

Project No: **BDHRN002**Job Card No **0017**

Notif.No.: 10049212

Activity: **1017**

Rev No: 20000622

Model.: F900EX

Sheet 1 of 1

A/C Regn: **D-AHRN**

Serial No.: 096

Type: F900EX

Starting Phase: Inspect

Starting Work Centre: FALCON A/C TEAM

Job Description: VI Ext Leaks Flt Control Hyd Components

ETOPS A/C: No

RVSM A/C: No

Warranty: -

ATA: 27

Work Center	
FALCON A/C	

Zone: 100,200,300,500,600,700**Access Required for this task:**

113FZ,114DZ,143BL,251CL,323EL,331BT,341BT,512CB,512DB,522AB,522CB,522FB,550AB,561AT,561CT,571AT,571CT,571ET,571FT,612CB,622AB,622CB,622FB,650AB,661AT,661CT,671AT,671CT,671ET,671FT,731AB,741AB,M SD,PAX

Corrective Action

0001

Task carried out in accordance with the attached Customer Card that quotes the Operator code detailed below.**This task satisfies operator codes 27-00-00-220-801-01 & 27-00-00-220-801-01A**

Accomplished

Inspected

Pers. No.

Date

Pers. No.

Date

Stamp

Stamp

Completed & Confirmed on SAP IAW MOE 2.13.



Order: 80069321

Operation: 0010

Phase: Inspect - scheduling activity

Work Center:FALCON A/C TEAM

Defect Card Raised

Components Removed/Installed

	Part Number	Part Name	S/N	Location	Comm. Off/On
OFF					
ON					
OFF					
ON					
OFF					
ON					
OFF					
ON					

Occurance Report Raised? YES ☐

Operations Above & Notifications Completed IAW MOE 2.13.

OEM Code: 27-00-00-220-801

Operator Code: 27-00-00-220-801-01A

Form No: JA-SAP-MTX-002

Printed by: ADAMOVIC G



Printed: 03.09.2012

13:34:17

Print No: 1

Operator: **HERON AVIATION**

Work Card No.: **27.025**

Serial No.: **096**

Model: **FALCON 900EX**

Reg No.: **D-AHRN**

Workorder No.: _____

	Date	A/C HRS	AFL	APH			
Due At		4000					
Accomplished							

TECHNICIAN SIGNATURE: _____ KIND OF CERTIFICATE & NO.: _____

INSPECTED BY: _____ KIND OF CERTIFICATE & NO.: _____

TECH	INSP	LABOR-HRS HRS.MINS
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>27-00-00-220-801- ☐ **VISUAL INSPECTION OF FLIGHT CONTROL HYDRAULIC
01A COMPONENTS (MANDATORY REF 5-40-20)**
MANDATORY 5-40

REMARKS : _____

AMM 27-00-00-220-801 NOTE: OPERATION COVERED BY STRUCTURAL INSPECTIONS 53-003, 53-008, 55-000 AND 57-000 SCHEDULED EVERY 2 YEARS. REFER TO 530031, 530091, 550001, 570001 AND 570002 FOR LAST COMPLIANCE INFORMATION.

Operator: **HERON AVIATION**

Work Card No.: **27.025**

Serial No.: **096**

Model: **FALCON 900EX**

Reg No.: **D-AHRN**

Workorder No.: _____

SOURCE SUMMARIES

7 ALD 05-40/20 PAGE NO.:PAGE 1/2 REF: 27-003 DATE: 03/2011 11

27-00-00-220-801-01 VISUAL INSPECTION OF FLIGHT CONTROL HYDRAULIC COMPONENTS (MANDATORY REF 5-40-20)
A

FALCON 900EX AIRCRAFT MAINTENANCE MANUAL

TASK 27-00-00-220-801

VISUAL INSPECTION OF FLIGHT CONTROL HYDRAULIC COMPONENTS FOR EXTERNAL LEAKS

1. OVERVIEW OF THE JOB

Operation code: 27-00-00-220-801-01

General description of the procedure

This procedure describes the operations to be performed to check for:

- integrity of the servo-actuator linkages by a visual inspection,
- leak of the hydraulic equipment in static and dynamic modes.

NOTE: The hydraulic and electro-hydraulic equipment items to be checked are listed in the Table below.

Table 1: Flight control hydraulic components to be checked

EQUIPMENT	ACCESS DOOR
Aileron servo-actuator (L521CC)/(R521CC)	(550AB)/(650AB)
Rudder servo-actuator (571CC)	(323EL)
Elevator servo-actuator (522CW)	(331BT)/(341BT)
Roll ARTHUR variable bellcrank (33CW) (A/C 2 to 11)	(113FZ)/(114DZ)
Pitch ARTHUR variable bellcrank (43CW)	(MSD)
Pitch ARTHUR servovalve (47CW)	(MSD)
Flap power drive unit (3CG)	(731AB)
Airbrake actuators (L500CD)/(L501CD)/(L502CD)/(R500CD)/(R501CD)/(R502CD)	(561CT)/(571ET)/(571FT)/(661CT)/ (671ET)/(671FT)
Airbrake restrictors (L506CD)/(L507CD)/(L508CD)/(R506CD)/(R507CD)/(R508CD)	(561AT)/(571AT)/(571CT)/(661AT)/ (671AT)/(671CT)
Middle airbrake valve (2CD)	(741AB)
Inboard and outboard airbrake valve (3CD)	(741AB)
Airbrake pressure holding valve (503CD)	(741AB)
Airbrake pressure accumulator gauge (504CD)	(741AB)
Airbrake charging valve (505CD)	(741AB)
Slat actuators (L500CM)/(L501CM)/(L502CM)/(L503CM)/(R500CM)/(R501CM)/ (R502CM)/(R503CM)	(512CB)/(522AB)/(522CB)/(522FB)/ (612CB)/(622AB)/(622CB)/(622FB)
Outboard slat manifold (L3CM)	(143BL)/(251CL)

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EQUIPMENT	ACCESS DOOR
Inboard slat valve (17CM)	(143BL)/(251CL)
Outboard slat emergency valve (R3CM)	(741AB)

- Observe the definition and various aspects of the hydraulic fluid lost (Refer to **TASK 20-32-00-910-802**).
- The procedure requires two operators:
 - one operator in the cockpit,
 - one operator to check for leaks on the hydraulic equipment.

2. LOGISTICS

A. References

Reference	Designation
• 20-32-00-910-802	ACCEPTANCE CRITERIA FOR HYDRAULIC LEAKS
• 24-00-00-860-801	ENERGIZATION / DE-ENERGIZATION OF THE AIRCRAFT
• 27-00-00-910-801	FLIGHT CONTROL SYSTEM MAINTENANCE AND SAFETY
	PRECAUTIONS
• 27-50-00-860-802	EXTENSION / RETRACTION OF THE SLATS / FLAPS FOR
	MAINTENANCE
• 27-60-00-860-801	EXTENSION / RETRACTION OF THE AIRBRAKES FOR
	MAINTENANCE
• 29-00-00-860-801	PRESSURIZATION / DE-PRESSURIZATION OF THE HYDRAULIC
	SYSTEMS
• 32-10-00-860-801	MANUAL OPENING / CLOSING OF THE MLG DOORS

B. Tools and Ground Support Equipment

Reference	Designation	Quantity
• F7XC202000008	TOOL BOX	
• TO-20-947	EMPENNAGE ACCESS PLATFORM	

C. Ingredients and Consumable Products

Designation	Additional designation
• CLEANER	MULTIPURPOSE

D. Energy

- ELECTRICAL
- HYDRAULIC

E. Access

Reference	Designation
• 113FZ	COCKPIT FLOOR
• 114DZ	COCKPIT FLOOR
• 143BL	WING ROOT LOWER ACCESS DOOR
• 251CL	WING ROOT UPPER ACCESS DOOR
• 323EL	FIN ACCESS DOOR
• 331BT	FRONT SPRING-LOADED FIN FAIRING

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- **341BT** FRONT SPRING-LOADED FIN FAIRING
- **512CB** WING LOWER SURFACE INBOARD LEADING EDGE ACCESS PANEL
- **522AB** WING LOWER SURFACE OUTBOARD LEADING EDGE ACCESS PANEL NO. 1
- **522CB** WING LOWER SURFACE OUTBOARD LEADING EDGE ACCESS PANEL NO. 3
- **522FB** WING LOWER SURFACE OUTBOARD LEADING EDGE ACCESS PANEL NO. 6
- **550AB** AILERON SERVO-ACTUATOR ACCESS DOOR
- **561AT** INBOARD AIRBRAKE INBOARD ACCESS DOOR
- **561CT** INBOARD AIRBRAKE MIDDLE ACCESS DOOR
- **571AT** MIDDLE AIRBRAKE INBOARD ACCESS DOOR
- **571CT** OUTBOARD AIRBRAKE INBOARD ACCESS DOOR
- **571ET** MIDDLE AIRBRAKE MIDDLE ACCESS DOOR
- **571FT** OUTBOARD AIRBRAKE MIDDLE ACCESS DOOR
- **612CB** WING LOWER SURFACE INBOARD LEADING EDGE ACCESS PANEL
- **622AB** WING LOWER SURFACE OUTBOARD LEADING EDGE ACCESS PANEL NO. 1
- **622CB** WING LOWER SURFACE OUTBOARD LEADING EDGE ACCESS PANEL NO. 3
- **622FB** WING LOWER SURFACE OUTBOARD LEADING EDGE ACCESS PANEL NO. 6
- **650AB** AILERON SERVO-ACTUATOR ACCESS DOOR
- **661AT** INBOARD AIRBRAKE INBOARD ACCESS DOOR
- **661CT** INBOARD AIRBRAKE MIDDLE ACCESS DOOR
- **671AT** MIDDLE AIRBRAKE INBOARD ACCESS DOOR
- **671CT** OUTBOARD AIRBRAKE INBOARD ACCESS DOOR
- **671ET** MIDDLE AIRBRAKE MIDDLE ACCESS DOOR
- **671FT** OUTBOARD AIRBRAKE MIDDLE ACCESS DOOR
- **731AB** LH MLG MAIN DOOR
- **741AB** RH MLG MAIN DOOR
- **MSD** SERVICING COMPARTMENT DOOR
- **PAX** PASSENGER DOOR

F. Miscellaneous

- SHEET OF WHITE PAPER (LOCAL PROCUREMENT)

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3. PRELIMINARY STEPS

- A. Observe all applicable recommendations and safety precautions to prevent injury to personnel and damage to equipment (Refer to **TASK 27-00-00-910-801**).
- B. Remove the access doors and floor panels according to Table 1.
- C. Manually open the LH and RH main L/G doors according to Table 1 (Refer to **TASK 32-10-00-860-801**, paragraph "Manual Opening of Main Landing Gear Doors").

4. VISUAL INSPECTION

- A. Check for integrity of the linkages of:
 - the aileron servo-actuators (**L521CC**) and (**R521CC**),
 - the rudder servo-actuator (**571CC**),
 - the elevator servo-actuator (**522CW**).
- B. Check the linkages between the servo-actuators and the aircraft fixed structure.
- C. Check the linkages between the servo-actuators and the control surfaces.

5. LEAKTIGHTNESS CHECK ON HYDRAULIC EQUIPMENT

- A. Visual Check for Leaks
 - (1) Check for leaks on the equipment items listed Table 1.
 - (2) If traces of hydraulic fluid are found on the equipment or inside the box structure, perform a static and a dynamic leak checks (see paragraphs 5.B. through 5.C.).

NOTE: Static and dynamic leak checks must be performed on flight control hydraulic equipment items whenever traces of hydraulic fluid are found on the equipment item or in its box structure.

- B. Static Check

NOTE: A slight seepage is normal. If a leak is detected, do not wipe the equipment at the leak. Proceed as follows:

- (1) Make sure that the pressure is dropped in hydraulic systems 1 and 2. If necessary, drop the residual pressure (Refer to **TASK 29-00-00-860-801**, paragraph "Cut off and Drop the Pressure from Hydraulic Ground Power Unit").
- (2) Place a sheet of white paper under the presumed leak.
- (3) Closely watch the equipment to determine the origin of the seepage:
 - if the seepage is at the sliding rod, the maximum acceptable leak rate is one drop over 15 minutes,
 - if the seepage is elsewhere, the maximum acceptable leak rate is one drop over 30 minutes.
- (4) If the leakage is more significant, replace the equipment.

- C. Dynamic Check

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- (1) Thoroughly wipe the equipment with a clean lint-free cloth and **cleaner**.
- (2) Connect the electrical ground power unit (Refer to **TASK 24-00-00-860-801**, paragraph "Connection of the Electrical Ground Power Unit").
- (3) Connect the hydraulic ground power unit to hydraulic systems 1 and 2 (Refer to **TASK 29-00-00-860-801**, paragraph "Connection of the Hydraulic Ground Power Unit").
- (4) Energize the aircraft systems (Refer to **TASK 24-00-00-860-801**, paragraph "Energization with the Electrical Ground Power Unit").
- (5) Pressurize hydraulic systems 1 and 2 (Refer to **TASK 29-00-00-860-801**, paragraph "Pressurization from Hydraulic Ground Power Unit").
- (6) Slat actuators (**L500CM**), (**L501CM**), (**L503CM**), (**R500CM**), (**R501CM**) and (**R503CM**)
 - (a) Perform a series of three extension/retraction of slats in normal mode to stabilize the leakage (Refer to **TASK 27-50-00-860-802**, paragraphs "Extension in Normal Mode" and "Retraction in Normal Mode").
 - (b) Then, perform a series of twelve extension/retraction of slats in normal mode and check that the number of fluid drops does not exceed two drops (Refer to **TASK 27-50-00-860-802**, paragraphs "Extension in Normal Mode" and "Retraction in Normal Mode").
- (7) Slat emergency actuators (**L502CM**) and (**R502CM**)
 - (a) Perform a series of three extension of slats in emergency mode/ retraction after an emergency mode extension to stabilize the leakage (Refer to **TASK 27-50-00-860-802**, paragraphs "Extension of Outboard Slats with "EMERG SLATS" Switch" and "Retraction of Outboard Slats after an Emergency Mode Extension").
 - (b) Then, perform a series of twelve extension of slats in emergency mode/ retraction after an emergency mode extension and check that the number of fluid drops does not exceed two drops (Refer to **TASK 27-50-00-860-802**, paragraphs "Extension of Outboard Slats with "EMERG SLATS" Switch" and "Retraction of Outboard Slats after an Emergency Mode Extension").
- (8) Airbrake actuators (**L500CD**), (**L501CD**), (**L502CD**), (**R500CD**), (**R501CD**) and (**R502CD**)
 - (a) Perform a series of three extension/retraction of the three pair of airbrakes to stabilize the leakage (Refer to **TASK 27-60-00-860-801**, paragraphs "Extension" and "Retraction").
 - (b) Then, perform a series of twelve extension/retraction of the three pair of airbrakes and check that the number of fluid drops does not exceed two drops (Refer to **TASK 27-60-00-860-801**, paragraphs "Extension" and "Retraction").
- (9) Servo-actuators (**L521CC**), (**R521CC**), (**571CC**) and (**522CW**)

NOTE 1: The servo-actuators (aileron (**L521CC**) and (**R521CC**), rudder (**571CC**), elevator (**522CW**)) are controlled using pilot/copilot control column/wheel (**L8TB**)/(**R8TB**) and pilot/copilot yaw control pedal assembly (**L550CC**)/(**R550CC**).

NOTE 2: One cycle corresponds to a control column/wheel or a yaw control pedal deflection from neutral position to stop, then stop to stop, and from stop back to neutral position.

 - (a) Perform a series of ten preliminary cycles to stabilize the leakage.
 - (b) Then, perform a series of twenty-five cycles and check that the number of fluid drops does not exceed two drops.

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(10) Pitch ARTHUR variable bellcrank (**43CW**)

NOTE 1: Pitch ARTHUR variable bellcrank (**43CW**) is controlled using the airbrake/tailplane/trim control box (**2CF**).

NOTE 2: One cycle corresponds to a Horizontal Stabilizer deflection from -5° to +1° and back to -5°.

- (a) Perform a series of ten preliminary cycles to stabilize the leakage.
- (b) Then, perform a series of twenty-five cycles and check that the number of fluid drops does not exceed two drops.

(11) Roll ARTHUR variable bellcrank (**33CW**) (A/C 2 to 11)

NOTE 1: Roll ARTHUR variable bellcrank (**33CW**) is control using the Indicated Airspeed (IAS).

NOTE 2: One cycle corresponds to a variation of the Indicated Airspeed (IAS) from the "low speed" to the "high speed" ARTHUR position.

- (a) Perform a series of ten preliminary cycles to stabilize the leakage.
- (b) Then, perform a series of twenty-five cycles and check that the number of fluid drops does not exceed two drops.

(12) Flap power drive unit (**3CG**)

- (a) Operate the flaps through one full extension/retraction cycle in normal mode to stabilize the leakage (Refer to **TASK 27-50-00-860-802**, paragraphs "Extension in Normal Mode" and "Retraction in Normal Mode").
- (b) Then, perform a series of two fully extension/retraction of flaps and check that the number of fluid drops does not exceed one drop (Refer to **TASK 27-50-00-860-802**, paragraphs "Extension in Normal Mode" and "Retraction in Normal Mode").

(13) If the number of fluid drops is out of tolerances, replace the equipment.

6. FINAL STEPS

- A. Cut off and drop the pressure in hydraulic systems 1 and 2 (Refer to **TASK 29-00-00-860-801**, paragraph "Cut off and Drop the Pressure from Hydraulic Ground Power Unit").
- B. De-energize the aircraft systems (Refer to **TASK 24-00-00-860-801**, paragraph "De-energization with the Electrical Ground Power Unit").
- C. Disconnect the hydraulic ground power unit (Refer to **TASK 29-00-00-860-801**, paragraph "Disconnection of the Hydraulic Ground Power Unit").
- D. Disconnect the electrical ground power unit (Refer to **TASK 24-00-00-860-801**, paragraph "Disconnection of the Electrical Ground Power Unit").
- E. Manually close the LH and RH main L/G doors (Refer to **TASK 32-10-00-860-801**, paragraph "Closing of Main Landing Gear Doors").
- F. Install the access doors and floor panels according to Table 1.