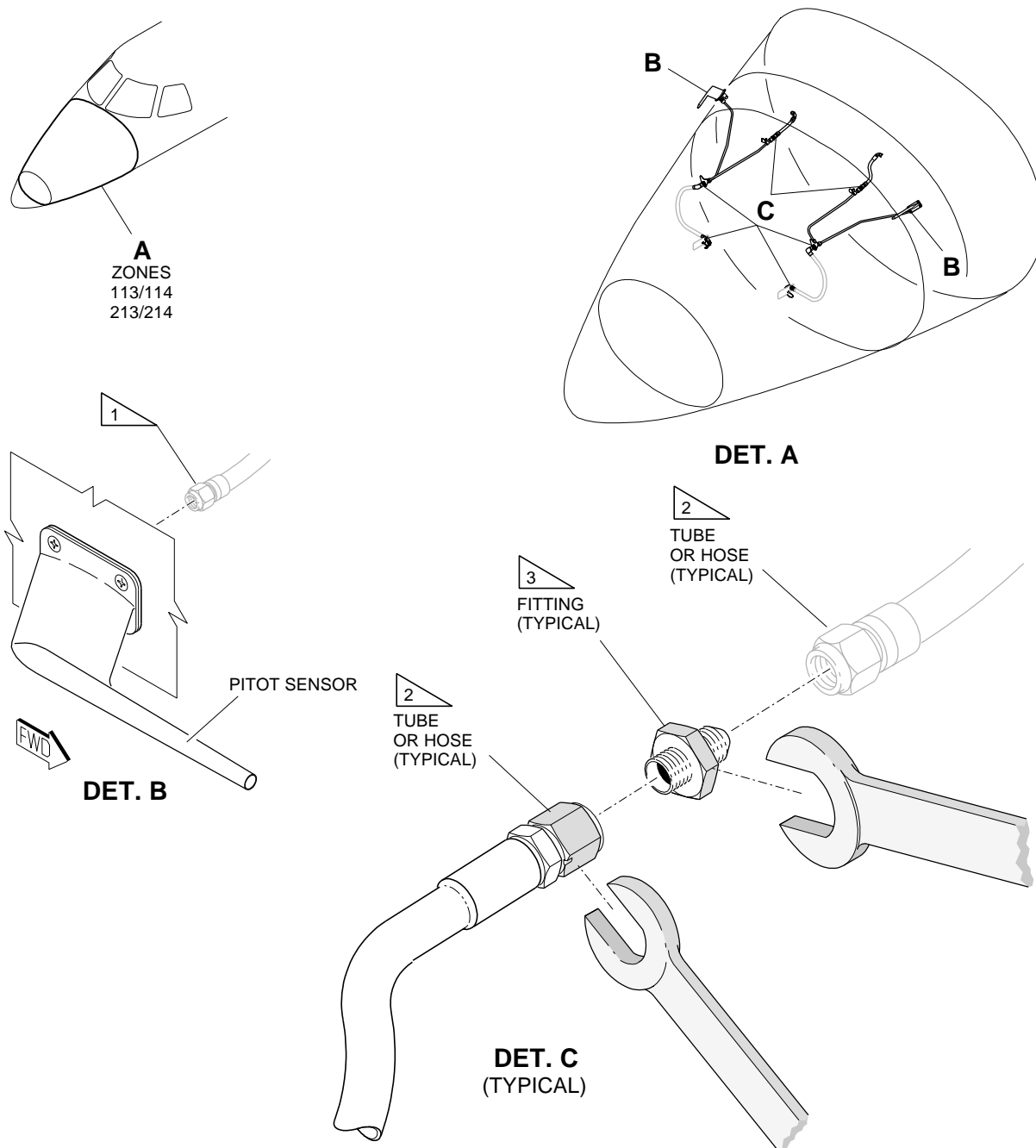
3 FITTING CAN BE A NIPPLE, TEE ADAPTER OR DRAIN ASSY.

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EFFECTIVITY: POST-MOD S.B. 145-34-0008

Pitot Sensor Tubing - Removal/Installation

Figure 402



TASK 34-13-05-400-801-A

EFFECTIVITY: ALL

### 3. PITOT SENSOR TUBING - INSTALLATION

#### A. General

(1) This procedure gives the instructions to install the pitot sensor tubing.

#### B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
<a href="#">AMM TASK 30-31-00-700-803-A/500</a>	PITOT AND ANEMOMETRIC STATIC PORT HEATING - OPERATIONAL TEST
<a href="#">AMM TASK 30-31-03-400-801-A/400</a>	PITOT LINES HEATER - INSTALLATION
<a href="#">AMM TASK 32-00-02-910-801-A/200</a>	SAFETY PIN OF THE NLG DOORS SOLENOID VALVE - INSTALLATION AND REMOVAL
<a href="#">AMM TASK 34-13-00-200-803-A/600</a>	PITOT LINES - INSPECTION
<a href="#">AMM TASK 34-13-00-790-802-A/500</a>	PITOT-STATIC SYSTEM 1 - LEAKAGE TEST
<a href="#">AMM TASK 34-13-00-790-803-A/500</a>	PITOT-STATIC SYSTEM 2 - LEAKAGE TEST
<a href="#">AMM TASK 34-13-01-400-801-A/400</a>	PITOT SENSOR - INSTALLATION
<a href="#">S.B.145-30-0056</a>	-
<a href="#">S.B.145-32-0036</a>	-

#### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
213	113CZ	Electronic compartment
214	113CZ	Electronic compartment

#### D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially Available	Torque wrench (For the torque range, refer to figure)	To torque the connections correctly	

#### 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	Top of the aircraft nose/Forward electronic compartment

I. Installation (Figure 401) (Figure 402)

*SUBTASK 420-002-A*

**CAUTION:** • BEFORE THE INSTALLATION, MAKE SURE THAT THERE IS NO UNWANTED MATERIAL IN THE PITOT SENSOR TO PREVENT THE CONTAMINATION OF THE SYSTEM.

- DO NOT USE LUBRICANT ON PITOT FITTINGS. CONTAMINATION OF THE SYSTEM CAN OCCUR.
- CORRECTLY ALIGN THE FITTINGS AND TUBING TO PERMIT THE NUTS TO BE TURNED DOWN BY HAND BEFORE THE WRENCH TIGHTENING. DO NOT USE FITTING NUTS TO PULL TUBING AND/OR FITTINGS INTO ALIGNMENT.

- (1) Remove the protection caps from the tube or hose.
- (2) Do a check of the tubing for abrasion, kinking, protection, wear, dents, scores, bent, and notches.
- (3) Examine the tubing ends, sleeves, and sealing areas of fittings for cleanliness, defects, and contamination that can decrease sealing effectiveness.
- (4) Align the tubes and fittings. Let the tube end stay against the fitting.
- (5) Hold the tube end or hose end against and aligned with the fitting. Turn the nut by hand.
- (6) Hold the fitting with the correct wrench and apply torque to the nut as follows:
  - (a) For the 5/16 in. nut, apply torque 70 - 90 lb.in (7.9 - 10.2 N.m).
  - (b) For the 1/4 in. nut, apply torque 50 - 65 lb.in (5.6 - 7.3 N.m).
- (7) Install the clamps if they were removed.
- (8) Do a visual inspection on the pitot line that was installed ( [AMM TASK 34-13-00-200-803-A/600](#)).
- (9) (PRE-MOD [S.B.145-30-0056](#)) If applicable do the steps that follow:
  - (a) Install de covering blanket to the fuselage ( [AMM TASK 34-13-01-400-801-A/400](#)).
  - (b) Install the insulation blanket and, if applicable, the heaters to the tubes ( [AMM TASK 30-31-03-400-801-A/400](#)).
- (10) (POST-MOD [S.B.145-30-0056](#)) If applicable, install the heaters to the tubes ( [AMM TASK 30-31-03-400-801-A/400](#)).

J. Follow-on

*SUBTASK 842-002-A*

- (1) Close access door 113CZ (AMM MPP 06-41-01/100).
- (2) (POST-MOD [S.B.145-32-0036](#)) Remove the safety pin from the NLG door solenoid valve ([AMM TASK 32-00-02-910-801-A/200](#)).
- (3) On the LH electrical-power control/distribution box, close the HEATING/PITOT 1 circuit breaker and remove the DO-NOT-CLOSE tag from it.
- (4) On the RH electrical-power control/distribution box, close the HEATING/PITOT 2 and remove the DO-NOT-CLOSE tag from it.
- (5) Do the Pitot/static System 1 leakage test ( [AMM TASK 34-13-00-790-802-A/500](#)) for pitot 1 installation or the Pitot/static System 2 leakage test ( [AMM TASK 34-13-00-790-803-A/500](#)) for pitot 2 installation.
- (6) Do an operational check on the pitot and anemometric static port heating system ([AMM TASK 30-31-00-700-803-A/500](#)).