

## CHANGE PROJECT PUB

|                  |                                                              |                   |
|------------------|--------------------------------------------------------------|-------------------|
| <b>FALCON 7X</b> | <b>TIII 5704 – EASy Architecture Robustness Design Issue</b> | <b>CP0177-PUB</b> |
|                  |                                                              |                   |

**These attached documents updated procedures CP0177 are related to  
TIII 5704 – EASy Architecture Robustness Design Issue**

**This set of 2 documents consists of:**

**AFM-CP0177-PUB**

**CODDE2-CP0177-PUB**

**CHANGE PROJECT PUB**

|            |                                                       |                  |
|------------|-------------------------------------------------------|------------------|
|            | TIII 5704 – EASy Architecture Robustness Design Issue | <i>FALCON 7X</i> |
| CP0177-PUB |                                                       |                  |
|            |                                                       |                  |

INTENTIONALLY LEFT BLANK

DASSAULT AVIATION Proprietary Data

|                                                             |                                                                                              |                   |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------------|
| <b>FALCON 7X</b><br><i>Airplane</i><br><i>Flight Manual</i> | <b>GENERAL<br/>REVISIONS</b><br><b>TIII 5704 – EASy Architecture Robustness Design Issue</b> |                   |
|                                                             |                                                                                              | <b>PAGE 1 / 2</b> |
|                                                             |                                                                                              | <b>CP0177-PUB</b> |

These attached AFM updated procedures CP0177 are related to  
TIII 5704 – EASy Architecture Robustness Design Issue.

The technical content of document is approved under the authority of DOA EASA.21J.051  
under change reference CP0177.

Approval Date: June 28, 2021.

Pending next AFM revision, attached pages can be used in conjunction  
with AFM revision 24.

### ACKNOWLEDGEMENT STATUS

For operators from the following countries:

Permanent agreements exist and drive the acknowledgement between EASA and the airworthiness authority associated with each of these countries.

|               | Acknowledgement | Comment |
|---------------|-----------------|---------|
| <b>China</b>  | Yes             |         |
| <b>India</b>  | Yes             |         |
| <b>Mexico</b> | Yes             |         |
| <b>Russia</b> | Yes             |         |
| <b>USA</b>    | Yes             |         |

For other operators:

Local Aviation Authorities are typically able to issue an approval when requested, based on approvals issued either by the EASA or the FAA. Should you experience any difficulty getting such an acknowledgement, please email Dassault at [FalconPilot@dassault-aviation.com](mailto:FalconPilot@dassault-aviation.com) for assistance.

|            |                                                                                              |                                                 |
|------------|----------------------------------------------------------------------------------------------|-------------------------------------------------|
|            | <b>GENERAL<br/>REVISIONS</b><br><b>TIII 5704 – EASy Architecture Robustness Design Issue</b> | <b>FALCON 7X<br/>Airplane<br/>Flight Manual</b> |
| PAGE 2 / 2 |                                                                                              |                                                 |
| CP0177-PUB |                                                                                              |                                                 |

## FILING INSTRUCTIONS

| Title and<br>Approval reference                                                       | Sub-sub-sections changes |                 |               |
|---------------------------------------------------------------------------------------|--------------------------|-----------------|---------------|
|                                                                                       | Removed                  | Added           | Applicability |
| AFM-CP0177- TIII 5704 – EASy Architecture Robustness Design<br>Issue approved by EASA |                          | 2-100-97 CP0177 |               |
|                                                                                       |                          | 2-200-70 CP0177 |               |

***Insert this page in AFM before the “List of AFM revisions” sub-sub-section (0-100-10).***

***Remove AFM-CP0177 pages when AFM revision 25 is received.***

|                                                             |                                                                                           |                   |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------|
| <b>FALCON 7X</b><br><b>Airplane</b><br><b>Flight Manual</b> | <b>EMERGENCY</b><br><b>OPERATING TECHNIQUES</b><br>Inconsistent or unreliable flight data | <b>2-100-97</b>   |
|                                                             |                                                                                           | <b>PAGE 1 / 2</b> |
|                                                             |                                                                                           | <b>CP0177</b>     |

|                                                                  |
|------------------------------------------------------------------|
| <b>INCONSISTENT OR UNRELIABLE FLIGHT DATA IN IPFD AND/OR HUD</b> |
|------------------------------------------------------------------|

- Fly using SFD.
- PILOT SIDE pushbutton ..... Select LH
- Monitor trajectory using INAV.



|                   |                                                                                           |                                                                                  |
|-------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <b>2-100-97</b>   | <b>EMERGENCY</b><br><b>OPERATING TECHNIQUES</b><br>Inconsistent or unreliable flight data | <b><i>FALCON 7X</i></b><br><b><i>Airplane</i></b><br><b><i>Flight Manual</i></b> |
| <b>PAGE 2 / 2</b> |                                                                                           |                                                                                  |
| <b>CP0177</b>     |                                                                                           |                                                                                  |

**INTENTIONALLY LEFT BLANK**

DASSAULT AVIATION Proprietary Data

|                                                             |                                                                     |                   |
|-------------------------------------------------------------|---------------------------------------------------------------------|-------------------|
| <b>FALCON 7X</b><br><i>Airplane</i><br><i>Flight Manual</i> | <b>EMERGENCY</b><br>EMERGENCY PROCEDURES<br>ADS with IRS miscompare | <b>2-200-70</b>   |
|                                                             |                                                                     | <b>PAGE 1 / 2</b> |
|                                                             |                                                                     | <b>CP0177</b>     |

## **AFCS: ADS1 MISCOMPARE AND AFCS: IRS2 MISCOMPARE**

According to flight conditions the following may be observed simultaneously:

- Possible miscompare flags in HUD and PDU (ALT/ATT/IAS/FPV/HDG)
- AP/AT disconnect, with FD and TD red flag in HUD and PDU

- Operating Technique **INCONSISTENT OR UNRELIABLE FLIGHT DATA IN IPFD AND/OR HUD** procedure (section 2-100-97) ..... Applied ➔
- LH and RH **ADS** pushbuttons..... Push to select ADS 3  
☒ On ADI ..... Amber **ADS3**
- LH and RH **IRS** pushbuttons ..... Push to select IRS 3  
☒ On ADI ..... Amber **IRS3**
- HDG bug and ASEL ..... Check
- FD and TD modes ..... Check

### **CAUTION**

Autopilot may be engaged but will disconnect upon vertical trajectory change.

## **AFCS: ADS2 MISCOMPARE AND AFCS: IRS3 MISCOMPARE**

According to flight conditions the following may be observed simultaneously:

- Possible miscompare flags in HUD and PDU (ALT/ATT/IAS/FPV/HDG)
- AP/AT disconnect, with FD and TD red flag in HUD and PDU

- Operating Technique **INCONSISTENT OR UNRELIABLE FLIGHT DATA IN IPFD AND/OR HUD** procedure (section 2-100-97) ..... Applied ➔
- LH and RH **ADS** pushbuttons..... Push to select ADS 1  
☒ On ADI ..... Amber **ADS1**
- LH and RH **IRS** pushbuttons ..... Push to select IRS 1  
☒ On ADI ..... Amber **IRS1**
- HDG bug and ASEL ..... Check
- FD and TD modes ..... Check

### **CAUTION**

Autopilot may be engaged but will disconnect upon vertical trajectory change.

|                   |                                                                                   |                                                                                  |
|-------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <b>2-200-70</b>   | <b>EMERGENCY</b><br><b>EMERGENCY PROCEDURES</b><br><b>ADS with IRS miscompare</b> | <b><i>FALCON 7X</i></b><br><b><i>Airplane</i></b><br><b><i>Flight Manual</i></b> |
| <b>PAGE 2 / 2</b> |                                                                                   |                                                                                  |
| <b>CP0177</b>     |                                                                                   |                                                                                  |

**INTENTIONALLY LEFT BLANK**

DASSAULT AVIATION Proprietary Data

## CHANGE PROJECT PUB

|           |                                                                                |            |
|-----------|--------------------------------------------------------------------------------|------------|
| FALCON 7X | GENERAL<br>REVISIONS<br>TIII 5704 – EASY ARCHITECTURE ROBUSTNESS DESIGN ISSUE) |            |
| CODDE2    |                                                                                | PAGE 1 / 2 |
| DGT105609 |                                                                                | CP0177-PUB |

These attached CODDE2 amended pages are linked with the AFM CP0177 related to  
TIII 5704 – EASy Architecture Robustness Design Issue

The technical content of this document is approved under the authority of DOA EASA.21J.051  
under change reference CP0177.

Approval Date: June 28, 2021.

Pending next CODDE2 revision, attached pages can be used in conjunction  
with CODDE2 revision 24.

### FILING INSTRUCTIONS

| Title                                                                   | CODDE2 Sub-sub-sections changes  |                                |               |
|-------------------------------------------------------------------------|----------------------------------|--------------------------------|---------------|
|                                                                         | Removed                          | Added                          | Applicability |
| CODDE2-CP0177- TIII 5704 – EASy<br>Architecture Robustness Design Issue | 04-05-05 (all pages)<br>issue 13 | 04-05-05 (all pages)<br>CP0177 |               |
|                                                                         | 04-15-10 (all pages)<br>issue 14 | 04-15-10 (all pages)<br>CP0177 |               |

***Insert this page in CODDE2 before the “LIST OF ISSUES” sub-sub-section (00-00-15).***

***Remove CODDE2 CP0177 pages when CODDE2 revision 25 is received.***

## CHANGE PROJECT PUB

|            |                                                                               |           |
|------------|-------------------------------------------------------------------------------|-----------|
|            | GENERAL<br>REVISIONS<br>TIII 5704 – EASY ARCHITECTURE ROBUSTNESS DESIGN ISSUE | FALCON 7X |
| PAGE 2 / 2 |                                                                               | CODDE2    |
| CP0177-PUB |                                                                               | DGT105609 |

INTENTIONALLY LEFT BLANK

|           |                                                                                   |             |
|-----------|-----------------------------------------------------------------------------------|-------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | 04-05-05    |
| CODDE2    |                                                                                   | PAGE 1 / 32 |
| DGT105609 |                                                                                   | CP0177      |

## REJECTED TAKE-OFF

- Any event or failure with or without CAS jeopardizing take-off safety below V1 → (1)

### BELOW V1

- Brakes .....Full braking
- Power levers (All 3) ..... Idle
- AIRBRAKES .....AB2 → (2)
- Thrust reverser .....As required

### NOTE

This procedure addresses the corrective actions linked with **NO TAKE OFF**.

## TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                          | CALL - OUT                                                              |
|-----------------|----|----------------------------------------------------------|-------------------------------------------------------------------------|
| PF              | PM | Monitor and report failures.                             | e.g. "AMBER CAS",<br>"ENGINE", "SMOKE",<br>"DANGER", "RED CAS"<br>→ (1) |
| PIC             |    | Decides and announces the Rejected Take-Off.             | "STOP"                                                                  |
| PF              |    | Applies full braking and sets power levers to idle.      |                                                                         |
|                 | PM | Sets Airbrakes handle to position 2.                     | "AIRBRAKES 2" → (2)                                                     |
| PF              |    | Deploys Thrust reverser.                                 | "REVERSE"                                                               |
|                 | PM | Checks effective deployment of the thrust reverser.      | "DEPLOYED"                                                              |
| PF              |    | Applies thrust reverser as required.                     |                                                                         |
|                 | PM | Advises ATC (IAS < 60 kt).                               | "REJECTING TAKE-OFF"<br>or<br>"ABORTING TAKE-OFF"                       |
| PF              |    | Vacates the runway if possible (except in case of fire). |                                                                         |

## TECHNICAL EXPLANATIONS

### Triggering event

Decision to reject take-off remains the Captain's decision according to circumstances. However, DA recommends, as a general rules, to seriously consider performing the "Rejected take-off" Operating Technique for the following reasons:

- Any significant failure before V1,
- Any external event jeopardizing take-off safety.

### Objectives of the Operating Technique

The "Rejected take-off" Operating Technique leads to interrupting take-off before V1.

|             |                                                                                   |           |
|-------------|-----------------------------------------------------------------------------------|-----------|
| 04-05-05    | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 2 / 32 |                                                                                   | CODDE2    |
| CP0177      |                                                                                   | DGT105609 |

#### NOTE

Any Rejected Take-Off initiated after V1 could lead to a runway overrun.

### Expanded explanations

#### → (1)

Below 80 kt, DA recommends performing an RTO for any failure.

Above 80 kt, DA recommends performing an RTO for the following major failures or events:

- Any red CAS message.
- Failure not indicated by a CAS message, but that leads the crew to believe that the airplane's handling is affected, such as a non-commanded change of trajectory, insufficient acceleration (10 % below expected acceleration), inefficient flight control command, etc.
- Any external event jeopardizing take-off safety.

#### → (2) AIRBRAKES AB2

It is necessary to manually extend the airbrakes despite automatic extension.

### ENGINE FAILURE AT OR AFTER V1

#### ► AT VR

- Rotate the airplane with full aft stick until a positive flight path is achieved.

#### ► AT V2

- Maintain V2 by pitch up and down adjustments, limited to +20° pitch attitude (no thrust adjustment).

#### ► WHEN A POSITIVE FLIGHT PATH IS ESTABLISHED

- Landing gear handle .....Up

#### CAUTION

If the speed achieved when the landing gear is retracted is above V2, maintain the speed attained without exceeding a limit of V2 + 10 kt.

If the conditions make it impossible to maintain the speed below V2+10 with a maximum pitch attitude of 20°, let the airplane accelerate at the current flight path angle.

#### ► AT NOT LESS THAN 400 FT AAL

- Level flight acceleration.

#### NOTE

Slats-Flaps may be set to SF 1 as soon as V2+10 is attained.

#### ► AT VFR:

- SLATS/FLAPS handle .....SF 0

|           |                                                                                           |             |
|-----------|-------------------------------------------------------------------------------------------|-------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>OPERATING TECHNIQUES<br><br>OPERATING TECHNIQUES | 04-05-05    |
| CODDE2    |                                                                                           | PAGE 3 / 32 |
| DGT105609 |                                                                                           | CP0177      |

► **WHEN IN CLEAN CONFIGURATION**

- Maintain VFTO.

► **5 MINUTES MAX. AFTER TAKE-OFF THRUST POWER SETTING**

- Power levers .....CL

**NOTE**

The published take-off performance is achieved when take-off is performed in accordance with AFM section 5.

**EXPANDED EXPLANATION**

After Take-off or Go-Around, the power lever of the operative engine is in TO position (5 minutes maximum). During this time, the airplane air conditioning system is automatically switched off. A transient white **CHECK CABIN RATE** CAS message can be triggered.

|             |                                                                                   |           |
|-------------|-----------------------------------------------------------------------------------|-----------|
| 04-05-05    | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 4 / 32 |                                                                                   | CODDE2    |
| CP0177      |                                                                                   | DGT105609 |

## TASKS AND CALL OUT

| TASK ALLOCATION             |    |                                                                                                                                                                                    | CALL OUT          |
|-----------------------------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| PIC                         |    | Announces take-off continuation.                                                                                                                                                   | "GO"              |
|                             | PM | Announces VR.                                                                                                                                                                      | "ROTATE"          |
| PF                          |    | Rotates (full aft stick) and aligns ROS with horizon.<br>After ROS disappearance, follows FD TO guidance.                                                                          |                   |
|                             | PM | Announces positive rate of climb.                                                                                                                                                  | "POSITIVE RATE"   |
| PF                          |    | Requests landing gear retraction.                                                                                                                                                  | "GEAR UP"         |
|                             | PM | Retracts landing gear.<br>Checks appropriate indication.<br>Announces landing gear position.<br>Sets taxi light off, and landing lights PULSE.<br>Sets wings anti-ice as required. | "GEAR IS UP"      |
| AT OR ABOVE 400FT AAL       |    |                                                                                                                                                                                    |                   |
| PF                          |    | Requests AP ON.                                                                                                                                                                    | "AUTOPILOT ON"    |
|                             | PM | Selects AP ON.<br>Checks FMA.<br>Announces AP status.                                                                                                                              | "AUTOPILOT IS ON" |
| AT TAKE-OFF SAFETY ALTITUDE |    |                                                                                                                                                                                    |                   |
|                             | PM | Announces take-off safety altitude.                                                                                                                                                | "TOSA"            |
| PF                          |    | Checks aircraft is accelerating to VFT.                                                                                                                                            |                   |
| AT VFR                      |    |                                                                                                                                                                                    |                   |
|                             | PM | Announces when speed is greater than VFR (V2+30 kt).                                                                                                                               | "ABOVE VFR"       |
| PF                          |    | Requests slats / flaps retraction.                                                                                                                                                 | "SF0"             |
|                             | PM | Retracts (one notch at a time).<br>Checks appropriate indication and announces Slats/Flaps position.                                                                               | "SF CLEAN SET"    |
| AT VFT                      |    |                                                                                                                                                                                    |                   |
|                             | PM | Announces when speed is greater than VFT.                                                                                                                                          | "VFT"             |
| PF                          |    | Sets Max Climb Thrust on live engines.<br>Follows SID with full automation except AT.                                                                                              | "MAX CLIMB"       |
| WHEN CLEAR OF OBSTACLES     |    |                                                                                                                                                                                    |                   |
| PF                          |    | Sets appropriate FD mode and speed as required.<br>Announces vertical mode and speed.                                                                                              |                   |

|           |                                                                                           |             |
|-----------|-------------------------------------------------------------------------------------------|-------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>OPERATING TECHNIQUES<br><br>OPERATING TECHNIQUES | 04-05-05    |
| CODDE2    |                                                                                           | PAGE 5 / 32 |
| DGT105609 |                                                                                           | CP0177      |

#### GO AROUND – ONE ENGINE INOPERATIVE (APPROACH WITH SF 3)

- TOGA pushbutton..... Push
- Rotate the airplane until a positive flight path is achieved.
- Power levers..... TO
- SLATS/FLAPS handle .....SF 2
- Maintain the approach speed by pitch up and down adjustments, limited to +20° pitch attitude (no thrust adjustment).
- ▶ **WHEN A POSITIVE FLIGHT PATH IS ESTABLISHED**
- Landing gear handle .....Up
- SLATS/FLAPS handle .....SF 1
- ▶ **AT NOT LESS THAN 800 FT AAL**
- Level flight acceleration.
- ▶ **AT VFR:**
- SLATS/FLAPS handle .....SF 0
- ▶ **WHEN IN CLEAN CONFIGURATION**
- Maintain VFTO.
- ▶ **5 MINUTES MAX. AFTER TAKE-OFF THRUST POWER SETTING**
- Power levers.....CL

#### EXPANDED EXPLANATION

After Take-off or Go-Around, the power lever of the operative engine is in TO position (5 minutes maximum). During this time, the airplane air conditioning system is automatically switched off. A transient white **CHECK CABIN RATE** CAS message can be triggered.

|             |                                                                                           |           |
|-------------|-------------------------------------------------------------------------------------------|-----------|
| 04-05-05    | EMERGENCY AND ABNORMAL OPERATIONS<br><br>OPERATING TECHNIQUES<br><br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 6 / 32 |                                                                                           | CODDE2    |
| CP0177      |                                                                                           | DGT105609 |

## TASKS AND CALL OUT

| TASK ALLOCATION              |    |                                                                                                                                      | CALL-OUT          |
|------------------------------|----|--------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| PF                           | PM | Decide to go-around.                                                                                                                 | "GO-AROUND SF2"   |
| PF                           |    | Pushes the TOGA pushbutton.<br>Follows the FD in LNAV-GA mode.<br>Sets take-off thrust.                                              |                   |
|                              | PM | Retracts slats flaps to SF2.<br>Checks appropriate indication.<br>Announces Slats/Flaps position.<br>Checks Airbrakes are retracted. | "SF 2 SET"        |
| WHEN POSITIVE RATE OF CLIMB  |    |                                                                                                                                      |                   |
|                              | PM | Announces positive rate of climb.                                                                                                    | "POSITIVE RATE"   |
| PF                           |    | Requests landing gear retraction.                                                                                                    | "GEAR UP"         |
|                              | PM | Retracts landing gear.<br>Checks appropriate indication.<br>Announces landing gear position.                                         | "GEAR IS UP"      |
| PF                           |    | Request SF1.                                                                                                                         | "SF1"             |
|                              | PM | Retracts slats flaps to SF1.<br>Checks indication in PDU and announces Slats/Flaps position.                                         | "SF1 SET"         |
| AT OR ABOVE 400FT            |    |                                                                                                                                      |                   |
| PF                           |    | Requests AP.                                                                                                                         | "AUTOPILOT ON"    |
|                              | PM | Engages AP.<br>Confirms AP is engaged on FMA.                                                                                        | "AUTOPILOT IS ON" |
| AT GO-AROUND SAFETY ALTITUDE |    |                                                                                                                                      |                   |
|                              | PM | Announces go-around safety altitude.                                                                                                 | "GASA"            |
| PF                           |    | Checks airplane is accelerating to VFT.                                                                                              |                   |
| AT VFR                       |    |                                                                                                                                      |                   |
|                              | PM | Announces when speed is greater than VFR.                                                                                            | "ABOVE VFR"       |
| PF                           |    | Requests Slats/Flaps retraction.                                                                                                     | "SF0"             |
|                              | PM | Retracts (one notch at a time) and checks appropriate indication.<br>Announces Slats/Flaps position.                                 | "SF CLEAN SET"    |
| AT VFT                       |    |                                                                                                                                      |                   |
| PF                           |    | Sets Max Climb Thrust on live engines.<br>Follows missed approach with full automation except AT.                                    | "MAX CLIMB"       |
| WHEN CLEAR OF OBSTACLES      |    |                                                                                                                                      |                   |
| PF                           |    | Sets appropriate FD mode and speed as required.<br>Announces vertical mode and speed.                                                |                   |

|           |                                                                                   |             |
|-----------|-----------------------------------------------------------------------------------|-------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | 04-05-05    |
| CODDE2    |                                                                                   | PAGE 7 / 32 |
| DGT105609 |                                                                                   | CP0177      |

## EMERGENCY DESCENT

### CAUTION

The following procedure assumes structural integrity of the airplane.

If structural integrity is questioned:

- Limit airspeed to lowest practicable value,
- Avoid high maneuvering load factors.

- INTERIOR LIGHTS: **FASTEN BELT** pushbutton ..... Push  
☒ Status light ..... Blue **ON**
- Autopilot ..... Disconnect
- Power levers (all 3) ..... Idle
- AIRBRAKES ..... AB2
- Descent airspeed ..... MMO / VMO, smooth air conditions
- Transponder ..... 7700

COMMENTS: This configuration permits a high rate of descent while remaining within the MMO/VMO limits.

Airbrakes may be used in all flight envelope.

COMMENTS: To avoid high load factors, anticipate the level-off according to the rate of descent.

Select a safe en-route altitude to continue the flight and achieve a safe landing.

The amount of supplemental oxygen required shall be determined for the most critical point of the flight.

## TASKS AND CALL OUT

| TASK ALLOCATION |                                                                                                                                                           | CALL - OUT          |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| PIC             | Calls for Emergency Descent.                                                                                                                              | "EMERGENCY DESCENT" |
| PF              | Disconnects AP.                                                                                                                                           |                     |
| PF              | Sets Power Levers to idle.                                                                                                                                |                     |
| PF              | Sets airbrakes handle to position 2.                                                                                                                      |                     |
| PF              | Adopts diverging heading $\pm 30^\circ$ as required.<br>Initiates descent to maximum appropriate speed, reducing speed if structural damage is suspected. |                     |
| PM              | Selects MEA or FL100 in ASEL.                                                                                                                             |                     |

### NOTE

Once descent is established, AP can be reengaged in HDG and PATH modes.

|             |                                   |           |
|-------------|-----------------------------------|-----------|
| 04-05-05    | EMERGENCY AND ABNORMAL OPERATIONS | FALCON 7X |
| PAGE 8 / 32 | OPERATING TECHNIQUES              | CODDE2    |
| CP0177      | OPERATING TECHNIQUES              | DGT105609 |

## TECHNICAL EXPLANATIONS

### Triggering event

Rapid depressurization.

### Objectives of the Operating Technique

The “EMERGENCY DESCENT” Operating Technique leads both crew members to set the airplane on the highest rate of descent.

### Expanded explanations

None.

## RAPID DEPRESSURIZATION

- Operating technique **CREW RESPIRATORY PROTECTION** procedure (section 04-05-05) ..... Applied. ➔
- Operating technique **EMERGENCY DESCENT** procedure (section 04-05-05) ..... Applied. ➔

## TASKS AND CALL OUT

Refer to “Crew oxygen protection” (ATA35) and “Emergency Descent” Operating techniques.

## TECHNICAL EXPLANATIONS

### Triggering event

The “RAPID DEPRESSURIZATION” Operating Technique must be triggered by the crew when rapid depressurization is identified, even if not annunciated by any alert through the aircraft interface.

### Objectives of the Operating Technique

The “RAPID DEPRESSURIZATION” Operating Technique leads both crew members to wear their mask and initiate an emergency descent.

### Expanded explanations

None.

|           |                                                                                   |             |
|-----------|-----------------------------------------------------------------------------------|-------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | 04-05-05    |
| CODDE2    |                                                                                   | PAGE 9 / 32 |
| DGT105609 |                                                                                   | CP0177      |

## UNWANTED DISCONNECTION OF AUTOPILOT

**AUTOPILOT voice warning,**  
PDU ADI window:  symbol flashing.

-  pushbutton or AP quick disconnect pushbutton..... Push
- Re-engage autopilot in normal flight conditions. → (1)

## TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                                                 | CALL - OUT                      |
|-----------------|----|---------------------------------------------------------------------------------|---------------------------------|
| PF              |    | Manually flies the airplane.                                                    |                                 |
| PF              |    | Silences the alarm. → (1)                                                       |                                 |
| PF              |    | If necessary, requests the AP reconnection.                                     | "AP ON"                         |
|                 | PM | Upon PF's request, attempts to reengage AP and checks its effective engagement. | "AP IS ON"<br>Or<br>"AP IS OFF" |

## TECHNICAL EXPLANATIONS

### Triggering event

- Aural alert "AUTOPILOT",
-  flag flashing on PDU's ADI window,
- Not annunciated AP disconnection.

### Objectives of the Operating Technique

The "AP DISCONNECTION" Operating Technique leads the PF to manually fly the airplane.

### Expanded explanations

#### → (1) Silence the alarm

The PF can silence the "AUTOPILOT" aural alarm using the AP/PTY pushbutton on sidestick, or the SIL pushbutton on the Guidance Panel.

|              |                                                                                   |           |
|--------------|-----------------------------------------------------------------------------------|-----------|
| 04-05-05     | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 10 / 32 |                                                                                   | CODDE2    |
| CP0177       |                                                                                   | DGT105609 |

## UNWANTED DISCONNECTION OF AUTOTHROTTLE

**AUTOTHROTTLE voice warning,**  
PDU ADI: **A/T** amber flashing.

- AT/DISC pushbutton..... Push
- Try to re-engage the autothrottle. ➔ (1)
- **If the re-engagement cannot be achieved:**
  - Continue the flight without autothrottle.

## TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                                                 | CALL - OUT                      |
|-----------------|----|---------------------------------------------------------------------------------|---------------------------------|
| PF              |    | Manually controls the throttle.                                                 |                                 |
| PF              |    | Silences the alarm. ➔ (1)                                                       |                                 |
| PF              |    | If necessary, call for the AT reconnection.                                     | "AT ON"                         |
|                 | PM | Upon PF's request, attempts to reengage AT and checks its effective engagement. | "AT IS ON"<br>Or<br>"AT IS OFF" |

## TECHNICAL EXPLANATIONS

### Triggering event

- Aural alert "AUTOTHROTTLE",
- **A/T** flag flashing on PDU's ADI window,
- Unannunciated AT disconnection.

### Objectives of the Operating Technique

The "AT disconnection" Operating Technique leads the PF to manually control the engines throttles.

### Expanded explanations

#### ➔ (1) Silence the alarm

The PF can silence the "AUTOTHROTTLE" aural alarm using the AT push-button on the power levers.

|           |                                                                                           |              |
|-----------|-------------------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>OPERATING TECHNIQUES<br><br>OPERATING TECHNIQUES | 04-05-05     |
| CODDE2    |                                                                                           | PAGE 11 / 32 |
| DGT105609 |                                                                                           | CP0177       |

#### OVERSPEED ALERT

- AP ..... Disengage
- Adjust power setting and / or path to decrease speed.
- AIRBRAKES handle ..... As required

#### NOTE

Pull up maneuver engaged by FBW system should not be counteracted by the crew.

#### TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                                 | CALL - OUT        |
|-----------------|----|-----------------------------------------------------------------|-------------------|
| PF              | PM | Emergency situation is identified.                              | "OVERSPEED"       |
| PF              |    | Disconnects AP and flies the airplane manually.                 | "I HAVE CONTROLS" |
| PF              |    | Sets Power levers to Idle.                                      |                   |
| PF              |    | Uses Airbrakes as required.                                     |                   |
| PF              |    | Does not counteract pull-up maneuver engaged by the FBW system. |                   |
| PF              |    | Maneuver with caution.                                          |                   |

#### TECHNICAL EXPLANATIONS

##### Triggering event

- Aural alert VMO/MMO.

##### Objectives of the Operating Technique

The "OVERSPEED RECOVERY" Operating Technique leads the crew to reduce power levers setting to idle and, if required, to use airbrakes.

##### Expanded explanations

None.

|              |                                                                                   |           |
|--------------|-----------------------------------------------------------------------------------|-----------|
| 04-05-05     | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 12 / 32 |                                                                                   | CODDE2    |
| CP0177       |                                                                                   | DGT105609 |

#### INCONSISTENT OR UNRELIABLE FLIGHT DATA IN IPFD AND/OR HUD

- Fly using SFD.
- PILOT SIDE pushbutton .....Select LH
- Monitor trajectory using INAV.

#### INCREASE SPEED ALERT

- Power setting ..... Adjust
- AP ..... Disengage
- Path angle ..... Adjust to increase speed

#### TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                | CALL - OUT        |
|-----------------|----|------------------------------------------------|-------------------|
| PF              | PM | Situation is identified.                       |                   |
| PF              |    | Adjusts power and / or path to increase speed. | "I HAVE CONTROLS" |

#### TECHNICAL EXPLANATIONS

##### Triggering event

- Aural alert "INCREASE SPEED".

##### Objectives of the Operating Technique

The "INCREASE SPEED" Operating Technique leads the PF to increase the speed by adjusting power and path.

##### Expanded explanations

None.

#### STALL

##### "STALL" voice warning

SIMULTANEOUSLY and smoothly:

- Autopilot and Autothrottle ..... Disconnect
- Pitch control ..... Nose down
- Bank ..... Wings level
- Power levers ..... TO
- AIRBRAKES ..... AB 0

|           |                                                                                           |              |
|-----------|-------------------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>OPERATING TECHNIQUES<br><br>OPERATING TECHNIQUES | 04-05-05     |
| CODDE2    |                                                                                           | PAGE 13 / 32 |
| DGT105609 |                                                                                           | CP0177       |

► **AFTER STALL RECOVERY:**

- Pitch Attitude ..... Close to horizon
- Thrust ..... Adjust

**TASKS AND CALL OUT**

| TASK ALLOCATION |    |                                                          | CALL - OUT        |
|-----------------|----|----------------------------------------------------------|-------------------|
| PF              | PM | Emergency situation is identified.                       | "I HAVE CONTROLS" |
| PF              |    | Disconnects A/P and A/T and manually takes-over.         |                   |
| PF              |    | Lower the nose and level the wings.                      |                   |
| PF              |    | Sets thrust to Take-Off power.                           |                   |
| PF              |    | Sets airbrakes manual handle in position 0.              |                   |
| PF              |    | After stall recovery, adjust pitch and thrust as needed. |                   |

**TECHNICAL EXPLANATIONS**

**Triggering event**

The "STALL RECOVERY" Operating Technique must be triggered by the crew for following reasons:

- Aural alert "Stall".

**Objectives of the Operating Technique**

The "STALL RECOVERY" Operating Technique leads the crew to reduce angle of attack, by:

- Reducing flight path angle (if trajectory permits).
- Increasing power levers setting,

**Expanded explanations**

In case of stall warning, airbrakes will possibly auto-retract.

|              |                                                                                           |           |
|--------------|-------------------------------------------------------------------------------------------|-----------|
| 04-05-05     | EMERGENCY AND ABNORMAL OPERATIONS<br><br>OPERATING TECHNIQUES<br><br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 14 / 32 |                                                                                           | CODDE2    |
| CP0177       |                                                                                           | DGT105609 |

## UNUSUAL ATTITUDE RECOVERY

*COMMENTS : The two following Operating Techniques are not in the Airplane Flight Manual but they provide the crew with adequate recovery techniques of nose-up and nose-down unusual attitudes.*

### UNUSUAL ATTITUDE RECOVERY - NOSE UP

- Autopilot and Autothrottle ..... Disconnect
- Power levers ..... TO
- Bank the aircraft by the shortest way ..... 80° to 90° Bank
- AIRBRAKES ..... AB 0
- **WHEN AIRCRAFT NOSE IS CLOSE TO HORIZON:**
- Bank ..... Wings level
- Thrust ..... Adjust

### UNUSUAL ATTITUDE RECOVERY - NOSE DOWN

- Autopilot and Autothrottle ..... Disconnect
- Power levers ..... Idle
- Bank ..... Wings level
- AIRBRAKES ..... As required
- Nose up pitch control ..... Smoothly apply
- **WHEN AIRCRAFT NOSE IS CLOSE TO HORIZON:**
- AIRBRAKES ..... AB 0
- Thrust ..... Adjust

|           |                                                                                   |              |
|-----------|-----------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | 04-05-05     |
| CODDE2    |                                                                                   | PAGE 15 / 32 |
| DGT105609 |                                                                                   | CP0177       |

## AIRBRAKE AUTO EXTEND FAIL

– **FCS: AB AUTO EXTEND FAIL**

► AIRBRAKES ..... AB 2 → (1)

### TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                    | CALL - OUT       |
|-----------------|----|----------------------------------------------------|------------------|
| PF              | PM | Emergency situation identified.                    | "AIRBRAKES FAIL" |
| PM              |    | Pulls Airbrakes Manual Handle in position 2. → (1) | "AIRBRAKES TWO"  |

### TECHNICAL EXPLANATIONS

#### Triggering event

- Red CAS message: **FCS: AB AUTO EXTEND FAIL**,
- Crew identification of automatic airbrake extension failure during landing.

#### Objectives of the Operating Technique

The "AIRBRAKES AUTO EXTEND FAIL" Operating Technique leads the crew to manually extend airbrakes at landing.

#### Expanded explanations

#### → (1) AIRBRAKES AB2

With regard to airbrakes operation, DA recommends that it should always be performed:

- By PF in flight,
- By PM on ground.

|              |                                                                                   |           |
|--------------|-----------------------------------------------------------------------------------|-----------|
| 04-05-05     | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 16 / 32 |                                                                                   | CODDE2    |
| CP0177       |                                                                                   | DGT105609 |

## AIRBRAKE AUTO RETRACT FAIL

– **FCS: AB AUTO RETRACT FAIL**

► AIRBRAKES .....AB0 → (1)

### TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                       | CALL - OUT       |
|-----------------|----|-------------------------------------------------------|------------------|
| PF              | PM | Emergency situation identified.                       |                  |
| PF              |    | Retracts Airbrakes Manual Handle in position 0. → (1) | "AIRBRAKES ZERO" |

### TECHNICAL EXPLANATIONS

#### Triggering event

- Red CAS message: **FCS : AB AUTO RETRACT FAIL**,
- Crew identification of automatic airbrakes retraction failure, during Go-Around or at high angle of attack.

#### Objectives of the Operating Technique

The "AIRBRAKE AUTO RETRACT FAIL" Operating Technique leads the crew to manually retract airbrakes if:

- Airbrakes auto-retraction fails while low speed protection limit is reached, or
- Engines are at Take-Off power after airbrakes have been manually extended, or
- Flaps are extended while inboard airbrakes are not retracted.

#### Expanded explanations

##### → (1) AIRBRAKES AB0

Airbrakes operations should be performed:

- By the PF in flight,
- By the PM on ground.

|           |                                                                                   |              |
|-----------|-----------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | 04-05-05     |
| CODDE2    |                                                                                   | PAGE 17 / 32 |
| DGT105609 |                                                                                   | CP0177       |

## BACK-UP

**"BACK-UP OPERATIVE" voice warning.**

- Use pitch trim for pitch control and rudder pedals for roll control. → (1)

## TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                                             | CALL - OUT        |
|-----------------|----|-----------------------------------------------------------------------------|-------------------|
| PF              | PM | Emergency situation identified.                                             |                   |
| PF              |    | Uses pitch trim for pitch control and rudder pedals for roll control. → (1) | "I HAVE CONTROLS" |
| PF              |    | Announces when the airplane is under control. → (2)                         | "UNDER CONTROL"   |

## TECHNICAL EXPLANATIONS

### Triggering event

Loss of control by MFCC and SFCC, identified by the aural alert: "BACK-UP OPERATIVE".

### Objectives of the Operating Technique

The "BACK-UP" Operating Technique leads the crew to use pitch trim for pitch control and rudder pedals for roll control, after failure of MFCC and SFCC.

### Expanded explanations

Transition to Back-up mode has a very low probability of occurrence and no credit is taken for it with regard to certification.

- (1) Use pitch trim for pitch control and rudder pedals for roll control.

The Back-Up computer allows roll control through the use of spoilers commanded by the pedals. Sidesticks are inoperative in back-up mode.

- (2) Calls out "Airplane Under control"

Once the airplane trajectory is under control, the PF is able to handle communication and navigation tasks, allowing the PM to proceed with the Emergency Procedure.

|              |                                                                                   |           |
|--------------|-----------------------------------------------------------------------------------|-----------|
| 04-05-05     | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 18 / 32 |                                                                                   | CODDE2    |
| CP0177       |                                                                                   | DGT105609 |

## DIRECT LAWS

### "DIRECT LAWS" voice warning

- Sidesticks ..... Neutral position
- Maneuver with caution. → (1)

### TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                      | CALL - OUT        |
|-----------------|----|------------------------------------------------------|-------------------|
| PF              | PM | Emergency situation identified.                      |                   |
| PF              |    | Releases sidestick then Maneuver with caution. → (1) | "I HAVE CONTROLS" |
| PF              |    | Announces when the airplane is under control. → (2)  | "UNDER CONTROL"   |

### TECHNICAL EXPLANATIONS

#### Triggering event

Loss of control by MFCC or degradation of MFCC flight control laws, identified by the aural alert: "DIRECT LAWS".

#### Objectives of the Operating Technique

The "DIRECT LAWS" Operating Technique leads the crew to smooth the airplane maneuvers.

#### Expanded explanations

##### → (1) Release sidestick then Maneuver with caution

Sidestick movement should be limited as Angle Of Attack, attitude and G-load protections are lost.

##### → (2) Calls out "Airplane Under control"

Once airplane trajectory is under control, the PF is able to handle communication and navigation tasks, allowing the PM to proceed with the Emergency Procedure.

|           |                                                                                   |              |
|-----------|-----------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | 04-05-05     |
| CODDE2    |                                                                                   | PAGE 19 / 32 |
| DGT105609 |                                                                                   | CP0177       |

## CONTROL SURFACE JAM

– **FCS: CONTROL SURFACE JAM**

- Maneuver with caution.
- Maintain current speed or reduce below red tape if more restrictive, and maintain configuration.

## TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                                                                   | CALL – OUT            |
|-----------------|----|---------------------------------------------------------------------------------------------------|-----------------------|
| PF              | PM | Emergency situation identified.                                                                   | “CONTROL SURFACE JAM” |
| PF              |    | Maintains current speed or reduce below red tape if more restrictive and maintains configuration. | “I HAVE CONTROLS”     |
| PF              |    | Announces when the airplane is under control. → (1)                                               | “UNDER CONTROL”       |

## TECHNICAL EXPLANATIONS

### Triggering event

Jamming of one aileron, spoiler, elevator or of the rudder, identified by the CAS message **FCS: CONTROL SURFACE JAM**.

### Expanded explanation

#### → (1) Airplane Under control

Once the airplane trajectory and configuration are under control, PF is able to handle communication and navigation tasks, allowing the PM to proceed with the Emergency Procedure.

|              |                                                                                   |           |
|--------------|-----------------------------------------------------------------------------------|-----------|
| 04-05-05     | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 20 / 32 |                                                                                   | CODDE2    |
| CP0177       |                                                                                   | DGT105609 |

## SIDESTICK PRIORITY

"XX SIDESTICK FAIL" voice warning

- **FCS: XX SIDESTICK FAIL**,
- or
- One sidestick jammed,
- Incapacitation of one crew member,
- Loss or damage of artificial feel.

- Use valid sidestick to control the airplane.
- On valid sidestick AP/PTY pushbutton .....Press for at least 30 sec.

### CAUTION

Do not press AP/PTY pushbutton on jammed sidestick.

*COMMENTS: All pushbuttons on failed sidestick are operative.*

## TASKS AND CALL OUT

| TASK ALLOCATION            |    |                                                                   | CALL – OUT        |
|----------------------------|----|-------------------------------------------------------------------|-------------------|
| PF                         | PM | Emergency situation identified.                                   |                   |
| Pilot on affected side     |    | Requests transfer of control.                                     | "YOUR CONTROL"    |
| Pilot on non affected side |    | Acknowledges transfer of control.                                 | "I HAVE CONTROLS" |
| Pilot on non affected side |    | Pushes AP/PTY pushbutton on sidestick during at least 30 seconds. |                   |
| Pilot on non affected side |    | Controls the airplane with the valid sidestick.                   |                   |

## TECHNICAL EXPLANATIONS

### Triggering event

- Mechanical Failure of one sidestick, including jam, high friction or complete or partial loss of artificial feel: this failure does not trigger any CAS message,
- Hardware failure of one sidestick, indicated by red CAS message **FCS: XX SIDESTICK FAIL** and **XX SIDESTICK FAIL** aural alert,
- Incapacitation of one crew member.

|           |                                                                                   |              |
|-----------|-----------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | 04-05-05     |
| CODDE2    |                                                                                   | PAGE 21 / 32 |
| DGT105609 |                                                                                   | CP0177       |

## Objectives of the Operating Technique

The "SIDESTICK PRIORITY" Operating Technique leads to having only one sidestick active.

## Expanded explanation

None.

## PITCH TRIM RUNAWAY

Pitch Trim Runaway

Possibly: **FCS: TRIM LIMIT**, **FCS: THS DEGRAD**, **FCS: ALTN LAWS ACTIVE** and **AFCS: AP FAIL** messages in CAS.

- Counteract using sidestick → (1)
- Counteract using the manual pitch trim → (1)
- Emergency panel: **TRIM EMERG** pushbutton ..... Push → (2)
  - ☒ Status light ..... Amber **ON**
  - ☒ **FCS: THS DEGRAD**, **FCS: ALTN LAWS ACTIVE** and **AFCS: AP FAIL** appear.

## TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                                                      | CALL - OUT     |
|-----------------|----|--------------------------------------------------------------------------------------|----------------|
| PF              | PM | Emergency situation identified.                                                      | "TRIM RUNAWAY" |
| PF              |    | Counteracts unwanted pitch effect using sidestick and manual trim control. → (1)     |                |
| PM              |    | Stops the pitch trim runaway by using the trim emergency pushbutton on PF's request. |                |

## TECHNICAL STATUS

| SYSTEM | LOST              | AVAILABLE         |
|--------|-------------------|-------------------|
| DFCS   | PITCH AUTO TRIM   | MANUAL PITCH TRIM |
| DFCS   | NORMAL THS MOTORS | BACK UP THS MOTOR |
| DFCS   | NORMAL LAWS       | ALTERNATE LAWS    |
| AFCS   | AUTO PILOT        | X                 |

## TECHNICAL EXPLANATIONS

### Triggering event

- Pitch trim runaway not detected by the automatic protections loops, or
- Pitch trim runaway triggered in manual operation.

|              |                                                                                           |           |
|--------------|-------------------------------------------------------------------------------------------|-----------|
| 04-05-05     | EMERGENCY AND ABNORMAL OPERATIONS<br><br>OPERATING TECHNIQUES<br><br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 22 / 32 |                                                                                           | CODDE2    |
| CP0177       |                                                                                           | DGT105609 |

### Objectives of the Operating Technique

The “PITCH TRIM RUNAWAY” leads to crew to counteract unwanted pitch effect due to pitch trim runaway.

### Expanded explanation

#### → (1) Counteract pitch effect

The crew must apply continuous pressure on sidestick if the airplane is not trimmed.

#### → (2) Emergency panel: **TRIM EMERG** pushbutton: Push

This action:

- Stops any trim runaway by shutting down electrical power for THS motor 3 and 4.
- Allows the crew to use the manual pitch through the THS back up motor.

|           |                                                                                   |              |
|-----------|-----------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | 04-05-05     |
| CODDE2    |                                                                                   | PAGE 23 / 32 |
| DGT105609 |                                                                                   | CP0177       |

## RUDDER TRIM RUNAWAY

Slipping tendency and roll effect

- Counteract using pedals and the manual yaw trim. → (1)
- Crew must apply continuous pressure on pedals if airplane is not autotrimmed.
- Engine differential thrust can be set to compensate a possible slipping tendency.

## TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                                                                 | CALL – OUT     |
|-----------------|----|-------------------------------------------------------------------------------------------------|----------------|
| PF              | PM | Emergency situation identified.                                                                 | "TRIM RUNAWAY" |
| PF              |    | Counteracts slipping tendency and roll effect through pedals and yaw manual trim control. → (1) |                |

## TECHNICAL EXPLANATIONS

### Triggering event

This failure rudder trim when manually used by the crew.

### Objectives of the Operating Technique

The "RUDDER TRIM OPERATING TECHNIQUE" leads the crew to counteract unwanted yaw effect due to rudder trim runaway.

### Expanded explanation

#### → (1) Counteract slipping tendency

The crew must apply continuous pressure on pedals if the airplane is not auto-trimmed.

Engine differential thrust can be set to compensate a possible slipping tendency.

If in Normal or Alternate Flight Control laws, the PM can attempt to reconnect the AP upon PF's request.

|              |                                                                                   |           |
|--------------|-----------------------------------------------------------------------------------|-----------|
| 04-05-05     | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 24 / 32 |                                                                                   | CODDE2    |
| CP0177       |                                                                                   | DGT105609 |

#### TOTAL LOSS OF NORMAL BRAKING

- **BRAKE: BOTH SYSTEMS FAIL**

#### AIRPLANE ON GROUND

- Thrust reverser .....As required
- Apply brake pressure slowly by gently pulling PARK BRAKE handle.
- On PDU: Deceleration on dry runway .....Maintain – 0.25 g
- AIRBRAKES ..... AB 2

#### CAUTION

Avoid PARK BRAKE handle cycling applications.

#### TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                                                                                           | CALL - OUT         |
|-----------------|----|---------------------------------------------------------------------------------------------------------------------------|--------------------|
| PF              | PM | Emergency situation identified.                                                                                           | "BOTH BRAKES FAIL" |
| PF              |    | Deploys thrust reverser.                                                                                                  | "REVERSE"          |
|                 | PM | Checks effective deployment of the thrust reverser.                                                                       | "DEPLOY"           |
| PF              |    | Pulls Park Brake handle below first detent, to reach and maintain adequate deceleration rate (max -0.25 on a dry runway). | "PARK BRAKE"       |
|                 | PM | Reads the deceleration rate on PDU.                                                                                       | "INDICATED G"      |
|                 | PM | Pulls Airbrakes Manual Handle in position 2.                                                                              | "AIRBRAKES TWO"    |

#### TECHNICAL EXPLANATIONS

##### Triggering event

The "TOTAL LOSS OF BRAKING" Operating Technique must be triggered by the crew for the following reasons:

- Red CAS message: **BRAKE: BOTH SYSTEMS FAIL** confirmed by PF,
- Crew identification of loss of normal braking system.

##### Objectives of the Operating Technique

The "TOTAL LOSS OF BRAKING" Operating Technique leads crew to use Park Brake rather than normal braking system.

##### Expanded explanation

None.

|           |                                                                                   |              |
|-----------|-----------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | 04-05-05     |
| CODDE2    |                                                                                   | PAGE 25 / 32 |
| DGT105609 |                                                                                   | CP0177       |

## CREW RESPIRATORY PROTECTION

### "CABIN" voice warning,

- smoke and unusual odors,
- Rapid depressurization,

- Full face masks.....Don
- Crew oxygen mode selector ..... EMGY
  - ☒ Yellow blinker ..... Checked

## TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                                | CALL - OUT |
|-----------------|----|----------------------------------------------------------------|------------|
| PF              | PM | Emergency situation identified.                                |            |
| PF              | PM | Don their quick donning oxygen masks and verify oxygen supply. | "OXYGEN"   |
| PF              | PM | Select "Mask" on Audio Control Panel and test communication.   |            |

### NOTE

MIC button on the storage box should be in "MASK" position at all times.

## TECHNICAL EXPLANATIONS

### Triggering event

The "CREW OXYGEN PROTECTION" Operating Technique must be triggered by the crew for the following reasons:

- Rapid depressurization,
- Smoke in the cockpit,
- Aural alert **CABIN**.

### Objectives of the Operating Technique

The "CREW OXYGEN PROTECTION" Operating Technique leads both crew members to don their mask.

### Expanded explanation

None.

|              |                                                                                           |           |
|--------------|-------------------------------------------------------------------------------------------|-----------|
| 04-05-05     | EMERGENCY AND ABNORMAL OPERATIONS<br><br>OPERATING TECHNIQUES<br><br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 26 / 32 |                                                                                           | CODDE2    |
| CP0177       |                                                                                           | DGT105609 |

## PULL UP

"PULL UP" or "TERRAIN AHEAD PULL UP" or "OBSTACLE AHEAD PULL UP" voice warning

- **PULL UP** in PDU
- **PULL UP** in HUD

- Autopilot..... Disconnect
- Level the wings.
- Sidestick fully aft.
- Power levers..... TO
- SLATS/FLAPS..... SF2 maximum
- Landing gear handle.....Up
  - ☒ On HSI: GEAR symbols (all 3)..... Out

## TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                                                             | CALL - OUT         |
|-----------------|----|---------------------------------------------------------------------------------------------|--------------------|
| PF              | PM | Emergency situation is identified.                                                          |                    |
| PF              |    | Announces a pull-up maneuver.                                                               | "PULL-UP RECOVERY" |
| PF              |    | Disconnects AP.                                                                             | "I HAVE CONTROLS"  |
| PF              |    | Pulls sidestick fully aft.                                                                  |                    |
| PF              |    | Sets Power Levers to Take Off.                                                              |                    |
| PF              |    | Requests SF2 if in SF3.                                                                     | "SF2"              |
|                 | PM | Sets SF2 on PF's request and checks slats/flaps effective retraction.                       | "SF2 SET"          |
| PIC             |    | Requests gear retraction as required, once risk of contact with ground has been eliminated. | "GEAR UP"          |
|                 | PM | Retracts the gear on PIC's request and checks its effective retraction.                     | "GEAR IS UP"       |
| PF              |    | Maintains positive rate of climb until safety altitude is reached.                          |                    |

## TECHNICAL EXPLANATIONS

### Triggering event

The "PULL UP" Operating Technique must be triggered by the crew for following cases:

- Identification of possible terrain collision, without EGPWS alert,
- Aural "PULL UP" alert and red **PULL UP** warning in the PDU,
- Aural "TERRAIN AHEAD PULL UP" alert or "OBSTACLE AHEAD PULL UP" and red **PULL UP** warning in the PDU.

|           |                                                                                           |              |
|-----------|-------------------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>OPERATING TECHNIQUES<br><br>OPERATING TECHNIQUES | 04-05-05     |
| CODDE2    |                                                                                           | PAGE 27 / 32 |
| DGT105609 |                                                                                           | CP0177       |

## Objectives of the Operating Technique

The "PULL UP" Operating Technique leads the crew to execute a pull up maneuver to avoid ground collision.

## Expanded explanation

At night or in IMC, the procedure should be applied immediately without diagnosis. During daylight VMC, with terrain and obstacles clearly in sight, the alert may be considered as cautionary. Take positive corrective action until alert ceases or a safe trajectory is ensured.

### WINDSHEAR RECOVERY

"WINDSHEAR WINDSHEAR WINDSHEAR" voice warning,

- WINDSHEAR in PDU,
- WINDSHEAR in HUD.

- TOGA pushbutton..... Press
  - ☒ On FMA: WSHR ..... Active
- Autopilot..... Disconnected - Check
- Flight Director ..... Follow
- Power levers ..... TO
- SLATS/FLAPS ..... SF 2 maximum
- At pilot's discretion, according to airplane height and vertical speed:
  - Landing gear handle ..... Up
    - ☒ On HSI: GEAR symbols (all 3) ..... Out

### NOTE

Disregard possible amber Low Speed Cue, "increase speed" aural warning and basic mode EGPWS aural alert during windshear recovery.

## TASKS AND CALL OUT

| TASK ALLOCATION |    |                                              | CALL - OUT           |
|-----------------|----|----------------------------------------------|----------------------|
| PF              | PM | Emergency situation is identified.           |                      |
| PF              | PM | Announce the Windshear recovery maneuver.    | "WINDSHEAR RECOVERY" |
| PF              |    | Pushes TOGA to activate the WSHR mode. → (1) |                      |
| PF              | PM | Check AP disconnection. → (2)                |                      |
| PF              |    | Follows WSHR vertical guidance. → (3)        |                      |
| PF              |    | Sets TO thrust.                              |                      |
| PF              |    | Requests SF2 if in SF3 configuration.        | "SF 2"               |
|                 | PM | Sets SF2 and checks effective retraction.    | "SF2 SET"            |
|                 | PM | Announces positive flight path.              | "POSITIVE PATH"      |

|              |                                                                                   |           |
|--------------|-----------------------------------------------------------------------------------|-----------|
| 04-05-05     | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 28 / 32 |                                                                                   | CODDE2    |
| CP0177       |                                                                                   | DGT105609 |

| TASK ALLOCATION         |                                                                                              |                                                                                               | CALL - OUT                                  |
|-------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------|
| PIC                     | Requests landing gear retraction once risk of contact with ground has been eliminated. → (4) |                                                                                               | "GEAR UP"                                   |
|                         | PM                                                                                           | Retracts the gear on PIC's request and checks effective retraction.                           | "GEAR IS UP"                                |
| WHEN CLEAR OF WINDSHEAR |                                                                                              |                                                                                               |                                             |
|                         | PM                                                                                           | Announces end of windshear                                                                    | "END OF WINDSHEAR"                          |
| PF                      |                                                                                              | Requests vertical and lateral FD modes, as necessary                                          | e.g.<br>"CLIMB MODE"<br>"LNAV MODE"         |
|                         | PM                                                                                           | Sets requested vertical and lateral FD modes                                                  | e.g.<br>"CLIMB MODE SET"<br>"LNAV MODE SET" |
| PF                      |                                                                                              | Confirms activation of FD lateral and vertical modes on FMA                                   | "CHECKED"                                   |
| PF                      | PM                                                                                           | Perform the AFTER TAKE-OFF do-list and check-list when convenient<br>Resume normal operations |                                             |

## TECHNICAL EXPLANATIONS

### Triggering event

The **WINDSHEAR RECOVERY** Operating Technique must be triggered by the crew for following cases:

- Aural EGPWS **WINDSHEAR WINDSHEAR WINDSHEAR** alert and red **WINDSHEAR** warning in the PDU or **WINDSHEAR** flag in the HUD,
- Windshear identified regardless of EGPWS alerts.

### Objective of the Operating Technique

The **WINDSHEAR RECOVERY** Operating Technique leads the crew to execute an escape maneuver with maximum power.

### Expanded explanation

#### → (1) TOGA

Pressing TOGA push-button activates the WSHR escape guidance mode.

#### → (2) Autopilot and Autothrottle disengagement conditions:

If the AP is engaged, it automatically disengages when Windshear escape guidance mode (WSHR) becomes active.

If the AT is engaged, it automatically disengages when Windshear escape guidance mode (WSHR) becomes active. While the FD WSHR guidance is active, the TD commands the MAX TO Thrust.

#### → (3) Flight Director:

ASEL is inhibited by the activation of the WSHR escape guidance.

When leaving the Windshear conditions, the pilot must engage another vertical mode in order to get out of the WSHR escape guidance mode with AP, ALT, CLB, VS, VNAV or TOGA pushbuttons.

|           |                                                                                   |              |
|-----------|-----------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | 04-05-05     |
| CODDE2    |                                                                                   | PAGE 29 / 32 |
| DGT105609 |                                                                                   | CP0177       |

➔ (4) Risk of ground collision is considered eliminated when the following conditions are reached:

- RA greater than 500 ft,
- Indicated airspeed greater than low Speed Cues,
- Positive path is followed.

|              |                                                                                       |           |
|--------------|---------------------------------------------------------------------------------------|-----------|
| 04-05-05     | EMERGENCY AND ABNORMAL OPERATIONS<br><br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 30 / 32 |                                                                                       | CODDE2    |
| CP0177       |                                                                                       | DGT105609 |

## TCAS ALERT

### TCAS RA voice warning

- Resolution Advisory in PDU

- Autopilot..... Disconnect
- TCAS RA guidance .....Follow

## TASKS AND CALL OUT

| TASK ALLOCATION |    |                                                                      | CALL - OUT                                                                                                                                                        |
|-----------------|----|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PF              | PM | Emergency situation is identified.                                   |                                                                                                                                                                   |
| PF              |    | Disconnects AP.<br>Follows TCAS RA guidance.                         | "TCAS, I HAVE CONTROLS"                                                                                                                                           |
|                 | PM | Looks outside in VMC.<br>Switches the LDG lights ON.<br>Advises ATC. | "ATC CENTER",<br>"AIRPLANE ID", "TCAS RA"                                                                                                                         |
|                 | PM | When cleared of conflict, advises ATC.                               | "ATC CENTER",<br>"AIRPLANE ID",<br>"CLEAR OF CONFLICT",<br>"RETURNING TO<br>"ASSIGNED CLEARANCE"<br>Or<br>"CLEAR OF CONFLICT",<br>"ASSIGNED CLEARANCE<br>RESUMED" |
|                 | PM | Advises ATC in case of a contradictory clearance or instruction.     | "UNABLE", "TCAS RA"                                                                                                                                               |

## TECHNICAL EXPLANATIONS

### Triggering event

TCAS alert (Resolution Advisory) is triggered following a TCAS Traffic Advisory.

### Objective of the Operating Technique

The TCAS ALERT Operating Technique leads the crew to follow TCAS alert guidance.

### Expanded explanation

None.

|           |                                                                                   |              |
|-----------|-----------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | 04-05-05     |
| CODDE2    |                                                                                   | PAGE 31 / 32 |
| DGT105609 |                                                                                   | CP0177       |

## UNRELIABLE AIRSPEED

All indicated airspeed drop to an abnormal low speed value in LH PDU, RH PDU and SFD with the following CAS messages:

ADS: 1+2+3+4 FAIL,

66 FCS: DIRECT LAWS ACTIVE,

FCS: SLATS M+O AUTO FAIL.

- Disregard Flight Path Vector in affected PDUs, SFD and HUD. ➔(1)
- Disengage AP/AT. ➔(2)
- Maneuver with caution.
- Level the wings.
- Pitch.....4°
- Power levers.....Gently adjusted to Max Climb ➔(3)

### WARNING

INAPPROPRIATE SPEED PROTECTION MAY ACTIVATE. DO NOT FOLLOW CORRESPONDING FLIGHT DIRECTOR OR THRUST DIRECTOR GUIDANCE.

### CAUTION

“STALL”, “INCREASE SPEED” and “GEAR” aural warnings may sound inappropriately.

- Apply UNRELIABLE AIRSPEED emergency procedure (section 04-15-10). ➔

### TECHNICAL EXPLANATIONS

Refer to the emergency procedure UNRELIABLE AIRSPEED for more details.

#### Expanded explanation

#### ➔ (1) Disregard FPV in PDUs, SFD and HUD

ADSs feed FPV signal with vertical speed. When all ADSs fail, FPV indication is erratic. In this situation, the longer the airplane flights level, the more the position error reduces. But FPV accuracy degrades again as soon as the altitude changes.

#### ➔ (2) Disconnect AP and AT

With AP and AT engaged, an erratic IAS could erroneously activate Pitch Speed Protection (PSP) and/or Auto-throttle Speed Protection (ASP).

#### ➔ (3) Pitch 4° and thrust set to Max Climb

These settings are rough values to fly level at high altitude (where ice crystals are most likely to be met) whatever the aircraft weight. Maintain altitude and accomplish the UNRELIABLE AIRSPEED emergency procedure.

|              |                                                                                   |           |
|--------------|-----------------------------------------------------------------------------------|-----------|
| 04-05-05     | EMERGENCY AND ABNORMAL OPERATIONS<br>OPERATING TECHNIQUES<br>OPERATING TECHNIQUES | FALCON 7X |
| PAGE 32 / 32 |                                                                                   | CODDE2    |
| CP0177       |                                                                                   | DGT105609 |

INTENTIONALLY LEFT BLANK

|           |                                                                                         |             |
|-----------|-----------------------------------------------------------------------------------------|-------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | 04-15-10    |
| CODDE2    |                                                                                         | PAGE 1 / 28 |
| DGT105609 |                                                                                         | CP0177      |

## EMERGENCY EVACUATION

- Continue this procedure using paper version of **EMERGENCY EVACUATION** procedure.
  - PARK BRAKE ..... Set
  - Transmission of distress message ..... MAYDAY
  - **DUMP** guarded pushbutton ..... Push
    - ☑ Status light ..... Amber **ON**
  - INTERIOR LIGHTS: EMERG LIGHTS switch ..... ON
    - ☑ Status light ..... Amber **EMERG LIGHTS**
  - Passengers..... Instruct
- COMMENTS: The crew must verify that the safety instructions are known by the passengers and access to the emergency exits is clear (main entrance door curtain open).*
- ENGINE .. SHUT OFF guarded pushbuttons (all 3) ..... Push
    - ☑ Status lights (all 3) ..... Amber **CLOSED** flashing then steady on
- COMMENTS: This closes the fuel shut-off valves and causes the engines shutdown.*
- DC SUPPLY: Both BAT switches ..... Off
- COMMENTS: This cuts off all electrical power.*
- ENGINE .. DISCH: **DISCH 2** guarded pushbuttons (all 3) ..... Push
- COMMENTS: Selecting Disch 2 position ensures percussion independently of power supply*
- COMMENTS: Break the snap wire and push directly to position 2.*
- APU: FIRE APU guarded pushbutton..... Push
  - Evacuation ..... Initiate

For IAC/AR certified A/C:

### NOTE

After emergency evacuation grab the portable ELT / emergency radio and operate it according to the instruction attached.

For Ukrainian registered A/C:

### NOTE

In case of forced landing or ditching, use the VHF emergency radio P855A1 located in the cockpit. The radio must be operated outside the airplane only. Operational manual is attached to VHF-P855A1 emergency radio unit.

|             |                                                                                         |           |
|-------------|-----------------------------------------------------------------------------------------|-----------|
| 04-15-10    | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | FALCON 7X |
| PAGE 2 / 28 |                                                                                         | CODDE2    |
| CP0177      |                                                                                         | DGT105609 |

## SMOKE OR FIRE OR UNUSUAL ODORS

Smoke and unusual odors

- Operating technique **CREW RESPIRATORY PROTECTION** procedure (section 04-05-05) ..... Applied →

### CAUTION

After conducting the fire or smoke procedure, land at the nearest suitable airport unless it is visually verified that the fire has been extinguished.

- INTERIOR LIGHTS: **NO SMOKING** pushbutton ..... Push
  - ☑ Status light ..... Blue **ON**
- AIR CONDITIONING: **GND VENT** pushbutton ..... Push
  - ☑ Status light ..... Amber **OFF**
- If flame in cabin:
  - DC SUPPLY: **CABIN MASTER** pushbutton ..... Push to set to OFF → (1)
    - ☑ Status light ..... Amber **OFF**
  - Fight fire with hand extinguisher.
  - Apply **SMOKE REMOVAL** procedure (section 04-15-10). →
  - End of procedure. ☒
- If no flame in cabin:
  - PAX OXYGEN rotary knob ..... O'RIDE → (2)
  - Passenger masks ..... Don - Checked → (3)

*COMMENTS: select manual emergency position to ensure opening of the mask boxes and supply of oxygen to passenger masks.  
Check PAX ON annunciation in ECS oxygen synoptic.  
Check that passengers use masks correctly, and assist them if necessary.*

#### DC SUPPLY:

- BUS TIE** status light ..... Unlighted - Untied - Check
- CABIN MASTER** pushbutton ..... Push to set to OFF
  - ☑ Status light ..... Amber **OFF**

*COMMENT: GALLEY MASTER is automatically switched off with CABIN MASTER.*

- PRESSURIZATION: **BAG VENT** pushbutton ..... Push to set to OFF
  - ☑ Status light ..... Amber **OFF**
- If possible avoid or leave icing conditions.
- BLEED: **BLEED 1**, **BLEED 2** and **BLEED 3** pushbuttons ..... Push to set to OFF → (4)
  - ☑ Status lights (all 3) ..... Amber **OFF**
- If smoke disappears (or does not increase):
  - BLEED: **BLEED 1** pushbutton ..... Push to set on
    - ☑ Status light ..... Unlighted - On

|           |                                   |             |
|-----------|-----------------------------------|-------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS | 04-15-10    |
| CODDE2    | EMERGENCY                         | PAGE 3 / 28 |
| DGT105609 | SPECIFIC EMERGENCY SITUATIONS     | CP0177      |

■ If smoke reappears: → (5)

- BLEED: **BLEED 1** pushbutton..... Push to set to OFF
- ☑ Status light .....Amber **OFF**

COMMENTS: Smoke is produced by bleed 1, an engine 1 failure may occur after a short delay.

- BLEED: **BLEED 2** and **BLEED 3** pushbuttons ..... Push to set on
- ☑ Status lights ..... Unlighted - On
- PRESSURIZATION: **BAG VENT** pushbutton ..... Push to set auto
- ☑ Status light ..... Unlighted - Auto
- DC SUPPLY: **CABIN MASTER** pushbutton..... Push to set on
- ☑ Status light ..... Unlighted - On
- Crew air gaspers ..... Open

AIR CONDITIONING:

- PAX TEMP rotary pushbuttons ..... Fully CCW → (6)
- CREW TEMP rotary pushbutton ..... Fully CCW → (6)
- Apply **BLEED: 1 FAIL** procedure (section 04-25-160). →
- End of procedure. ☒

■ If smoke does not reappear:

- BLEED: **BLEED 3** pushbutton..... Push to set on
- ☑ Status light ..... Unlighted - On

■ If smoke reappears: → (7)

- BLEED: **BLEED 3** pushbutton ..... Push to set to OFF
- ☑ Status light .....Amber **OFF**

COMMENTS: Smoke is produced by bleed, 3 an engine 3 failure may occur after a short delay.

- BLEED: **BLEED 2** pushbutton ..... Push to set on
- ☑ Status light ..... Unlighted - On
- PRESSURIZATION: **BAG VENT** pushbutton..... Push to set auto
- ☑ Status light ..... Unlighted - Auto
- DC SUPPLY: **CABIN MASTER** pushbutton ..... Push to set on
- ☑ Status light ..... Unlighted - On
- Crew air gaspers ..... Open

AIR CONDITIONING:

- PAX TEMP rotary pushbuttons ..... Fully CCW
- CREW TEMP rotary pushbutton ..... Fully CCW
- Apply **BLEED: 3 FAIL** procedure (section 04-25-160). →
- End of procedure. ☒

COMMENTS: If Bleeds 1 and 3 can be restored without smoke, origin of smoke is coming from equipment powered by CABIN MASTER or Bleed 2.

■ If smoke does not reappear:

- BLEED: **BLEED 2** pushbutton ..... Push to set on
- ☑ Status light ..... Unlighted - On

|             |                                   |           |
|-------------|-----------------------------------|-----------|
| 04-15-10    | EMERGENCY AND ABNORMAL OPERATIONS | FALCON 7X |
| PAGE 4 / 28 | EMERGENCY                         | CODDE2    |
| CP0177      | SPECIFIC EMERGENCY SITUATIONS     | DGT105609 |

■ **If smoke reappears:** → (8)

- BLEED: **BLEED 2** pushbutton ..... Push to set to OFF
- ☑ Status light ..... Amber **OFF**

COMMENTS: Smoke is produced by bleed 2, an engine 2 failure may occur after a short delay.

- PRESSURIZATION: **BAG VENT** pushbutton ..... Push to set auto
- ☑ Status light ..... Unlighted - Auto
- DC SUPPLY: **CABIN MASTER** pushbutton ..... Push to set on
- ☑ Status light ..... Unlighted - On
- Crew air gaspers ..... Open

AIR CONDITIONING:

- PAX TEMP rotary pushbuttons ..... Fully CCW
- CREW TEMP rotary pushbutton ..... Fully CCW
- Apply **BLEED: 2 FAIL** procedure (section 04-25-160). →
- End of procedure. ☒

■ **If smoke does not reappear:**

COMMENTS: Origin of smoke is coming from equipment powered by CABIN MASTER.

- PRESSURIZATION: **BAG VENT** pushbutton ..... Push to set auto
- ☑ Status light ..... Unlighted – Auto
- Crew air gaspers ..... Open

AIR CONDITIONING:

- PAX TEMP rotary pushbuttons ..... Fully CCW
- CREW TEMP rotary pushbutton ..... Fully CCW
- End of procedure. ☒

■ **If smoke persists (or increases):** → (9)

COMMENTS: Smoke is coming from equipment or supply lines connected to ESS or MAIN LH or RH buses and not powered by CABIN MASTER.

DC SUPPLY:

- **GEN 1** and **GEN 3** guarded pushbuttons ..... Push
- ☑ Status lights (both) ..... Amber **OFF**
- **BAT 1** switch ..... Off

BLEED:

- **BLEED 1**, **BLEED 2** and **BLEED 3** pushbuttons ..... Push to set on
- ☑ Status lights (all 3) ..... Unlighted - On
- **XBLEED 1↔2** and **XBLEED 2↔3** pushbuttons ..... Push to set ON → (10)
- ☑ Status lights ..... Amber **ON**
- Crew air gaspers ..... Open

AIR CONDITIONING:

- CREW TEMP rotary pushbutton ..... Fully CCW
- PAX TEMP rotary pushbuttons ..... Fully CCW

|           |                                                                                         |             |
|-----------|-----------------------------------------------------------------------------------------|-------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | 04-15-10    |
| CODDE2    |                                                                                         | PAGE 5 / 28 |
| DGT105609 |                                                                                         | CP0177      |

■ If smoke disappears:

AIR CONDITIONING:

- PAX and CREW TEMP rotary pushbuttons ..... Adjust temperature → (11)
- Apply LH MAIN + LH ESS BUSES INOPERATIVE procedure (section 04-25-60\_4). →
- Land as soon as possible. ☒

■ If smoke persists: → (12)

DC SUPPLY:

- GEN 1 and GEN 3 guarded pushbuttons ..... Push to reset
  - ☑ Status lights (both) ..... Unlighted - On
- BAT 1 switch ..... On
- LH ISOL pushbutton ..... Push
  - ☑ Status light ..... Unlighted - Tied
- FLIGHT CONTROL: NORM FCS ENGAGE pushbutton..... Push

■ If blue status light ENGAGE does not light:

- FLIGHT CONTROL: ST-BY FCS ENGAGE pushbutton ..... Push
- GEN 2 guarded pushbutton..... Push to set to OFF
  - ☑ Status light ..... Amber OFF
- BAT 2 switch ..... Off

■ If smoke disappears:

AIR CONDITIONING:

- PAX TEMP rotary pushbuttons ..... Fully CCW
- CREW TEMP rotary pushbutton ..... Fully CCW
- Apply RH MAIN + RH ESS BUSES INOPERATIVE procedure (section 04-25-60\_4). →
- Land as soon as possible. ☒

■ If smoke persists:

DC SUPPLY:

- GEN 2 guarded pushbutton ..... Push to reset
  - ☑ Status light ..... Unlighted - On
- BAT 2 switch ..... On
- RH ISOL pushbutton ..... Push
  - ☑ Status light ..... Unlighted - Tied
- FLIGHT CONTROL: NORM FCS ENGAGE pushbutton..... Push

■ If blue status light ENGAGE does not light:

- FLIGHT CONTROL: ST-BY FCS ENGAGE pushbutton ..... Push
- Descend below 14,000 ft or to a safe altitude.
- Land as soon as possible.

## TECHNICAL EXPLANATIONS

### Triggering event

Smoke and unusual odors

|             |                                   |           |
|-------------|-----------------------------------|-----------|
| 04-15-10    | EMERGENCY AND ABNORMAL OPERATIONS | FALCON 7X |
| PAGE 6 / 28 | EMERGENCY                         | CODDE2    |
| CP0177      | SPECIFIC EMERGENCY SITUATIONS     | DGT105609 |

### Objectives of the procedure

This procedure is dedicated to unidentified smoke or fire.

In order to quickly secure airplane and recover an acceptable level of flight safety, the investigation level of this procedure helps only to detect and isolate the system or subsystem suspected in the smoke or fire:

- Electrical: CAB loads, ESS or MAIN buses or,
- Air conditioning: BLEED 1, 2 or 3.

The particular equipment causing the smoke or fire will not be further investigated.

### Expanded explanations

#### → (1) CABIN MASTER pushbutton

Cabin and galley equipments are isolated from the electrical supply (GALLEY MASTER is automatically switched off with CABIN MASTER OFF)

#### → (2) PAX OXYGEN rotary knob

Manual emergency position O'RIDE is selected to ensure opening of the mask boxes and supply of oxygen to passenger masks.

#### → (3) Passenger masks

Check PAX ON annunciation in ECS Oxygen synoptic.

Check that passengers use mask correctly and assist them if necessary.

In this procedure passenger masks are used since airplane is slowly depressurized (hypoxia).

The passenger masks are fitted with a dilution valve (ambient valve) and they do not protect against smoke and fumes.

#### → (4) BLEED 1, BLEED 2 and BLEED 3 pushbuttons

The entire BLEED system is isolated and if smoke disappears, the BLEED System is suspected.

#### → (5) If smoke reappears

If smoke is produced by bleed 1, engine 1 may fail after a short delay.

#### → (6) PAX FWD TEMP rotary pushbutton

Only cabin/cockpit hot air

#### → (7) If smoke reappears

If smoke is produced by bleed 3, engine 3 may fail after a short delay.

#### → (8) If smoke reappears

If smoke is produced by bleed 2, engine 2 may fail after a short delay.

#### → (9) If smoke persists (or increases)

Smoke is coming from equipment or supply lines connected to ESS or MAIN LH or RH buses and not powered by CABIN MASTER.

|           |                                                                                         |             |
|-----------|-----------------------------------------------------------------------------------------|-------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | 04-15-10    |
| CODDE2    |                                                                                         | PAGE 7 / 28 |
| DGT105609 |                                                                                         | CP0177      |

➔ (10) **XBLEED 1↔2** and **XBLEED 2↔3** pushbuttons

With Main Bus LH isolated HP1 and HP3 valves are inoperative.  
With XBLEED 1/2 and 2/3 open HP2 valve can help with smoke evacuation.

➔ (11) **PAX and CREW TEMP** rotary pushbuttons

With MAIN LH bus inoperative, pax and crew Temp auto mode is inoperative.

➔ (12) **If smoke persists**

LH MAIN and LH ESS are restored; RH MAIN and RH ESS are isolated.

➔ (13) **PAX FWD TEMP and CREW TEMP** rotary pushbuttons

With RH MAIN BUS inoperative, pax and crew Temp manual mode is inoperative.

## SMOKE REMOVAL

- Operating technique **CREW RESPIRATORY PROTECTION** procedure (section 04-05-05) ..... Applied ➔
- INTERIOR LIGHTS: **NO SMOKING** pushbutton ..... Push
  - ☑ Status light ..... Blue **ON**
- AIR CONDITIONING: **GND VENT** pushbutton ..... Push
  - ☑ Status light ..... Amber **OFF**
- **BAG ISOL** pushbutton ..... Push
  - ☑ Status light ..... Amber **ON**

### WARNING

**DO NOT APPLY THE FOLLOWING PROCEDURE IF FLAME IN CABIN. APPLY SMOKE OR FIRE OR UNUSUAL ODORS PROCEDURE (SECTION 04-15-10).** ➔

- PAX OXYGEN rotary knob ..... O'RIDE ➔ (1)
- Passenger masks ..... Don - Checked ➔ (2)

*COMMENTS: select manual emergency position to ensure opening of the mask boxes and supply of oxygen to the passenger masks.*

*Check PAX ON annunciation in ECS oxygen synoptic.*

*Check that the passengers use the masks correctly, and assist them if necessary.*

- Crew air gaspers ..... Open
- AIR CONDITIONING:
- PAX TEMP rotary pushbuttons ..... Fully CCW
- CREW TEMP rotary pushbutton ..... Fully CCW
- Descend below 14,000 ft or to a safe altitude.

|             |                                                                                         |           |
|-------------|-----------------------------------------------------------------------------------------|-----------|
| 04-15-10    | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | FALCON 7X |
| PAGE 8 / 28 |                                                                                         | CODDE2    |
| CP0177      |                                                                                         | DGT105609 |

### CAUTION

After DESCENT:  
Avoid extended flight when the TAT is above 0 °C  
or open the BAG ISOL valve at a cabin altitude below 8,000 ft.

### TECHNICAL STATUS

None.

### OPERATIONAL STATUS

None.

### TECHNICAL EXPLANATIONS

#### Triggering event

Smoke and unusual odors

#### Objectives of the procedure

This procedure is applied after the smoke or fire or unusual odors procedure if causes are still undetermined.

However, crew may immediately apply this procedure if safety requires it.

#### Expanded explanations

##### → (1) PAX OXYGEN rotary knob

Manual emergency position O'RIDE is selected to ensure opening of the mask boxes and supply of oxygen to passenger masks.

##### → (2) Passenger masks

Check PAX ON annunciation in ECS Oxygen synoptic.

Check that passengers use masks correctly and assist them if necessary.

|           |                                                                                         |             |
|-----------|-----------------------------------------------------------------------------------------|-------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | 04-15-10    |
| CODDE2    |                                                                                         | PAGE 9 / 28 |
| DGT105609 |                                                                                         | CP0177      |

## UNRELIABLE AIRSPEED

At least 3 ADS sources are lost or erroneous with following CAS messages and IAS has dropped to an abnormal low speed value in LH PDU, RH PDU and/or SFD:

ADS: 1+2+3+4 FAIL,

66 FCS: DIRECT LAWS ACTIVE,

FCS: SLATS M+O AUTO FAIL,

Possible amber ALT and IAS miscompare flags in PDU(s),

Possible FD, AT and TD red flags in PDU(s),

AT may disengage.

► Operating technique **UNRELIABLE AIRSPEED** procedure (section 04-05-05) ..... Applied →

### ► ABOVE 15,000 FT AAL

- Fly the airplane using:
  - Pitch limited between -3° and +5°,
  - Ground Speed (on PDU or SENSOR page), → (1)
  - GPS altitude (on SENSOR page).

## WARNING

DISREGARD IAS, TAS, ALT, FPV, AOA PATH LIMIT SYMBOL AND WIND INFORMATION DISPLAYED IN PDU(S), MDU(S) AND HUD. → (2)

- Set PILOT SIDE pushbutton to the other side to keep the SENSOR/GPS window displayed on PF side. → (3)
- Use manual trims.
- Calculate a speed equal to [Flight Level + 100kt], limited between 250kt and 450kt.
- Correct this speed by subtracting headwind or adding tailwind component to obtain the Ground Speed (GS).
- Adjust thrust to fly this GS target. → (4)
- Compare present N1 with N1 corresponding to Mach cruise = 0.80 → (5)

## NOTE

Speed calculation must be updated after significant heading variation.

- FD and TD ..... Deselect if possible → (6)

## CAUTION

Loss of protections (low speed, high speed, G load), autotrimms and autopilot.  
Loss of auto retraction capability for airbrakes and inboard slats.  
Do not use AB 2 in flight while flaps are extended.

|              |                                                                                         |           |
|--------------|-----------------------------------------------------------------------------------------|-----------|
| 04-15-10     | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | FALCON 7X |
| PAGE 10 / 28 |                                                                                         | CODDE2    |
| CP0177       |                                                                                         | DGT105609 |

#### NOTE

Use latest valid wind information applicable to the flight conditions, based on wind charts, flight log, ATC, other airplanes...

- During cruise, set N1 according to Performance Manual (section 4-050). ➔
- In case of inappropriate and non mutable “INCREASE SPEED” or “GEAR” or “STALL” aural warnings:
  - EMERGENCY PANEL: **AURAL WARN 1** and **AURAL WARN 2** pushbuttons ..... Push
    - ☒ Status lights (both) .....Amber **OFF**

#### CAUTION

With AURAL WARN 1 and 2 set to OFF, all audio warnings except TCAS advisories are inoperative.

- ANTI-ICE: **ENG ..** pushbutton (all 3) ..... Push to set ON
  - ☒ Status light ..... Blue **ON** ➔ (7)
- In icing conditions:
  - ANTI-ICE: **WINGS** pushbutton ..... Push to set ON
    - ☒ Status light ..... Blue **ON**
  - Do not reduce N1 below 73 %. ➔ (8)

#### NOTE

Anti-ice minimum N1 in PDU are erroneous.

- INTERIOR LIGHTS: **FASTEN BELT** pushbutton ..... Push
  - ☒ Status light ..... Blue **ON**
- XPDR..... ALT OFF ➔ (9)
- Advise ATC that XPDR no longer reports altitude and TCAS is inoperative.

#### NOTE

Do not complete the procedures for **66 FCS: DIRECT LAWS ACTIVE**, **ADS: .. FAIL**, **ADS: ..+. FAIL** and **FCS: SLATS M+O AUTO FAIL**

#### ► BEFORE DESCENT

- Descent as soon as practicable to leave icing conditions.
- The following limitations will apply at landing:
  - Maximum landing elevation ..... 5,000 ft ➔ (10)
  - Maximum crosswind ..... 10 kt ➔ (11)
  - Maximum headwind..... 20 kt ➔ (11)
  - Maximum tailwind ..... 10 kt ➔ (11)
  - Increase landing distance by 50% (multiply by 1.50). ➔ (12)
- Landing in gusty winds is not recommended.

|           |                                                                                         |              |
|-----------|-----------------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | 04-15-10     |
| CODDE2    |                                                                                         | PAGE 11 / 28 |
| DGT105609 |                                                                                         | CP0177       |

## ► DESCENT

### ■ In icing conditions:

- Thrust setting (all 3) ..... N1=73 %
- Airbrakes..... AB1

### ■ Else:

- Power levers (all 3) ..... Idle
- Roughly set pitch into the following envelope (see table) and adjust to fly previous GS target.

| GROSS WEIGHT | Pitch envelope |
|--------------|----------------|
| 40,000 lb    | [ -3° ; -1° ]  |
| 50,000 lb    | [ -2° ; 0° ]   |
| 60,000 lb    | [ -1° ; +2° ]  |

## NOTE

During descent, ADS probes may unclog. Cross-Check all ADS information to confirm possible airspeed recovery.

## ► BELOW 15,000 FT AAL

- Continue flight using GS.
- FLIGHT CONTROL: A/B AUTO EXT pushbutton ..... Push ➔ (4)  
☒ Status light ..... Amber OFF

## ► APPROACH

- Perform a long stabilized approach.
- In SF0, SF1 and SF2, fly GS target = standard maneuvering speeds (subtract headwind or add tailwind component).

## ► FINAL APPROACH

- Use ILS or LPV approach raw data, or control glide path with GPS altitude.
- SLATS/FLAPS.....SF3
- Roughly set pitch/N1 into the following envelope (see table) and adjust to fly GS target = VREF+10 kt (subtract headwind or add tailwind component). ➔ (13)

| GROSS WEIGHT | Pitch / N1 references<br>(SF3/Gear Down/VREF+10kt) |         |
|--------------|----------------------------------------------------|---------|
| 40,000 lb    | [ +2.5° ; +5° ]                                    | 50 % N1 |
| 50,000 lb    |                                                    | 55 % N1 |
| 60,000 lb    |                                                    | 60 % N1 |

|              |                                                                                         |           |
|--------------|-----------------------------------------------------------------------------------------|-----------|
| 04-15-10     | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | FALCON 7X |
| PAGE 12 / 28 |                                                                                         | CODDE2    |
| CP0177       |                                                                                         | DGT105609 |

COMMENTS: The above N1 values apply with A/I ON or OFF.

► **AT 50 FT**

- Progressively flare the airplane.

**WARNING**

**PILOT MUST MINIMIZE SIDESTICK INPUTS AND TRIM ACTIVITY DURING FLARE.**

► **AIRPLANE ON GROUND**

- Manually extend airbrakes only when nose gear is maintained firmly on ground.

**NOTE**

In case of absolute necessary Go-Around:

- Climb with  $15^{\circ} < \text{pitch} < 20^{\circ}$  and maintain GS above final approach GS.
- At not less than 800ft AAL (GPS Altitude), retract Slats-Flaps when GS is above final approach GS + 30 kt.

- End of procedure. ☒

|           |                                                                                         |              |
|-----------|-----------------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | 04-15-10     |
| CODDE2    |                                                                                         | PAGE 13 / 28 |
| DGT105609 |                                                                                         | CP0177       |

| INOPERATIVE/UNRELIABLE ITEMS                                                                                                                                              | OPERATIVE/RELIABLE ITEMS                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>BASIC FLIGHT PARAMETERS</b>                                                                                                                                            |                                                                                                       |
| IAS/MI/TAS on both PDU and on SFD.                                                                                                                                        | GS on PDU permanent data.<br>IRS ground speed in SENSOR window.<br>GPS ground speed in SENSOR window. |
| Pitch and roll attitude on SFD.<br>FPV.                                                                                                                                   | Pitch and roll attitude on both PDU.                                                                  |
| Altitude reported by XPDR mode S.<br>Altitude displayed on both PDU and SFD.<br>Vertical Speed                                                                            | GPS altitude (SENSORS window).<br>Radio-altimeter height.                                             |
| SAT, ISA deviation.<br>TAT possibly unreliable.                                                                                                                           | Temperature data provided by AFIS /<br>Uplink Weather / Weather briefing<br>/Operational flight plan. |
|                                                                                                                                                                           | Heading and track.                                                                                    |
| Wind direction and speed on PDU.                                                                                                                                          | Wind data provided by AFIS /<br>Uplink Weather / Weather briefing<br>/Operational flight plan.        |
| <b>WARNINGS</b>                                                                                                                                                           |                                                                                                       |
| VMO/MMO audio warning.<br>Increase speed aural warning.<br>Gear aural warning.<br>Stall aural warning.<br>AOA path limit symbol.<br>Stall indication on PDU.<br>SWC, LSC. |                                                                                                       |
| <b>FLIGHT CONTROLS</b>                                                                                                                                                    |                                                                                                       |
|                                                                                                                                                                           | Primary flight controls (direct laws).                                                                |
| Unreliable Automatic slats.<br>Unreliable Stall protection:<br>- IGN,<br>- Automatic Airbrakes retraction.                                                                |                                                                                                       |
| <b>AUTOMATIC FLIGHT CONTROL SYSTEM</b>                                                                                                                                    |                                                                                                       |
| AP, AT.                                                                                                                                                                   |                                                                                                       |
| Mach trim.                                                                                                                                                                |                                                                                                       |
| <b>ENGINE</b>                                                                                                                                                             |                                                                                                       |
| N1 max cruise limit bug, N1 max climb<br>limit bug, N1 max T/O limit bug on<br>engines display.                                                                           | Engine primary parameters (N1, ITT, N2,<br>FF) and controls.                                          |
| <b>AIRPLANE SYSTEMS</b>                                                                                                                                                   |                                                                                                       |
|                                                                                                                                                                           | All systems controls and displays.                                                                    |

|              |                                   |           |
|--------------|-----------------------------------|-----------|
| 04-15-10     | EMERGENCY AND ABNORMAL OPERATIONS | FALCON 7X |
| PAGE 14 / 28 | EMERGENCY                         | CODDE2    |
| CP0177       | SPECIFIC EMERGENCY SITUATIONS     | DGT105609 |

## TECHNICAL EXPLANATIONS

### Triggering event

All pitot probes have blocked (e.g. by ice or volcanic ash accretion).

### Symptoms

- IAS indications on coupled screens (PDUs and SFD) is erratic and low,
- When the third smart probe blocks, all 4 ADS fail, triggering CAS message **ADS: 1+2+3+4 FAIL**,
- FCS reverts to DIRECT LAWS, triggering CAS messages **66 FCS: DIRECT LAWS ACTIVE** and possibly **FCS: SLATS M+O AUTO FAIL**,
- Flags **ALT**, **IAS**, **FD**, **AT** and **TD** can show in PDUs,
- AP/AT can possibly desengage.

### Objectives of the procedure

Fly the airplane using Ground Speed and pre-calculated performance data.

Select a suitable landing runway.

### Expanded explanations

#### → (1) Ground speed on PDU and SENSOR page

Ground speed is not affected by this ADS issue.

On PDU, GS is IRS-based, while GPS-based in SENSOR page.

#### → (2) Disregard FPV in PDUs, SFD and HUD

ADSs feed FPV signal with vertical speed. When all ADSs fail, FPV indication is erratic. In this situation, the longer the airplane flights level, the more the position error reduces. But FPV accuracy degrades again as soon as the altitude changes.

#### → (3) Set PILOT SIDE pushbutton to the Pilot Non Flying side

In DIRECT LAWS, any input from trim switches automatically pops-up the ENG-TRM-FUEL 1/6 page in the PF's PDU. To keep displaying the SENSOR page and the GPS ground speed in front of the PF, select PNF/PM as the active PILOT SIDE.

#### → (4) Ground Speed Target

The recommended airspeed offers good safety margins regarding the flight envelope and speed limitations in direct laws, even at light weight.

### CAUTION

**With available weather forecast (Operational Flight Plan, AFIS winds, other airplanes in the vicinity...), carefully apply the required wind correction.**

Example of GS target calculation:

Flying at FL400 with estimated headwind of 80 kt:

- Target speed for current altitude is  $FL+100 = 400 + 100 = 500$  kt. As it exceeds the upper limit, it has to be reduced to 450 kt,

|           |                                                                                         |              |
|-----------|-----------------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | 04-15-10     |
| CODDE2    |                                                                                         | PAGE 15 / 28 |
| DGT105609 |                                                                                         | CP0177       |

- With 80 kt of headwind, airplane shall fly a GS target of 450-80 = 370 kt.

→ (5) Compare resulting N1 to M0.80 N1

In case of significant difference, double check the calculations for GS and N1 for M0.80 targets.

→ (6) FD/TD deselection

It may not be possible to deselect FD/TD when IAS is in Low speed Cue area.

→ (7) ENG ANTI-ICE set to **ON**

Engine anti-ice system also activates engine probes anti-icing. This prevents erratic airflow data from feeding the FADECs.

→ (8) N1 not below 73% in icing condition

Minimum N1 in the ENG-TRM-FUEL page can be incorrect. 73% is a safe value for minimum N1.

→ (9) XPDR set to ALT OFF

On EASy II airplanes, setting the transponder to ALT OFF displays the CAS message **AVC: TCAS OFF**.

→ (10) Maximum landing field elevation limited to 5,000ft

Limiting altitude caps the effects of compressibility. It thus ensures:

- Good safety margins regarding the flight envelope when flying at the recommended airspeed,
- Consistency of the suggested rough attitude and settings.

→ (11) Maximum wind values

Crosswind limitation is the same as **66 FCS: DIRECT LAWS ACTIVE**.

Headwind is limited to ensure that the calculated speed (GS target) is lower than VFE.

Tailwind is limited as per AFM normal limitation.

→ (12) Landing Distance penalty

1.50 is the penalty resulting from merging the DIRECT LAWS (1.23) and OVERSPEED AT THRESHOLD (1.20) penalties.

→ (13) Pitch / N1 values

The Pitch/N1 table applies whatever the condition regarding icing.

|              |                                                                                         |           |
|--------------|-----------------------------------------------------------------------------------------|-----------|
| 04-15-10     | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | FALCON 7X |
| PAGE 16 / 28 |                                                                                         | CODDE2    |
| CP0177       |                                                                                         | DGT105609 |

## VOLCANIC ASH ENCOUNTER

### WARNING

EXIT ASH CLOUD AS QUICKLY AS POSSIBLE. DO NOT ATTEMPT TO CLIMB OUT OF THE ASH CLOUD.

### CAUTION

Weather radar does not detect volcanic ash.

- Land at the nearest suitable airport
- Course ..... Reverse, 180° turn → (1)
- ATC XPDR ..... 7700
- MAYDAY message ..... Transmit
- Full face masks ..... Don
- Crew oxygen mode selector ..... EMGY
- Yellow blinker ..... Check
- ANTI ICE: **ENG ..** pushbuttons (all 3) ..... Push to set ON → (2)
  - ☑ Status lights (all 3) ..... Blue **ON**
- AT ..... Disconnect → (3)
- Power levers, one by one ..... Smoothly reduce thrust to set ITT below 550°C → (4)
- **If unable to maintain flight level:**
  - Fly the driftdown
  - Power levers ..... Avoid rapid thrust variations → (4)
  - Engines parameters ..... Monitor
- **If a surge is evidenced on one engine:**
  - Corresponding engine ..... Smoothly reduce thrust to be free of surge
  - Be prepared to apply **ENG ... OUT** or **ENG ...+... OUT** procedure (section 04-25-210). or **46 ENG: ALL OUT** procedure (section 04-15-05\_5). → (5)
  - Airspeed indications ..... Monitor
- **If airspeed indications become unreliable:**
  - Apply **UNRELIABLE AIRSPEED** procedure (section 04-15-10). →
- **If smoke, acrid odor or volcanic dust fill the cabin:**
  - INTERIOR LIGHTS: **NO SMOKING** pushbutton ..... Push
    - ☑ Status light ..... Blue **ON**
  - PAX OXYGEN rotary knob ..... O'RIDE → (6)
  - Passengers masks ..... Donned - Check → (7)

## TECHNICAL STATUS

Depending on the volcanic ash concentration and exposure time, many airplane systems can be affected and grandly degraded.

|           |                                                                                         |              |
|-----------|-----------------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | 04-15-10     |
| CODDE2    |                                                                                         | PAGE 17 / 28 |
| DGT105609 |                                                                                         | CP0177       |

### **OPERATIONAL STATUS**

Depending on the airplane technical status and operational considerations, the pilots can elect to land as soon as possible or land at the nearest suitable airport.

### **TECHNICAL EXPLANATIONS**

#### **Triggering event**

As weather radar is not effective in detecting volcanic ash clouds, crew must be informed by other means of the potential or effective presence of ash clouds on air route.

VAA, VAR/AIREP, SIGMET, NOTAM and ASHTAM reports provide information about airspaces contaminated by volcanic ash.

During night operations or if meteorological conditions or the characteristics of the volcanic ash cloud impede its detection, one or a combination of the following symptoms can indicate that the airplane has entered an ash cloud:

- Smoky or acrid odor that can smell like electrical smoke, burned dust or sulfur,
- Possible haze in the cabin (dust can settle on surfaces),
- Static discharge similar to St. Elmo's fire or glow can occur. Blue colored sparks can appear to flow up the outside of the windshield or a white glow can appear at the leading edges of the wings,
- A bright white or orange glow can appear in the engines inlets,
- ITT can vary unexpectedly, surge and flame out can occur,
- Erroneous airspeed indication (IAS can decrease or erratically vary) with the associated effect on aircraft systems,
- Cabin pressure can vary, including the possible loss of pressurization,
- Landing lights can cast sharp distinct shadows,
- Possible loss of visibility due to opaque or discolored windshields (sandblast effect).

#### **Objectives of the procedure**

The procedure deals with an emergency situation which can be encountered if the airplane inadvertently flies through a volcanic ash cloud.

In such circumstance, the main consideration is the safety of the airplane. Thus the procedure leads the crew to immediately:

- Exit the volcanic ash cloud
- Take all the appropriate measures avoiding partial or total engine thrust loss,
- Monitor IAS and be prepared to the loss of ADS data,
- Don the oxygen masks (if smoke, acrid odor or volcanic dust fills the cabin).
- Land at the nearest suitable airport.

#### **Expanded explanations**

##### **→ (1) 180 ° turn:**

Considering that an ash cloud can extend for hundred of miles, a 180-deg turn in descent is the best escape strategy.

Depending on the situation, an emergency descent may be necessary.

|              |                                   |           |
|--------------|-----------------------------------|-----------|
| 04-15-10     | EMERGENCY AND ABNORMAL OPERATIONS | FALCON 7X |
| PAGE 18 / 28 | EMERGENCY                         | CODDE2    |
| CP0177       | SPECIFIC EMERGENCY SITUATIONS     | DGT105609 |

➔ (2) ANTI ICE: **ENG..** pushbuttons (all 3):

This improves the engine stall margins by increasing the bleed air flow, and increases the fuel / air ratio in the combustion chamber.

➔ (3) AT DISCONNECTION:

The auto throttles must be disconnected for a better engines control with slow and smooth thrust lever movements.

➔ (4) Power levers:

Keeping ITT below 550°C lowers the fused ash buildup on turbine blades and hot-section components.

Rapid thrust variation must be avoided since engine surge margin may be reduced.

➔ (5) Engine relight:

The airplane may be out of the airstart envelope if it has encountered volcanic ash in cruise.

If engine relight is attempted (auto or manual), it could take longer than normal to reach the idle thrust due to the combined effects of high altitude and volcanic ash ingestion.

➔ (6) PAX OXYGEN rotary knob:

Select O'RIDE to ensure the masks boxes opening and supply of oxygen to the passengers mask.

➔ (7) Passengers mask :

Check **PAX ON** annunciation in the ECS Oxygen synoptic.

## FORCED LANDING

- Transmission of distress message ..... MAYDAY
- Transponder ..... 7700
- INTERIOR LIGHTS: **FASTEN BELT** and **NO SMOKING** pushbuttons ..... Push
- ☑ Status lights (2) ..... Blue **ON**

*COMMENTS: seat belts must be fastened, properly adjusted and sufficiently tight.  
The crew must also put on harnesses.*

- Passengers..... Instruct

*COMMENTS: prepare passengers for the forced landing.*

*The crew must verify that passengers are aware of the safety instructions and access to emergency exits is clear (main entrance door curtain open).*

- Mid cabin partition door if installed .....Open / Latch
- Pilot seat arm rest..... Stow

*COMMENTS: The third cockpit member must be seated in the main cabin if possible.*

- 3rd cockpit seat .....Unoccupied and stowed if possible

*COMMENTS: to clear the way for evacuation.*

|           |                                                                                         |              |
|-----------|-----------------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | 04-15-10     |
| CODDE2    |                                                                                         | PAGE 19 / 28 |
| DGT105609 |                                                                                         | CP0177       |

#### ► APPROACH

- ANTI-ICE: **WINGS** pushbutton..... Push to set to Off  
☒ Status light ..... Unlighted - Off
- BLEED: **BLEED 1**, **BLEED 2** and **BLEED 3** pushbuttons ..... Push to set to OFF  
☒ Status lights (all 3) .....Amber **OFF**

#### ► BELOW 14,000 FT:

- PRESSURIZATION: **DUMP** guarded pushbutton ..... Push  
☒ Status light ..... Amber **ON**
- PEDESTAL MKB: **TERR INHIB** pushbutton ..... Push

#### ► SLATS AND FLAPS EXTENSION

- Airspeed ..... Below 200 KIAS (VFE)
- HYDRAULICS: **BACKUP PUMP** status lights..... Unlighted - Auto - Check
- Landing gear handle ..... Down  
☒ On HSI: GEAR symbols (all 3)..... Green
- If necessary perform an abnormal extension:
  - Airspeed ..... Not less than 160 KIAS
  - LH MAIN GEAR EMERGENCY handle ..... Pull, up to the green mark
  - RH MAIN GEAR EMERGENCY handle ..... Pull, up to the green mark

*COMMENTS: 30 sec. Delay time is not necessary with a positive gear down position indication available.*

#### CAUTION

**NOSE GEAR EMERGENCY handle must be used only when LH or RH main gear is locked down.**

#### ■ When main gear are locked down:

- NOSE GEAR EMERGENCY handle..... Pull, up to the green mark

#### CAUTION

**After an emergency extension the landing gear handle must remain down**

- SLATS/FLAPS handle .....SF 3
- Approach speed (zero wind).....VREF

#### ► JUST BEFORE TOUCH DOWN

- EMERGENCY panel: **RAT AUTO** pushbutton ..... Push  
☒ Status light ..... Amber **INHIBIT**

*COMMENTS: Except if RAT was previously extended.*

- INTERIOR LIGHTS: EMERG LIGHTS switch .....ON  
☒ Status light ..... Amber **EMERG LIGHTS**
- Vertical speed as low as possible.....300 ft / minute maximum

|              |                                   |           |
|--------------|-----------------------------------|-----------|
| 04-15-10     | EMERGENCY AND ABNORMAL OPERATIONS | FALCON 7X |
| PAGE 20 / 28 | EMERGENCY                         | CODDE2    |
| CP0177       | SPECIFIC EMERGENCY SITUATIONS     | DGT105609 |

- ENGINE .. SHUT OFF guarded pushbuttons (all 3) ..... Push
  - ☒ Status lights (all 3) ..... Amber **CLOSED** flashing then steady on

*COMMENTS: raise the guarded pushbuttons. This closes the fuel shut-off valves and causes the engines to shut down.*

- Land airplane at the slowest practicable speed and with a nose up attitude of 5 to 8 degrees.

#### ► AFTER THE AIRPLANE HAS COME TO REST

- Continue this procedure using paper version of **EMERGENCY EVACUATION** procedure (section 04-15-10). →

### DITCHING

- Transmission of distress message ..... MAYDAY
- Transponder ..... 7700
- INTERIOR LIGHTS: **FASTEN BELT** and **NO SMOKING** pushbuttons ..... Push
  - ☒ Status lights (2) ..... Blue **ON**

*COMMENTS: seat belts must be fastened, properly adjusted and sufficiently tight.  
The crew must also put on harnesses*

- Passengers..... Instruct
- Life jackets.....Don

*COMMENTS: prepare passengers for ditching.*

*Crew must verify that safety instructions are known by the passengers and access to emergency exits is clear (main entrance door curtain open)*

- Mid cabin partition door if installed .....Open / Latch
- Pilot seat arm rest..... Stow

*COMMENTS: The third cockpit member must be seated in the main cabin if possible.*

- 3rd cockpit seat ..... Unoccupied and stowed if possible
- EMERGENCY panel:
- **AURAL WARN 1** and **AURAL WARN 2** pushbuttons ..... Push
  - ☒ Status lights .....Amber **OFF**

*COMMENTS: this shuts off audio warning "GEAR" at low altitude.*

#### ► APPROACH

- Approach parallel to the major swell.
- ANTI-ICE: **WINGS** pushbutton..... Push to set to Off
  - ☒ Status light ..... Unlighted - Off
- BLEED: **BLEED 1**, **BLEED 2** and **BLEED 3** pushbuttons ..... Push to set to OFF
  - ☒ Status lights .....Amber **OFF**

|           |                                                                                         |              |
|-----------|-----------------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | 04-15-10     |
| CODDE2    |                                                                                         | PAGE 21 / 28 |
| DGT105609 |                                                                                         | CP0177       |

► **BELOW 14,000 FT:**

- PRESSURIZATION : **DUMP** guarded pushbutton ..... Push  
☒ Status light ..... Amber **ON**

*COMMENTS: this causes rapid depressurization of the cabin and eliminates any residual pressure that could prevent opening emergency exits after ditching.*

- PEDESTAL MKB: **TERR INHIB** pushbutton ..... Push

► **SLATS AND FLAPS EXTENSION**

- Airspeed ..... Below 200 KIAS (VFE)
- HYDRAULICS: **BACKUP PUMP** status lights ..... Unlighted - Auto - Check
- SLATS/FLAPS handle ..... SF3
- Approach speed (zero wind) ..... VREF

► **JUST BEFORE TOUCH DOWN**

- EMERGENCY panel: **RAT AUTO** pushbutton ..... Push  
☒ Status light ..... Amber **INHIBIT**

*COMMENTS: Except if RAT was previously extended.*

- Vertical speed as low as possible ..... 300 ft / minute maximum
- ENGINE .. SHUT OFF guarded pushbuttons (all 3) ..... Push  
☒ Status lights (all 3) ..... Amber **CLOSED** flashing then steady on

*COMMENTS: this closes the fuel shut-off valves and causes the engines to shutdown.*

- INTERIOR LIGHTS: EMERG LIGHTS switch ..... ON  
☒ Status light ..... Amber **EMERG LIGHTS**
- Ditch airplane on a crest parallel to the swell, at the slowest practicable speed and with a nose up attitude of 14 degrees.

► **AFTER TOUCH DOWN**

- Continue this procedure using paper version of **EMERGENCY EVACUATION** procedure (section 04-15-10). ➔

## BOMB ON BOARD

**PROCEDURE**

- Airplane ..... Level off
- INTERIOR LIGHTS: **FASTEN BELT** and **NO SMOKING** pushbuttons ..... Push  
☒ Status lights (both) ..... Blue **ON**
- Transmission of distress signal ..... MAYDAY
- ATC transponder ..... Mayday code
- PRESSURIZATION: **PRESSU MAN** pushbutton ..... Push  
☒ Status light ..... Amber **ON**

|              |                                   |           |
|--------------|-----------------------------------|-----------|
| 04-15-10     | EMERGENCY AND ABNORMAL OPERATIONS | FALCON 7X |
| PAGE 22 / 28 | EMERGENCY                         | CODDE2    |
| CP0177       | SPECIFIC EMERGENCY SITUATIONS     | DGT105609 |

- ECS synoptic: cabin altitude RATE .....Maintain to 0
- Land as soon as possible.
- Descent to altitude = cabin altitude + 2,500 ft ( $\Delta P = 1$  psi) or safety altitude.
- When altitude = cabin altitude + 2,500 ft:
  - Continue descent maintaining  $\Delta P$  CABIN = 1 psi.

#### CAUTION

If structural integrity is questioned:

- Limit airspeed to lowest practical value,
- Avoid high maneuvering load factors.

#### NOTE

Approach and landing are performed using normal procedures and checklist.

#### ► BEFORE LANDING

- PRESSURIZATION: **PRESSU MAN** pushbutton.....Push  
☒ Status light ..... Unlighted - Off

#### ► AFTER LANDING AND WHEN AIRPLANE STOPPED IN A REMOTE AREA:

- Apply **EMERGENCY EVACUATION** procedure (section 04-15-10). ➔

### TECHNICAL EXPLANATIONS

#### Triggering event

Suspicion of bomb on board.

#### Objectives of the procedure

To avoid activating an altitude sensitive or timer ignition bomb, the BOMB ON BOARD procedure focuses on:

- Making sure cabin altitude does not exceed the value at which the bomb was discovered,
- Trying to minimize the flight time.

Moreover, to reduce the effects of explosions by helping the blast to go outwards, the airplane should fly with approximately 1psi differential pressure (which corresponds to a 2,500 ft difference between the airplane and the cabin altitude) for as long as possible.

|           |                                                                                         |              |
|-----------|-----------------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | 04-15-10     |
| CODDE2    |                                                                                         | PAGE 23 / 28 |
| DGT105609 |                                                                                         | CP0177       |

## PILOT INCAPACITATION

Pilot incapacitation may take many forms. It may occur gradually or suddenly, be partial or complete and can be preceded by a warning, or may occur with no warning at all.

The definition of incapacitation is when a pilot suffers medical symptoms of illness during flight that may impair his ability to operate the airplane.

These symptoms may include but are not limited to: severe headache, chest pain, dizziness, loss of vision (partial or complete), disorientation, vomiting or loss of consciousness.

The pilot incapacitation procedures must be carried out even if the pilot appears to have recovered, as early symptoms may be warning signs of a more severe illness.

A pilot who is aware of, or feels any type of incapacitation, must immediately alert the other pilot.

In some cases the incapacitated pilot may not be aware of, or may be incapable of rationally evaluating his situation and alerting the other crew member. In this situation, the other pilot is responsible for detecting the symptoms of incapacitation as soon as possible.

Symptoms include: no reactivity or inconsistent response to call-outs, inappropriate task sharing, and difficulties in handling airplane and can be used to help the valid pilot to detect the incapacitation.

### ■ If a pilot becomes incapacitated, the remaining pilot must:

- Ensure control of the trajectory:
  - By taking over the controls and applying the Side Stick Priority operating technique if necessary (refer to sub-section 04-05-05),
  - By selecting the Guidance Panel Pilot Side pushbutton on the valid pilot side,
  - By engaging AP and AT as soon as possible.

*COMMENTS: During the Pilot Side selection change, FD automatically reverts to basic modes and AP remains engaged.*

- Check position of essential controls and switches.
- Inform ATC and declare an emergency if necessary.

*COMMENTS: Communications are preferably performed using the headset.*

- Request the help of cabin crew or a passenger to assist the incapacitated pilot:
  - Pull the pilot back by his shoulders,
  - Tighten and manually lock the incapacitated pilot's shoulder harness,
  - Place and secure his hands under the belt harness,
  - Move seat completely aft,
  - Recline seatback if possible,
  - Lift each knee to remove the pilot's feet from the rudder pedals,
  - Move the rudder pedals of the incapacitated pilot fully forward using the electrical rudder pedal adjustment switch on the side panel,
  - Perform a medical assessment of the incapacitated pilot (including vital signs),
  - Administer first aid as necessary,
  - Consider use of the oxygen mask or therapeutic oxygen and mask,
  - Contact medical assistance if time and environmental conditions permit,

|              |                                                                                         |           |
|--------------|-----------------------------------------------------------------------------------------|-----------|
| 04-15-10     | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | FALCON 7X |
| PAGE 24 / 28 |                                                                                         | CODDE2    |
| CP0177       |                                                                                         | DGT105609 |

- Remove the incapacitated pilot from the seat if phase of flight and environmental conditions permit.
- Reorganize cockpit workload:
  - Distribute workload among remaining crew members if possible,
  - Perform checklists earlier than usual,
  - Request radar vectoring whenever possible,
  - Complete landing configuration earlier than normal.
- Divert to nearest suitable airport depending on nature of medical emergency level and flight conditions as required.

#### NOTE

It takes two people to remove the weight of an unconscious person from a seat without endangering any controls and/or switches.

If it is not possible to remove the incapacitated pilot, the cabin crew or any medically qualified passenger must remain in the cockpit to take care of and monitor the incapacitated pilot.

|           |                                                                                         |              |
|-----------|-----------------------------------------------------------------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS<br><br>EMERGENCY<br><br>SPECIFIC EMERGENCY SITUATIONS | 04-15-10     |
| CODDE2    |                                                                                         | PAGE 25 / 28 |
| DGT105609 |                                                                                         | CP0177       |

#### AFCS: ADS1 MISCOMPARE AND AFCS: IRS2 MISCOMPARE

According to flight conditions the following may be observed simultaneously:

- Possible miscompare flags in HUD and PDU (ALT/ATT/IAS/FPV/HDG)
- AP/AT disconnect, with FD and TD red flag in HUD and PDU

► Operating Technique **INCONSISTENT OR UNRELIABLE FLIGHT DATA IN IPFD AND/OR HUD** procedure (EMERGENCY - OPERATING TECHNIQUES) ..... Applied →

- LH and RH **ADS** pushbuttons ..... Push to select ADS 3  
☒ On ADI ..... Amber **ADS3**
- LH and RH **IRS** pushbuttons ..... Push to select IRS 3  
☒ On ADI ..... Amber **IRS3**
- HDG bug and ASEL ..... Check
- FD and TD modes ..... Check

#### CAUTION

Autopilot may be engaged but will disconnect upon vertical trajectory change.

| Operational consequences |                                                                                                                        |
|--------------------------|------------------------------------------------------------------------------------------------------------------------|
| OPS                      | : UNABLE RVSM / CAT2 / STEEP APP<br>UNABLE RNP APP (LNAV/VNAV & LPV MINIMA)<br>UNABLE RNP-AR<br>UNABLE EVS OPS CREDITS |

#### TECHNICAL STATUS

| SYSTEM | LOST            | AVAILABLE            |
|--------|-----------------|----------------------|
| AFCS   | 1 ADS and 1 IRS | 2 ADS, 2 IRS and SFD |

#### TECHNICAL EXPLANATIONS

##### Triggering event

- Failure of MAU 2 internal module (GEN I/O).

##### Technical explanations

The failure of the GEN I/O #4 module leads to:

- Frozen ADS 1 data to the LH PDU (speed, altitude, vertical speed).
- Misleading IRS 1 data to the LH PDU (FPV, vertical speed)
- Frozen IRS 2 data to the RH PDU.

|              |                                   |           |
|--------------|-----------------------------------|-----------|
| 04-15-10     | EMERGENCY AND ABNORMAL OPERATIONS | FALCON 7X |
| PAGE 26 / 28 | EMERGENCY                         | CODDE2    |
| CP0177       | SPECIFIC EMERGENCY SITUATIONS     | DGT105609 |

Both CAS messages can be triggered simultaneously, or separately in a timeframe up to 15 sec in critical phases. Thus, the CAS messages may not be placed together in the CAS window.

**AFCS: ADS2 MISCOMPARE** AND **AFCS: IRS3 MISCOMPARE**

According to flight conditions the following may be observed simultaneously:

- Possible miscompare flags in HUD and PDU (ALT/ATT/IAS/FPV/HDG)
- AP/AT disconnect, with FD and TD red flag in HUD and PDU

► Operating Technique **INCONSISTENT OR UNRELIABLE FLIGHT DATA IN IPFD AND/OR HUD** procedure (section EMERGENCY - OPERATING TECHNIQUES)..... Applied →

- LH and RH **ADS** pushbuttons ..... Push to select ADS 1  
☒ On ADI .....Amber **ADS1**
- LH and RH **IRS** pushbuttons .....Push to select IRS 1  
☒ On ADI ..... Amber **IRS1**
- HDG bug and ASEL ..... Check
- FD and TD modes ..... Check

#### CAUTION

Autopilot may be engaged but will disconnect upon vertical trajectory change.

| Operational consequences |                                                                                                                        |
|--------------------------|------------------------------------------------------------------------------------------------------------------------|
| OPS                      | : UNABLE RVSM / CAT2 / STEEP APP<br>UNABLE RNP APP (LNAV/VNAV & LPV MINIMA)<br>UNABLE RNP-AR<br>UNABLE EVS OPS CREDITS |

#### TECHNICAL STATUS

| SYSTEM | LOST            | AVAILABLE            |
|--------|-----------------|----------------------|
| AFCS   | 2 ADS and 2 IRS | 1 ADS, 1 IRS and SFD |

#### TECHNICAL EXPLANATIONS

##### Triggering event

- Failure of MAU 1 internal module (GEN I/O).

##### Technical explanations

The failure of the GEN I/O #2 module leads to:

|           |                                   |              |
|-----------|-----------------------------------|--------------|
| FALCON 7X | EMERGENCY AND ABNORMAL OPERATIONS | 04-15-10     |
| CODDE2    | EMERGENCY                         | PAGE 27 / 28 |
| DGT105609 | SPECIFIC EMERGENCY SITUATIONS     | CP0177       |

- Frozen ADS 1 data to the LH HUD (speed, altitude, vertical speed),
- Frozen avionics data to the LH HUD (FMA, deviation pointers...),
- Frozen ADS 2 data to the RH PDU (speed, altitude, vertical speed),
- Misleading IRS 2 data to the RH PDU (FPV, vertical speed),
- Frozen IRS 3 data,
- Frozen RA 2 data.

Both CAS messages can be triggered simultaneously, or separately in a timeframe up to 15 sec in critical phases. Thus, the CAS messages may not be placed together in the CAS window.

|              |                                                                                 |           |
|--------------|---------------------------------------------------------------------------------|-----------|
| 04-15-10     | EMERGENCY AND ABNORMAL OPERATIONS<br>EMERGENCY<br>SPECIFIC EMERGENCY SITUATIONS | FALCON 7X |
| PAGE 28 / 28 |                                                                                 | CODDE2    |
| CP0177       |                                                                                 | DGT105609 |

INTENTIONALLY LEFT BLANK