AIRBUS MILITARY	FUNCTIONAL TEST	PFAFA-47-20-01-00/0	Issue	B	Pages.	11
	SPF, Aircraft System Engineering Department					
Aircraft	A330 FSTA					

Title:

INNERTING TUBE LEAKAGE TEST

Summary:

Prepared by:	Checked by:	Approved by:
Álvaro Aguilera Martínez	Mayte Mongay Gómez	Fatima Lozano Montoya
Signature: 	Signature: 	Signature: 
Date: 11/12/2012	Date: 11/12/2012	Date: 11/12/2012

REVISIONS RECORD

Issue Date	Revision Reason Chapters, Sections, Affected Pages	Approved Signature
A	New Issue	Fátima Lozano Montoya
9/10/2012	All pages	
B	Change of pressure variation to 0.06 psig. Former pressure variation was erroneous.	Fátima Lozano Montoya
11/12/2012	Pages 6 and 7	

1 INTRODUCTION

1.1 Object

The aim of this test is to measure the structural leakages.

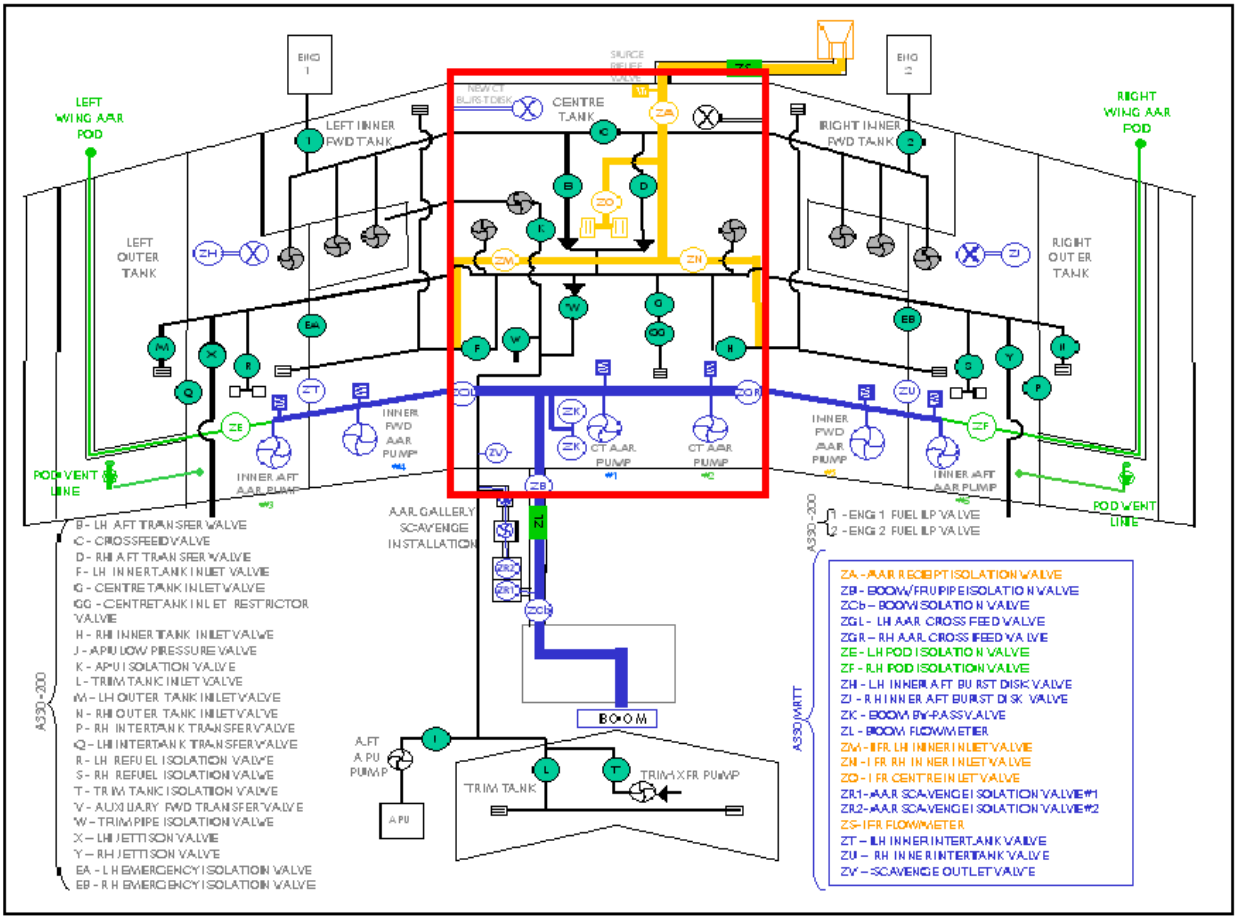
1.2 List of acronyms and abbreviations

AMM	Aircraft Maintenance Manual
FWD	Flight Direction Forward

2 APPLICABLE DOCUMENTATION

FSTA:

[1] AMM TASK 57-17-11-000-801-A
[2] AMM TASK 57-17-11-400-801-A
[3] AMM TASK 28-10-00-910-801
[4] USER'S MANUAL FUEL PUMP KIT PRFU-01-4833-10203-01-A
[5] F472A1000



3 TEST EQUIPMENT

Fuel Pump Kit	PRFU-01-4833-10200-02-A A330 MRTT FUEL PUMP + TOPs KIT
Cap	PRFU-01-CATS-10212
Cap port/connect	PRFU-01-CATS-10211
Manual cronometre	Resolution 0.1s, total time at least 2 hours

4 DEFINITIONS

N/A

5 REQUIREMENT BEFORE PERFORMING FUNCIONAL TEST

5.1 Safety Instructions:

- All relevant Work Standing Orders concerning safety must be complied with. Particular attention should be paid to the safe handling of compressed air and the operation of pressure test equipment.
- Put the safety barriers in position. They shall have a safety range of 5 meters.
- Put no smoking notices in the area.
- Use protective eye shield/goggles when you use compressed air. Debris and/or high-pressure air can damage your eyes. Get medical aid if necessary.
- Conducting pressure tests with air or nitrogen is dangerous. Gas is a compressible medium storing energy when compressed. In case of failure of containment large amounts of energy are released, which may damage structure and personnel.
- Obey the Safety Procedures When You Do Work in a Fuel Tank (Ref. AMM TASK 28-10-00-910-801). These tests require access to be gained to parts of the aircraft external and internal structure, including the interior of the inner and outer wing and centre tanks. Inspection is required to be carried out from within tanks and externally.
- Make sure that the ground safety-locks are correctly installed on the landing gear. This prevents unwanted movement of the landing gear.

5.2 Test preparation

- The rerouting of the inerting system tube shall be installed as per F472A1000
- All the inerting system tube located on the centre tank shall be installed
- The dual-flapper check valve P/N 2050121-202 shall be installed

The following steps contain instructions for connection of caps, adaptors and test equipment at different locations of the Innerting tube system.

1. Ensure the fuel tanks are empty and drained of fuel.

2. Ensure that the dual flapper check valves are installed (Figure 3).

3. Do the TASK 57-17-11-000-801-A Removal of the Covers 147AZ (148AZ) (Figure 2).

4. Connect the **cap** P/N PRFU-01-CATS-10212for the innerting tube on the point **B**(*Figure 1*, Annex 8), crossing the two manhole towards FWD for access at **zone 2**.

5. Connect the **cap port/connect** P/N PRFU-01-CATS-10211 for the innerting tube in the position **A**(*Figure 1*, Annex 8), crossing only the first manhole towards FWD for access at **zone 1.**

6 TEST EXECUTION

The following **test conditions** will apply unless otherwise stated:

Ambient temperature:	-15°C to 40°C
Aircraft attitude:	Pitch: 0° approximately
	Roll: 0° approximately

The following sections represent a continuous sequence.

6.1 Test execution

1. Connect the **inner hose** PRFU-01-4833-10204-01-A of the fuel pump kit and its adapter PRFU-01-4833-10209-01-A to the **cap port/connect (**PRFU-01-CATS-10211**)** position **A**(*Figure 1*, Annex 8).

2. Slowly increase the pressure until reaching 13.5 psi ± 0.5 psi and maintain 5 minute for stabilization.

3. Retain for 5 min.

4. Pressure variation in the range of ± 0.06 psi of the obtained pressure is considered as no leak.

5. Check visually for abnormalities or leaks.

6. Results and observations shall be reported on Table 1 section 7 Test Results.

7. Slowly decrease to the ambient pressure.

8. Disconnect the caps installed on the tubes.

9. Do the task TASK 57-17-11-400-801-A Installation of the Covers 147AZ (148AZ)

10. Before closing up make sure that all installed testing elements have been removed. Make a visual inspection to see that there is no testing equipment left in the A/C and that everything is correctly installed.

7 TEST RESULTS

Test results have to be logged on Table 1 and any additional observations have to be recorded.

Measurement	Measured value	Required value	
Initial pressure (**P1**)		13.5± 0.5 psig	
Final pressure (P2)		**(P1)** ± 0.06 psig	
Time (T)		-----	

Table 1

Leak test (Pass/Fail)	

The test equipment used has to be logged on Table 2.

Equipment	Manufacturer	Model	Tool identification	Calibration date	Next calibration date

Table 2

RESULTS SHEET 1 OF 2

IMPORTANT NOTE: Any comments or remarks arisen during test execution shall be written down here and sent to Engineering Department. Non-conformities shall be processed according to MP-22501.

NOTE: After this functional test execution, stamp the correspondent operation on the Production Order.

NOTE: Every result sheet must be stamped and attached to Production Order.

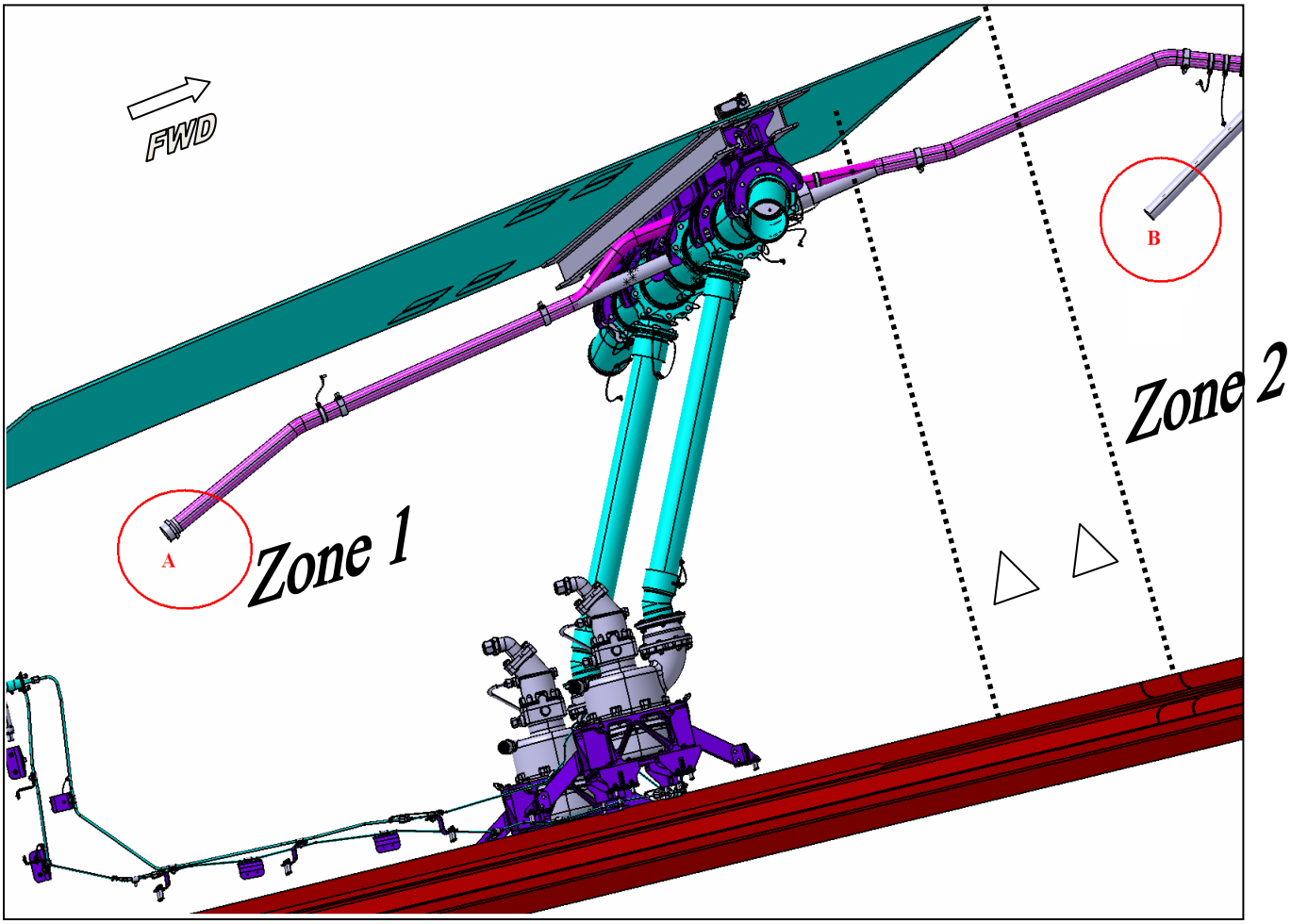
STAMP:	
DATE:	

RESULTS SHEET 2 OF 2

8 ANNEX

Leak Test Connection Points

Figure 1. Catia centre tank (Schematic. Innerting tube)



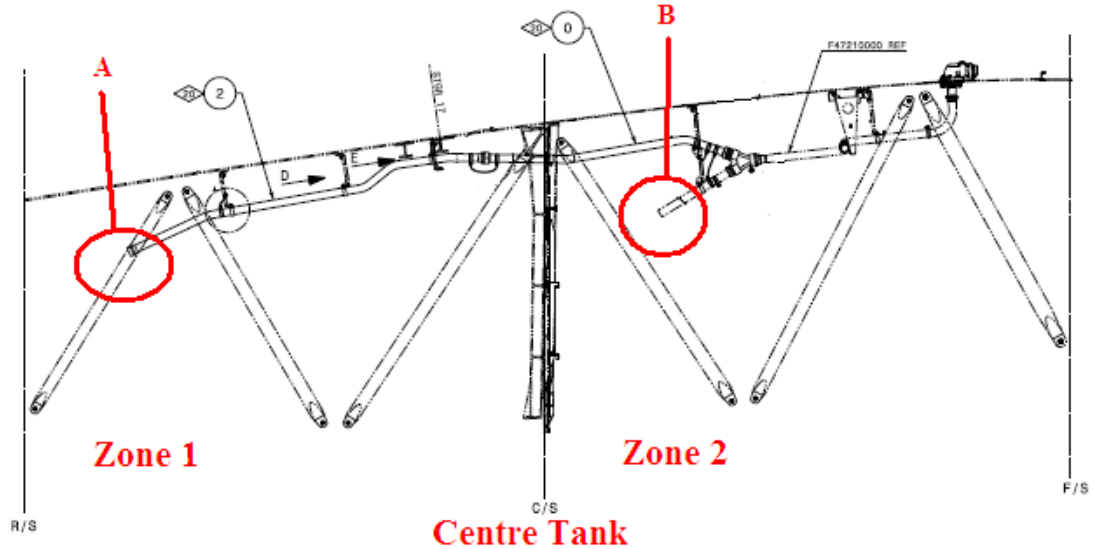


Figure 2. Centre tank manhole

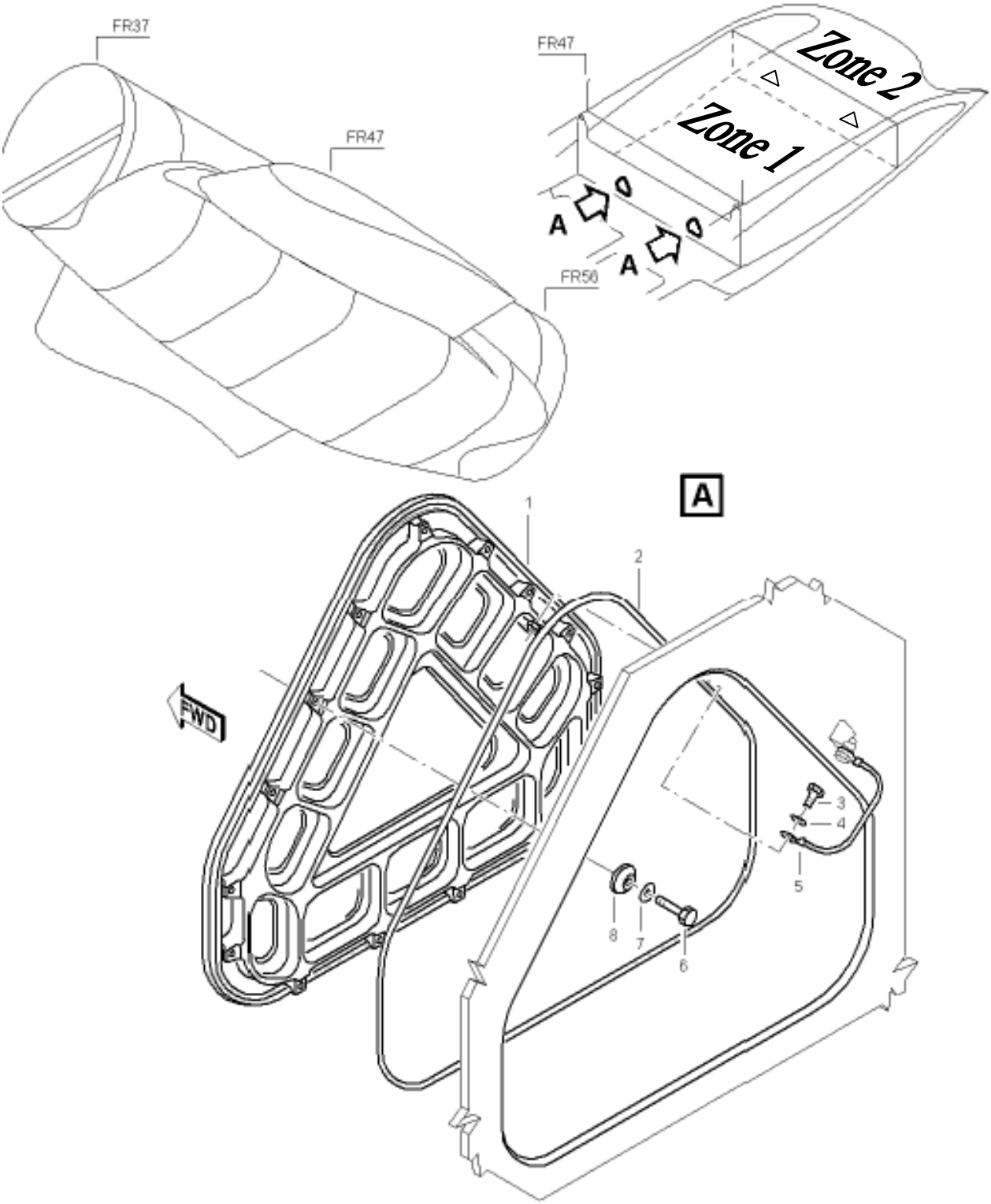


Figure 3 Dual Flapper check valve