

INSPECTION DOCUMENT 09

Date: _____
 Registration Number: _____
 Serial Number: _____
 Total Time: _____

1. Description

- A. Inspection Document 09 gives a list of item(s), which are completed at every 800 Hours or 12 calendar months, whichever occurs first.
- B. Inspection items are given in the sequence of the zone in which the inspection is completed. A description of the inspection, as well as the Item Code Number are supplied for cross-reference to section 5-10-01. Frequently, tasks give more information about each inspection. These tasks are found in the individual chapters of this manual.
- C. The right portion of each page gives space for the mechanic's and inspector's initials and remarks. You can use copies of these pages as a checklist while you complete the tasks in this Inspection Document.

2. General Inspection Criteria

- A. As you complete each of the inspection tasks in this Inspection Document, examine the adjacent area while access is available to find conditions that need more maintenance.
- B. If it is necessary to replace a component or to make a change to a system while you complete a task, do the task again before the system or component is returned to service.
- C. Inspection Kits are available for some Inspection Documents. They supply consumable materials used to complete the inspection item(s) given for the interval. Refer to the Model 208 Illustrated Parts Catalog, Introduction, Service Kit List to find applicable part numbers.

ITEM CODE NUMBER	TASK	ZONE	MECH	IN-SP	REMARKS
B221201	Garmin Autopilot (GFC 700) Functional Check Task 22-12-00-720	226 232			
B243201	Gill Flooded Lead-Acid Battery Functional Check (Capacity Check) Task 24-32-00-720	122			
B243301	Concord Sealed Lead Acid Battery Functional Check (Capacity Check) Task 24-33-00-720	122			
A275001	Flap Actuator Mount Bracket Detailed Inspection Task 27-50-00-220	231 232			
A275003	Flap Bellcrank Detailed Inspection Task 27-50-00-221	251 252 511 611 525 625			

ITEM CODE NUMBER	TASK	ZONE	MECH	IN- SP	REMARKS
	*** End of Inspection Document 09 Inspection Items ***				

Task 22-12-00-720

3. Garmin Autopilot (GFC 700) Functional Check

A. General

- (1) This task gives the procedures to do a Functional Check of the Garmin Autopilot (GFC 700).

B. Special Tools

- (1) External Electrical Power Unit
- (2) Cable Tensionmeter

C. Access

- (1) Remove the copilot's seat to get access to the roll servo. Refer to Chapter 25, Flight Compartment - Maintenance Practices.
- (2) Remove access panel 232DR to get access to the roll servo. Refer to Chapter 6, Access/Inspection Plates - Description and Operation.
- (3) Remove the rear compartment partition or unzip the canvas wall to get access to the yaw and pitch servo. Refer to Chapter 25, Rear Compartment Wall - Maintenance Practices .
- (4) Remove access panels 226A and 226D from the pedestal to get access to the pitch trim servo. Refer to Chapter 6, Access/Inspection Plates - Description and Operation.

D. Do a Functional Check of the Garmin Autopilot (GFC 700).

- (1) Examine the servos, connectors, support structures, and control cables for corrosion, chaffing, cracks, or other damage.
- (2) Have a helper manually move the ailerons, (for roll servo), elevators (for pitch servo), elevator trim wheel (for pitch trim servo), and rudder pedals (for yaw servo) from stop to stop and examine the servo, capstan, and control surface operation.
 - (a) Make sure there are no binds in the control cables and that the capstan pulleys turn freely.
- (3) Examine the servo control cables to make sure there is no fraying, corrosion, or other damage.
 - (a) If the condition of the cable is unknown, replace it with a new one.
- (4) Examine the tension of each servo control cable. Refer to GFC 700 Autopilot - Maintenance Practices.
- (5) Examine the GFC 700 autopilot system wiring and make sure there is no chaffing, wear, or other damage.

E. Do a GSM Servo Slip Clutch Check.

- (1) Apply external electrical power to the airplane.
- (2) Set the external power switch to BUS.
- (3) Set the battery switch to ON.
- (4) Set the avionics switches 1 and 2 to ON.
- (5) Make sure that the A/P SERVOS circuit breaker and A/P CONT circuit breaker on the lower left circuit breaker panel are engaged.
- (6) Push the AP key on the GMC 710 AFCS controller to engage the autopilot.

NOTE: The GFC 700 uses electronic torque limiting as well as mechanical slip clutches to limit the maximum servo effort. When the system is on the ground, the electronic torque limiting is removed, to allow manual checks of the slip-clutch settings.

- (7) Apply force to the control yoke to find if the autopilot clutches can be overpowered in pitch and roll.
 - (a) If the autopilot clutches cannot be overpowered, examine the servo clutch torque settings. Refer to G1000 Caravan Line Maintenance Manual.

NOTE: There is an overpowered condition if the control surfaces can be moved by applying force to the control wheel or the rudder pedals against the resistance of the engaged autopilot.

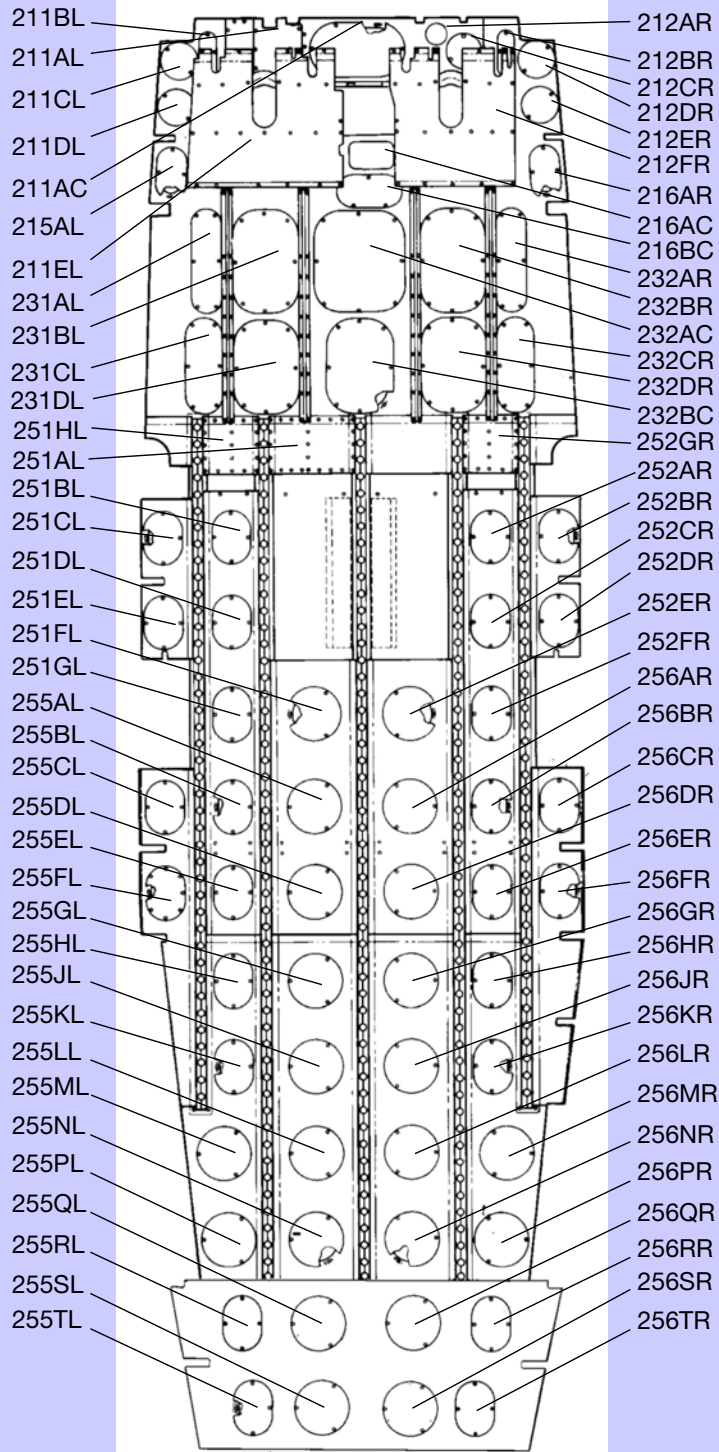
- (8) Apply force to the rudder pedals to find if the autopilot clutches can be overpowered in yaw.
 - (a) If the autopilot clutches cannot be overpowered, examine the servo clutch torque settings. Refer to G1000 Caravan Line Maintenance Manual.
- (9) Use the Pitch MET (Manual Electric Trim) switch to initiate an autopilot disconnect.

- (a) While the trim is running, grasp the aircraft pitch trim wheel and make sure that the trim clutch can be overpowered by preventing the trim wheel from moving.
 - 1 If it cannot be overpowered, examine the servo clutch torque setting. Refer to G1000 Caravan Line Maintenance Manual.
 - (b) Make sure that the trim wheel moves smoothly in both directions through the full trim range during the Pitch MET (Manual Electric Trim) operation.
 - 1 If the trim wheel does not move in 2 seconds, this can show that the pitch trim clutch is slipping.
 - (c) Make sure that the clutch setting and cable tensions are correct.
 - 1 If the clutch setting and cable tensions are in tolerance, examine the aircraft pitch trim system for too much friction.
- (10) Set the avionics switches 1 and 2 to OFF.
 - (11) Set the battery switch to OFF.
 - (12) Set the external power switch to OFF.
 - (13) Remove external electrical power to the airplane.
- F. Restore Access
- (1) Install access panels 226A and 226D to the pedestal. Refer to Chapter 6, Access/Inspection Plates - Description and Operation.
 - (2) Install the rear compartment partition or zip the canvas wall. Refer to Chapter 25, Rear Compartment Wall - Maintenance Practices.
 - (3) Install access panel 232DR . Refer to Chapter 6, Access/Inspection Plates - Description and Operation.
 - (4) Install the copilot's seat. Refer to Chapter 25, Flight Compartment - Maintenance Practices.

End Task

Figure 2. Model 208 Floorboard Access Plates/Panels Identification

A22946



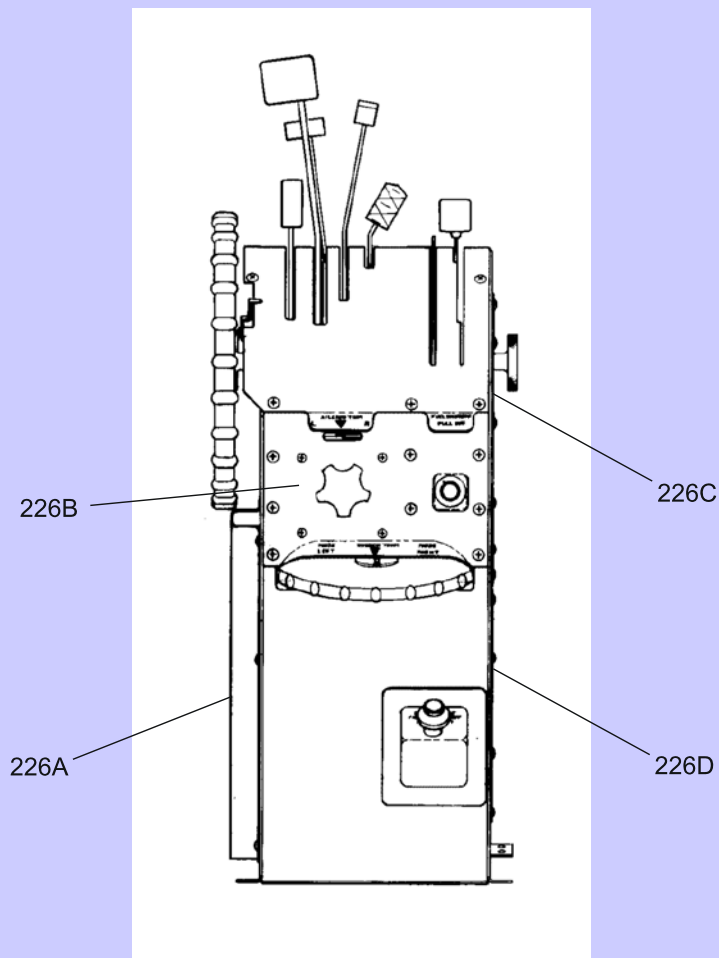
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Figure 6. Panels

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Sheet 1 of 1

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Task 24-32-00-720

2. Gill Flooded Lead-Acid Battery Functional Check (Capacity Check)

A. General

- (1) This section gives the information needed to do the functional check of the flooded lead-acid battery.

B. Special Tools

- (1) Elcon Inspection Gauge #029 or Equivalent.

C. Access

- (1) Open the right cowling door to get access to the battery. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.

D. Do the Gill Flooded Lead-Acid Battery Functional Check (Capacity Check).

- (1) Remove the battery from the airplane. Refer to Flooded Lead-Acid Battery - Maintenance Practices.
- (2) Visually examine the lead acid battery for general condition.
- (3) Examine the terminals for an overheat indication, burns, or signs of arcing.
- (4) Examine the vent tubes for deterioration or wear.
- (5) Make sure that the battery tray is clean.
- (6) Do a capacity check of the flooded lead-acid battery. Refer to the Gill Flooded Lead-Acid Main Battery Maintenance Manual Supplement.
- (7) Install the battery in the airplane. Refer to Flooded Lead-Acid Battery - Maintenance Practices.

E. Restore Access

- (1) Close the right cowling door. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.

End Task

Task 24-33-00-720

2. Concord Sealed Lead Acid Battery Functional Check (Capacity Check)

A. General

- (1) This section gives the information needed to do the functional check of the sealed lead acid battery.

B. Special Tools

- (1) None

C. Access

- (1) Open the right cowling door to get access to the battery. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.

D. Do the Concord Sealed Lead Acid Battery Functional Check (Capacity Check)

- (1) For airplanes that operate less than 1000 hours per year:
 - (a) Do the battery capacity check at 12 calendar months after the initial battery installation (plus or minus one month).
 - (b) As long as the battery capacity check is above 90 percent, then you should do subsequent battery capacity checks every six months (plus or minus one month).
 - 1 If the battery capacity check is between 85 and 90 percent, then you should do subsequent battery capacity checks every 3 months (plus or minus one month).
 - 2 If the battery capacity check is less than 85 percent, install a new battery.
- (2) For airplanes that operate 1000 or more hours per year:
 - (a) Do the battery capacity check at 1000 hours after the initial battery installation (plus or minus 100 hours).
 - (b) As long as the battery capacity check is above 90 percent, then you should do subsequent battery capacity checks every 500 hours (plus or minus 100 hours).
 - 1 If the battery capacity check is between 85 and 90 percent, then you should do subsequent battery capacity checks every 250 hours (plus or minus 100 hours).
 - 2 If the battery capacity check is less than 85 percent, install a new battery.
- (3) Remove the battery from the airplane. Refer to Sealed Lead Acid Battery - Maintenance Practices.
- (4) Visually examine the lead acid battery for general condition.
- (5) Examine the terminals for an overheat indication, burns, or signs of arcing.
- (6) Examine the vent tubes for deterioration or wear.
- (7) Make sure that the battery tray is clean.
- (8) Do a capacity check of the lead acid battery. Refer to the Concorde Valve Regulated Lead Acid Main Battery Maintenance Manual Supplement.
- (9) Install the battery in the airplane. Refer to Sealed Lead Acid Battery - Maintenance Practices.

E. Restore Access

- (1) Close the right cowling door. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.

End Task

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 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 Task