



THE CRYSTAL CLASS

# Master Maintenance and Operating Procedures (MMOP)

Document Number 02422 Issue 004 Revision 01: February 02, 2021 This Page Intentionally Left Blank



# CHANGE HIGHLIGHTS OF ISSUE 004 REVISION 01

Page	Paragraph	Title	Description of Changes
7	-	List of effective pages	Updated to include issue 004 revision 01.
9	-	Log of revisions	Updated to include issue 004 revision 01 as well as previous missing revisions.
11	-	General information	Issue of relevant MMEL specified.
17	21-60-01A	Temperature control valve (TCV)	Step D amended.
18	21-60-02A	Flow control valve (FCV)	Step D amended.
33	24-20-01A	115V AC outlets	ECB added.
37	25-20-01A	Storage cabinets/wardrobe/ galley	Galley added in title and procedure. Steps D and E added.
39	25-21-01-1A	Passenger seats - Recline functions	CMM reference for executive seats amended.
41	25-21-01-5A	Passenger seats – Swivel/travel mechanisms	CMM reference for executive seats amended.
57	28-40-01A	Fuel quantity indication system	Steps G thru I added.
59	30-10-01A	Wing anti-ice valve	Step D corrected (spelling error only).
64	32-40-07A	Hydraulic filter assembly bypass electrical indicator	New procedure introduced.
86	35-50-01A	Portable oxygen cylinder assembly (POCA)	New procedure introduced.
90	36-10-04A	Bleed pressure sensor (BPS)	New procedure introduced.
91	36-10-05A	Bleed temperature sensor (BTS)	New procedure introduced.
92	36-10-08A	Burst disk assembly	New procedure introduced.



This Page Intentionally Left Blank



# **TABLE OF CONTENTS**

CHANGE HIGHL	IGHTS OF ISSUE 004 REVISION 01	.1
LIST OF EFFEC	TIVE PAGES	. 7
LOG OF REVISI	ONS	. 9
GENERAL INFO	RMATION	11
ATA 21 - AIR C	ONDITIONING	13
21-40-01A	(ALL) – Cockpit electrical heater	13
21-40-02A	(ALL) – Cabin electrical heater	15
21-60-01A	(ALL) – Temperature control valve (TCV)	17
21-60-02A	(ALL) – Flow control valve (FCV)	18
21-60-03A	(ALL) – Dual heat exchanger fan (DHEF)	19
21-80-01A	(ALL) – Cockpit evaporator fan	21
21-80-02A	(ALL) – Cabin evaporator fan	23
ATA 22 - AUTO	FLIGHT	25
22-10-01A	(NCC) – Autopilot	25
22-10-01B	(CAT) – Autopilot	26
22-10-02A	(ALL) – Flight director symbols (FD bars)	27
22-30-01A	(ALL) – Auto-throttle	28
ATA 23 - COMI	MUNICATIONS	29
23-11-02A	(ALL) – Selective call system (SELCAL)	29
23-12-01B	(CAT) – VHF Communications (Multi Mode Digital Radio – MMDR)	30
23-12-01C	(CAT) – VHF Communications (Multi Mode Digital Radio – MMDR)	31
23-30-01B	(ALL) – Public address (PA) system	32
ATA 24 - ELEC	TRICAL POWER	33
24-20-01A	(ALL) – 115V AC outlets	33
ATA 25 - EQUI	PMENT/FURNISHINGS	35
25-11-01-2A	(ALL) – Flight crew seats – Vertical and recline adjustment	35
25-11-01-3A	(ALL) – Flight crew seats – Other adjustments	36
25-20-01A	(ALL) – Storage cabinets/wardrobe/galley	37
25-21-01A	(ALL) – Passenger seats	38
25-21-01-1A	(ALL) – Passenger seats - Recline functions	39
25-21-01-2A	(ALL) – Passenger seats - Under seat stowage compartment	40
25-21-01-5A	(ALL) – Passenger seats – Swivel/travel mechanisms	41
25-60-03A	(ALL) – Protective breathing equipment	42
25-60-05A	(ALL) – Life rafts	43
25-63-01A	(ALL) – Emergency locator transmitter (ELT)(AF)	44
25-64-01A	(ALL) – Life jackets	45
ATA 26 - FIRE	PROTECTION	47
26-24-01A	(ALL) – Hand fire extinguishers	47



ATA 27 - FLIGH	IT CONTROLS	49
27-10-01A	(ALL) – Aileron trim	49
27-10-02A	(ALL) – Aileron trim position indication	51
27-20-02A	(ALL) – Rudder trim position indication	52
27-60-01A	(ALL) – Multi-Function Spoiler (MFS) System	53
27-60-02A	(ALL) – Ground Spoiler System	54
27-60-06A	(ALL) – Roll assist position sensor (RAPS)	55
ATA 28 - FUEL		57
28-40-01A	(ALL) – Fuel quantity indication system	57
28-40-01B	(ALL) – Fuel quantity indication system	58
ATA 30 - ICE A	ND RAIN PROTECTION	59
30-10-01A	(ALL) – Wing anti-ice valve	59
ATA 32 - LAND	ING GEAR	61
32-30-01A	(ALL) – Landing gear actuator heater	61
32-40-06A	(ALL) – Anti-skid system	62
32-40-07A	(ALL) – Hydraulic filter assembly bypass electrical indicator	64
ATA 33 - LIGH	rs	65
33-20-02A	(ALL) – Cabin signs	65
33-42-01-1A	(ALL) – Red beacons	66
33-50-01-1A	(ALL) – Overhead emergency lighting	67
ATA 34 - NAVIO	GATION	69
34-15-01A	(ALL) – Altitude alerting system	69
34-40-01A	(ALL) – Airborne collision avoidance system (ACAS/TCAS II)	70
34-40-01B	(ALL) – Airborne collision avoidance system (ACAS/TCAS II)	72
34-43-01-5A	(ALL) – EGPWS –Advisory callouts	74
34-43-01-5B	(ALL) – EGPWS –Advisory callouts	75
34-51-01B	(ALL) – Navigation systems	76
34-54-02-2B	(ALL) – Extended squitter (ADS-B out) transmissions	77
34-60-01A	(ALL) – Navigation database	78
34-60-01B	(ALL) – Navigation database	79
ATA 35 - OXYG	EN	81
35-10-01-1A	(ALL) – Flight crew fixed oxygen system	81
35-20-01A	(ALL) – Passenger oxygen system	82
35-20-01B	(ALL) – Passenger oxygen system	83
35-20-01-1A	(ALL) – Automatic mask deployment system	84
35-20-01-2A	(ALL) – Passenger drop down masks	85
35-50-01A	(ALL) – Portable oxygen cylinder assembly (POCA)	86
ATA 36 - PNEU	MATIC	87
36-10-01A	(ALL) – Bleed air shut-off valve (SOV)	87
36-10-02A	(ALL) – Bleed air pressure regulating valve (PRV)	89
36-10-04A	(ALL) – Bleed pressure sensor (BPS)	90
36-10-05A	(ALL) – Bleed temperature sensor (BTS)	91



36-10-08A	(ALL) – Burst disk assembly	. 92
ATA 38 - WAT	ER/WASTE	93
38-30-01A	(ALL) – Water and waste system	.93
ATA 44 - CABI	N SYSTEMS	95
44-00-01A	(ALL) – USB charging ports	.95
ATA 46 - INFO	RMATION SYSTEMS	97
46-20-01-04A	(ALL) – Lower MFD	.97
ATA 52 - DOOF	RS	99
52-70-01A	(ALL) – Cargo door actuation system	.99



This Page Intentionally Left Blank



# LIST OF EFFECTIVE PAGES

Section	Page No	<b>Revision No</b>	Applicability

All pages are issued at Issue 004 Revision 01, dated February 02, 2021.

**GENERAL** Not applicable

I

# **ITEM LIST**

Not applicable



This Page Intentionally Left Blank



# LOG OF REVISIONS

#### **ORIGINAL ISSUE:**

Issue 001 Revision 00, dated November 17/2017

#### **REVISION:**

Issue 002 Revision 00, dated November 29, 2017

#### **Purpose of revision:**

To include new items and correct previous ones. Changes are not marked with a revision bar.

#### **REVISION:**

Issue 003 Revision 00, dated May 28, 2019

#### **Purpose of revision:** To include new items and amend previous ones. Changes are not marked with a revision bar.

#### **REVISION:**

Issue 004 Revision 00, dated February 20, 2020

#### **Purpose of revision:**

To include new items and amend previous ones. Changes are marked with a revision bar.

#### **REVISION:**

Issue 004 Revision 01, dated February 02, 2021

# Purpose of revision:

To include new items and amend previous ones. Changes are marked with a revision bar.

#### GENERAL

Not applicable

#### **ITEM LIST**

Not applicable



This Page Intentionally Left Blank



# **GENERAL INFORMATION**

The content of this Maintenance and Operating Procedures Manual is based on the:

Pilatus PC-24 Master Minimum Equipment List (MMEL) - Document Number 02384 – Issue 004 revision 01, dated January 29, 2021.

Refer to the MMEL Preamble for definitions and instructions on the use and application of the procedures contained herein.



This Page Intentionally Left Blank



# ATA 21 - AIR CONDITIONING

# 21-40-01A (ALL) – Cockpit electrical heater

# 1. Maintenance (M)

Before the first flight under MMEL dispatch conditions, apply the following procedure to open the required Electronic Circuit Breakers (ECB):

- A. Power down the electrical system.
- B. Move the co-pilot seat fully forward to get access to the Maintenance panel on the lower right cockpit side panel.
- C. Remove the Maintenance panel cover which is attached by Velcro strips.
- D. Make sure that the RIGGING switch on the Maintenance Panel is set to OFF.
- E. Set the MAINT MODE switch on the Maintenance Panel to MAINT. Hold it in this position throughout the entire procedure either by inserting a pin or by hand (second person).

**<u>Note</u>**: If the switch is inadvertently released then start the procedure over from step (A).

F. Turn on electrical power (either using Ground or Battery power).

<u>Note</u>: Steps (F) through (N) must be performed within 4 minutes. If more time elapses then start the procedure over from step (A).

- G. Verify that the "Maint Switch" CAS message is shown.
- H. Place the cursor in the main area of the upper MFD.
- I. Press the PAGE button.
- J. In the pulldown menu, select "Maint".
- K. On the CMC MAIN MENU page, select "SYSTEM DIAGNOSTICS".
- L. Using the scroll wheel and the ENTER button, select
  - "42 INTEGRATED MODULAR AVIONICS", then
  - "20 DATA CONCENTR AND PROCESS UNIT", then
  - "ENTER UMS MAINT MODE".
- M. On the UMS MAINTENANCE MODE page make sure that the "SET MAINTENANCE MODE SWITCH TO MAINT" status is "MAINT".
- N. Select "ENTER UMS MAINTENANCE MODE".
- 0. Make sure UMS MAINTENANCE MODE STATUS is ON for all eight channels.
- P. Press PAGE button.
- Q. In the pulldown menus, select "Synoptic".
- R. On lower MFD, press "SYN" bezel.
- S. Press "ECB" bezel.
- T. On the "SET" bezel, set the following ECBs to LOCK:

ECB	
CKPT HEAT HI	
CKPT HEAT LO	

U. On the "STATUS" bezel, select "OUT".

**Note**: This will list all the ECBs which are OUT. Whenever an ECB is set to IN in step (V) then it will disappear from this list.



- V. On the "SET" bezel, set all listed ECBs to IN, until the displayed list is empty.
- W. On the "STATUS" bezel, select "LOCK".
- X. Make sure that the ECBs which were set to LOCK in step (T) are shown. Make sure no other ECBs are listed as "LOCK".
- Y. Remove the pin from the MAINT MODE switch or release the switch. It moves to the normal position.

**Note**: This will automatically re-boot the UMS in normal mode.

Z. Put the Maintenance panel cover back on.

# 2. Operations (0)

None required.



# 21-40-02A (ALL) – Cabin electrical heater

#### 1. Maintenance (M)

Before the first flight under MMEL dispatch conditions, apply the following procedure to open the required Electronic Circuit Breakers (ECB):

- A. Power down the electrical system.
- B. Move the co-pilot seat fully forward to get access to the Maintenance panel on the lower right cockpit side panel.
- C. Remove the Maintenance panel cover which is attached by Velcro strips.
- D. Make sure that the RIGGING switch on the Maintenance Panel is set to OFF.
- E. Set the MAINT MODE switch on the Maintenance Panel to MAINT. Hold it in this position throughout the entire procedure either by inserting a pin or by hand (second person).

**<u>Note</u>**: If the switch is inadvertently released then start the procedure over from step (A).

F. Turn on electrical power (either using Ground or Battery power).

**<u>Note</u>**: Steps (F) through (N) must be performed within 4 minutes. If more time elapses then start the procedure over from step (A).

- G. Verify that the "Maint Switch" CAS message is shown.
- H. Place the cursor in the main area of the upper MFD.
- I. Press the PAGE button.
- J. In the pulldown menu, select "Maint".
- K. On the CMC MAIN MENU page, select "SYSTEM DIAGNOSTICS".
- L. Using the scroll wheel and the ENTER button, select
  - "42 INTEGRATED MODULAR AVIONICS", then
  - "20 DATA CONCENTR AND PROCESS UNIT", then
  - "ENTER UMS MAINT MODE".
- M. On the UMS MAINTENANCE MODE page make sure that the "SET MAINTENANCE MODE SWITCH TO MAINT" status is "MAINT".
- N. Select "ENTER UMS MAINTENANCE MODE".
- 0. Make sure UMS MAINTENANCE MODE STATUS is ON for all eight channels.
- P. Press PAGE button.
- Q. In the pulldown menus, select "Synoptic".
- R. On lower MFD, press "SYN" bezel.
- S. Press "ECB" bezel.
- T. On the "SET" bezel, set the following ECBs to LOCK:

ECB
Cabin HEAT 1 L
Cabin HEAT 1 R
Cabin HEAT 2 L
Cabin HEAT 2 R

U. On the "STATUS" bezel, select "OUT".

**<u>Note</u>**: This will list all the ECBs which are OUT. Whenever an ECB is set to IN in step (V) then it will disappear from this list.

V. On the "SET" bezel, set all listed ECBs to IN, until the displayed list is empty.



- W. On the "STATUS" bezel, select "LOCK".
- X. Make sure that the ECBs which were set to LOCK in step (T) are shown. Make sure no other ECBs are listed as "LOCK".
- Y. Remove the pin from the MAINT MODE switch or release the switch. It moves to the normal position.

**Note**: This will automatically re-boot the UMS in normal mode.

Z. Put the Maintenance panel cover back on.

# 2. Operations (0)

None required.



# 21-60-01A (ALL) – Temperature control valve (TCV)

#### 1. Maintenance (M)

None required.

# 2. Operations (0)

- A. Plan and conduct the flight at a maximum altitude of FL250.
- B. After engine start, using the Bleed Selector Switch on the centre console set the associated bleed air shut-off valve (SOV) to the closed position:
  - 1. If the <u>left</u> TCV has failed, set the bleed air selector switch to "R".
  - 2. If the right TCV has failed, set the bleed air selector switch to "L".
- C. On the ECS synoptic page, using the X-Bleed valve bezel button, set the X-Bleed valve to "CLOSED".
- D. Keep both the SOV and the X-Bleed valve closed throughout the subsequent flight(s).



# 21-60-02A (ALL) - Flow control valve (FCV)

#### 1. Maintenance (M)

None required.

#### 2. Operations (0)

- A. Plan and conduct the flight at a maximum altitude of FL250.
- B. After engine start, using the Bleed Selector Switch on the centre console set the associated bleed air shut-off valve (SOV) to the closed position:
  - 1. If the <u>left</u> FCV has failed, set the bleed air selector switch to "R".
  - 2. If the <u>right</u> FCV has failed, set the bleed air selector switch to "L".
- C. On the ECS synoptic page, using the X-Bleed valve bezel button, set the X-Bleed valve to "CLOSED".
- D. Keep both the SOV and the X-Bleed valve closed throughout the subsequent flight(s).



# 21-60-03A (ALL) – Dual heat exchanger fan (DHEF)

#### 1. Maintenance (M)

Before the first flight under MMEL dispatch conditions, apply the following procedure to open the required Electronic Circuit Breakers (ECB):

- A. Power down the electrical system.
- B. Move the co-pilot seat fully forward to get access to the Maintenance panel on the lower right cockpit side panel.
- C. Remove the Maintenance panel cover which is attached by Velcro strips.
- D. Make sure that the RIGGING switch on the Maintenance Panel is set to OFF.
- E. Set the MAINT MODE switch on the Maintenance Panel to MAINT. Hold it in this position throughout the entire procedure either by inserting a pin or by hand (second person).

**Note**: If the switch is inadvertently released then start the procedure over from step (A).

F. Turn on electrical power (either using Ground or Battery power).

<u>Note</u>: Steps (F) through (N) must be performed within 4 minutes. If more time elapses then start the procedure over from step (A).

- G. Verify that the "Maint Switch" CAS message is shown.
- H. Place the cursor in the main area of the upper MFD.
- I. Press the PAGE button.
- J. In the pulldown menu, select "Maint".
- K. On the CMC MAIN MENU page, select "SYSTEM DIAGNOSTICS".
- L. Using the scroll wheel and the ENTER button, select
  - "42 INTEGRATED MODULAR AVIONICS", then
  - "20 DATA CONCENTR AND PROCESS UNIT", then
  - "ENTER UMS MAINT MODE".
- M. On the UMS MAINTENANCE MODE page make sure that the "SET MAINTENANCE MODE SWITCH TO MAINT" status is "MAINT".
- N. Select "ENTER UMS MAINTENANCE MODE".
- 0. Make sure UMS MAINTENANCE MODE STATUS is ON for all eight channels.
- P. Press PAGE button.
- Q. In the pulldown menus, select "Synoptic".
- R. On lower MFD, press "SYN" bezel.
- S. Press "ECB" bezel.
- T. On the "SET" bezel, set the following ECBs to LOCK:

ECB	
HEAT EXCH	

U. On the "STATUS" bezel, select "OUT".

**<u>Note</u>**: This will list all the ECBs which are OUT. Whenever an ECB is set to IN in step (V) then it will disappear from this list.

- V. On the "SET" bezel, set all listed ECBs to IN, until the displayed list is empty.
- W. On the "STATUS" bezel, select "LOCK".



- X. Make sure that the ECB which was set to LOCK in step (T) are shown. Make sure no other ECBs are listed as "LOCK".
- Y. Remove the pin from the MAINT MODE switch or release the switch. It moves to the normal position.

Note: This will automatically re-boot the UMS in normal mode.

Z. Put the Maintenance panel cover back on.

# 2. Operations (0)

- A. Perform the bleed air PBIT: Turn on the bleed air supply by setting the bleed air rotary switch on the centre console to the "BLEED BOTH" position, for at least two minutes with the engines set at ground idle. If the PBIT fails this will be indicated by the illumination of Bleed Off / Fail L or Bleed Off / Fail R or Bleed Off / Fail, L+R CAS message.
- B. To perform a bleed off take-off:

Before take-off, command both of the bleed air shut-off valves to the closed position by setting the bleed air rotary switch to the "OFF" position.

After take-off (at the pilot's discretion) command both bleed air shut off valves to the open position by setting the bleed air rotary switch to the "BLEED BOTH" position.



# 21-80-01A (ALL) – Cockpit evaporator fan

#### 1. Maintenance (M)

Before the first flight under MMEL dispatch conditions, apply the following procedure to open the required Electronic Circuit Breakers (ECB):

- A. Power down the electrical system.
- B. Move the co-pilot seat fully forward to get access to the Maintenance panel on the lower right cockpit side panel.
- C. Remove the Maintenance panel cover which is attached by Velcro strips.
- D. Make sure that the RIGGING switch on the Maintenance Panel is set to OFF.
- E. Set the MAINT MODE switch on the Maintenance Panel to MAINT. Hold it in this position throughout the entire procedure either by inserting a pin or by hand (second person).

**<u>Note</u>**: If the switch is inadvertently released then start the procedure over from step (A).

F. Turn on electrical power (either using Ground or Battery power).

**<u>Note</u>**: Steps (F) through (N) must be performed within 4 minutes. If more time elapses then start the procedure over from step (A).

- G. Verify that the "Maint Switch" CAS message is shown.
- H. Place the cursor in the main area of the upper MFD.
- I. Press the PAGE button.
- J. In the pulldown menu, select "Maint".
- K. On the CMC MAIN MENU page, select "SYSTEM DIAGNOSTICS".
- L. Using the scroll wheel and the ENTER button, select
  - "42 INTEGRATED MODULAR AVIONICS", then
  - "20 DATA CONCENTR AND PROCESS UNIT", then
  - "ENTER UMS MAINT MODE".
- M. On the UMS MAINTENANCE MODE page make sure that the "SET MAINTENANCE MODE SWITCH TO MAINT" status is "MAINT".
- N. Select "ENTER UMS MAINTENANCE MODE".
- 0. Make sure UMS MAINTENANCE MODE STATUS is ON for all eight channels.
- P. Press PAGE button.
- Q. In the pulldown menus, select "Synoptic".
- R. On lower MFD, press "SYN" bezel.
- S. Press "ECB" bezel.
- T. On the "SET" bezel, set the following ECB to LOCK:

ECB	
CKPT Fan	

U. On the "STATUS" bezel, select "OUT".

**Note**: This will list all the ECBs which are OUT. Whenever an ECB is set to IN in step (V) then it will disappear from this list.

V. On the "SET" bezel, set all listed ECBs to IN, until the displayed list is empty.



- W. On the "STATUS" bezel, select "LOCK".
- X. Make sure that the ECB which was set to LOCK in step (T) is shown. Make sure no other ECBs are listed as "LOCK".
- Y. Remove the pin from the MAINT MODE switch or release the switch. It moves to the normal position.

**Note**: This will automatically re-boot the UMS in normal mode.

Z. Put the Maintenance panel cover back on.

# 2. Operations (0)

None required.



# 21-80-02A (ALL) – Cabin evaporator fan

#### 1. Maintenance (M)

Before the first flight under MMEL dispatch conditions, apply the following procedure to open the required Electronic Circuit Breakers (ECB):

- A. Power down the electrical system.
- B. Move the co-pilot seat fully forward to get access to the Maintenance panel on the lower right cockpit side panel.
- C. Remove the Maintenance panel cover which is attached by Velcro strips.
- D. Make sure that the RIGGING switch on the Maintenance Panel is set to OFF.
- E. Set the MAINT MODE switch on the Maintenance Panel to MAINT. Hold it in this position throughout the entire procedure either by inserting a pin or by hand (second person).

**<u>Note</u>**: If the switch is inadvertently released then start the procedure over from step (A).

F. Turn on electrical power (either using Ground or Battery power).

**<u>Note</u>**: Steps (F) through (N) must be performed within 4 minutes. If more time elapses then start the procedure over from step (A).

- G. Verify that the "Maint Switch" CAS message is shown.
- H. Place the cursor in the main area of the upper MFD.
- I. Press the PAGE button.
- J. In the pulldown menu, select "Maint".
- K. On the CMC MAIN MENU page, select "SYSTEM DIAGNOSTICS".
- L. Using the scroll wheel and the ENTER button, select
  - "42 INTEGRATED MODULAR AVIONICS", then
  - "20 DATA CONCENTR AND PROCESS UNIT", then
  - "ENTER UMS MAINT MODE".
- M. On the UMS MAINTENANCE MODE page make sure that the "SET MAINTENANCE MODE SWITCH TO MAINT" status is "MAINT".
- N. Select "ENTER UMS MAINTENANCE MODE".
- 0. Make sure UMS MAINTENANCE MODE STATUS is ON for all eight channels.
- P. Press PAGE button.
- Q. In the pulldown menus, select "Synoptic".
- R. On lower MFD, press "SYN" bezel.
- S. Press "ECB" bezel.
- T. On the "SET" bezel, set the following ECBs to LOCK:

ECB
Cabin Fan R
and/or
Cabin Fan L

U. On the "STATUS" bezel, select "OUT".

**Note**: This will list all the ECBs which are OUT. Whenever an ECB is set to IN in step (V) then it will disappear from this list.

V. On the "SET" bezel, set all listed ECBs to IN, until the displayed list is empty.



- W. On the "STATUS" bezel, select "LOCK".
- X. Make sure that the ECBs which were set to LOCK in step (T) are shown. Make sure no other ECBs are listed as "LOCK".
- Y. Remove the pin from the MAINT MODE switch or release the switch. It moves to the normal position.

**Note**: This will automatically re-boot the UMS in normal mode.

Z. Put the Maintenance panel cover back on.

# 2. Operations (0)

None required.



# ATA 22 – AUTO FLIGHT

22-10-01A (NCC) – Autopilot

# 1. Maintenance (M)

None required.

# 2. Operations (0)

- A. Consider the increase in workload due to the unavailability of the AP and the prevailing conditions (e.g. crew skill level, IMC/VMC, Day/Night, duration of flight, complexity of the intended approach procedure, etc.). If the expected increase in workload may become excessive then Pilatus recommends implementing suitable mitigations (e.g. change in flight plan, postponement of the flight, etc.).
- B. Consider operational regulations and determine whether there are any applicable restrictions for the intended type of operation (e.g. for PBN/MNPS, Low visibility operations, etc.).

**Note**: RVSM operations not permitted.



# 22-10-01B (CAT) – Autopilot

#### 1. Maintenance (M)

None required.

#### 2. Operations (0)

- A. Consider the increase in workload due to the unavailability of the AP and the prevailing conditions (e.g. crew skill level, IMC/VMC, Day/Night, duration of flight, complexity of the intended approach procedure, etc.). If the expected increase in workload may become excessive then Pilatus recommends implementing suitable mitigations (e.g. change in flight plan, postponement of the flight, etc.).
- B. Consider operational regulations and determine whether there are any applicable restrictions for the intended type of operation (e.g. for PBN/MNPS, Low visibility operations, etc.).

**Note**: RVSM operations not permitted.



# 22-10-02A (ALL) - Flight director symbols (FD bars)

#### 1. Maintenance (M)

None required.

#### 2. Operations (0)

- A. Consider the increase in workload due to the unavailability of the AP and the prevailing conditions (e.g. crew skill level, IMC/VMC, Day/Night, duration of flight, complexity of the intended approach procedure, etc.). If the expected increase in workload may become excessive then Pilatus recommends implementing suitable mitigations (e.g. change in flight plan, postponement of the flight, etc.).
- B. Consider operational regulations and determine whether there are any applicable restrictions for the intended type of operation (e.g. for PBN/MNPS, Low visibility operations, etc.).

**<u>Note</u>**: RVSM operations not permitted.



# 22-30-01A (ALL) - Auto-throttle

# 1. Maintenance (M)

- A. Open the hinged nose door (LH 212AL) on the left hand side of the aircraft nose.
- B. Pull the following mechanical circuit breaker on PNL 913.

СВ	CB Name
⊾F2	THRUST LEVER

# 2. Operations (0)

None required.



# **ATA 23 – COMMUNICATIONS**

# 23-11-02A (ALL) - Selective call system (SELCAL)

# 1. Maintenance (M)

None required.

# 2. Operations (0)

A. Actively monitor (listen to) the transmissions on the applicable frequency while long range communication capability is required.



#### 23-12-01B (CAT) – VHF Communications (Multi Mode Digital Radio – MMDR)

#### 1. Maintenance (M)

None required.

#### 2. Operations (0)

The unavailability of the communications radio(s) will result in an increase in workload.

Pilatus cannot anticipate the operational environment and requirements under which dispatch is intended. Therefore, the operator should implement a process where the impact of the unavailability of the radio(s) is assessed and briefed to the flight crew. This process should consider factors such as, but not limited to:

- 1. Density and complexity of the airspace,
- 2. the number of frequency changes and handovers required for an intended flight,
- 3. operational rules requiring the monitoring of emergency frequencies,
- 4. Single or dual crew operation, etc.

The process should be described in the operator's Maintenance and Operating Procedures Manual, or equivalent.



# 23-12-01C (CAT) – VHF Communications (Multi Mode Digital Radio – MMDR)

#### 1. Maintenance (M)

None required.

#### 2. Operations (0)

The unavailability of the communications radio(s) will result in an increase in workload.

Pilatus cannot anticipate the operational environment and requirements under which dispatch is intended. Therefore, the operator should implement a process where the impact of the unavailability of the radio(s) is assessed and briefed to the flight crew. This process should consider factors such as, but not limited to:

- 1. Density and complexity of the airspace,
- 2. the number of frequency changes and handovers required for an intended flight,
- 3. operational rules requiring the monitoring of emergency frequencies,
- 4. Single or dual crew operation.

The process should be described in the operator's Maintenance and Operating Procedures Manual, or equivalent.



#### 23-30-01B (ALL) – Public address (PA) system

#### 1. Maintenance (M)

None required.

# 2. Operations (0)

- A. Define in the operators Maintenance and Operating Procedures manual a minimum set of hand signs to communicate non-verbally with the cabin occupants. The hand signs should include as a minimum (more may be defined):
  - 1. "Is everything OK?"
  - 2. Don the oxygen masks
  - 3. Brace for impact
- B. Brief the cabin crew members (if carried) and the passengers on the fact that the PA system is not operative and on the hand signs to be expected.
- C. Use direct verbal communication and hand signs as required.



# **ATA 24 – ELECTRICAL POWER**

# 24-20-01A (ALL) - 115V AC outlets

#### 1. Maintenance (M)

Before the first flight under MMEL dispatch conditions, apply the following procedure to open the required Electronic Circuit Breaker (ECB) of the associated inverter:

- A. Power down the electrical system.
- B. Move the co-pilot seat fully forward to get access to the Maintenance panel on the lower right cockpit side panel.
- C. Remove the Maintenance panel cover which is attached by Velcro strips.
- D. Make sure that the RIGGING switch on the Maintenance Panel is set to OFF.
- E. Set the MAINT MODE switch on the Maintenance Panel to MAINT. Hold it in this position throughout the entire procedure either by inserting a pin or by hand (second person).

**Note:** If the switch is inadvertently released then start the procedure over from step (A).

F. Turn on electrical power (either using Ground or Battery power).

**Note:** Steps (F) through (N) must be performed within 4 minutes. If more time elapses then start the procedure over from step (A).

- G. Verify that the "Maint Switch" CAS message is shown.
- H. Place the cursor in the main area of the upper MFD.
- I. Press the PAGE button.
- J. In the pulldown menu, select "Maint".
- K. On the CMC MAIN MENU page, select "SYSTEM DIAGNOSTICS".
- L. Using the scroll wheel and the ENTER button, select
  - "42 INTEGRATED MODULAR AVIONICS", then
  - "20 DATA CONCENTR AND PROCESS UNIT", then
  - "ENTER UMS MAINT MODE".
- M. On the UMS MAINTENANCE MODE page make sure that the "SET MAINTENANCE MODE SWITCH TO MAINT" status is "MAINT".
- N. Select "ENTER UMS MAINTENANCE MODE".
- 0. Make sure UMS MAINTENANCE MODE STATUS is ON for all eight channels.
- P. Press PAGE button.
- Q. In the pulldown menus, select "Synoptic".
- R. On lower MFD, press "SYN" bezel.
- S. Press "ECB" bezel.
- T. On the "SET" bezel, set the following ECBs to LOCK:

ECB
Inverter
and/or
Inverter 2
and/or
Fwd Galley LT/CTRL



U. On the "STATUS" bezel, select "OUT".

**Note:** This will list all the ECBs which are OUT. Whenever an ECB is set to IN in step (V) then it will disappear from this list.

- V. On the "SET" bezel, set all listed ECBs to IN, until the displayed list is empty.
- W. On the "STATUS" bezel, select "LOCK".
- X. Make sure that the ECBs which were set to LOCK in step (T) are shown. Make sure no other ECBs are listed as "LOCK".
- Y. Remove the pin from the MAINT MODE switch or release the switch. It moves to the normal position.

**Note:** This will automatically re-boot the UMS in normal mode.

Z. Put the Maintenance panel cover back on.

# 2. Operations (0)

None required.


# **ATA 25 – EQUIPMENT/FURNISHINGS**

### 25-11-01-2A (ALL) - Flight crew seats - Vertical and recline adjustment

### 1. Maintenance (M)

- **Note**: Refer to the applicable Component Maintenance Manual (CMM, Ipeco Publication Reference Number SM702) for information and support in the following procedures.
- A. Determine the reason why the vertical and/or recline adjustment is inoperative (Ref. CMM TESTING AND FAULT ISOLATION section).
- B. If required, move the seat to an acceptable position for the flight crew member.
- C. Consider the reason why the vertical and/or recline adjustment is inoperative and use appropriate maintenance practice to secure and lock the seat in the acceptable position.

### 2. Operations (0)



#### 25-11-01-3A (ALL) - Flight crew seats - Other adjustments

#### 1. Maintenance (M)

- **Note**: Refer to the applicable Component Maintenance Manual (CMM, Ipeco Publication Reference Number SM702) for information and support in the following procedures.
- A. Determine the reason why the vertical and/or recline adjustment is inoperative (Ref. CMM TESTING AND FAULT ISOLATION section).
- B. If required, move the seat to an acceptable position for the flight crew member.
- C. Consider the reason why the affected adjustment is inoperative and use appropriate maintenance practice to secure and lock the seat in the acceptable position.
- **Note:** If an armrest cannot be secured in a position where it will not hinder an emergency evacuation or any other flight duties then it must be removed.

# 2. Operations (0)



### 25-20-01A (ALL) - Storage cabinets/wardrobe/galley

### 1. Maintenance (M)

- A. Remove all items from the affected storage cabinet/wardrobe/galley, except for those permanently affixed.
- B. Secure the compartment closed by using locally procured self-adhesive tape. If feasible, install the tape so that it will preclude operation of the compartment latch.

<u>Note</u>: Make sure the tape is of good quality so that it will not leave traces of adhesive when removed.

C. Install an INOPERATIVE – DO NOT USE placard in a position where it can be clearly seen by a person who attempts to open the storage cabinet/wardrobe/galley.

The following steps are applicable only for the forward galley:

D. Pull the following mechanical circuit breakers on the forward galley, CB panel, flight compartment.

CB Name
GALLEY BREWER
GALLEY OVEN

If equipment is powered from the AC outlet:

E. Disconnect the electrical connector from the AC receptacle.

### 2. Operations (0)



### 25-21-01A (ALL) – Passenger seats

#### **<u>1. Maintenance (M)</u>**

A. Make sure that the inoperative seat does not restrict an occupant's access to the isle or to an emergency exit.

<u>Note</u>: If the inoperative seat blocks access to an emergency exit or to the isle from any other seat(s) in front or behind it then this/these seat(s) must also be considered to be affected.

B. Put a PASSENGER SEAT INOPERATIVE placard on the affected seat(s). Use locally procured selfadhesive tape.

**Note**: Make sure the tape is of good quality so that it will not leave traces of adhesive when removed.

C. Put a conspicuous DO NOT OCCUPY placard on the affected seat(s). Secure the placard in such a way that it is not possible to use the seat without disturbing the placard, for example by running the tape from the top of the seat back to the forward edge of the seat cushion. Use locally procured self-adhesive tape.

**<u>Note</u>**: Make sure the tape is of good quality so that it will not leave traces of adhesive when removed.

#### 2. Operations (0)



### 25-21-01-1A (ALL) - Passenger seats - Recline functions

#### 1. Maintenance (M)

**Note**: Refer to the applicable Component Maintenance Manual (CMM) for information and support in the following procedures.

For commuter seats: Millennium Model 2044 (Doc. No. 2044-CMM026). For executive seats: UTC Aerospace Model 4053 (Part Number 403184 Series, CMM 25-70-62) or Model 4055 (CMM 25-70-82).

- A. Determine the reason why the recline function is inoperative. For commuter seats: Ref. CMM Section 3.0 TESTING AND FAULT ISOLATION. For executive seats: Ref. CMM TESTING AND FAULT ISOLATION section.
- B. If required, move the seat to the take-off and landing position.
- C. Consider the reason why the recline function is inoperative and use appropriate maintenance practice to secure and lock the seat in the take-off and landing position.

### 2. Operations (0)



#### 25-21-01-2A (ALL) - Passenger seats - Under seat stowage compartment

# 1. Maintenance (M)

A. If required, secure the compartment closed by using locally procured self-adhesive tape. Install the tape so that it will preclude operation of the compartment latch.

**Note**: Make sure the tape is of good quality so that it will not leave traces of adhesive when removed.

# 2. Operations (0)



### 25-21-01-5A (ALL) - Passenger seats - Swivel/travel mechanisms

#### 1. Maintenance (M)

**Note**: Refer to the applicable Component Maintenance Manual (CMM) for information and support in the following procedures.

For commuter seats: Millennium Model 2044 (Doc. No. 2044-CMM026). For executive seats: UTC Aerospace Model 4053 (Part Number 403184 Series, CMM 25-70-62) or Model 4055 (CMM 25-70-82).

- A. Determine the reason why the swivel/travel function is inoperative. For commuter seats: Ref. CMM Section 3.0 TESTING AND FAULT ISOLATION. For executive seats: Ref. CMM TESTING AND FAULT ISOLATION section.
- B. If required, move the seat back to the upright position.
- C. Consider the reason why the swivel/travel function is inoperative and use appropriate maintenance practice to secure and lock the seat in the required position.

### 2. Operations (0)



### 25-60-03A (ALL) - Protective breathing equipment

### 1. Maintenance (M)

**Note**: Do not remove the inoperative unit from the airplane until the replacement is available.

- A. Secure the storage box behind the co-pilot seat closed. Use locally procured self-adhesive tape. Make sure the tape is of good quality so that it will not leave traces of adhesive when removed.
- B. Install the required placard on top of the self-adhesive tape so that the tape cannot be removed without disturbing the placard.
- C. Install an additional placard in plain view of the pilot that the PBE is inoperative.

#### 2. Operations (0)

A. Ensure that the flight crew is made aware of the unavailability of the PBE with a dedicated procedure before each flight.
It is the operator's responsibility to define a specific procedure which suits his operational environment. The procedure should be described in the applicable Operators Manual.



### 25-60-05A (ALL) - Life rafts

# 1. Maintenance (M)

None required.

### 2. Operations (0)

A. Ensure that the flight crew is made aware of the unavailability of the Life raft with a dedicated procedure before each flight.

It is the operator's responsibility to define a specific procedure which suits his operational environment. The procedure should be described in the applicable Operators Manual.



# 25-63-01A (ALL) - Emergency locator transmitter (ELT)(AF)

# 1. Maintenance (M)

A. Remove the inoperative ELT from the aircraft (Ref. AMM PC24-A-E25-61-0001-00A-520A-A).

## 2. Operations (0)



## 25-64-01A (ALL) – Life jackets

#### 1. Maintenance (M)

- A. Place the inoperative Life jacket in a plastic bag and mark the bag "INOPERATIVE" with indelible ink.
- B. Place the inoperative Life jacket in a location where it is out-of-sight for the passengers, OR remove the inoperative Life jacket from the aircraft.
- C. Put a LIFE JACKET INOPERATIVE placard in a conspicuous and unambiguous location so that it can be clearly seen by a person sitting in the affected seat.

### 2. Operations (0)

A. Ensure that the flight crew is made aware of the unavailability of the Life jacket with a dedicated procedure before each flight.
It is the operator's responsibility to define a specific procedure which suits his operational environment. The procedure should be described in the applicable Operators Manual.



This Page Intentionally Left Blank



# **ATA 26 – FIRE PROTECTION**

### 26-24-01A (ALL) – Hand fire extinguishers

### 1. Maintenance (M)

- A. Place the inoperative Hand fire extinguisher in a plastic bag and mark the bag "INOPERATIVE" with indelible ink.
- B. Place the inoperative Hand fire extinguisher in a location where it is out-of-sight for the passengers and properly secured, OR remove the inoperative Hand fire extinguisher from the aircraft.
- C. Ensure that the required distribution in accordance with national regulations is maintained. If required, remove installed Hand fire extinguisher(s) from the installed location and install in the required location.
- D. Put a HAND FIRE EXTINGUISHER INOPERATIVE placard near the installed location so that it can be clearly seen by a person intending to use it.

### 2. Operations (0)



This Page Intentionally Left Blank



# **ATA 27 – FLIGHT CONTROLS**

# 27-10-01A (ALL) – Aileron trim

## 1. Maintenance (M)

Set the aileron trim tab to the neutral position. If the aileron cannot be set to the neutral position due to the system inoperability then no dispatch is permissible.

- A. Make sure that the aileron control is centred. Install the yoke gust lock.
- B. Make sure that the top surface of the aileron trim tab aligns with the top surface of the aileron (take-off setting).
- C. Power down the electrical system.
- D. Move the co-pilot seat fully forward to get access to the Maintenance panel on the lower right cockpit side panel.
- E. Remove the Maintenance panel cover which is attached by Velcro strips.
- F. Make sure that the RIGGING switch on the Maintenance Panel is set to OFF.
- G. Set the MAINT MODE switch on the Maintenance Panel to MAINT. Hold it in this position throughout the entire procedure either by inserting a pin or by hand (second person).

**<u>Note</u>**: If the switch is inadvertently released then start the procedure over from step (A).

H. Turn on electrical power (either using Ground or Battery power).

**<u>Note</u>**: Steps (F) through (N) must be performed within 4 minutes. If more time elapses then start the procedure over from step (A).

- I. Verify that the "Maint Switch" CAS message is shown.
- J. Place the cursor in the main area of the upper MFD.
- K. Press the PAGE button.
- L. In the pulldown menu, select "Maint".
- M. On the CMC MAIN MENU page, select "SYSTEM DIAGNOSTICS".
- N. Using the scroll wheel and the ENTER button, select
  - "42 INTEGRATED MODULAR AVIONICS", then
  - "20 DATA CONCENTR AND PROCESS UNIT", then
  - "ENTER UMS MAINT MODE".
- 0. On the UMS MAINTENANCE MODE page make sure that the "SET MAINTENANCE MODE SWITCH TO MAINT" status is "MAINT".
- P. Select "ENTER UMS MAINTENANCE MODE".
- Q. Make sure UMS MAINTENANCE MODE STATUS is ON for all eight channels.
- R. Press PAGE button.
- S. In the pulldown menus, select "Synoptic".
- T. On lower MFD, press "SYN" bezel.
- U. Press "ECB" bezel.
- V. On the "SET" bezel, set the following ECBs to LOCK:

ECB	
Aileron	Trim



W. On the "STATUS" bezel, select "OUT".

**Note**: This will list all the ECBs which are OUT. Whenever an ECB is set to IN in step (X) then it will disappear from this list.

- X. On the "SET" bezel, set all listed ECBs to IN, until the displayed list is empty.
- Y. On the "STATUS" bezel, select "LOCK".
- Z. Make sure that the ECB which was set to LOCK in step (V) is shown. Make sure no other ECBs are listed as "LOCK".
- AA. Remove the pin from the MAINT MODE switch or release the switch. It moves to the normal position.

**<u>Note</u>**: This will automatically re-boot the UMS in normal mode.

BB. Put the Maintenance panel cover back on.

### 2. Operations (0)

A. At intervals not exceeding 20 minutes make sure there are no indications of potential fuel imbalance (increased aileron control forces). Disconnect the autopilot, if used, to perform this check.

**<u>Note</u>**: If there are indications of a potential fuel imbalance, use fuel transfer to balance the fuel. Land as soon as practical.



### 27-10-02A (ALL) – Aileron trim position indication

### 1. Maintenance (M)

None required.

#### 2. Operations (0)

#### On Ground before each flight

- **Note**: Two persons are required to perform the following procedure. One person to operate the trim switch in the cockpit. The second person to observe the aileron trim tab movement. Radio communication between the two persons will be required to efficiently undertake the procedure.
- A. Operate the trim tab through the full range of travel:
  - 1. Check that the aileron trim tab smoothly moves through the full range of travel. With the aileron in the neutral (streamline) position, the trailing edge of the trim tab should move approximately 2cm up when commanded to the fully up position and approximately 2cm down when commanded to the fully down position.
- B. Make sure that the aileron control is centred. Install the yoke gust lock.
- C. Operate the trim so that the top surface of the aileron trim tab aligns with the top surface of the aileron (take-off setting).
- D. Do not change the aileron trim setting on the ground before take-off. After take-off the aileron trim may be operated as required.

### In Flight

A. At intervals not exceeding 20 minutes make sure there are no indications of potential fuel imbalance (increased aileron control forces). Disconnect the autopilot, if used, to perform this check.

<u>Note</u>: If there are indications of a potential fuel imbalance, use fuel transfer to balance the fuel. Land as soon as practical.



### 27-20-02A (ALL) – Rudder trim position indication

### 1. Maintenance (M)

None required.

- **Note**: Two persons are required to perform the following procedure. One person to operate the trim switch in the cockpit. The second person to observe the rudder trim tab movement. Radio communication between the two persons will be required to efficiently undertake the procedure.
- A. Operate the trim tab through the full range of travel:
  - 1. Check that the rudder trim tab smoothly moves through the full range of travel. With the rudder in the neutral (streamline) position, the lower trailing edge of the trim tab should move approximately 7.5cm left when commanded to the fully left position and approximately 9cm right when commanded to the fully right position.
- B. Make sure that the rudder control is centred.
- C. Operate the trim so that the trailing edge of the rudder trim tab aligns with the trailing edge of the rudder (take-off setting).
- D. Do not change the rudder trim setting on the ground before take-off. After take-off the rudder trim may be operated as required.



### 27-60-01A (ALL) – Multi-function spoiler (MFS) system

#### 1. Maintenance (M)

- **Note**: Refer to the Aircraft Maintenance Manual (AMM) Report 02378 (Data Module 27-60-0008-00A-520A-A) and Wiring Diagram Manual references 527.69.24.008 and 527.69.24.009 for information and support in the following procedures.
- A. Disconnect the electrical connectors of each of the Multi-Function Spoiler (MFS) actuators from their electrical receptacles on the Spoiler APCMs (connectors AB3110P3, AB3110P5, AB3120P3 and AB3120P5).
- B. Install blanking caps on the electrical connectors / receptacles.
- C. Safely secure the sensor flying leads to guarantee that they cannot inhibit the free movement of the flight controls.

**Note:** Refer to the Aircraft Maintenance Manual (AMM) - Report 02378 (Data Module 27-60-0000-00A-310A-A) for information and support in the following procedures.

- D. Examine the MFS actuator linkages in accordance with paragraph 7.
- E. Check that the MFS panels do not move from the retracted position when pulled by hand.

#### 2. Operations (0)

- A. Plan and conduct the flight at a maximum altitude of FL250.
- B. For takeoff performance apply the AFM's Takeoff Field Length Correction Factor for "Lift Dump Inoperative"
- C. For the planned destination consider the landing performance based on the AFM's Abnormal Landing Case factor for "Flapless Landing + Lift Dump Failure"

**Note:** For the planned destination, the additional factor for the "Flapless Landing" must be applied even though the flap system is unaffected by this MMEL item. Actual landing performance will be that of the factor "Lift Dump Failure" alone.



### 27-60-02A (ALL) – Ground spoiler system

#### 1. Maintenance (M)

- **Note**: Refer to the Aircraft Maintenance Manual (AMM) Report 02378 (Data Module 27-60-0008-00A-520A-A) and Wiring Diagram Manual references 527.69.24.008 and 527.69.24.009 for information and support in the following procedures.
- A. Disconnect the electrical connector of each of the Ground Spoiler actuators from their electrical receptacles on the Spoiler APCMs (connectors AB3110P4, AB3110P6, AB3120P4 and AB3120P6).
- B. Install blanking caps on the electrical connectors / receptacles.
- C. Safely secure the flying leads to guarantee that they cannot inhibit the free movement of the flight controls.

**Note:** Refer to the Aircraft Maintenance Manual (AMM) – Report 02378 (Data Module 27-60-0000-00A-270A-A) for information and support in the following procedures.

D. Perform the spoilers over center stop check in accordance with paragraph 7.6.

# 2. Operations (0)

- A. For takeoff performance apply the AFM's Takeoff Field Length Correction Factor for "Lift Dump Inoperative".
- B. For the planned destination consider the landing performance based on the AFM's Abnormal Landing Case factor for "Flapless Landing + Lift Dump Failure".

<u>Note:</u> For the planned destination, the additional factor for the "Flapless Landing" must be applied even though the flap system is unaffected by this MMEL item. Actual landing performance will be that of the factor "Lift Dump Failure" alone.



### 27-60-06A (ALL) – Roll assist position sensor (RAPS)

### 1. Maintenance (M)

- **Note**: Refer to the Aircraft Maintenance Manual (AMM) Report 02378 (Data Module 27-60-0006-00A-520A-A) for information and support in the following procedures.
- A. Disconnect the electrical connectors of both sensors from their electrical receptacles.
- B. Install blanking caps on the electrical connectors / receptacles.
- C. Safely secure the sensor flying leads to guarantee that they cannot inhibit the free movement of the flight controls.

### 2. Operations (0)

A. With a dedicated procedure before each flight, ensure that the flight crew is made aware of a slight increase in the forces on the primary flight controls and a slight reduction in the aircraft manoeuvrability when roll angles of 27 degrees or greater are commanded below 175 knots and with the flaps extended at 8°, 15° or 33°.



This Page Intentionally Left Blank



# ATA 28 - FUEL

## 28-40-01A (ALL) – Fuel quantity indication system

## 1. Maintenance (M)

None required.

- A. Operate the Aileron trim system to the full left-wing-down (LWD) stop.
- B. When trim operation stops, confirm that the AIL Trim indication on the lower MFD display shows full LWD.
- C. Operate the Aileron trim system to the full right-wing-down (RWD) stop.
- D. When trim operation stops, confirm that the AIL Trim indication on the lower MFD display shows full RWD.
- E. Operate the Aileron trim system to the neutral (centred) position.
- F. Visually confirm that the roll trim tab on the left aileron is streamlined with the aileron.
- G. Fuel the aircraft on the wing with the operative fuel quantity indication at least to a level which can be clearly seen through the gravity filler cap.
- H. Visually compare the fuel level in the tanks and fuel the aircraft on the wing with the inoperative fuel quantity indication to the same level as the opposite tank.
- I. Calculate two times the indicated fuel quantity on the operative fuel quantity indication. Use this calculated quantity of fuel for the flight planning.



### 28-40-01B (ALL) – Fuel quantity indication system

### 1. Maintenance (M)

None required.

- A. Operate the Aileron trim system to the full left-wing-down (LWD) stop.
- B. When trim operation stops, confirm that the AIL Trim indication on the lower MFD display shows full LWD.
- C. Operate the Aileron trim system to the full right-wing-down (RWD) stop.
- D. When trim operation stops, confirm that the AIL Trim indication on the lower MFD display shows full RWD.
- E. Operate the Aileron trim system to the neutral (centred) position.
- F. Visually confirm that the roll trim tab on the left aileron is streamlined with the aileron.



# ATA 30 – ICE AND RAIN PROTECTION

### **30-10-01A** (ALL) – Wing anti-ice valve

# 1. Maintenance (M)

None required.

- A. Plan and conduct the flight at a maximum altitude of FL250.
- B. After engine start, using the Bleed Selector Switch on the centre console set the associated bleed air shut-off valve (SOV) to the closed position:
  - 1. If the <u>left</u> wing anti-ice valve has failed, set the bleed air selector switch to "R".
  - 2. If the <u>right</u> wing anti-ice valve has failed, set the bleed air selector switch to "L".
- C. On the ECS synoptic page, using the X-Bleed valve bezel button, set the X-Bleed valve to "CLOSED".
- D. Keep both the SOV and the X-Bleed valve closed throughout the subsequent flight(s).



This Page Intentionally Left Blank



# ATA 32 - LANDING GEAR

## 32-30-01A (ALL) – Landing gear actuator heater

## 1. Maintenance (M)

None required.

## 2. Operations (0)

A. Establish a procedure to ensure that SAT is maintained above -55°C in flight. Review the predicted SAT along the planned route and if necessary monitor the SAT at regular intervals during the flight.



### 32-40-06A (ALL) – Anti-skid system

### 1. Maintenance (M)

Before the first flight under MMEL dispatch conditions, apply the following procedure to open the required Electronic Circuit Breakers (ECB):

- A. Power down the electrical system.
- B. Move the co-pilot seat fully forward to get access to the Maintenance panel on the lower right cockpit side panel.
- C. Remove the Maintenance panel cover which is attached by Velcro strips.
- D. Make sure that the RIGGING switch on the Maintenance Panel is set to OFF.
- E. Set the MAINT MODE switch on the Maintenance Panel to MAINT. Hold it in this position throughout the entire procedure either by inserting a pin or by hand (second person).

**Note:** If the switch is inadvertently released then start the procedure over from step (A).

F. Turn on electrical power (either using Ground or Battery power).

**<u>Note</u>**: Steps (F) through (N) must be performed within 4 minutes. If more time elapses then start the procedure over from step (A).

- G. Verify that the "Maint Switch" CAS message is shown.
- H. Place the cursor in the main area of the upper MFD.
- I. Press the PAGE button.
- J. In the pulldown menu, select "Maint".
- K. On the CMC MAIN MENU page, select "SYSTEM DIAGNOSTICS".
- L. Using the scroll wheel and the ENTER button, select
  - "42 INTEGRATED MODULAR AVIONICS", then
  - "20 DATA CONCENTR AND PROCESS UNIT", then
  - "ENTER UMS MAINT MODE".
- M. On the UMS MAINTENANCE MODE page make sure that the "SET MAINTENANCE MODE SWITCH TO MAINT" status is "MAINT".
- N. Select "ENTER UMS MAINTENANCE MODE".
- 0. Make sure UMS MAINTENANCE MODE STATUS is ON for all eight channels.
- P. Press PAGE button.
- Q. In the pulldown menus, select "Synoptic".
- R. On lower MFD, press "SYN" bezel.
- S. Press "ECB" bezel.
- T. On the "SET" bezel, set the following ECBs to LOCK:

ECB	
Anti-Skid	

U. On the "STATUS" bezel, select "OUT".

**Note:** This will list all the ECBs which are OUT. Whenever an ECB is set to IN in step (V) then it will disappear from this list.

V. On the "SET" bezel, set all listed ECBs to IN, until the displayed list is empty.



- W. On the "STATUS" bezel, select "LOCK".
- X. Make sure that the ECBs which were set to LOCK in step (T) are shown. Make sure no other ECBs are listed as "LOCK".
- Y. Remove the pin from the MAINT MODE switch or release the switch. It moves to the normal position.

**Note:** This will automatically re-boot the UMS in normal mode.

Z. Put the Maintenance panel cover back on.

### 2. Operations (0)

- A. Before Engine Start check that the left and right main brakes are operational by checking the indications on the System Synoptic BRAKES:
  - With toe brakes released check that the Brake LH and RH indications are shown in white,
  - Press the LH and RH toe brakes and check that the Brake LH and RH indications are shown in green,
  - Release the LH and RH toe brakes and check that the Brake LH and RH indications are shown in white.
- B. For takeoff performance apply the AFM's Takeoff Field Length Correction Factor for "Anti-skid Inoperative".
- C. For the planned destination consider the landing performance based on the AFM's Abnormal Landing Case factor for "Flapless Landing + Anti-Skid Failure".

**Note:** For the planned destination, the additional factor for the "Flapless Landing" must be applied even though the flap system is unaffected by this MMEL item. Actual landing performance will be that of the factor "Anti-skid Failure" alone.



### 32-40-07A (ALL) – Hydraulic filter assembly bypass electrical indicator

#### 1. Maintenance (M)

- **Note:** Refer to the data module PC24-A-E32-40-0012-00A-520A-A in the Aircraft Maintenance Manual (AMM) Report 02378 for information and support in the following procedures.
- A. Remove panel number 141BB to gain access to the filter manifold assembly.
- B. Visually check that the red button bypass indicators on the filter manifold are not visible (not raised).
- C. Replace panel 141BB.

# 2. Operations (0)



# ATA 33 - LIGHTS

### 33-20-02A (ALL) – Cabin signs

### 1. Maintenance (M)

A. Put a PASSENGER SEAT INOPERATIVE placard on the affected seat(s). Use locally procured selfadhesive tape.

**Note**: Make sure the tape is of good quality so that it will not leave traces of adhesive when removed.

B. Put a conspicuous DO NOT OCCUPY placard on the affected seat(s).

Secure the placard in such a way that it is not possible to use the seat without disturbing the placard, for example by running the tape from the top of the seat back to the forward edge of the seat cushion.

Use locally procured self-adhesive tape.

**<u>Note</u>**: Make sure the tape is of good quality so that it will not leave traces of adhesive when removed.

### 2. Operations (0)

A. Ensure that the flight crew is made aware of the unavailability of the affected seats with a dedicated procedure before each flight.
It is the operator's responsibility to define a specific procedure which suits his operational environment. The procedure should be described in the applicable Operators Manual.



### 33-42-01-1A (ALL) - Red beacons

### 1. Maintenance (M)

None required.

### 2. Operations (0)

- A. Use caution when operating the white strobe lights on the ground.
  - The white strobes are very bright and may temporarily blind ground personnel or flight crews of other aircraft.

Use particular caution under the following conditions:

- 1. At night the bright light may temporarily have a significant effect on night vision
- 2. During rainy conditions the effect of the bright light may be increased by reflections.
- 3. In foggy conditions there may be a disorienting effect when the fog is illuminated.
- B. If required, temporarily switch off the white strobe lights when operating on the ground. Make sure the white strobe lights are switched on before take-off.



# 33-50-01-1A (ALL) - Overhead emergency lighting

# 1. Maintenance (M)

None required.

- A. Ensure that the flight crew is made aware of the unavailability of a cabin emergency light with a dedicated procedure before each flight.
- B. Brief the cabin crewmembers (if carried) and the passengers on the condition of the overhead emergency lighting.



This Page Intentionally Left Blank



# ATA 34 - NAVIGATION

### 34-15-01A (ALL) – Altitude alerting system

# 1. Maintenance (M)

None required.

- A. Flights in RVSM airspace not permitted.
- B. Check and observe any applicable AFM Section 2 "Limitations".
- C. During the flight, use altitude hold (ALT) and autopilot functions for all operations for which they are appropriate.
- D. Monitor altitude indications when maintaining an assigned altitude.
- E. Ensure that any additional / national requirement are met.



### 34-40-01A (ALL) – Airborne collision avoidance system (ACAS/TCAS II)

### 1. Maintenance (M)

Before the first flight under MMEL dispatch conditions, apply the following procedure to open the required Electronic Circuit Breakers (ECB):

- A. Power down the electrical system.
- B. Move the co-pilot seat fully forward to get access to the Maintenance panel on the lower right cockpit side panel.
- C. Remove the Maintenance panel cover which is attached by Velcro strips.
- D. Make sure that the RIGGING switch on the Maintenance Panel is set to OFF.
- E. Set the MAINT MODE switch on the Maintenance Panel to MAINT. Hold it in this position throughout the entire procedure either by inserting a pin or by hand (second person).

**<u>Note</u>**: If the switch is inadvertently released then start the procedure over from step (A).

F. Turn on electrical power (either using Ground or Battery power).

**<u>Note</u>**: Steps (F) through (N) must be performed within 4 minutes. If more time elapses then start the procedure over from step (A).

- G. Verify that the "Maint Switch" CAS message is shown.
- H. Place the cursor in the main area of the upper MFD.
- I. Press the PAGE button.
- J. In the pulldown menu, select "Maint".
- K. On the CMC MAIN MENU page, select "SYSTEM DIAGNOSTICS".
- L. Using the scroll wheel and the ENTER button, select
  - "42 INTEGRATED MODULAR AVIONICS", then
  - "20 DATA CONCENTR AND PROCESS UNIT", then
  - "ENTER UMS MAINT MODE".
- M. On the UMS MAINTENANCE MODE page make sure that the "SET MAINTENANCE MODE SWITCH TO MAINT" status is "MAINT".
- N. Select "ENTER UMS MAINTENANCE MODE".
- 0. Make sure UMS MAINTENANCE MODE STATUS is ON for all eight channels.
- P. Press PAGE button.
- Q. In the pulldown menus, select "Synoptic".
- R. On lower MFD, press "SYN" bezel.
- S. Press "ECB" bezel.
- T. On the "SET" bezel, set the following ECB to LOCK:

ECB	
TCAS	

U. On the "STATUS" bezel, select "OUT".

**<u>Note</u>**: This will list all the ECBs which are OUT. Whenever an ECB is set to IN in step (V) then it will disappear from this list.

- V. On the "SET" bezel, set all listed ECBs to IN, until the displayed list is empty.
- W. On the "STATUS" bezel, select "LOCK".


- X. Make sure that the ECB which was set to LOCK in step (T) is shown. Make sure no other ECBs are listed as "LOCK".
- Y. Remove the pin from the MAINT MODE switch or release the switch. It moves to the normal position.

Note: This will automatically re-boot the UMS in normal mode.

Z. Put the Maintenance panel cover back on.

# 2. Operations (0)

A. Make sure that ACAS/TCAS is not required by regulations for the type of operation and the airspace of the intended flight.



#### 34-40-01B (ALL) – Airborne collision avoidance system (ACAS/TCAS II)

### 1. Maintenance (M)

Before the first flight under MMEL dispatch conditions, apply the following procedure to open the required Electronic Circuit Breakers (ECB):

- A. Power down the electrical system.
- B. Move the co-pilot seat fully forward to get access to the Maintenance panel on the lower right cockpit side panel.
- C. Remove the Maintenance panel cover which is attached by Velcro strips.
- D. Make sure that the RIGGING switch on the Maintenance Panel is set to OFF.
- E. Set the MAINT MODE switch on the Maintenance Panel to MAINT. Hold it in this position throughout the entire procedure either by inserting a pin or by hand (second person).

**<u>Note</u>**: If the switch is inadvertently released then start the procedure over from step (A).

F. Turn on electrical power (either 905670 using Ground or Battery power).

**<u>Note</u>**: Steps (F) through (N) must be performed within 4 minutes. If more time elapses then start the procedure over from step (A).

- G. Verify that the "Maint Switch" CAS message is shown.
- H. Place the cursor in the main area of the upper MFD.
- I. Press the PAGE button.
- J. In the pulldown menu, select "Maint".
- K. On the CMC MAIN MENU page, select "SYSTEM DIAGNOSTICS".
- L. Using the scroll wheel and the ENTER button, select
  - "42 INTEGRATED MODULAR AVIONICS", then
  - "20 DATA CONCENTR AND PROCESS UNIT", then
  - "ENTER UMS MAINT MODE".
- M. On the UMS MAINTENANCE MODE page make sure that the "SET MAINTENANCE MODE SWITCH TO MAINT" status is "MAINT".
- N. Select "ENTER UMS MAINTENANCE MODE".
- 0. Make sure UMS MAINTENANCE MODE STATUS is ON for all eight channels.
- P. Press PAGE button.
- Q. In the pulldown menus, select "Synoptic".
- R. On lower MFD, press "SYN" bezel.
- S. Press "ECB" bezel.
- T. On the "SET" bezel, set the following ECBs to LOCK:

ECB	
TCAS	

U. On the "STATUS" bezel, select "OUT".

**<u>Note</u>**: This will list all the ECBs which are OUT. Whenever an ECB is set to IN in step (V) then it will disappear from this list.

- V. On the "SET" bezel, set all listed ECBs to IN, until the displayed list is empty.
- W. On the "STATUS" bezel, select "LOCK".



- X. Make sure that the ECB which was set to LOCK in step (T) is shown. Make sure no other ECBs are listed as "LOCK".
- Y. Remove the pin from the MAINT MODE switch or release the switch. It moves to the normal position.

Note: This will automatically re-boot the UMS in normal mode.

Z. Put the Maintenance panel cover back on.

# 2. Operations (0)

None required.



# 34-43-01-5A (ALL) - EGPWS - Advisory callouts

# 1. Maintenance (M)

None required.

- A. Review the Minimum safe altitudes (MSA) along the planned route, at the destination and any alternate airports.
- B. During the flight, monitor flight progress with reference to MSA along the route and especially during descent and approach.



# 34-43-01-5B (ALL) - EGPWS - Advisory callouts

# 1. Maintenance (M)

None required.

- A. Review the Minimum safe altitudes (MSA) along the planned route, at the destination and any alternate airports.
- B. During the flight, monitor flight progress with reference to MSA along the route and especially during descent and approach.



## 34-51-01B (ALL) – Navigation systems

# 1. Maintenance (M)

None required.

- A. Make sure the available navigation equipment is sufficient for the intended flight route and type of operation (VFR/IFR).
- B. Establish procedures to use alternative instrumentation to ensure the navigation capability required for the intended flight.
- C. Review and brief before flight the alternate procedures established under (B).



#### 34-54-02-2B (ALL) - Extended squitter (ADS-B out) transmissions

#### 1. Maintenance (M)

None required.

#### 2. Operations (0)

- A. Determine whether the ADS-B Out functionality is required for the intended flight.
- B. If required for the intended flight, contact the Air navigation service provider(s) along the intended route to obtain permission to operate with degraded ADS-B Out capabilities.

**<u>Note</u>**: Advise the ANS provider if the ADS-B Out capability is only partially affected. Functions which operate normally may be used.



## 34-60-01A (ALL) – Navigation database

### 1. Maintenance (M)

None required.

- A. Establish, brief and perform procedures to ensure that the dispatch conditions are met prior to release of the aircraft. These procedures should describe:
  - 1. The responsibility for the task,
  - 2. What aeronautical information must be carried on the aircraft,
  - 3. How to make sure that the information is current, and
  - 4. Procedures that navigation aid frequencies and identifiers (including for any alternates) are readily available to the flight crew.



## 34-60-01B (ALL) – Navigation database

#### 1. Maintenance (M)

None required.

- A. Establish, brief and perform procedures to ensure that the dispatch conditions are met prior to release of the aircraft. These procedures should describe:
  - 1. The responsibility for the task,
  - 2. A check of Area Navigation (RNAV/RNP) departure, arrival and approach procedures to ensure that they do not depend on the data amended in the current database cycle (alternatively, conventional (non RNAV/RNP) navigation or ANSP assistance may be used),
  - 3. What aeronautical information must be carried on the aircraft,
  - 4. How to make sure that the information is current, and
  - 5. Procedures that navigation aid frequencies and identifiers (including for any alternates) are readily available to the flight crew.



This Page Intentionally Left Blank



# ATA 35 - OXYGEN

### 35-10-01-1A (ALL) - Flight crew fixed oxygen system

## 1. Maintenance (M)

None required.

# 2. Operations (0)

- A. Measure the ambient temperature in the right nose bay.
- B. Read the indicated oxygen pressure on the oxygen cylinder head in the right nose bay.
- C. Using the following chart, determine how full the cylinder is (percentage of maximum volume).

**Note**: Interpolate between lines on the chart as required, or conservatively use the next lower line.



- D. Multiply the percentage obtained in step (C) by the maximum volume of the oxygen cylinder:
  - 1. 1928 litres (useable quantity) for the small oxygen cylinder (77 cu. ft standard A/C fit), or
  - 2. 2880 litres (useable quantity) for the large oxygen cylinder (115 cu. ft optional A/C fit).
- E. Make sure that the available quantity is above the minimum for the intended flight.



## 35-20-01A (ALL) – Passenger oxygen system

#### 1. Maintenance (M)

None required.

- A. Make sure that the Air conditioning system is operating normally. Make sure there is flow of air from cockpit outlets.
- B. Consider in the flight planning that supplemental oxygen is not available to the passengers. Consider options to descent to a lower altitude or divert to an alternate airfield if a passenger develops a condition where use of supplemental oxygen would be advised.
- C. Brief the passengers that the Oxygen masks depicted on the Safety briefing cards are inoperative, but that they will not be required because of the low flight altitude.
- D. Perform the flight at an altitude not exceeding 10,000 ft. AMSL.



## 35-20-01B (ALL) – Passenger oxygen system

## 1. Maintenance (M)

None required.

#### 2. Operations (0)

A. Brief the passengers that the Oxygen masks depicted on the Safety briefing cards are inoperative. If advisable, explain that in the event of a decompression the flight crew will perform a rapid descent in sufficient time to an altitude where oxygen for normal breathing will be available.



#### 35-20-01-1A (ALL) – Automatic mask deployment system

## 1. Maintenance (M)

None required.

- A. In case of a cabin depressurisation, perform the descent to 13 000 feet without any undue delay, especially if the manual mask deployment function was found not to deploy the masks when necessary.
- B. If MSA permits, descend to 10 000 feet or below.



#### 35-20-01-2A (ALL) – Passenger drop down masks

#### 1. Maintenance (M)

None required.

#### 2. Operations (0)

A. Put a PASSENGER SEAT INOPERATIVE placard on the affected seat(s). Use locally procured selfadhesive tape.

**Note**: Make sure the tape is of good quality so that it will not leave traces of adhesive when removed.

B. Put a conspicuous DO NOT OCCUPY placard on the affected seat(s).

Secure the placard in such a way that it is not possible to use the seat without disturbing the placard, for example by running the tape from the top of the seat back to the forward edge of the seat cushion.

Use locally procured self-adhesive tape.

**<u>Note</u>**: Make sure the tape is of good quality so that it will not leave traces of adhesive when removed.



#### 35-50-01A (ALL) – Portable oxygen cylinder assembly (POCA)

#### 1. Maintenance (M)

- A. Either remove the inoperative portable oxygen cylinder assembly from the aircraft OR place the inoperative portable oxygen cylinder assembly in a plastic bag and mark the bag "INOPERATIVE" with indelible ink (the assembly is to remain in its installed location).
- B. Put an OXYGEN CYLINDER INOPERATIVE (or other appropriate wording) placard near the installed location so that it can be clearly seen by a person intending to use it.

### 2. Operations (0)

A. Ensure that the flight crew are made aware of the unavailability of the portable oxygen cylinder assembly with a dedicated procedure before each flight. It is the operator's responsibility to define a specific procedure which suits his operational environment. The procedure should be described in the applicable Operators Manual.



# ATA 36 – PNEUMATIC

## 36-10-01A (ALL) - Bleed air shut-off valve (SOV)

### 1. Maintenance (M)

Before the first flight under MMEL dispatch conditions, apply the following procedure to open the required Electronic Circuit Breaker (ECB) of the failed SOV:

- A. Power down the electrical system.
- B. Move the co-pilot seat fully forward to get access to the Maintenance panel on the lower right cockpit side panel.
- C. Remove the Maintenance panel cover which is attached by Velcro strips.
- D. Make sure that the RIGGING switch on the Maintenance Panel is set to OFF.
- E. Set the MAINT MODE switch on the Maintenance Panel to MAINT. Hold it in this position throughout the entire procedure either by inserting a pin or by hand (second person).

**<u>Note</u>**: If the switch is inadvertently released then start the procedure over from step (A).

F. Turn on electrical power (either using Ground or Battery power).

**<u>Note</u>**: Steps (F) through (N) must be performed within 4 minutes. If more time elapses then start the procedure over from step (A).

- G. Verify that the "Maint Switch" CAS message is shown.
- H. Place the cursor in the main area of the upper MFD.
- I. Press the PAGE button.
- J. In the pulldown menu, select "Maint".
- K. On the CMC MAIN MENU page, select "SYSTEM DIAGNOSTICS".
- L. Using the scroll wheel and the ENTER button, select
  - "42 INTEGRATED MODULAR AVIONICS", then
  - "20 DATA CONCENTR AND PROCESS UNIT", then
  - "ENTER UMS MAINT MODE".
- M. On the UMS MAINTENANCE MODE page make sure that the "SET MAINTENANCE MODE SWITCH TO MAINT" status is "MAINT".
- N. Select "ENTER UMS MAINTENANCE MODE".
- 0. Make sure UMS MAINTENANCE MODE STATUS is ON for all eight channels.
- P. Press PAGE button.
- Q. In the pulldown menus, select "Synoptic".
- R. On lower MFD, press "SYN" bezel.
- S. Press "ECB" bezel.
- T. On the "SET" bezel, set the following ECBs to LOCK:

ECB
Bleed SOV L
or
Bleed SOV R



U. On the "STATUS" bezel, select "OUT".

 $\underline{\textbf{Note}}$ : This will list all the ECBs which are OUT. Whenever an ECB is set to IN in step (V) then it will disappear from this list.

- V. On the "SET" bezel, set all listed ECBs to IN, until the displayed list is empty.
- W. On the "STATUS" bezel, select "LOCK".
- X. Make sure that the ECB which was set to LOCK in step (T) are shown. Make sure no other ECBs are listed as "LOCK".
- Y. Remove the pin from the MAINT MODE switch or release the switch. It moves to the normal position.

**<u>Note</u>**: This will automatically re-boot the UMS in normal mode.

- Z. Put the Maintenance panel cover back on.
- AA. Verify that the SOV is in the fully closed position via the visual indicator on the SOV valve body.

# 2. Operations (0)

A. Plan and conduct the flight at a maximum altitude of FL250.



### 36-10-02A (ALL) – Bleed air pressure regulating valve (PRV)

### 1. Maintenance (M)

None required.

- A. Plan and conduct the flight at a maximum altitude of FL250.
- B. After engine start, using the Bleed Selector Switch on the centre console set the associated bleed air shut-off valve (SOV) to the closed position;
  - 1. If the <u>left</u> PRV has failed, set the bleed air selector switch to "R".
  - 2. If the <u>right</u> PRV has failed, set the bleed air selector switch to "L".
- C. Keep the SOV closed throughout the subsequent flight(s).



# 36-10-04A (ALL) – Bleed pressure sensor (BPS)

## 1. Maintenance (M)

None required.

- A. On the ECS synoptic page, using the X-Bleed valve bezel button, set the X-Bleed valve to "CLOSED".
- B. Keep the X-Bleed valve closed throughout the subsequent flight(s).



# 36-10-05A (ALL) – Bleed temperature sensor (BTS)

# 1. Maintenance (M)

None required.

- A. On the ECS synoptic page, using the X-Bleed valve bezel button, set the X-Bleed valve to "CLOSED".
- B. Keep the X-Bleed valve closed throughout the subsequent flight(s).



# 36-10-08A (ALL) – Burst disk assembly

# 1. Maintenance (M)

None required.

- A. On the ECS synoptic page, using the X-Bleed valve bezel button, set the X-Bleed valve to "CLOSED".
- B. Keep the X-Bleed valve closed throughout the subsequent flight(s).



# ATA 38 - WATER/WASTE

#### 38-30-01A (ALL) – Water and waste system

## 1. Maintenance (M)

- <u>Note</u>: Refer to the Aircraft Maintenance Manual (AMM) Report 02378 for information and support in the following procedures.
- A. Drain the water / waste in accordance with AMM Step 7 and Step 8 of the "Water and waste system General maintenance procedure (Data module PC24-A-A12-10-0006-00A-913A-A).
- B. Inspect for signs of leakage.
- Electrically de-activate the water waste system following the procedure outlined below:
- C. Power down the electrical system.
- D. Move the co-pilot seat fully forward to get access to the Maintenance panel on the lower right cockpit side panel.
- E. Remove the Maintenance panel cover which is attached by Velcro strips.
- F. Make sure that the RIGGING switch on the Maintenance Panel is set to OFF.
- G. Set the MAINT MODE switch on the Maintenance Panel to MAINT. Hold it in this position throughout the entire procedure either by inserting a pin or by hand (second person).

**<u>Note</u>**: If the switch is inadvertently released then start the procedure over from step (A).

H. Turn on electrical power (either using Ground or Battery power).

**<u>Note</u>**: Steps (F) through (N) must be performed within 4 minutes. If more time elapses then start the procedure over from step (A).

- I. Verify that the "Maint Switch" CAS message is shown.
- J. Place the cursor in the main area of the upper MFD.
- K. Press the PAGE button.
- L. In the pulldown menu, select "Maint".
- M. On the CMC MAIN MENU page, select "SYSTEM DIAGNOSTICS".
- N. Using the scroll wheel and the ENTER button, select
  - "42 INTEGRATED MODULAR AVIONICS", then
  - "20 DATA CONCENTR AND PROCESS UNIT", then
  - "ENTER UMS MAINT MODE".
- 0. On the UMS MAINTENANCE MODE page make sure that the "SET MAINTENANCE MODE SWITCH TO MAINT" status is "MAINT".
- P. Select "ENTER UMS MAINTENANCE MODE".
- Q. Make sure UMS MAINTENANCE MODE STATUS is ON for all eight channels.
- R. Press PAGE button.
- S. In the pulldown menus, select "Synoptic".
- T. On lower MFD, press "SYN" bezel.
- U. Press "ECB" bezel.



V. On the "SET" bezel, set the following ECBs to LOCK:

ECB
Toilet Assy
Toilet Heat
Toilet Pump

W. On the "STATUS" bezel, select "OUT".

**Note**: This will list all the ECBs which are OUT. Whenever an ECB is set to IN in step (V) then it will disappear from this list.

- X. On the "SET" bezel, set all listed ECBs to IN, until the displayed list is empty.
- Y. On the "STATUS" bezel, select "LOCK".
- Z. Make sure that the ECBs which were set to LOCK in step (V) are shown. Make sure no other ECBs are listed as "LOCK".
- AA. Remove the pin from the MAINT MODE switch or release the switch. It moves to the normal position.

**Note**: This will automatically re-boot the UMS in normal mode.

- BB. Put the Maintenance panel cover back on.
- CC. Secure the toilet door (facia panel) closed by using locally procured self-adhesive tape. If feasible, install the tape so that it will preclude operation of the door latch.

**<u>Note</u>**: Make sure the tape is of good quality so that it will not leave traces of adhesive when removed.

# 2. Operations (0)

None required.



# ATA 44 – CABIN SYSTEMS

## 44-00-01A (ALL) – USB charging ports

### 1. Maintenance (M)

Before the first flight under MMEL dispatch conditions, apply the following procedure to open the required Electronic Circuit Breakers (ECB):

- A. Power down the electrical system.
- B. Move the co-pilot seat fully forward to get access to the Maintenance panel on the lower right cockpit side panel.
- C. Remove the Maintenance panel cover which is attached by Velcro strips.
- D. Make sure that the RIGGING switch on the Maintenance Panel is set to OFF.
- E. Set the MAINT MODE switch on the Maintenance Panel to MAINT. Hold it in this position throughout the entire procedure either by inserting a pin or by hand (second person).

**Note:** If the switch is inadvertently released then start the procedure over from step (A).

F. Turn on electrical power (either using Ground or Battery power).

**<u>Note</u>**: Steps (F) through (N) must be performed within 4 minutes. If more time elapses then start the procedure over from step (A).

- G. Verify that the "Maint Switch" CAS message is shown.
- H. Place the cursor in the main area of the upper MFD.
- I. Press the PAGE button.
- J. In the pulldown menu, select "Maint".
- K. On the CMC MAIN MENU page, select "SYSTEM DIAGNOSTICS".
- L. Using the scroll wheel and the ENTER button, select
  - "42 INTEGRATED MODULAR AVIONICS", then
  - "20 DATA CONCENTR AND PROCESS UNIT", then
  - "ENTER UMS MAINT MODE".
- M. On the UMS MAINTENANCE MODE page make sure that the "SET MAINTENANCE MODE SWITCH TO MAINT" status is "MAINT".
- N. Select "ENTER UMS MAINTENANCE MODE".
- 0. Make sure UMS MAINTENANCE MODE STATUS is ON for all eight channels.
- P. Press PAGE button.
- Q. In the pulldown menus, select "Synoptic".
- R. On lower MFD, press "SYN" bezel.
- S. Press "ECB" bezel.
- T. On the "SET" bezel, set the following ECBs to LOCK:

ECB	
USB Chargers	

U. On the "STATUS" bezel, select "OUT".

**Note:** This will list all the ECBs which are OUT. Whenever an ECB is set to IN in step (V) then it will disappear from this list.



- V. On the "SET" bezel, set all listed ECBs to IN, until the displayed list is empty.
- W. On the "STATUS" bezel, select "LOCK".
- X. Make sure that the ECB which was set to LOCK in step (T) is shown. Make sure no other ECBs are listed as "LOCK".
- Y. Remove the pin from the MAINT MODE switch or release the switch. It moves to the normal position.

Note: This will automatically re-boot the UMS in normal mode.

Z. Put the Maintenance panel cover back on.

## 2. Operations (0)

None required.



# **ATA 46 – INFORMATION SYSTEMS**

46-20-01-04A (ALL) - Lower MFD

# 1. Maintenance (M)

None required.

- A. Use the controls on the Display Reversion Control Panel to achieve and acceptable display configuration on the operative displays. Make sure that all required display configurations for the intended flight can be configured.
- B. Make sure that no error messages or crossed-out areas are shown on the ESIS.



This Page Intentionally Left Blank



# ATA 52 - DOORS

# 52-70-01A (ALL) – Cargo door actuation system

# 1. Maintenance (M)

- A. Open the hinged access panel (143FTR) on the rear right hand side of the fuselage.
- B. Pull the following mechanical circuit breaker on PNLB 3321.

СВ	CB Name
<sub>R</sub> E1	DOOR ACT

# 2. Operations (0)

None required.



This Page Intentionally Left Blank