

FLAP SYSTEM - INSPECTION/CHECK

1. General

- A. This section has the inspections and checks necessary to keep the flap system in a serviceable condition.

TASK 27-50-00-220

2. Flap Actuator Mount Bracket Detailed Inspection

A. General

- (1) This task gives the procedures to do a detailed inspection of the flap actuator mount bracket.

B. Special Tools

- (1) None

C. Access

- (1) Open (unzip) the fabric headliner (passenger) or remove the hard shelled headliner (cargo) to get access to the flap actuator mount bracket. Refer to Chapter 25, Cabin Upholstery - Maintenance Practices.

D. Do a Detailed Inspection of the Flap Actuator Mount Brackets.

WARNING: If cracks are found in the support structure, reinforce or replace the structure as necessary. Stop drilling cracks is not sufficient; more reinforcement is necessary.

- (1) Examine the flap actuator support structure for corrosion, cracks, deformation, or other signs of damage.

E. Restore Access.

- (1) Close (zip) the fabric headliner (passenger) or install the hard shelled headliner (cargo). Refer to Chapter 25, Cabin Upholstery - Maintenance Practices.

END OF TASK

TASK 27-50-00-221

3. Flap Bellcrank Detailed Inspection

A. General

- (1) This task gives the procedures to do a detailed inspection of the flap bellcranks.

B. Special Tools

- (1) None

C. Access.

- (1) Remove the necessary panels and covers to get access to the flap components on both wings. Refer to Flap Rigging Guide - Adjustment/Test, Figure 501.

D. Do a detailed inspection of the flap bellcranks.

- (1) Clean and lubricate the flap bellcranks, interconnect rods, and pushrods. Refer to Chapter 12, Flight Controls - Servicing.

CAUTION: Bellcrank supports are subject to high loads. Close inspection of the supports and the adjacent structure is mandatory.

- (2) Examine the flap bellcranks, bellcrank tubes, bearing, and bushings for corrosion, cracks, condition, deformations, signs of damage, and security of installation.

- (3) Examine the bellcrank supports for corrosion, cracks, condition, buckling, and security of installation.

- (4) Examine the tube ends for interference with the adjacent structure.

E. Restore Access.

- (1) Install the applicable panels and covers that were removed to get access to the flap components on both wings. Refer to Flap Rigging Guide - Adjustment/Test, Figure 501.

END OF TASK

TASK 27-50-00-720

4. Flap System Functional Check

A. General

- (1) This task gives the procedures to do a functional check of the flap system.

B. Special Tools

- (1) Cable Tensiometer
- (2) Inclinometer
- (3) External Electrical Power Unit
- (4) Torque Wrench

C. Access

- (1) Remove the necessary panels and covers to get access to the flap components on both wings. Refer to Flap Rigging Guide - Adjustment/Test, Figure 501.
- (2) Open (unzip) the fabric headliner (passenger) or remove the hard shelled headliner (cargo) to get access to the flap actuator and the wing-to-wing interconnect rod. Refer to Chapter 25, Cabin Upholstery - Maintenance Practices.

D. Complete a Functional Check of the Flap System.

- (1) Examine the flap control lever and pointer for security of installation, travel, and signs of damage.
- (2) Examine the flaps for loose rivets, cracks, condition, and security of installation.
- (3) Examine the flap cable runs for interference with the structure, correct routing, frozen pulleys, fraying, twisting, and corrosion.
 - (a) Look for interference with the adjacent structure, equipment, wiring, plumbing, and other controls.
- (4) Move a cloth along the full length of the flap cables to examine for broken wires.
 - (a) If snags are found or you think that there are broken wires, Refer to Chapter 20, Control Cable and Corrosion Limitations - Maintenance Practices.
- (5) Examine the pulleys, attach brackets, and guard pins for condition, wear, corrosion, and security.
- (6) Turn the pulleys with your hand to make sure that there is freedom of movement, and to keep even wear on the pulleys.
- (7) Examine the cable attachment brackets on each flap for condition, corrosion, security, and correct attachment of the cable to the bracket.
- (8) Examine the motors and the transmission for condition, wear, corrosion, and security.
- (9) Do the Flap Component Inspection. Refer to Flap Rigging Guide - Adjustment/Test.

E. Do a Travel and Cable Tension Check.

- (1) To examine the flap travel and cable tensions, do the Operational Check of the flaps. Refer to Flap Rigging Guide - Adjustment/Test.

F. Do a Standby Flap Motor Operational Check (Refer to Figure 601).

CAUTION: You must set the NORMAL/STBY switch to STBY before you operate the standby UP/DOWN switch. Since the standby flap system bypasses the limit function of the flap switch actuator, you must stop the operation of the standby UP/DOWN switch before the flaps reach their limits. This will help prevent overloading and damage to the flap system.

- (1) For Airplanes 20800224 and On and 208B0327 and On, and airplanes that incorporate SK208-119A, break the frangible copper wire on the UP/DOWN switch guard and the NORMAL/STBY switch guard.
- (2) Set the battery switch to ON.

WARNING: Before you move the flaps, make sure that the area around the flaps is clear. This will prevent injuries to personnel and damage to the equipment and the flaps.

- (3) Use the flap control lever in the control pedestal to move the flaps to the 10 degree position.
- (4) Open the NORMAL/STBY switch guard.
- (5) Set the NORMAL STBY switch to STBY.
- (6) Move the flaps to the 20 degree position with the standby UP/DOWN switch.
- (7) Move the flaps to the 10 degree position with the standby UP/DOWN switch.
- (8) Close the NORMAL/STBY switch guard to set the NORMAL/STBY switch to NORMAL.
- (9) Move the flaps to the UP position with the flap control lever.
- (10) Set the battery switch to OFF.
- (11) For Airplanes 20800224 and On and 208B0327 and On, and airplanes that incorporate SK208-119A, use frangible

copper wire to safety the NORMAL/STBY switch guard and the UP/DOWN switch guard in the closed position.

- (12) Make sure that all rod end inspection holes are covered.
- (13) Make sure that the rod ends are positioned so maximum rotational freedom is available to each rod (so rod housings are perpendicular to attaching bolts).
- (14) Remove the inclinometers from left and the right flaps.
- (15) Make sure that the necessary flap system components are secure, torqued, and safety wired.
- (16) Put the External Power Switch to OFF.
- (17) Remove external electrical power from the airplane.

G. Restore Access.

- (1) Close (zip) the fabric headliner (passenger) or install the hard shelled headliner (cargo). Refer to Chapter 25, Cabin Upholstery - Maintenance Practices.
- (2) Install the applicable panels and covers that were removed to get access to the flap components on both wings. Refer to Flap Rigging Guide - Adjustment/Test, Figure 501.

END OF TASK

TASK 27-50-00-640

5. Flap Tracks and Rollers Lubrication

A. General

- (1) This task provides the procedures to perform a lubrication of the flap tracks and rollers.

B. Tools and Equipment

- (1) External Electrical Power Unit, 28 VDC.
- (2) Dry Solid Film Lubricant (MIL-L-23398D)

C. Access

- (1) None

D. Complete a Lubrication of the Flap Tracks and Rollers.

- (1) Connect the external electrical power unit to the airplane.
- (2) Set the External Power Switch to the BUS position.
- (3) Set the Battery Switch to the ON position.
- (4) Extend / retract the flaps as necessary to get access to the tacks and rollers.
- (5) Wipe the flap tracks and the rollers clean and examine for corrosion.
- (6) Lubricate the flap tracks and the rollers with dry solid film lubricant (MIL-L-23398D).
- (7) Wipe off unwanted spray.
- (8) Fully retract the flaps.
- (9) Set the Battery Switch to the OFF position.
- (10) Set the External Power Switch to the OFF position.
- (11) Remove the external electrical power unit from the airplane.

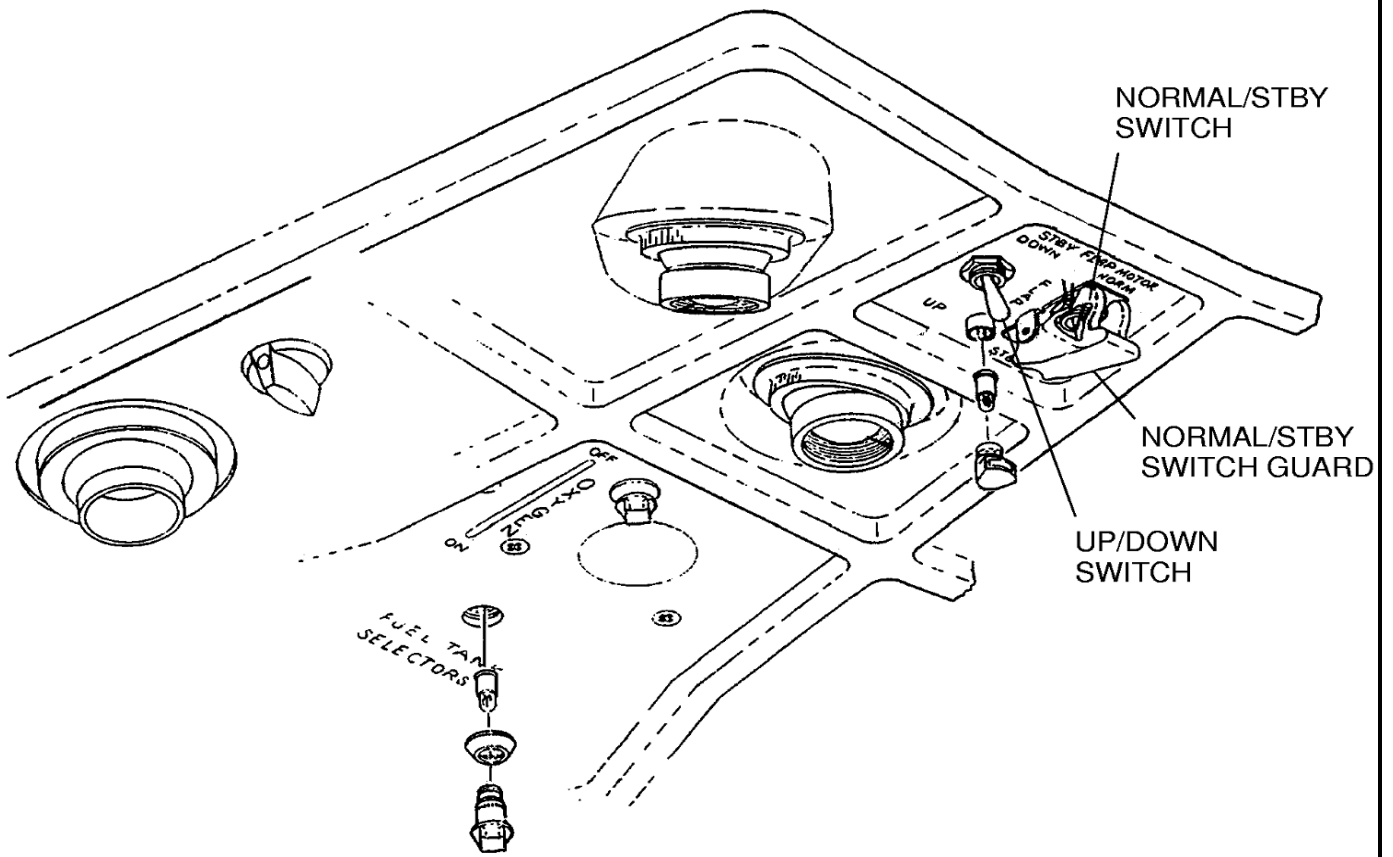
E. Restore Access

- (1) None

END OF TASK

Figure 601 : Sheet 1 : Standby Flap Motor Switches

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Figure 601 : Sheet 2 : Standby Flap Motor Switches

