



AIRCRAFT  
MAINTENANCE MANUAL

PNEUMATIC OUTFLOW VALVE - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove, install, deactivate, and reactivate the Pneumatic Outflow Valve.
- B. The pneumatic outflow valve is installed on the rear pressure bulkhead.
- 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
21-31-04-000-801-A	PNEUMATIC OUTFLOW VALVE - REMOV- ALL AL	
21-31-04-400-801-A	PNEUMATIC OUTFLOW VALVE - INSTAL- ALL LATION	
21-31-04-040-801-A	PNEUMATIC OUTFLOW VALVE - DEACTI- ALL VATION PROCEDURE	
21-31-04-440-801-A	PNEUMATIC OUTFLOW VALVE - REACTI- ALL VATION PROCEDURE	



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TASK 21-31-04-000-801-A

EFFECTIVITY: ALL

2. PNEUMATIC OUTFLOW VALVE - REMOVAL

A. General

- (1) This task gives the procedures to remove the pneumatic outflow valve.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
272	272DR	Rear fuselage I

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	Aft electronic compartment

I. Preparation

SUBTASK 841-002-A

- (1) Open access door 272DR (AMM MPP 06-41-01/100).

J. Removal (Figure 401)

SUBTASK 020-002-A

- (1) Disconnect the reference pressure tube (1), the static port tube (2), the vacuum tube (6), and the electropneumatic outflow valve interconnection tube (4).
- (2) Disconnect the bonding jumper (3).
- (3) Remove the clamp (7).
- (4) Remove the valve (9).



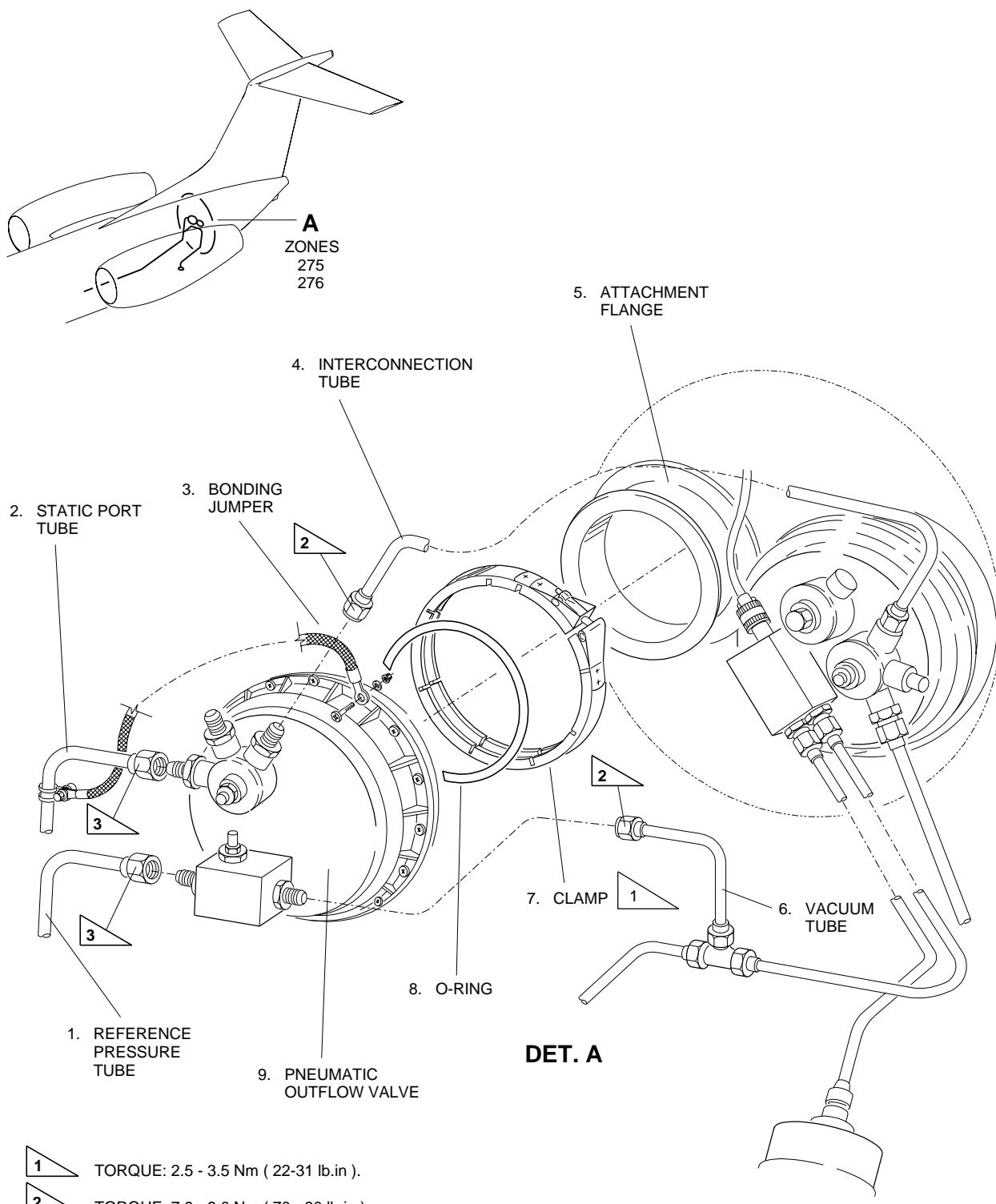
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- (5) Discard the O-ring (8).
- (6) Install the caps on the tubes.

**EFFECTIVITY: ALL**

Pneumatic Outflow Valve - Removal/Installation

Figure 401



-  TORQUE: 2.5 - 3.5 Nm ( 22-31 lb.in ).
-  TORQUE: 7.9 - 9.0 Nm ( 70 - 80 lb.in ).
-  TORQUE: 3.0 - 4.0 Nm ( 27 -36 lb.in ).

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TASK 21-31-04-400-801-A

EFFECTIVITY: ALL

3. PNEUMATIC OUTFLOW VALVE - INSTALLATION

## A. General

- (1) This task gives the procedures to install the pneumatic outflow valve.

## B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM TASK 21-31-00-700-804-A/500	-
IPC 21-30-00	PRESSURIZATION DISTRIBUTION SYSTEM

## C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
272	272DR	Rear fuselage I

## D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Torque wrench	To tighten the pneumatic outflow valve	

## E. Auxiliary Items

Not Applicable

## F. Consumable Materials

Not Applicable

## G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
O-ring	IPC 21-30-00	1

## H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Aft electronic compartment

## I. Installation (Figure 401)

## SUBTASK 420-002-A

- (1) Remove the caps from the tubes.
- (2) Install a new O-ring (8).



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- (3) Put the valve in the attachment flange (5).
- (4) Install the clamp (7).
- (5) Align the connection points of the valve with the related tubes.
- (6) Tighten the clamp (7) to the torque shown in (Figure 401).
- (7) Connect the vacuum tube (6), the reference pressure tube (1), the static port tube (2), and the electropneumatic outflow valve interconnection (4) tube. Tighten the tubes to the torque shown in (Figure 401).
- (8) Install the bonding jumper (3).

J. Follow-on

*SUBTASK 842-002-A*

- (1) Do the AMM TASK 21-31-00-700-804-A/500.
- (2) Close access door 272DR (AMM MPP 06-41-01/100).

**TASK 21-31-04-040-801-A**
*EFFECTIVITY: ALL*
**4. PNEUMATIC OUTFLOW VALVE - DEACTIVATION PROCEDURE**
**A. General**

- (1) This task refers to item 21-31-03 - Outflow Valves of the DDPM and gives the procedure to deactivate the pneumatic outflow valve.

**B. References**

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
<a href="#">AMM MPP 20-10-02/200</a>	- MAINTENANCE PRACTICES
<a href="#">AMM TASK 21-31-03-000-801-A/400</a>	ELECTROPNEUMATIC OUTFLOW VALVE - REMOVAL
<a href="#">AMM TASK 21-31-03-400-801-A/400</a>	ELECTROPNEUMATIC OUTFLOW VALVE - INSTALLATION
<a href="#">AMM TASK 21-31-04-000-801-A/400</a>	PNEUMATIC OUTFLOW VALVE - REMOVAL
<a href="#">AMM TASK 21-31-04-400-801-A/400</a>	PNEUMATIC OUTFLOW VALVE - INSTALLATION

**C. Zones and Accesses**

ZONE	PANEL/DOOR	LOCATION
272	272DR	Rear fuselage I

**D. Tools and Equipment**

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available (AN806-5D and AN929-5)	Plugs	To plug the tubes and valve	AR

**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	Inside the rear fuselage I

**I. Preparation**
**SUBTASK 841-003-A**



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- (1) Open and safety the CONTROL circuit breaker, on the circuit breaker panel.
- (2) Open access door 272DR (AMM MPP 06-41-01/100).

J. Pneumatic Outflow Valve - Deactivation Procedure

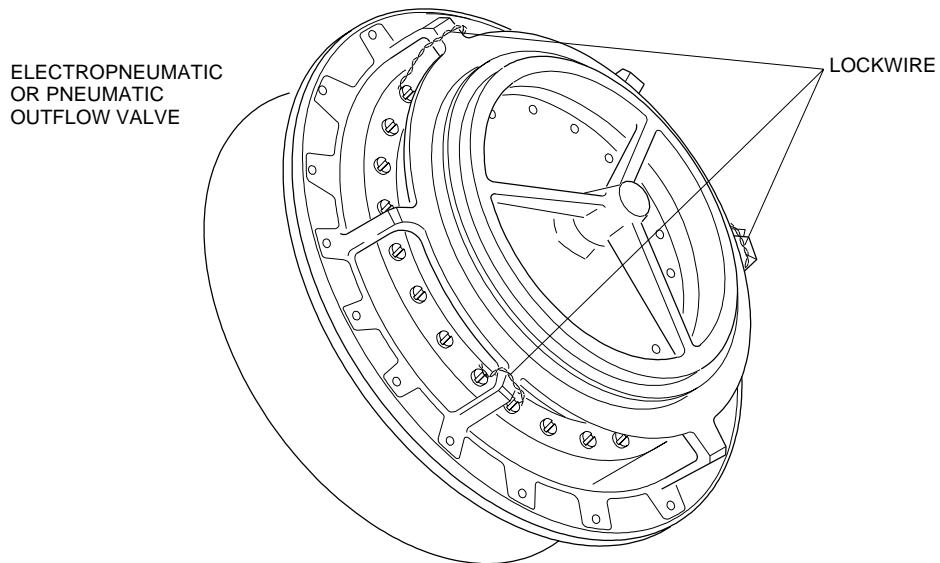
SUBTASK 040-002-A

- (1) Pneumatic Outflow Valve Secured Closed:
  - (a) Remove the pneumatic outflow valve ([AMM TASK 21-31-04-000-801-A/400](#)).
  - (b) Safety the valve in the closed position, as shown in [Figure 402](#), DET. A.  
NOTE: The safety wires must be 0.81 mm (0.032 in) or more. Refer to [AMM MPP 20-10-02/200](#).
  - (c) Open fittings 2, 3 and 4 ([Figure 402](#), DET . B) and then plug the tubes and valve with commercially available plugs P/N AN806-5D and AN929-5.
  - (d) Install the pneumatic outflow valve ([AMM TASK 21-31-04-400-801-A/400](#)).  
NOTE: During the installation of the pneumatic outflow valve secured in the closed position, on the aircraft, do not connect servo lines 2, 3 and 4 to the valve. Keep the plugs on the valve and tubes.
- (2) The two Outflow Valves Secured Open:
  - (a) Remove the electropneumatic outflow valve ([AMM TASK 21-31-03-000-801-A/400](#)) and the pneumatic outflow valve ([AMM TASK 21-31-04-000-801-A/400](#)).
  - (b) Get access to the outflow valves through access door 272DR (AMM MPP 06-41-01/100).
  - (c) With your two hands, open one of the valves as follows: push the poppet while you put the Opening Tool (GSE 282) against the valve shaft guide ([Figure 403](#)).
  - (d) Make sure that the Opening Tool engaged on to the shaft to prevent valve closure.
  - (e) Do the procedure again for the other valve.  
NOTE: To remove the Opening Tool from the valve, only pull it out.
  - (f) Install the electropneumatic outflow valve ([AMM TASK 21-31-03-400-801-A/400](#)) and the pneumatic outflow valve ([AMM TASK 21-31-04-400-801-A/400](#)), back.
- (3) Write in the aircraft technical logbook that you did the deactivation procedure for the Pneumatic Outflow Valve.

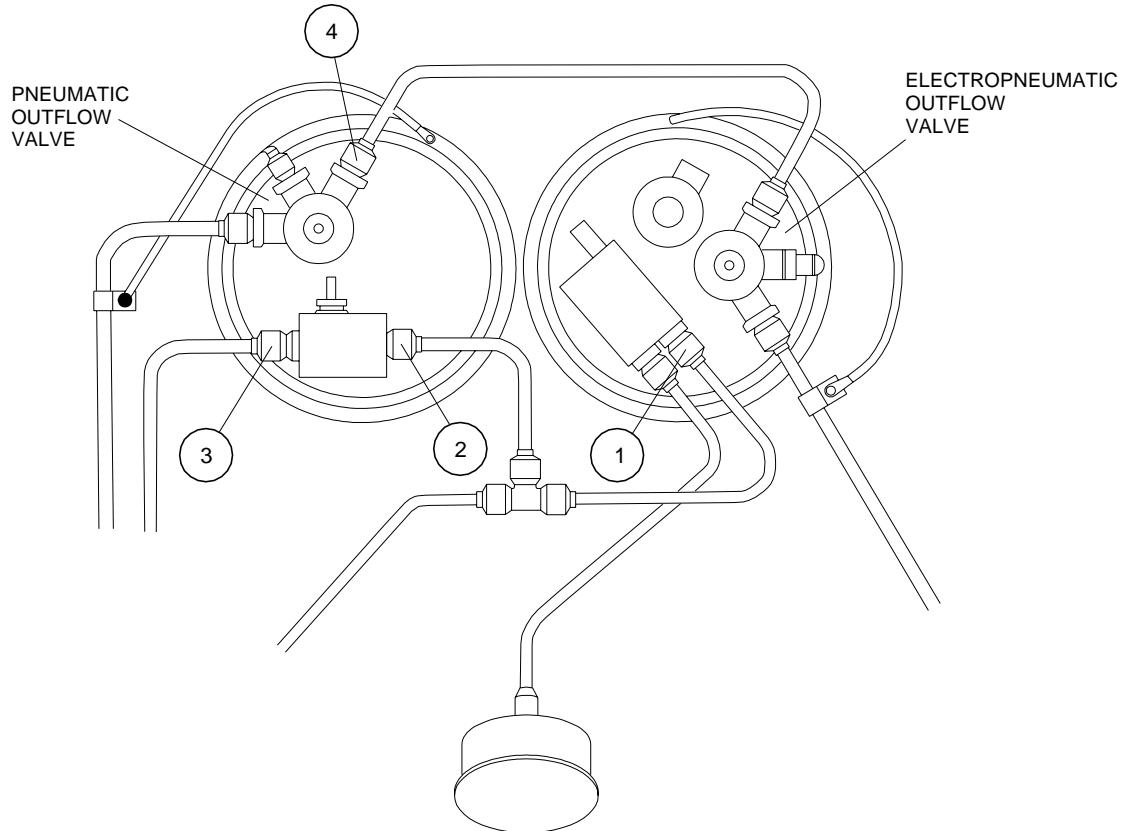
**EFFECTIVITY: ALL**

Electropneumatic or Pneumatic Outflow Valves Secured Closed

Figure 402



**DET. A**



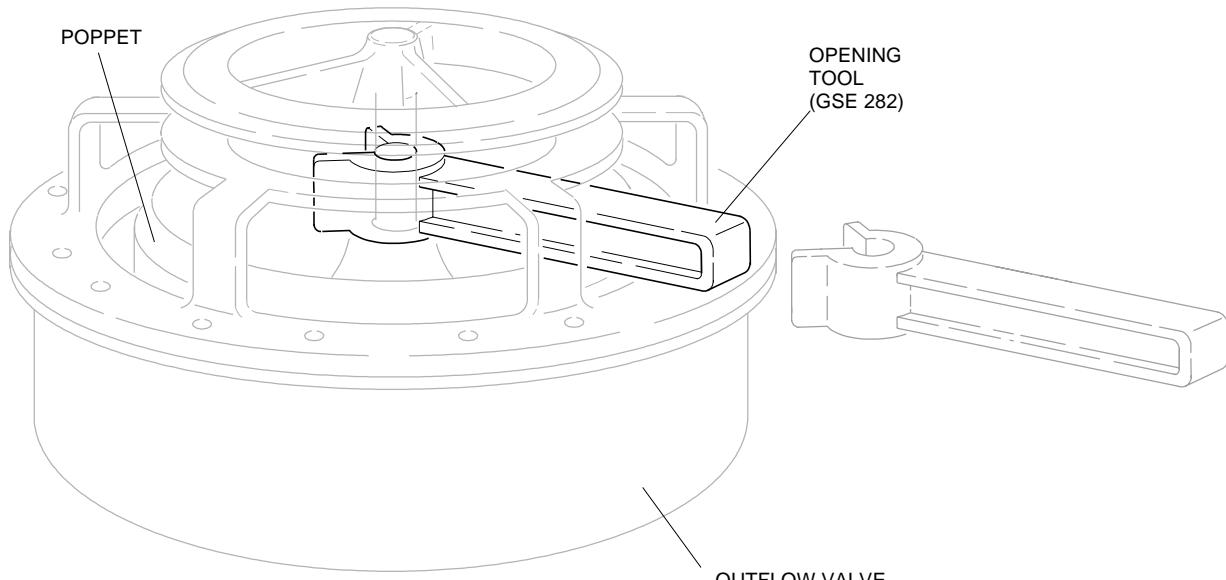
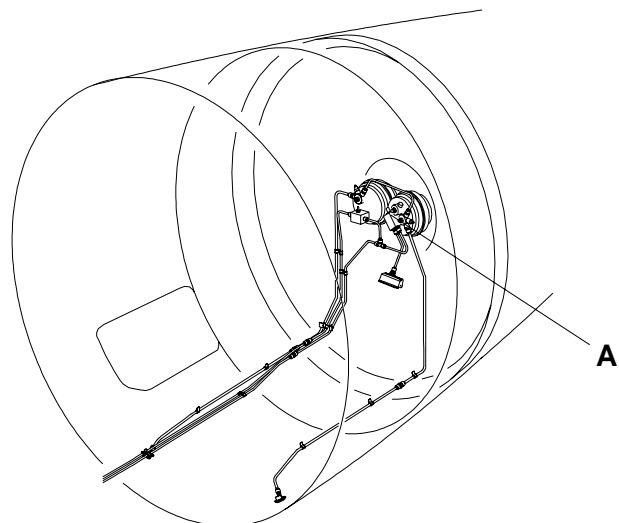
**DET. B**

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**EFFECTIVITY: ALL**

The Two Outflow Valves Secured Open

Figure 403


**DET. A**

EM145AMM211002A.DGN

**TASK 21-31-04-440-801-A**
*EFFECTIVITY: ALL*
**5. PNEUMATIC OUTFLOW VALVE - REACTIVATION PROCEDURE**
**A. General**

- (1) This task gives the procedures to reactivate the pneumatic outflow valve.

**B. References**

<i>REFERENCE</i>	<i>DESIGNATION</i>
AMM MPP 06-41-01/100	-
<a href="#">AMM TASK 21-31-03-000-801-A/400</a>	ELECTROPNEUMATIC OUTFLOW VALVE - REMOVAL
<a href="#">AMM TASK 21-31-03-400-801-A/400</a>	ELECTROPNEUMATIC OUTFLOW VALVE - INSTALLATION
<a href="#">AMM TASK 21-31-04-000-801-A/400</a>	PNEUMATIC OUTFLOW VALVE - REMOVAL
<a href="#">AMM TASK 21-31-04-400-801-A/400</a>	PNEUMATIC OUTFLOW VALVE - INSTALLATION

**C. Zones and Accesses**

<i>ZONE</i>	<i>PANEL/DOOR</i>	<i>LOCATION</i>
272	272DR	Rear fuselage I

**D. Tools and Equipment**

Not Applicable

**E. Auxiliary Items**

Not Applicable

**F. Consumable Materials**

Not Applicable

**G. Expandable Parts**

Not Applicable

**H. Persons Recommended**

<i>QTY</i>	<i>FUNCTION</i>	<i>PLACE</i>
1	Does the task	Inside the rear fuselage I

**I. Preparation**
**SUBTASK 841-004-A**

- (1) Make sure that the CONTROL circuit breaker, on the circuit breaker panel, is open and safetied.
- (2) Open access door 272DR (AMM MPP 06-41-01/100).

**J. Pneumatic Outflow Valve - Reactivation Procedure**
**SUBTASK 440-002-A**



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- (1) Do the troubleshooting and the applicable corrective maintenance procedures for the Pneumatic Outflow Valve or other component that could possibly cause its deactivation.
- (2) Reactivate the Pneumatic Outflow Valve from the secured closed condition:
  - (a) Remove the pneumatic outflow valve ([AMM TASK 21-31-04-000-801-A/400](#)).
  - (b) Remove the plugs from the tube and close fitting 1 (Figure 402, DET. B).
  - (c) Remove the lockwires installed as shown in Figure 402, DET. A.
  - (d) Install the pneumatic outflow valve ([AMM TASK 21-31-04-400-801-A/400](#)).
- (3) Reactivate the two Outflow Valves from the secured open condition:
  - (a) Remove the electropneumatic outflow valve ([AMM TASK 21-31-03-000-801-A/400](#)) and the pneumatic outflow valve ([AMM TASK 21-31-04-000-801-A/400](#)).
  - (b) Remove the Opening Tool from the valves.  
NOTE: To remove the Opening Tool from the valve, only pull it out.
  - (c) Install the electropneumatic outflow valve ([AMM TASK 21-31-03-400-801-A/400](#)) and the pneumatic outflow valve ([AMM TASK 21-31-04-400-801-A/400](#)), back.