

APU FUEL FEED LINE SHROUD - ADJUSTMENT/TEST

EFFECTIVITY: ACFT MODEL(S) EMB-145

1. General

- A. This section gives the procedures to do a test on the APU fuel-feed-line shroud for leakage.
- 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
28-22-03-700-801-A ♦	APU FUEL-FEED-LINE SHROUD - OPERATIONAL TEST	ACFT MODEL(S) EMB-145

TASK 28-22-03-700-801-A

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2. APU FUEL-FEED-LINE SHROUD - OPERATIONAL TEST

A. General

- (1) The function of this test is to make sure that there is no leakage in the connections of the APU fuel-feed-line shroud.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM MPP 06-41-02/100	-
AMM MPP 06-42-00/100	-
AMM MPP 28-00-00/200	- MAINTENANCE PRACTICES
AMM MPP 28-00-01/400	- REMOVAL/INSTALLATION

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
155	155FZ	LH wing stub
155	155GZ	LH wing stub
156	156FZ	RH wing stub
156	156GZ	RH wing stub
312	312AR	Tail cone compartment

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 080	Box, leakage test	To pressurize the engine fuel-feed-line shroud	
GSE 115	Hose assembly	To connect the leakage test box to the APU fuel-feed-line shroud drain	
GSE 116	Hose assembly	To connect the leakage test box to the APU fuel-feed-line shroud drain	

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Brush	To apply leak detection fluid	1
Commercially available	Plug, AS 5168 D08 or equivalent	To close the APU-fuel-feed line	1
Commercially available	Rubber hose - 25.4 mm (1 in) in diameter/300 mm (18 in) in length	To close the APU fuel-feed-line shroud	1
Commercially available	Union, AS 5174 D0404, or equivalent	To connect the pressure line	1

(Continued)

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Sleeve, MS 20819 - 4D, or equivalent	To connect the pressure line	1
Commercially available	Tee, AS 1039 W040404, or equivalent	To connect the pressure line	1
Commercially available	Flared tube, AL 5052 - 6.35 mm (1/4 in) in diameter/101 mm (4 in) in length	To connect the pressure line	1
Commercially available	Nut, AN 818 - 4D, or equivalent	To connect the pressure line	1
Commercially available	Clamp NAS 1922-0100-1H or similar	To attach the hose to the APU shroud	2
Available in the operator's inventories	Cap	To close the hose	1
Commercially available	Plug	Close the APU fuel-feed line	1

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
Leak Tec No. 16	MIL-L-25567 or equivalent	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Tail cone compartment/wing stub/passenger cabin/baggage compartment/rear electronic compartment

I. Preparation

SUBTASK 841-010-A

- (1) Remove access panels 155FZ, 155GZ, 156FZ and 156GZ (AMM MPP 06-41-01/100) to get access to the APU fuel-feed-line shroud drain fitting.

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 THE MATERIAL.

- (2) Open access panel 312AR (AMM MPP 06-42-00/100) to get access to the APU fuel-feed line in the tail cone compartment.
- (3) On the circuit breaker panel, open these circuit breakers and attach a DO-NOT-CLOSE tag to them:
 - STAR 1/2.

- FUEL PUMPS 1A/1B/1C.
 - FUEL PUMPS 2A/2B/2C.
 - APU CONTROL.
 - APU FUEL SOV.
- (4) Disconnect the APU fuel-feed line in the tail cone compartment and install the plug (3) to close the APU fuel-feed line.
- (5) Close the line shroud with the hose (4), plug (2), and clamps (1).
- (6) Release the clamp (8) and remove the APU fuel-feed-line hose drain in the wing stub.
- (7) Before you connect the leakage test box to the APU line shroud, do the steps below to adjust the leakage test box (Figure 501):
- (a) Make sure that there is no moisture and no foreign matter in the inlet filter of the leakage test box.
 - (b) Install a hose to connect the AIR OUTLET coupling to the MANOMETRIC PRESSURE coupling on the LH side of the leakage test box.
 - (c) Turn the pressure regulator knob fully counterclockwise (-).
 - (d) Keep the pressure source selector in the CLOSE position.
- CAUTION:** MAKE SURE THAT THE REGULATOR KNOB IS FULLY CLOSED IN THE COUNTERCLOCKWISE POSITION BEFORE YOU CONNECT THE SHOP-AIR/BOTTLE INLET. IF YOU DO NOT OBEY THIS PROCEDURE DAMAGE TO THE EQUIPMENT CAN OCCUR
- (e) Connect a source of compressed air to AIR INLET coupling on the leakage test box.
 - (f) Turn the pressure source selector to the AIR position.
 - (g) Move the operation selector lever to the PRESSURE position and turn the pressure regulator knob clockwise (+) until you get an indication of 1.5 psi on the pressure gauge.
 - (h) Turn the pressure source selector to the CLOSE position.
 - (i) Push the operation selector lever to the ESCAPE position until the pressure gauge shows zero.
 - (j) Remove the hose that connect the AIR OUTLET coupling to the MANOMETRIC PRESSURE coupling.
- (8) Install the hoses (4) and (5) and connect the leakage test box to the APU-fuel-line shroud drain. See Figure 501 to assemble the hoses.

J. Operationally Check APU Fuel-Feed-Line Shroud (Figure 502)

SUBTASK 710-010-A

CAUTION: TOO MUCH PRESSURE CAN CAUSE STRUCTURAL DAMAGE TO THE SHROUD.
USE ONLY THE SPECIFIED PRESSURE VALUE (1.5 PSI) TO DO THE TEST.

- (1) On the leakage test box, turn the pressure source selector to the AIR position.
- (2) Move the selector lever of the leakage test box to the PRESSURE position and turn the pressure regulator knob clockwise until the pressure reaches 1.5 psi.
- (3) When the pressure becomes stable at 1.5 psi, release test box lever and turn the source selector to the CLOSE position.
- (4) Monitor the pressure value for the next 10 (ten) min. The pressure value must be stable. Use a chronometer if necessary.
- (5) If, during the check, the pressure does not stay at the test value, do the steps from (a) to (h) to repair the leakage:
 - (a) Move the test box lever to the ESCAPE position, until the pressure gauge shows zero.
 - (b) Remove these access panels to get access to the APU fuel-feed-line shroud:
 - 1 Passenger cabin
 - 251HF/261DF/261BF (AMM MPP 06-41-02/100).
 - 2 Baggage compartment
 - 271AF/271BF/271CF (AMM MPP 06-41-02/100).
 - 3 Rear electronic compartment
 - 271DF/271EF (AMM MPP 06-41-02/100).
 - (c) Move the selector lever of the leakage test box to the PRESSURE position and apply pressure into the shroud line until you have the test value.
 - (d) Use a brush to apply the leak detection fluid to the shroud fittings and examine them for leakage.
 - (e) If there are leaks, identify the related area(s).
 - (f) Move the test box lever to the ESCAPE position, until the pressure gauge shows zero.
 - (g) Repair the shroud as necessary to remove the leak(s).
Do the check again and make sure that there is no leak.
 - (h) Install all the panels (AMM MPP 06-41-02/100) removed in step (b).
- (6) Move the test box lever to the ESCAPE position, until the pressure gauge shows zero.

K. Follow-on

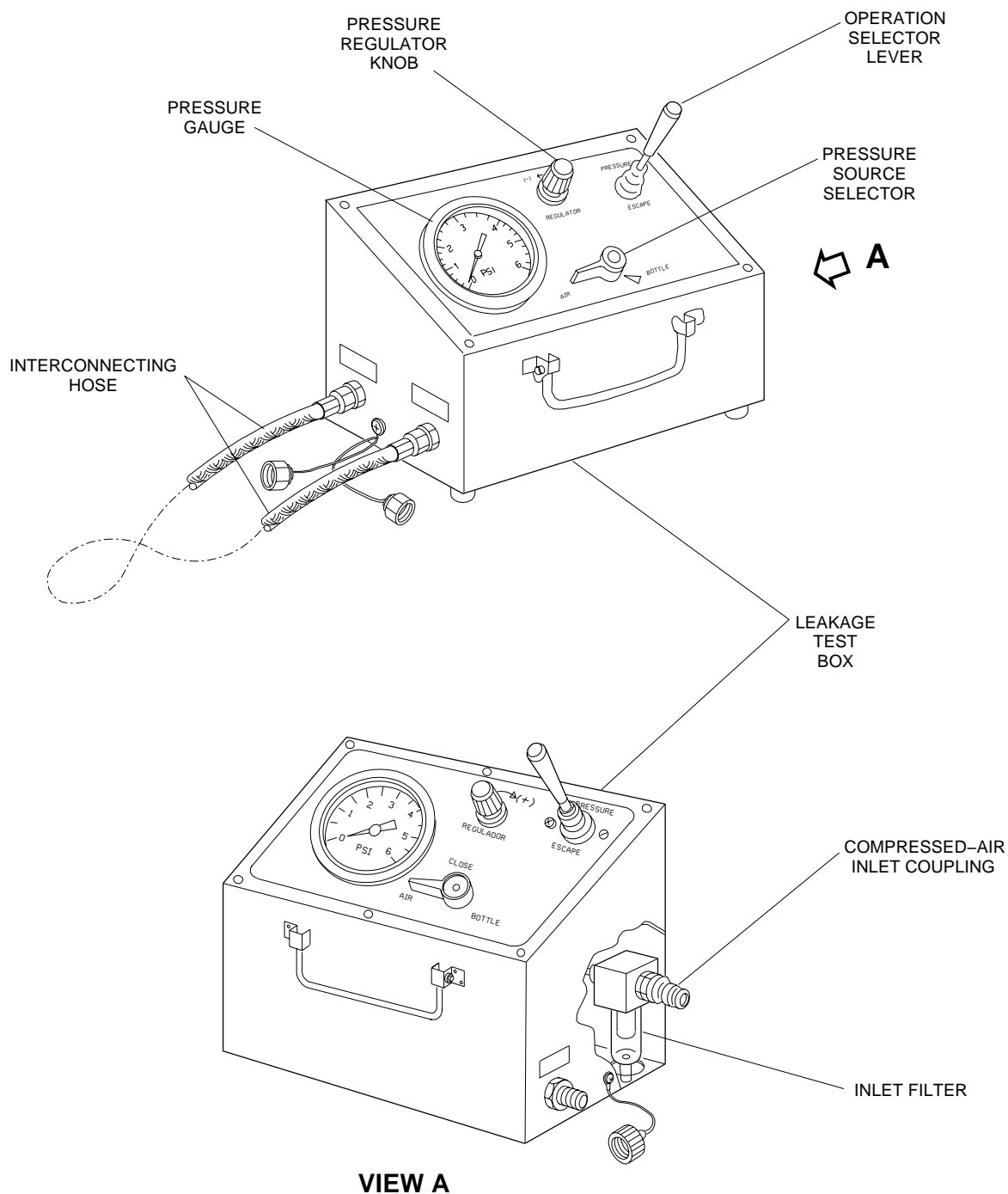
SUBTASK 842-010-A

- (1) On the test box turn the pressure regulator knob fully counterclockwise (-).
- (2) Remove the hoses (4) and (5) and disconnect the leakage test box from the APU shroud drain.
- (3) Disconnect the source of compressed air from AIR INLET coupling of the leakage test box.
- (4) Install the drain hose of the APU-fuel-feed line shroud in the wing stub.
- (5) Remove the hose (4), plug (2), and clamps (1) from the APU fuel-feed-line shroud.
- (6) Remove the plug (3) from the APU fuel-feed line.
- (7) Connect the APU fuel line (AMM MPP 28-00-01/400).
- (8) On the circuit breaker panel, close these circuit breakers and remove the tag from them:
 - STAR 1/2.
 - FUEL PUMPS 1A/1B/1C.
 - FUEL PUMPS 2A/2B/2C.
 - APU CONTROL.
 - APU FUEL SOV.
- (9) Set the APU master switch to ON.
- (10) Set the applicable fuel pump to on and do a check for leaks at the fuel hose.
- (11) Set the applicable fuel pump to off.
- (12) Set the APU master switch to OFF.
- (13) Install access panels 155FZ, 155GZ, 156FZ and 156GZ (AMM MPP 06-41-01/100).
- (14) Install access panel 312AR (AMM MPP 06-42-00/100).
- (15) Put the aircraft back to its usual configuration.

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Leakage Test Box

Figure 501

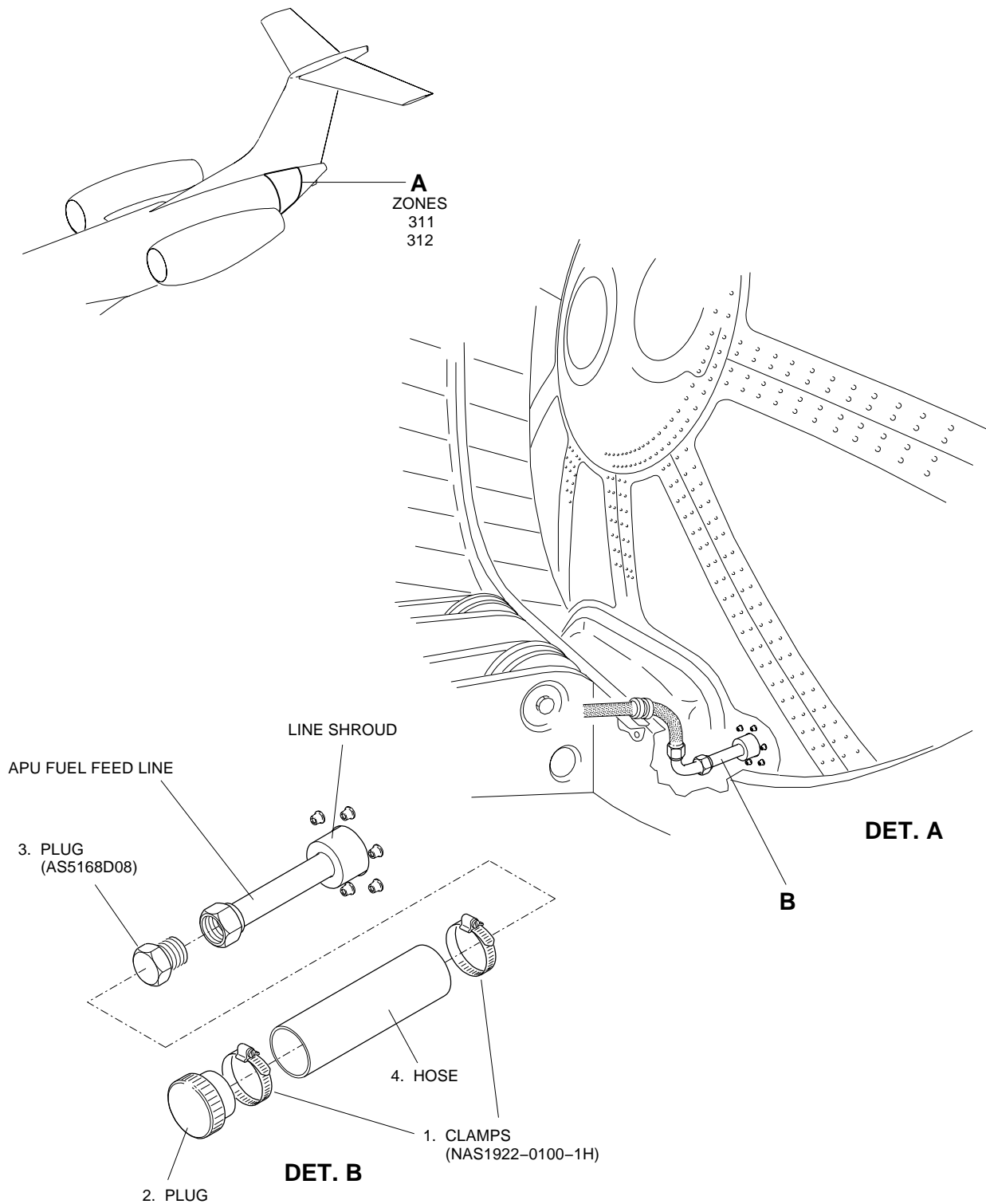


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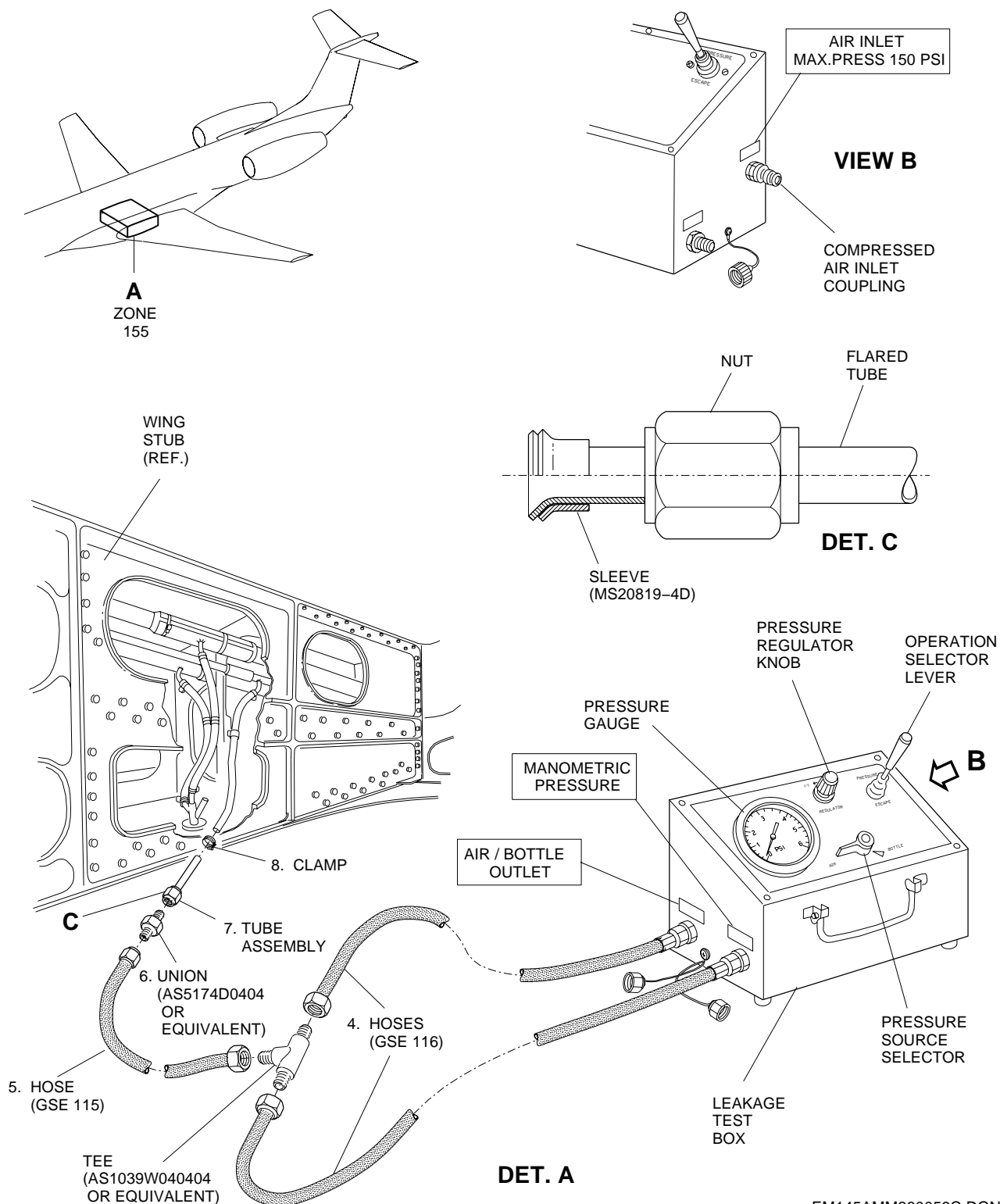
APU Fuel-Feed-Line Shroud - Component Locations

Figure 502 - Sheet 1



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APU Fuel-Feed-Line Shroud - Component Locations
Figure 502 - Sheet 2

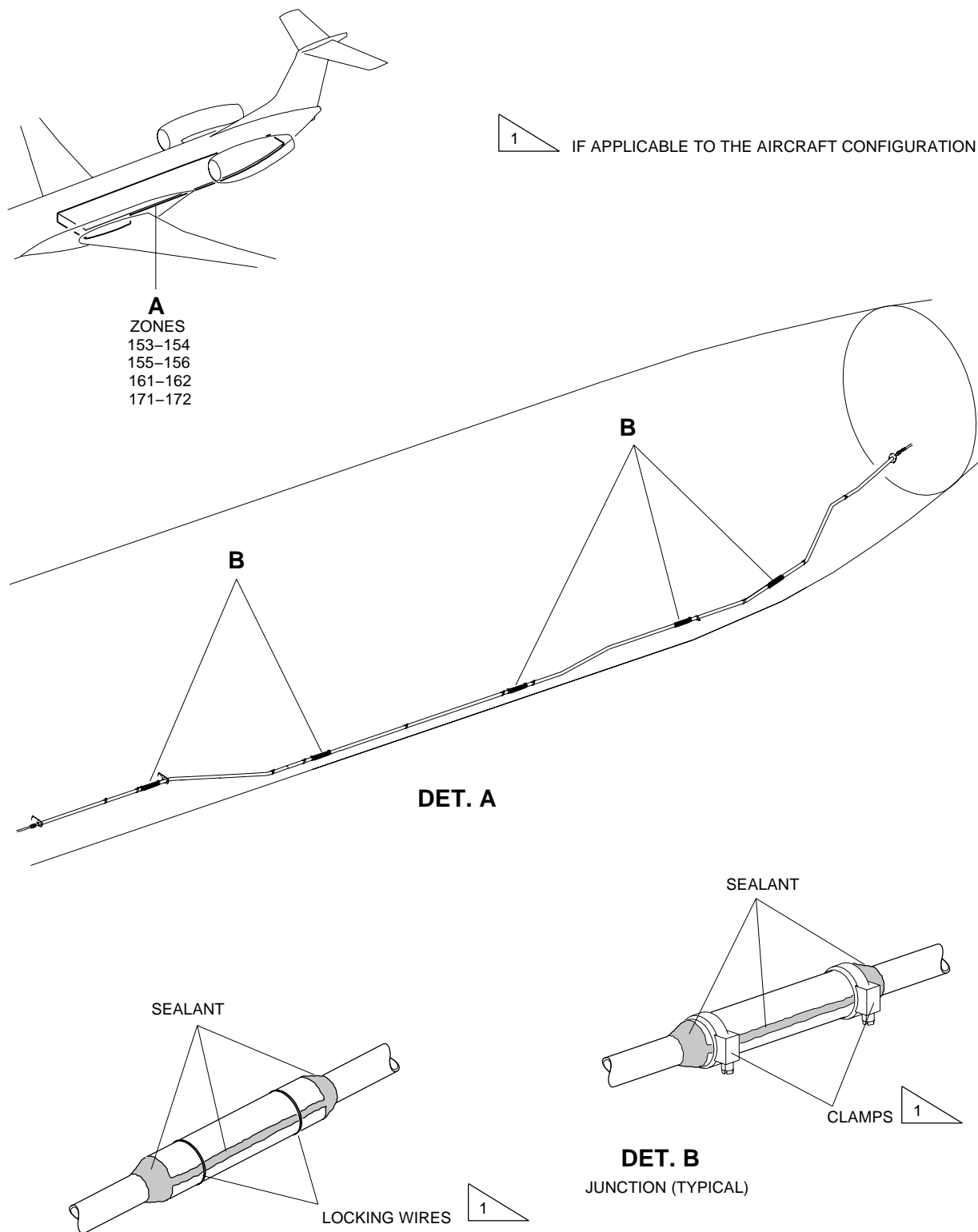


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APU Fuel-Feed-Line Shroud - Component Locations

Figure 502 - Sheet 3



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