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 (Refer to Figure 602).

(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 (Refer to Figure 602).

(1) Use the cable tensiometer to measure the Flap cable tension.

(a) Make sure that the cable tension is 35 pounds, +5 or -5 pounds (156 N, +22 or -22 N) at 70°F (21°C).

(2) 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 frangble 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

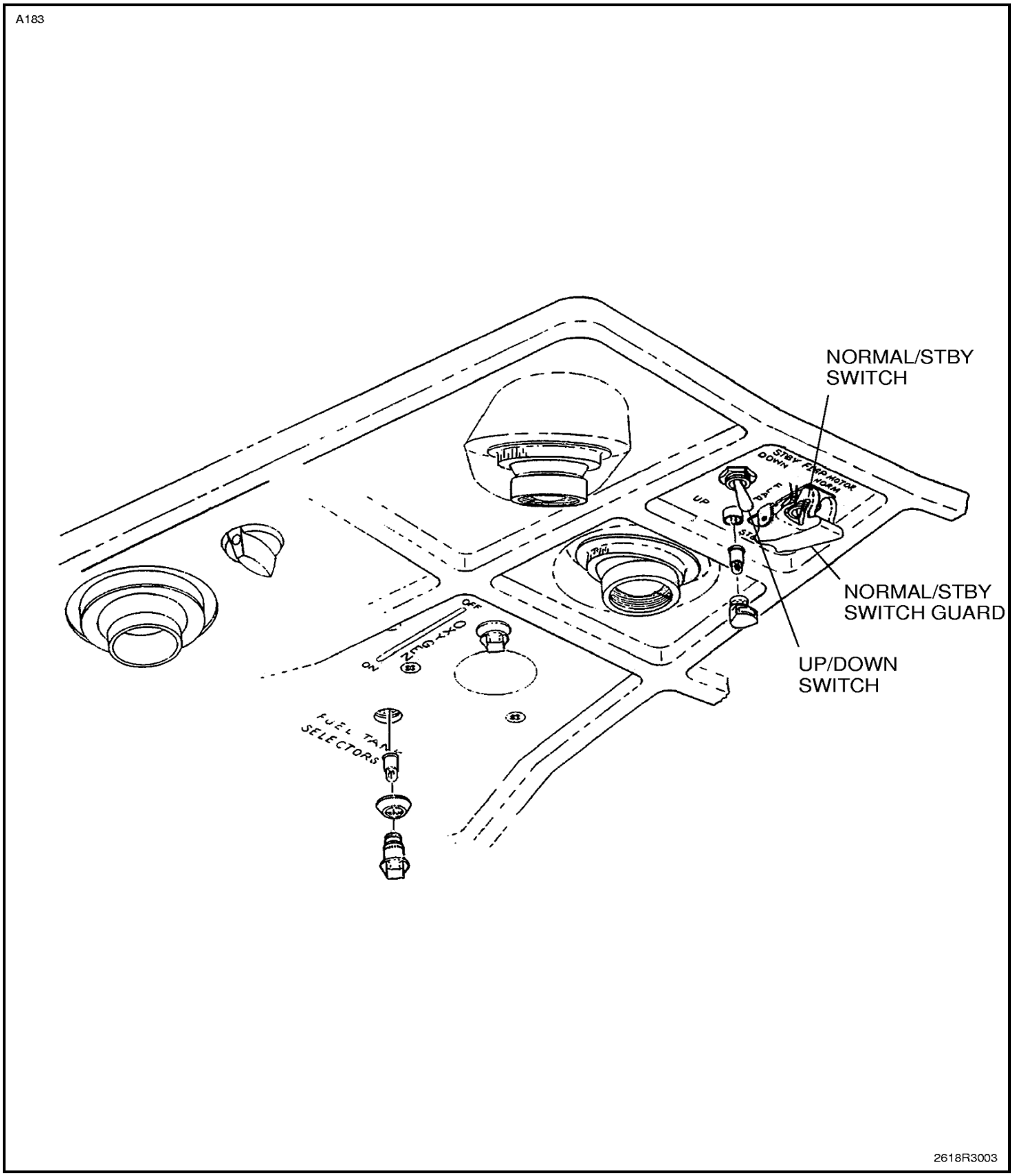

Figure 601 : Sheet 2 : Standby Flap Motor Switches

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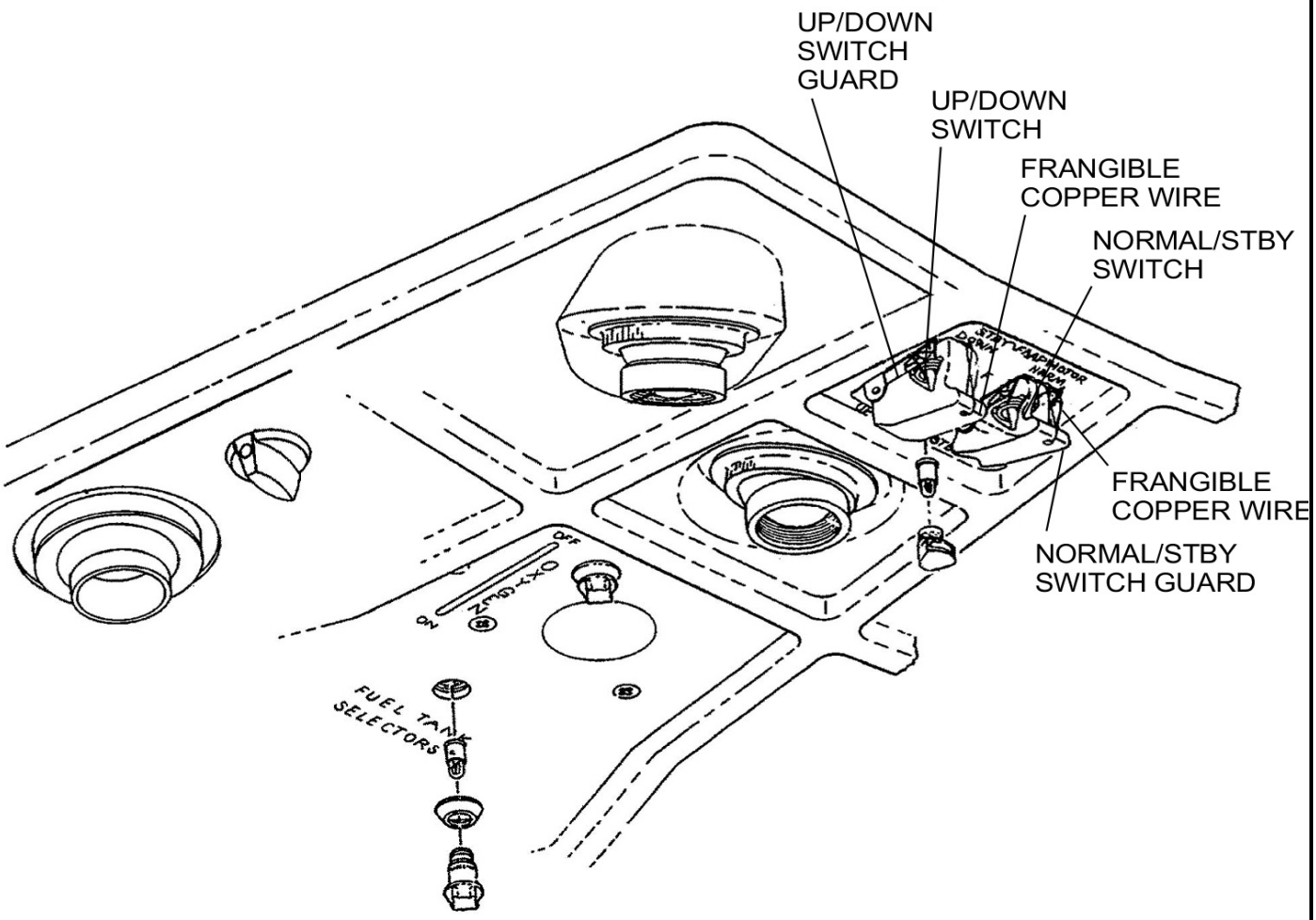

AIRPLANES 20800224 AND ON AND
AIRPLANES 208B0327 AND ON AND
AIRPLANES 20800001 THRU 20800223 AND
AIRPLANES 208B0001 THRU 208B0326
INCORPORATING SK208-119

Figure 602 : Sheet 1 : Temperature Effect on Cable Tension - 208/208B Flap Cables (1/16" 7*7 CRES)

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