

Project No: **BDHRN002**Job Card No **0133**

Notif.No.: 10049213

Activity: **1018**

Rev No: 20000622

Model.: F900EX

Sheet 1 of 1

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

Serial No.: 096

Type: F900EX

Starting Phase: Functions

Starting Work Centre: FALCON A/C TEAM

Job Description: FNC Rudder Servo Actuator

ETOPS A/C: No

RVSM A/C: No

Warranty: -

ATA: 27

Work Center	
FALCON A/C	

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

110AZ

Corrective Action

0001	Task carried out in accordance with the attached Customer Card that quotes the Operator code detailed below.				 Order: 80069300 Operation: 0010 Phase: Functions - scheduling activity Work Center: FALCON A/C TEAM	
	This task satisfies operator codes 27-22-01-350-801-01 & 27-22-01-350-801-01A					
	Accomplished		Inspected			
	Pers. No.	Date	Pers. No.	Date		
Stamp		Stamp				
Completed & Confirmed on SAP IAW MOE 2.13.						

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: 27-22-01-350-801-01

Operator Code: 27-22-01-350-801-01

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.: **27.190**
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.: _____

27-22-01-900-801-01 RUDDER SERVO ACTUATOR AMM 27-22-01-900-801

REASON REMOVED: (CHECK ONE) ☐ TIME EXPIRED ☐ FAILURE ☐ WORN ☐ LOANER ☐ SCHEDULING CONV
☐ MOD/UPGRADE ☐ SERVICE ☐ ENGINE CHANGE ☐ TIRE CHANGE ☐ SWAP/TRBLE SHOOT ☐ DAMAGED ☐ UNKNOWN

If removed P/N & S/N information is incorrect please provide details below.

REMOVED P/N	103103-18		S/N	1170		LABOR-HRS	
INSTALLED P/N			S/N			PART COST\$	
INSTALLED TSN	MOS	INSTALLED TSO	MOS	TIME SINCE REPAIR	MOS	WARRANTY TIME REMAINING	MOS
	HRS		HRS		HRS		HRS
	LDGS		LDGS		LDGS		LDGS
				TECH:		INSP:	

REMARKS : _____

Note: INITIAL THE SERVICE TASKS BELOW WHICH WERE ACCOMPLISHED DURING CHANGE. IF TASKS WERE NOT ACCOMPLISHED, RECORD TIME ACCRUED SINCE TASK WAS LAST ACCOMPLISHED OR CHECK CONTINUE TIME (CT).

TECH	INSP	LABOR-HRS HRS.MINS	TIME ACCRUED	CONTINUE TIME
------	------	-----------------------	-----------------	------------------

27-22-01-350-801-01 RESTORATION RUDDER SERVO ACTUATOR (FUNCTIONAL TEST) _____ ☐
REMARKS : _____

GENERIC NO REF,AMM
27-22-01-350-801

>27-22-01-350-801-01A RESTORATION RUDDER SERVO ACTUATOR (FUNCTIONAL TEST) (MANDATORY REF 5-40) _____ ☐
MANDATORY 5-40
REMARKS : _____

GENERIC NO REF,AMM
27-22-01-350-801

Operator: **HERON AVIATION**

Work Card No.: **27.190**

Serial No.: **096**

Model: **FALCON 900EX**

Reg No.: **D-AHRN**

Workorder No.: _____

AREA SUMMARIES

T1 EMPENNAGE AND ENGINE NO. 2 AIR INTAKE

27-22-01-900-801-01 RUDDER SERVO ACTUATOR

27-22-01-350-801-01 RESTORATION RUDDER SERVO ACTUATOR (FUNCTIONAL TEST)

SOURCE SUMMARIES

956 MPD 05-20-27 PAGE NO.:PAGE 2/7 REF: 27-20 RUDDER DATE: MAR 09/2012 2

27-22-01-350-801-01 RESTORATION RUDDER SERVO ACTUATOR (FUNCTIONAL TEST)

7 ALD 05-40/20 PAGE NO.:PAGE 1/2 REF: 27-215 (SEE 5-20) DATE: 03/2011 11

27-22-01-350-801-01 RESTORATION RUDDER SERVO ACTUATOR (FUNCTIONAL TEST)

27-22-01-350-801-01 RESTORATION RUDDER SERVO ACTUATOR (FUNCTIONAL TEST) (MANDATORY REF 5-40)
A

FALCON 900EX AIRCRAFT MAINTENANCE MANUAL

TASK 27-22-01-900-801

REMOVAL / INSTALLATION OF THE RUDDER SERVO-ACTUATOR

WARNING: SERIOUS PERSONNEL INJURIES CAN RESULT FROM OPERATIONS ON ACTIVE FLIGHT CONTROLS IF THE FOLLOWING INSTRUCTIONS ARE NOT OBSERVED:

- THE FLIGHT CONTROL MANEUVERING SPACES MUST BE UNOBSTRUCTED,
- APPROPRIATE SAFETY FENCES AND WARNING LIGHTS MUST BE INSTALLED AROUND THE AIRCRAFT,
- THE PERSONNEL INSIDE THE FENCED AREA MUST BE AWARE OF THE ONGOING OPERATIONS AND OF THE ASSOCIATED HAZARDS.

CAUTION: WHEN PERFORMING OPERATIONS ON FLIGHT CONTROL COMPONENTS, ALL REQUIRED PRECAUTIONS MUST BE TAKEN TO PREVENT INSTALLATION ERROR AND/OR DAMAGE TO A CRITICAL INSTALLATION (REFER TO [TASK 27-00-00-910-802](#), PARAGRAPH "MECHANICAL COMPONENTS").

1. OVERVIEW OF THE JOB

Operation code: 27-22-01-900-801-01 rudder servo-actuator (**571CC**)

NOTE: This procedure requires two operators.

2. LOGISTICS

A. References

Reference	Designation
• 20-00-00-910-801	GENERAL MAINTENANCE AND SAFETY PRECAUTIONS
• 20-20-00-900-801	REMOVAL / INSTALLATION OF THE ELECTRICAL BONDING BRAIDS
• 20-33-00-910-801	ACCEPTANCE CRITERIA FOR HOSES AND PIPES
• 24-00-00-860-801	ENERGIZATION / DE-ENERGIZATION OF THE AIRCRAFT
• 27-00-00-720-806	BRIEF CHECK OF THE FLIGHT CONTROL FORCE PATTERNS
• 27-00-00-910-802	PRECAUTIONS TO BE TAKEN WHEN REPLACING FLIGHT CONTROL SYSTEM COMPONENTS
• 27-00-00-910-804	USE OF THE FLIGHT CONTROL SURFACE DEFLECTION MEASURING FIXTURES
• 27-00-00-910-805	REMOVAL / INSTALLATION OF THE FLIGHT CONTROL RIGGING PINS
• 27-20-00-720-801	FUNCTIONAL TEST OF THE RUDDER CONTROL SURFACE DEFLECTION
• 27-20-00-820-801	ADJUSTMENT / TEST OF THE YAW CONTROL
• 29-00-00-860-801	PRESSURIZATION / DE-PRESSURIZATION OF THE HYDRAULIC SYSTEMS
• 29-00-00-870-802	DEGASSING OF THE HYDRAULIC SYSTEMS
• 29-14-01-610-801	FILLING AND REPLENISHING OF THE HYDRAULIC RESERVOIRS

B. Tools and Ground Support Equipment

Reference	Designation	Quantity
• F7XC202000008	TOOL BOX	

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- **TO-20-947** EMPENNAGE ACCESS PLATFORM

C. Ingredients and Consumable Products

Designation	Additional designation
• LOCKWIRE MS20995C63	
• LOCKWIRE	MS20995C32
• LUBRICATING OIL	
• P-D-680B	WHITE SPIRIT

D. Spare Parts

Reference	Designation	Quantity
• F50B321016003	RETAINER,NUT	2
• MS24665-155	PIN,COTTER	
• F50B331101201A1	WASHER,TAB	

E. Additional Spare Parts

Reference	Designation	Quantity
• AE2460060E0180	HOSE	2
• AE2463277E0180	HOSE	2
• 75103A244150	BRAID,BONDING	2
• MY20270-001	WASHER	

F. Energy

- ELECTRICAL
- HYDRAULIC

G. Access

Reference	Designation
• 323DL	FIN ACCESS DOOR
• 323EL	FIN ACCESS DOOR
• 323FL	FIN ACCESS DOOR
• 324AL	RUDDER ACCESS DOOR
• MSD	SERVICING COMPARTMENT DOOR
• PAX	PASSENGER DOOR

H. Miscellaneous

- SAFETY FENCES (LOCAL PROCUREMENT)
- WARNING LIGHTS (LOCAL PROCUREMENT)
- DRAIN CONTAINER (LOCAL PROCUREMENT)
- CIRCUIT BREAKER LOCKOUT (LOCAL PROCUREMENT) (QTY : 2)

3. **PRELIMINARY STEPS**

Refer to **fig. 1**

- A. Install the safety fences and the warning lights.

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- B. Connect the electrical ground power unit (Refer to [TASK 24-00-00-860-801](#), paragraph "Connection of the Electrical Ground Power Unit").
- C. Connect the hydraulic ground power unit (Refer to [TASK 29-00-00-860-801](#), paragraph "Connection of the Hydraulic Ground Power Unit").

WARNING: SERIOUS PERSONNEL INJURIES CAN RESULT FROM ANY OPERATIONS ON FLIGHT CONTROL SYSTEM EQUIPMENT. ELECTRICAL AND HYDRAULIC POWER SUPPLIES ARE PROHIBITED WHEN INSTALLING THE RUDDER DEFLECTION MEASURING FIXTURE.

- D. Install the rudder deflection measuring fixture (Refer to [TASK 27-00-00-910-804](#), paragraph "Use of Rudder Deflection Measuring Fixture").

NOTE: To inhibit control surface deflection, the following circuit breakers must be held safetied with circuit breaker lockouts:

- in "A1 BUS" section, "HYDR" zone: "ST BY PUMP" circuit breaker (**11ML**),
- in "A2 BUS" section, "FLT CONTROL" zone: "TRIM RUDDER" circuit breaker (**1CC**).

- E. Check of yaw channel adjustment

- (1) Energize the aircraft systems (Refer to [TASK 24-00-00-860-801](#), paragraph "Energization with the Electrical Ground Power Unit").
- (2) Pressurize hydraulic systems 1 and 2 (Refer to [TASK 29-00-00-860-801](#), paragraph "Pressurization from the Hydraulic Ground Power Unit").
- (3) If rudder servo-actuator to be removed is not failed, perform a functional test of rudder deflection to make sure that the yaw channel assembly is correctly adjusted (Refer to [TASK 27-20-00-720-801](#), paragraph "Functional Test of Rudder Deflection").

NOTE: The rudder deflection measuring fixture must be kept in place.

- (4) Cut off the pressure and depressurize the reservoirs in hydraulic systems 1 and 2 (Refer to [TASK 29-00-00-860-801](#), paragraph "Cut off and Drop Pressure from the Hydraulic Ground Power Unit").
- (5) De-energize the aircraft systems (Refer to [TASK 24-00-00-860-801](#), paragraph "De-energization with the Electrical Ground Power Unit").

- F. Safetying

- (1) Disconnect the hydraulic ground power unit (Refer to [TASK 29-00-00-860-801](#), paragraph "Disconnection of the Hydraulic Ground Power Unit").
- (2) Disconnect the electrical ground power unit (Refer to [TASK 24-00-00-860-801](#), paragraph "Disconnection of the Electrical Ground Power Unit").
- (3) Place a "DANGER, DO NOT OPERATE FLIGHT CONTROLS" placard, in plain sight, on the cockpit pedestal.
- (4) On circuit breaker panel (**10PP**), disengage the following circuit breakers and secure them with circuit breaker lockouts:
 - in "A1 BUS" section, "FLT CONTROL" zone: "STAB EMERG" circuit breaker (**21CF**),
 - in "B1 BUS" section, "FLT CONTROL" zone: "STAB NORMAL" circuit breaker (**1CF**).

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- G. Remove access doors (**323DL**), (**323EL**), (**323FL**) and (**324AL**).
- H. Pin the yaw bellcrank FGFB372003 (Refer to **TASK 27-00-00-910-805**, paragraph "Yaw Control Linkage").
- I. Install a drain container near the rudder servo-actuator to retain the rest of hydraulic fluid when disconnecting the hydraulic hoses.
- J. Drop the residual pressure in hydraulic systems 1 and 2 and in hydraulic reservoirs (**L501ML**) and (**R501ML**) (Refer to **TASK 29-00-00-860-801**, paragraph "Cut off and Drop Pressure from the Hydraulic Ground Power Unit").

4. REMOVAL OF RUDDER SERVO-ACTUATOR

Refer to **fig. 1** and **fig. 2**

WARNING: PERSONNEL INJURIES CAN RESULT FROM ANY OPERATIONS ON FLIGHT CONTROL SYSTEM. HYDRAULIC AND ELECTRICAL POWER SUPPLIES ARE PROHIBITED WHEN REMOVING THE RUDDER SERVO-ACTUATOR.

CAUTION: ALL REQUIRED PRECAUTIONS MUST BE TAKEN TO DISCONNECT THE HYDRAULIC COUPLINGS (REFER TO **TASK 20-00-00-910-801, PARAGRAPH "HYDRAULICS").**

- A. Disconnection of the four hydraulic hoses (**fig. 1**)
 - (1) Mark the location of the four hydraulic hoses:
 - hydraulic hoses of hydraulic system 1 (supply (S1) and return (R1)), through access door (**323FL**),
 - hydraulic hoses of hydraulic system 2 (supply (S2) and return (R2)), through access door (**323DL**).
 - NOTE:** The hydraulic hoses (supply and return lines) may be identified by their diameters.
 - (2) Unsafely and disconnect the hydraulic hose couplings of hydraulic systems 1 and 2 only from A/C side rigid couplings.
NOTE: These hydraulic hoses will be disconnected from servo-actuator rigid couplings on workbench.
 - (3) Install protective plugs on the disconnected coupling components (Refer to **TASK 20-00-00-910-801**, paragraph "Hydraulics").
- B. Disconnection of rudder servo-actuator drive rod (**570CC**) from servo-actuator drive lever (**fig. 2**)
 - (1) Remove and discard cotter pin (1).
 - (2) Remove nut (2) and washer (3).
 - (3) Remove attaching pin (4) and Teflon washer (5) (record the washer location).
 - (4) Protect the rudder servo-actuator drive rod against shocks.
- C. Disconnection of yaw Auxiliary Artificial Feel Unit (AAFU) (**572CC**) only from servo-actuator input lever (**fig. 2**)
 - (1) Remove attaching pin (12).

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- (2) Remove and discard tabwasher (13).
- (3) Protect the yaw AAFU against shocks.
- D. Disconnection of bonding braids (3a) and (3b) from the rudder servo-actuator barrel (**fig. 1**)
 - (1) Remove screws (4) and washers (5).
 - (2) Disconnect bonding braids (3a) and (3b).
 - (3) Protect the bonding braids.
- E. Disconnection of rudder servo-actuator (**571CC**) (**fig. 2**)
 - (1) On drive bellcrank side (6)
 - (a) Cut and discard lockwire (7) to unsafety attaching pin (8).
 - (b) Remove attaching pin (8).
 - (c) Unbend lockwasher (10).
 - (d) Remove attaching pin (9).
 - (e) Remove and discard lockwasher (10).
 - (2) On fin fitting side (11)
 - (a) Cut and discard lockwire (12) to unsafety attaching pin (13).
 - (b) Remove attaching pin (13).
 - (c) Unbend lockwasher (15).
 - (d) Remove attaching pin (14).
 - (e) Remove and discard lockwasher (15).
- F. Remove rudder servo-actuator (**571CC**), taking care not to damage the hydraulic hoses.

5. PREPARATION BEFORE INSTALLATION

Refer to **fig. 1**

- A. On workbench

CAUTION: ALL REQUIRED PRECAUTIONS MUST BE TAKEN TO DISCONNECT THE HYDRAULIC COUPLINGS
(REFER TO **TASK 20-00-00-910-801**, PARAGRAPH "HYDRAULICS").

- (1) Unsafety and disconnect the couplings of hydraulic systems 1 and 2 hoses (S1), (R1), (S2) and (R2) from rigid couplings of the removed servo-actuator.
- (2) Install protective plugs on the disconnected couplings of servo-actuator and hydraulic hoses (Refer to **TASK 20-00-00-910-801**, paragraph "Hydraulics").
- B. Check the following components for condition (and replace, if necessary):
 - yaw AAFU (**572CC**),
 - the four hydraulic hoses (supply hoses (**AE2460060E0180**)) and (return hoses (**AE2463277E0180**)) (Refer to **TASK 20-33-00-910-801**) and protective heat-shrinkable sheaths,

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- the two bonding braids (3a) and (3b) ([75103A244150](#)), (Refer to [TASK 20-90-00-200-801](#)),
- the bonding braid to be connected to rudder servo-actuator drive rod ([570CC](#)) (Refer to [TASK 27-23-01-900-801](#), paragraph "Removal/Installation of a Yaw Control Rod with Adjustable Length").

NOTE: In event of bonding braid damage, (Refer to [TASK 20-20-00-900-801](#)).

C. Lubrication

- (1) Using a clean lint-free cloth moistened with [P-D-680B](#), clean attaching pins (8), (9), (13) and (14).
- (2) Using an oil can filled with [lubricating oil](#), lubricate attaching pins (8), (9), (13) and (14).

D. On workbench, installation of hydraulic hoses (S1), (R1), (S2) and (R2) on the rudder servo-actuator to be installed

CAUTION: ALL REQUIRED PRECAUTIONS MUST BE TAKEN TO CONNECT THE HYDRAULIC COUPLINGS (REFER TO [TASK 20-00-00-910-801](#), PARAGRAPH "HYDRAULICS").

- (1) Remove the protective plugs from the couplings (on the point of being connected) on hydraulic hose and rudder servo-actuator sides.

CAUTION: THE HYDRAULIC HOSES MUST NOT BE TWISTED WHEN TIGHTENING THE COUPLINGS.

- (2) Connect the four hydraulic hoses to the servo-actuator rigid couplings, taking into account the location marks made before removing them.

NOTE: The hydraulic hoses (supply and return lines) may be identified by their diameters.

- (3) On servo-actuator side, safety the hydraulic hose couplings to each other with [lockwire](#) (MS20995C32).

E. On the A/C side rigid couplings, prepare the safetying with [lockwire](#) (MS20995C32).

6. INSTALLATION OF RUDDER SERVO-ACTUATOR

Refer to **fig. 1** and **fig. 2**

WARNING: PERSONNEL INJURIES CAN RESULT FROM ANY OPERATION ON FLIGHT CONTROL SYSTEM. HYDRAULIC AND ELECTRICAL POWER SUPPLIES ARE PROHIBITED WHEN INSTALLING THE RUDDER SERVO-ACTUATOR.

NOTE: Yaw bellcrank FGFB372003 is still pinned (Refer to [TASK 27-00-00-910-805](#), paragraph "Yaw Control Linkage").

A. Position the rudder servo-actuator with hydraulic hoses routed in their housings.

B. Connection of the rudder servo-actuator (**fig. 2**)

- (1) On fin fitting (11) side
 - (a) Screw in attaching pin (14) with a new lockwasher (15) ([F50B321016003](#)).
 - (b) Install attaching pin (13).
- (2) On drive bellcrank (6) side

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- (a) Screw attaching pin (9) with new lockwasher (10) ([F50B321016003](#)).
 - (b) Install attaching pin (8).
 - (3) Torque attaching pins (8), (9), (13) and (14) to 0.6 m.daN (53 in.lbf).
 - (4) Bend lockwashers (10) and (15).
 - (5) Safety pin (13) with **lockwire MS20995C63**.
 - (6) Safety pin (8) with **lockwire** (MS20995C32).
- C. Connection of the four removable hose couplings according to the location marks (**fig. 1**)
- NOTE: The hydraulic hoses (supply and return lines) may be identified by their diameters.
- (1) Remove the protective plugs from all the couplings to be connected.
CAUTION: THE HYDRAULIC HOSES MUST NOT BE TWISTED WHEN TIGHTENING THE COUPLINGS.
 - (2) Connect the couplings of removable hydraulic hoses (S1) and (R1) to the A/C side rigid couplings (through access door (**323FL**)).
 - (3) Safety the removable hydraulic hose couplings (S1) and (R1) to each other with **lockwire** (MS20995C32).
 - (4) Connect the couplings of removable hydraulic hoses (S2) and (R2) to the A/C side rigid couplings (through access door (**323DL**)).
 - (5) Safety the removable hydraulic hose couplings (S2) and (R2) to each other with **lockwire** (MS20995C32).
- D. Connection of yaw AAFU (**572CC**) to servo-actuator input lever (**fig. 2**)
- (1) Using an oil can filled with **lubricating oil**, lubricate attaching pin (12).
 - (2) Install a new tabwasher ([F50B331101201A1](#)) (13).
 - (3) Install attaching pin (12).
- NOTE 1: Attaching pin (12) must be installed with its head upwards.
- NOTE 2: Tabwashers (13) must not be bent. Safetying will be performed when installing the yaw AAFU permanently on A/C (after the adjustment/tests (Refer to **TASK 27-20-00-820-801**, paragraph "Adjustment/Tests with Hydraulic Systems Pressurized)).
- E. Connection of rudder servo-actuator drive rod (**570CC**) to servo-actuator drive lever (**fig. 2**)
- CAUTION: THIS CONTROL ROD IS EQUIPPED WITH ONE ANTI-SWIVELING WASHER (REFER TO THE "ILLUSTRATED PARTS CATALOG" FOR LOCATION). THIS WASHER MUST NOT BE OMITTED WHEN INSTALLING THE CONTROL ROD.**
- (1) Using an oil can filled with **lubricating oil**, lubricate attaching pin (4).
 - (2) Install anti-swiveling washer (5).
- NOTE: It may be necessary to replace the anti-swiveling Teflon washer (5) ([MY20270-001](#)).
- (3) Install attaching pin (4).

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NOTE: Attaching pin (4) must be installed with its head upwards.

- (4) Install washer (3).
- (5) Slightly tighten nut (2).

NOTE: The new cotter pin ([MS24665-155](#)) (1) must not be bent. Safetying will be performed when installing the control rod permanently on A/C (after the adjustment/tests (Refer to [TASK 27-20-00-820-801](#), paragraph "Adjustment/Tests with Hydraulic Systems Pressurized)).

- F. Connection of bonding braids (3a) and (3b) (Refer to [TASK 20-20-00-900-801](#)) (**fig. 1**)
 - (1) Position the bonding braid lug on its servo-actuator terminal stud.
 - (2) Install screw (4) with washer (5).
- G. Remove the rigging pin from yaw bellcrank FGFB372003 (Refer to [TASK 27-00-00-910-805](#), paragraph "Yaw Control Linkage").
- H. Remove the drain container.

7. PREPARATION AND CHECKS BEFORE ADJUSTMENTS

CAUTION: BEFORE STARTING THE ADJUSTMENT/TEST OPERATIONS, ANY RIGGING PIN MUST BE REMOVED FROM THE FLIGHT CONTROL LINKAGE.

- A. Preliminary steps
 - (1) Perform a careful inspection in the servo-actuator housing:
 - to find possible impact marks or damage on the control rods,
 - to make sure that there are no foreign matters or any other components.
 - (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 (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 the Hydraulic Ground Power Unit").
 - (6) Degassing and check of external servo-actuator components for leaks
 - (a) Perform degassing of the yaw flight control system (Refer to [TASK 29-00-00-870-802](#)).
 - (b) When actuating the yaw control
 - 1 Check the external servo-actuator components for leaks.
 - 2 Carefully examine the servo-actuator throughout the deflection, in order to check for absence of mechanical interference.
 - 3 In particular, check for free displacement of hydraulic hoses, and for absence of interference with one another and with the structure.

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- (7) Check the hydraulic fluid level in the two hydraulic reservoirs and top up if required (Refer to [TASK 29-14-01-610-801](#)).
- (8) 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 Pressure from the Hydraulic Ground Power Unit").
- (9) De-energize the aircraft systems (Refer to [TASK 24-00-00-860-801](#), paragraph "De-energization with the Electrical Ground Power Unit").

8. CHECKS AND ADJUSTMENTS

WARNING: PERSONNEL INJURIES CAN RESULT FROM OPERATIONS ON ACTIVE FLIGHT CONTROL EQUIPMENT. ALL PRECAUTIONS MUST BE TAKEN WHEN PERFORMING OPERATIONS ON CONTROL LINKAGE COMPONENTS WITH ELECTRICAL SYSTEMS ENERGIZED AND HYDRAULIC SYSTEMS PRESSURIZED.

- A. Complete test of the yaw control channel
 - (1) Perform a complete test of the yaw control channel with hydraulic systems pressurized except the check of yaw trim operating features (Refer to [TASK 27-20-00-820-801](#), paragraph "Adjustment/ Tests with Hydraulic Systems Pressurized").
- B. Perform a brief check of yaw force pattern (Refer to [TASK 27-00-00-720-806](#)).
- C. 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 Pressure from the Hydraulic Ground Power Unit").
- D. De-energize the aircraft systems (Refer to [TASK 24-00-00-860-801](#), paragraph "De-energization with the Electrical Ground Power Unit").

9. FINAL STEPS

- A. Disconnect the hydraulic ground power unit (Refer to [TASK 29-00-00-860-801](#), paragraph "Disconnection of the Hydraulic Ground Power Unit").
- B. Disconnect the electrical ground power unit (Refer to [TASK 24-00-00-860-801](#), paragraph "Disconnection of the Electrical Ground Power Unit").

WARNING: SERIOUS PERSONNEL INJURIES CAN RESULT FROM ANY OPERATIONS ON FLIGHT CONTROL SYSTEM EQUIPMENT. ELECTRICAL AND HYDRAULIC POWER SUPPLIES ARE PROHIBITED WHEN REMOVING THE RUDDER DEFLECTION MEASURING FIXTURE.

- C. Remove the rudder deflection measuring fixture (Refer to [TASK 27-00-00-910-804](#), paragraph "Use of Rudder Deflection Measuring Fixture").
- D. Removal of the control surface deflection safeties
 - (1) In the cockpit
 - (a) In the cockpit, remove the "DANGER, DO NOT OPERATE FLIGHT CONTROLS" placard from the cockpit pedestal.

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- (b) On center circuit breaker panel (**10PP**), remove the circuit breaker lockouts from the following circuit breakers:
 - in "A1 BUS" section, "HYDR" zone: "ST BY PUMP" circuit breaker (**11ML**),
 - in "A1 BUS" section, "FLT CONTROL" zone: "STAB EMERG" circuit breaker (**21CF**),
 - in "A2 BUS" section, "FLT CONTROL" zone: "TRIM RUDDER" circuit breaker (**1CC**),
 - in "B1 BUS" section, "FLT CONTROL" zone: "STAB NORMAL" circuit breaker (**1CF**).
 - (c) Engage these circuit breakers.
- E. Install access doors (**323DL**), (**323EL**), (**323FL**) and (**324AL**).
- F. Remove the safety fences and the warning lights.

FALCON 900EX AIRCRAFT MAINTENANCE MANUAL

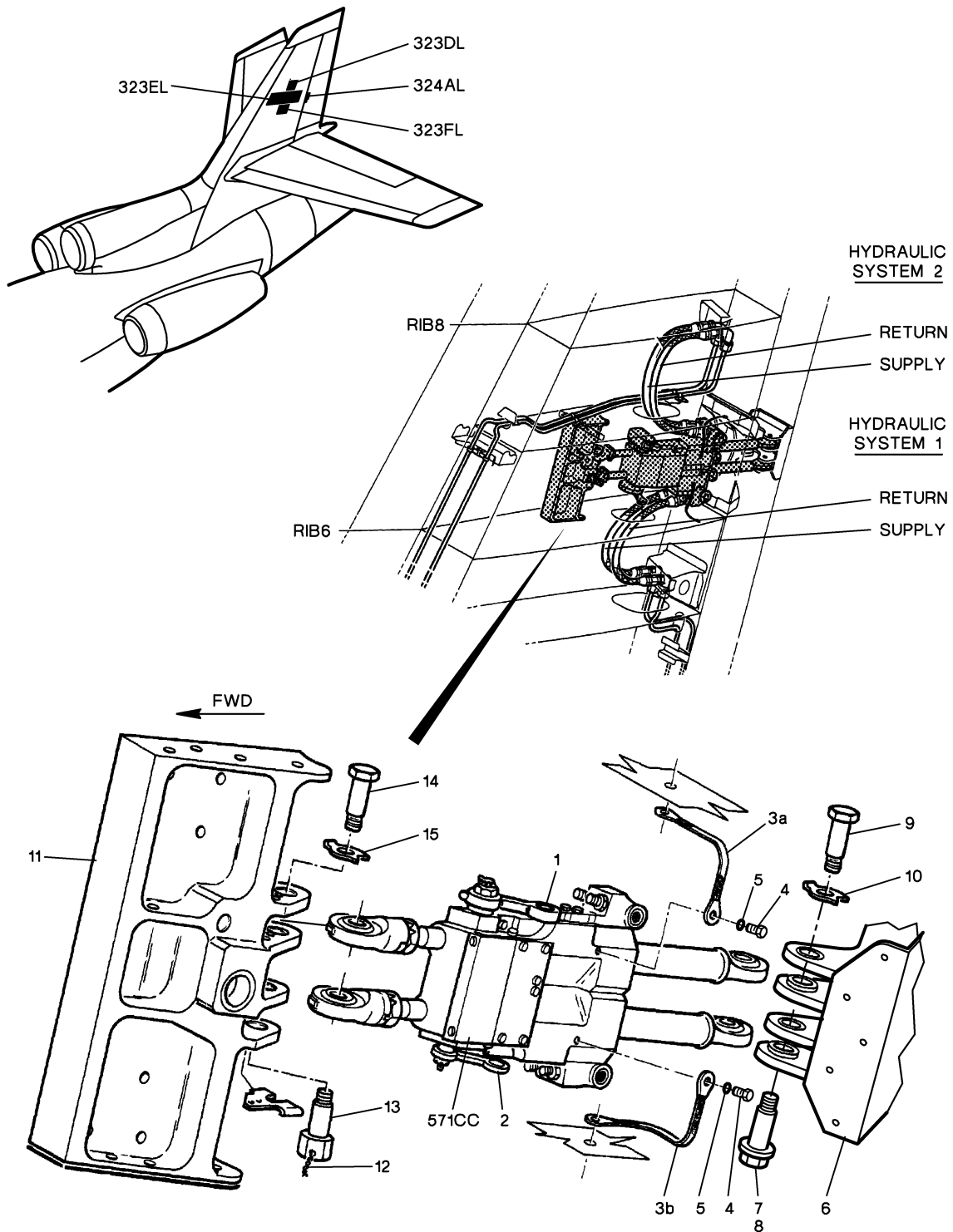


Figure 1: Removal/Installation of Rudder Servo-actuator

FALCON 900EX AIRCRAFT MAINTENANCE MANUAL

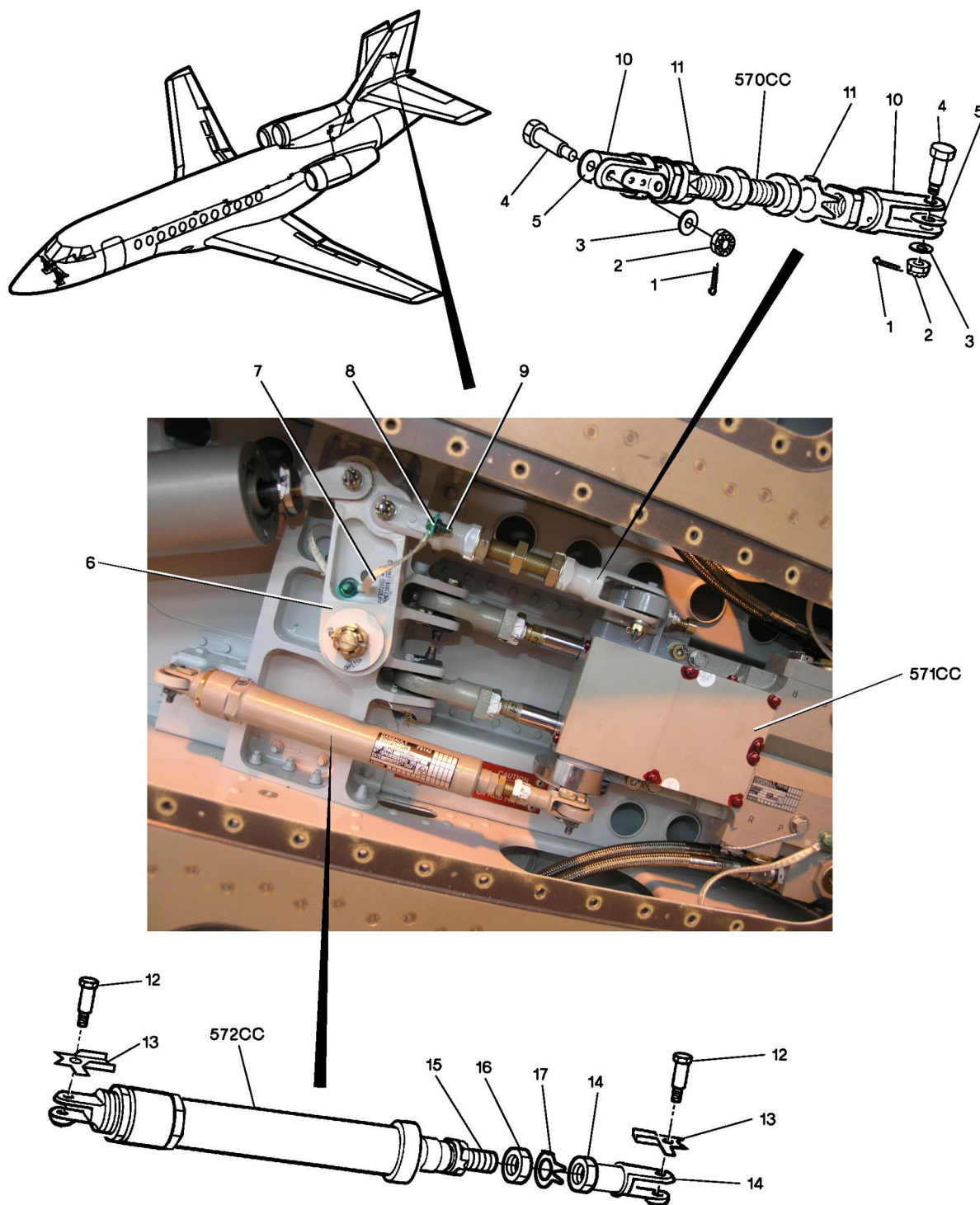


Figure 2: Removal/Installation of Components at Servo-actuator

FALCON 900EX AIRCRAFT MAINTENANCE MANUAL

TASK 27-22-01-350-801

RESTORATION OF THE RUDDER SERVO-ACTUATOR (FUNCTIONAL TEST)

1. OVERVIEW OF THE JOB

Operation code: 27-22-01-350-801-01 rudder servo-actuator (571CC)

This task consists in checking the damping valves and the valve sealing of the rudder servo-actuator (571CC) for condition.

This operation must be performed by an authorized Repair Agent.

For the removal/installation of the rudder servo-actuator (571CC) (Refer to [TASK 27-22-01-900-801](#)).

2. LOGISTICS

A. References

Reference

- [27-22-01-900-801](#)

Designation

REMOVAL / INSTALLATION OF THE RUDDER SERVO-ACTUATOR