WINGS - INSPECTION/CHECK

1. General

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

TASK 57-10-00-210

2. Wing Zonal Inspection

A. General

(1) The Zonal Inspection Program (ZIP) includes a series of General Visual Inspection (GVI) tasks. This section gives ZIP procedures for an zonal inspection of the wings.

NOTE: An external zonal GVI is a general visual examination of an exterior area, and/or an open installation or assembly to find damage, failure or defects. This level of inspection is made during typical lighting conditions such as daylight, hangar light or flashlight by approximately an arm-length distance to the inspection object. Unless it is specified, it is not necessary to remove or open access panels or doors to do an external GVI. You can use an inspection mirror to help with visual access to all opened surfaces in the inspection area. You can use maintenance stands, ladders, or platforms to get near the inspection area.

B. Special Tools

(1) None

C. Access

NOTE: The lower wing fuel access panels and lower wing dry bay panels are removed after the inspection steps for removing the fuel.

(1) Lower wing fuel access panels.

(2) Lower wing dry bay panels.

(3) Wing and strut fairing panels.

D. Do the External Zonal Inspection of the Wings.

(1) Examine the external wings for loose fasteners, corrosion, cracks, wrinkles, and dents.

NOTE: If you suspect corrosion under the deice boots (if installed), remove the deice boots for inspection. Refer to Chapter 30, Pneumatic Deice Boots Removal/Installation.

(a) Make sure that you examine the areas that follow between WS 35.00 to WS 155.90. The wing leading edge skin surface. The access covers around the screw attachments.

(b) Make sure that you examine the areas that follow between WS 155.90 to WS 308.00. The wing leading edge skin surface. The access covers around the screw attachments.

(c) Make sure that you examine the areas that follow between WS 53.00 to WS 214.30. The wing upper and lower forward skin surface. The access covers around the screw attachments.

(d) Make sure that you examine the areas that follow between WS 214.30 to WS 308.00. The wing upper and lower forward skin surface. The access covers around the screw attachments.

(e) Make sure that you examine the areas that follow between WS 35.00 to WS 229.00. The wing upper and lower aft skin surface. The access covers around the screw attachments.

(f) Make sure that you examine the areas that follow between WS 35.00 to WS 228.00. The flap skin surface and the flap leading edge skin surface.

(g) Make sure that you examine the areas that follow at WS 53.00, WS 126.50, and WS 214.30. The flap track structure including the inboard, center, and outboard flap tracks. The inboard, center, and outboard flap support attach bolt, bracket and attach bolt.

(2) Examine the attach points for condition and security of installation.

(3) Examine the full wing surface for fuel leaks.

(4) Examine the wing spar fittings and bolts for corrosion, condition and security of installation.

(a) Make sure that you examine the areas that follow at WS 35.00. The forward spar fitting and lug surface. The rear spar fitting and lug surface.

NOTE: If corrosion is found on the lug surface or the attaching hardware (bolt, nut, or cotter pin),

remove the attach bolt and inspect the lug bore.

(5) Examine the wing struts for signs of damage, condition, and security of installation.

(6) Examine the upper and lower wing strut fittings, fairings and bolts for corrosion, condition and security of installation.

(a) Make sure that you examine the areas that follow at FS 168.70 for the Model 208 and FS 188.70 for the Model 208B. The lower wing strut to fuselage attach fitting and lug surface. The wing strut to wing attach fitting and lug surface.

NOTE: If corrosion is found on the lug surface or the attaching hardware (bolt, nut, or cotter pin), remove the attach bolt and inspect the lug bore.

(7) Examine the drain openings and vent holes in the bottom of the wing for obstructions.

(8) Examine all wing access panels for security of installation and signs of damage.

(9) Examine the fuel access panels for signs of leaks.

(10) Examine the external wing surface for damage and signs of overheating. Refer to Chapter 20, High Intensity Radiated Fields (HIRF) - Inspection/Check, External Zonal Visual Inspection of Lightning and High Intensity Radiated Fields.

E. Do the Internal Zonal Inspection of the Wing Wet Bays.

NOTE: An internal zonal GVI is a general visual examination that includes all of the systems and the structural components of an interior area, installation, or assembly. This includes a check for signs of corrosion, cracks, chafing of tubing, loose duct support, wiring damage, cable and pulley wear, fluid leaks, drainage that is not sufficient, and other conditions that can cause corrosion or damage. This level of inspection is made during typical lighting conditions such as daylight, hangar light, flood light, or flashlight by approximately an arm-length distance to the inspection object. It can be necessary to remove and/or open access panels or doors to complete an internal GVI. You can use an inspection mirror to help with visual access to all opened surfaces in the inspection area. You can use maintenance stands, ladders, or platforms to get near the inspection area.

WARNING: Before you do maintenance on the fuel system, you must read and understand all of the fuel system maintenance, fire precautions, and safety practices. Refer to Fuel System - Maintenance Practices and Chapter 12, Fuel – Servicing.

(1) Defuel the airplane. Refer to Chapter 12, Fuel – Servicing.

(a) Remove the remaining fuel from the fuel storage areas with the fuel drain valves. Refer to Chapter 12, Fuel – Servicing.

(2) Remove lower wing fuel access panels 521AB, 521BB, 521DB, 521EB left, and 621AB, 621BB, 621DB and 621EB right. Refer to Chapter 6, Access Plates and Panels Identification - Description and Operation.

CAUTION: Be careful to not separate the wing skin doubler from the wing skin.

(a) Purge the fuel tanks. Refer to Chapter 12, Fuel – Servicing.

(3) Purge fuel tanks. Refer to Chapter 12, Fuel - Servicing.

(4) Examine the eight (8) quantity transmitter mounting plates for condition, leaks, and security.

(5) Examine the transmitters wire harnesses and terminals at the transmitters for condition and security.

(6) Examine the tank drains for condition, leaks, and security.

(7) Examine all of the wire bundle assemblies and the electrical components for signs of overheating, correct installation, frayed or chafed wiring insulation, electrical bonding, damage, and corrosion. Refer to Chapter 20, High Intensity Radiated Fields (HIRF) - Inspection/Check, Internal Zonal Visual Inspection of Lightning and High Intensity Radiated Fields.

(8) Examine all of the systems and structural components for damage, corrosion, cracks, loose fasteners, and correct installation.

(9) Examine all tubing, fuel shut-off-valves, hose, and fluid fittings for signs of leaks, damage, chafing, correct clamp installation, condition, and security.

F. Do the Internal Zonal Inspection of the Wing Dry Bays.

(1) Remove lower wing dry bay panels 501AB, 501BB, 501CB, 501DB, 501EB, 503AB,503BB, 503CB, 503DB, 503EB, 503FB, 503GB, 503HB, 503JB, 511AB, 525AB, 525BB, 525CB, 525DB, 525EB, 525FB, 525GB, 551AB,

and 575AB left, and 601AB, 601BB, 601CB, 601DB, 601EB, 603AB, 603BB, 603CB, 603DB, 603EB, 603FB, 603GB, 603HB, 603JB, 611AB, 621CB, 623AB, 625AB, 625BB, 625CB, 625DB, 625EB, 625FB, 625GB, 651AB, 675AB right, for the internal zonal inspection. Refer to Chapter 6, Access/Inspection Plates - Description and Operation.

(2) Examine all of the wire bundle assemblies and the electrical components for signs of overheating, correct installation, frayed or chafed wiring insulation, electrical bonding, damage, and corrosion. Refer to Chapter 20, High Intensity Radiated Fields (HIRF) - Inspection/Check, Internal Zonal Visual Inspection of Lightning and High Intensity Radiated Fields.

(3) Examine all of the systems and structural components for damage, corrosion, cracks, loose fasteners, loose/misalignment of linkage, and correct installation.

(4) Examine all tubing, hose, and fluid fittings for signs of leaks, damage, chafing, and correct clamp installation.

(5) Examine for contamination and look carefully for quantities of combustible material.

(a) Remove all of the combustible material that has collected.

NOTE: Combustible material can be fuel vapor, engine oil, and/or dust or lint that has collected.

NOTE: An inspection for contamination and combustible material meets the requirements of the Enhanced Zonal Inspection Program.

(6) Install lower wing fuel access panels 521AB, 521BB, 521DB, 521EB left, and 621AB, 621BB, 621DB and 621EB right. Refer to Chapter 6, Access Plates and Panels Identification - Description and Operation.

(7) Install lower wing dry bay panels 501AB, 501BB, 501CB, 501DB, 501EB, 503AB,503BB, 503CB, 503DB, 503EB, 503FB, 503GB, 503HB, 503JB, 511AB, 525AB, 525BB, 525CB, 525DB, 525EB, 525FB, 525GB, 551AB, and 575AB left, and 601AB, 601BB, 601CB, 601DB, 601EB, 603AB, 603BB, 603CB, 603DB, 603EB, 603FB, 603GB, 603HB, 603JB, 611AB, 621CB, 623AB, 625AB, 625BB, 625CB, 625DB, 625EB, 625FB, 625GB, 651AB, 675AB right. Refer to Chapter 6, Access/Inspection Plates - Description and Operation.

(8) Refuel the airplane. Refer to Chapter 12, Fuel – Servicing.

(9) Examine the fuel bay panels for leaks.

G. Restore Access

NOTE: The lower wing fuel access panels and lower wing dry bay panels are installed before the inspection step to do a leak check of the panels.

(1) None

END OF TASK

TASK 57-10-00-250

3. Wing to Carry - Thru Front Spar Attachment Fittings Special Detailed Inspection

A. General

(1) This task includes the Supplemental Inspection Document (SID) requirements necessary to keep the wing to carry - thru front spar attachment fittings in a serviceable condition.

B. Special Tools

(1) None

C. Access

(1) Remove the wing from the airplane. Refer to Wings - Removal/Installation.

D. Do a Special Detailed Inspection of the Wing to Carry - Thru Front Spar Attachment Fittings.

(1) Do a nondestructive testing (NDT) inspection for cracks in the front wing-to-carry-thru spar attach fitting lug. Refer to the Model 208 Nondestructive testing Manual, Part 6, Eddy Current, Wing to Carry - Thru Spar Attachment Fittings.

(2) Do a NDT inspection for cracks in the front wing-to-carry-thru spar attach fitting holes. Refer to the Model 208 Nondestructive testing Manual, Part 6, Eddy Current, Wing to Carry - Thru Spar Attachment Fittings.

(3) If no cracks are found, restore access.

(4) If cracks are found, replace the wing-to-carry-thru spar attach fitting. Refer to Wings - Removal/Installation.

E. Restore Access

(1) Install the wing. Refer to Wings - Removal/Installation.

END OF TASK
TASK 57-10-00-251

4. Wing to Carry - Thru Rear Spar Attachment Fittings Special Detailed Inspection

A. General

(1) This task includes the Supplemental Inspection Document (SID) requirements necessary to keep the wing to carry - thru rear spar attachment fittings in a serviceable condition.

B. Special Tools

(1) None

C. Access

(1) Remove the wing from the airplane. Refer to Wings - Removal/Installation.

D. Do a Special Detailed Inspection of the Wing to Carry - Thru Rear Spar Attachment Fittings.

(1) Do a nondestructive testing (NDT) inspection for cracks in the rear wing-to-carry-thru spar attach fitting lug. Refer to the Model 208 Nondestructive testing Manual, Part 6, Eddy Current, Wing to Carry - Thru Spar Attachment Fittings.

(2) Do a NDT inspection for cracks in the rear wing-to-carry-thru spar attach fitting holes. Refer to the Model 208 Nondestructive testing Manual, Part 6, Eddy Current, Wing to Carry - Thru Spar Attachment Fittings.

(3) If no cracks are found, restore access.

(4) If cracks are found, replace the wing-to-carry-thru spar attach fitting. Refer to Wings - Removal/Installation.

E. Restore Access

(1) Install the wing. Refer to Wings - Removal/Installation.

END OF TASK
TASK 57-10-00-252

5. Front Spar Lower Cap Inboard of WS 141.20 Special Detailed Inspection

A. General

(1) This task includes the Supplemental Inspection Document (SID) requirements necessary to keep the front spar lower cap inboard of WS 141.20 in a serviceable condition.

B. Special Tools

(1) None

C. Access

(1) Remove the applicable access panels on the bottom of the wing to get access to the front spar. Refer to Chapter 6, Access Plates and Panels Identification - Description and Operation.

D. Do a Special Detailed Inspection of the Front Spar Lower Cap Inboard of WS 141.20.

(1) Do a visual inspection for cracks in the wing front spar lower cap inboard of WS 141.20.

(2) Do a nondestructive testing (NDT) inspection for cracks in the wing front spar lower cap between the wing attach fittings and WS 141.20. Refer to the Model 208 Nondestructive testing Manual, Part 6, Eddy Current, Forward Spar Lower Cap Inboard of WS 141.20.

(3) If no cracks are found, restore access.

(4) If cracks are found, contact Cessna Propeller Aircraft Product Support for repair procedures.

E. Restore Access

(1) Installed the access panels that were removed on the bottom of the wing to get access to the front spar. Refer to Chapter 6, Access Plates and Panels Identification - Description and Operation.

END OF TASK
TASK 57-10-00-253

6. Rear Spar Lower Cap Inboard of WS 141.20 Special Detailed Inspection

A. General

(1) This task includes the Supplemental Inspection Document (SID) requirements necessary to keep the rear spar lower cap inboard of WS 141.20 in a serviceable condition.

B. Special Tools

(1) None

C. Access

(1) Remove the applicable access panels on the bottom of the wing to get access to the rear spar. Refer to Chapter 6, Access Plates and Panels Identification - Description and Operation.

D. Do a Special Detailed Inspection of the Rear Spar Lower Cap Inboard of WS 141.20.

(1) Do a visual inspection for cracks in the wing rear spar lower cap inboard of WS 141.20.

(2) Do a nondestructive testing (NDT) inspection for cracks in the wing rear spar lower cap between the wing attach fittings and WS 141.20. Refer to the Model 208 Nondestructive testing Manual, Part 6, Eddy Current, Aft Spar Lower Cap Inboard of WS 141.20 - Description And Operation.

(3) If no cracks are found, restore access.

(4) If cracks are found, contact Cessna Propeller Aircraft Product Support for repair procedures.

E. Restore Access

(1) Installed the access panels that were removed on the bottom of the wing to get access to the rear spar. Refer to Chapter 6, Access Plates and Panels Identification - Description and Operation.

END OF TASK

TASK 57-10-00-254

7. Center Flap Track and Inboard Flap Track Special Detailed Inspection

A. General

(1) This task includes the Supplemental Inspection Document (SID) requirements necessary to keep the center flap track and inboard flap track in a serviceable condition.

B. Special Tools

(1) None

C. Access

(1) Remove the center and inboard flaps. Refer to Flaps - Maintenance Practices.

D. Do a Special Detailed Inspection of the Center Flap Track and Inboard Flap Track.

(1) Do a nondestructive testing (NDT) inspection for cracks in the inboard flap track at WS 53.00. Refer to the Model 208 Nondestructive testing Manual, Part 6, Eddy Current, Flap Tracks.

(2) Do a NDT inspection for cracks in the center flap track at WS 126.50. Refer to the Model 208 Nondestructive testing Manual, Part 6, Eddy Current, Flap Tracks.

(3) If no cracks are found, restore access.

(4) If cracks are found, replace the flap track(s). Refer to Flaps - Maintenance Practices.

E. Restore Access

(1) Install the center and inboard flaps. Refer to Flaps - Maintenance Practices.

END OF TASK

TASK 57-10-00-255

8. Outboard Flap Track Special Detailed Inspection

A. General

(1) This task includes the Supplemental Inspection Document (SID) requirements necessary to keep the outboard flap track in a serviceable condition.

B. Special Tools

(1) None

C. Access

(1) Remove the outboard flap. Refer to Flaps - Maintenance Practices.

D. Do a Special Detailed Inspection of the Outboard Flap Track.

(1) Do a nondestructive testing (NDT) inspection for cracks in the outboard flap track at WS 214.30. Refer to the Model 208 Nondestructive testing Manual, Part 6, Eddy Current, Flap Tracks.

(2) If no cracks are found, restore access.

(3) If cracks are found, replace the flap track(s). Refer to Flaps - Maintenance Practices.

E. Restore Access

(1) Install the outboard flap. Refer to Flaps - Maintenance Practices.

END OF TASK