REVISION TRANSMITTAL

This sheet transmits Revision 1 to CIL-99-03, which:
A. Updates the corrosion maps in Figures 1 thru 6.
B. Adds the Note in Step 4A(3)(b) regarding corrosion underneath the paint.

NOTE: This revision replaces the original issue of CIL-99-03 in its entirety.

REVISION COMPLIANCE
NO EFFECT. Airplanes previously modified by this service letter are not affected by this revision.

LOG OF REVISIONS

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<tr>
<td>Original Issue</td>
<td>January 4, 2013</td>
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<tr>
<td>Revision 1</td>
<td>March 25, 2013</td>
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TITLE
MISCELLANEOUS - CORROSION PREVENTION AND CONTROL PROGRAM (CPCP)

EFFECTIVITY
All Citation Models

REASON
To assist in preventing and controlling corrosion.

NOTE: Cessna’s warranty excludes coverage of corrosion damage. The use of a Corrosion Prevention and Control Program (CPCP) does not change the warranty in any way.

DESCRIPTION
A Corrosion Prevention and Control Program (CPCP) is designed to allow the operator to develop an inspection/maintenance program that is tailored to their operating environment and operational practices. It is the operator’s responsibility to review the information in this service letter and develop a program that helps protect their aircraft from corrosion. In a future revision to the maintenance manual, Cessna will be including the CPCP information to aid in preventing and controlling corrosion.

COMPLIANCE
RECOMMENDED. This service letter should be accomplished at a scheduled maintenance period or phase inspection.

REFERENCES
None

PUBLICATIONS AFFECTED
None

ACCOMPLISHMENT INSTRUCTIONS
1. Development of a Corrosion Prevention and Control Program
   A. The purpose of a Corrosion Prevention and Control Program (CPCP) is to make sure corrosion on an airplane is minimized and controlled. While no program will completely eliminate corrosion, an effective and comprehensive plan that is followed closely will minimize the amount and severity of corrosion that does occur.

   (1) A comprehensive CPCP includes a thorough inspection plan for the early detection and repair of any areas where corrosion is found, the regular washing and rinsing of an airplane exterior, the proper application of the appropriate corrosion inhibiting compounds and a complete historical record of locations where corrosion has occurred in the past.

   CAUTION: Inspections and intervals developed for a CPCP cannot replace the inspections required for an ICA (Instruction for Continued Airworthiness) or Chapter 5 Task. ICA and Chapter 5 Tasks can, and should be part of a CPCP. An ICA or Chapter 5 Task that is used in the CPCP may have the interval shortened to be done more frequently, but never lengthened beyond the specified time frame.

   (2) The baseline CPCP should include the following areas as a minimum:
   • Landing Gear
B. Cessna Aircraft Company requires scheduled corrosion inspections of some areas of the airplane which are listed in Chapter 5 of the applicable maintenance manual. In addition to these minimum inspection requirements, operators must consider factors such as the environment in which the airplane is operated, storage practices, airplane wash schedules and the use of airplane/runway deice fluids when determining additional corrosion inspections for their airplane.

(1) Develop a Corrosion Prevention and Control Program (CPCP).

(a) Create the airplane baseline inspection program.

**NOTE:** If the baseline CPCP inspection uncovers corrosion, Cessna recommends a General Visual Inspection (GVI) be done over the entire aircraft exterior surface. Assure that any and all corrosion is found and repaired.

(b) Determine at what interval the items will be inspected.

**NOTE:** When creating a baseline CPCP, Cessna recommends a six month interval, on items not covered by Chapter 5, to establish the program.

**NOTE:** Operations in regions with adverse winter weather should schedule their inspections for the start and end of winter. This allows the airplane to go into winter operations in a corrosion-free state and provides for an inspection at the conclusion of winter operations.

**NOTE:** Only inspection intervals created by an operator for use in their specific CPCP can be shortened or lengthened. The documented results of prior CPCP inspections should be used to determine when an interval change is appropriate.

C. In recent years, environmentally friendly Runway De-Icing (RDI) fluids which contain ingredients such as potassium formate, potassium acetate and other alcohols have been introduced at airports in certain parts of the world. Operators in Europe should be aware that most local airports use potassium formate-based runway de-icing products. These types of de-icers are advertised to be environmentally friendly, however, they are also known to have chemical properties that are highly corrosive. These chemicals are destructive due to their ability to serve as an electrolyte, which can chemically attack a number of common aircraft alloys. The RDI fluids are sprayed by the wheels during taxi, take-off and landing onto areas such as landing gear and into wheel wells, wing and tail coves and the aircraft belly. If not removed promptly by washing the airplane, corrosion often results and can progress rapidly.

**NOTE:** Aircraft washing is a key component of any CPCP. Washing removes corrosive agents from the surface of the airplane. Cessna requires an aircraft be washed every fourteen days if it flies into any severe corrosion areas during its operational route. Cessna strongly recommends washing or rinsing the airplane after any operation that exposes the airplane to RDI fluids. The wash/rinse should be accomplished as soon as possible and no later than three days after any exposure to any RDI fluids. Any delay can result in the greater likelihood of corrosion from RDI fluids. Operators can refer to the Airplane Wash/Rinse procedures in Chapter 12 of the applicable maintenance manual. Additional information regarding corrosion can be found in the applicable maintenance manual, Chapter 51, Corrosion - Description and Operation.

D. Cessna Aircraft Company approves the use of Corrosion Inhibiting Compounds (CIC’s) on many areas of the airplane. Information on the approved CIC’s as well as specifications on the preparation and application of these compounds can be found in CIL-99-01.
2. Guidelines

A. Glossary.

(1) The following Table clarifies terms used in this document.

<table>
<thead>
<tr>
<th>WORD</th>
<th>GENERAL DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allowable Limit</td>
<td>The allowable limit is the maximum amount of material (usually expressed in material thickness) that may be removed or blended out without affecting the ultimate design strength capability of the structural member. Allowable limits are established by the design approval holder. The design approval holder normally publishes allowable limits with approved repairs in Service Documents, Maintenance Manuals or in the Structural Repair Manual.</td>
</tr>
<tr>
<td>Corrosion (Metal)</td>
<td>The physical deterioration of metals caused by reaction to an environment.</td>
</tr>
<tr>
<td>Corrosion Inhibiting Compounds (CIC)</td>
<td>Corrosion Inhibiting Compounds (CIC) may be applied to assemblies and assembled aircraft by spray application to inhibit corrosion.</td>
</tr>
<tr>
<td>Corrosion Prevention and Control Program</td>
<td>The intent of a Corrosion Prevention and Control Program is to provide a comprehensive and systematic approach to controlling corrosion such that the airplane structure is not degraded below a class necessary to maintain airworthiness. It contains a definition of corrosion classes and specific procedures if corrosion damage exceeds Class 1 in any area or zone.</td>
</tr>
<tr>
<td>Design Approval Holder</td>
<td>The design approval holder is either the type certificate holder for the aircraft or the supplemental type certificate holder.</td>
</tr>
<tr>
<td>Inspection Area</td>
<td>The inspection area is a region of airplane structure to which one or more inspections apply. The inspection area may also be referred to as a Zone.</td>
</tr>
<tr>
<td>Inspection Interval</td>
<td>The inspection interval is the calendar time between the accomplishment of successive corrosion inspection tasks for a Task Area or Zone.</td>
</tr>
<tr>
<td>Class 1 Corrosion Findings (Note)</td>
<td>Class 1 Corrosion Findings are one or more of the conditions that follow and do not require a change to the inspection interval:</td>
</tr>
<tr>
<td></td>
<td>1. Corrosion damage occurring between successive inspections that is local and can be reworked or blended out within the published allowable limits.</td>
</tr>
<tr>
<td></td>
<td>2. Local corrosion damage that exceeds the published allowable limit but can be attributed to an event not typical of the operator's usage or other airplanes in the same fleet. This will require corrosion repair to be defined.</td>
</tr>
<tr>
<td></td>
<td>3. Operator experience has demonstrated only light corrosion between each successive corrosion task inspection; the latest corrosion inspection task results in a cumulative effect which requires rework or blend out that exceeds the published allowable limit. This will require corrosion repair to be defined.</td>
</tr>
<tr>
<td>Class 2 Corrosion Findings (Note)</td>
<td>Class 2 corrosion occurs between two successive corrosion inspection tasks and requires a single rework or blend-out that exceeds the published allowable limit. A finding of Class 2 corrosion requires repair, reinforcement or complete or partial replacement of the applicable structure.</td>
</tr>
<tr>
<td>Class 3 Corrosion Findings (Note)</td>
<td>Class 3 corrosion occurs at the first or subsequent accomplishments of a corrosion inspection task that is so severe that the operator determines it to be an urgent airworthiness concern.</td>
</tr>
<tr>
<td>Light Corrosion</td>
<td>Light corrosion is corrosion damage so slight that removal and blend out over multiple repeat intervals may be accomplished before material loss exceeds the published allowable limit.</td>
</tr>
</tbody>
</table>
Local Corrosion  Generally, local corrosion is corrosion of a skin or web (wing, fuselage, empennage, or strut) that does not exceed one frame, stringer, or stiffener bay. Local corrosion is typically limited to a single frame, chord, stringer, or stiffener, or the corrosion of more than one frame, chord, stringer, or stiffener where no corrosion exists on two adjacent members on each side of the corroded member.

Principal Structural Element (PSE)  A Principal Structural Element (PSE) is an element that contributes significantly to carrying flight, ground or pressurization loads, and whose integrity is essential in maintaining the overall structural integrity of the airplane.

Urgent Airworthiness Concern  An urgent airworthiness concern is damage that could jeopardize continued safe operation of any airplane. An urgent airworthiness concern typically requires correction before the next flight and expeditious action to inspect the other airplanes in the operator's fleet.

Widespread Corrosion  Widespread corrosion is corrosion of two or more adjacent skin or web bays (a web bay is defined by frame, stringer, or stiffener spacing). Or, widespread corrosion is corrosion of two or more adjacent frames, chords, stringers, or stiffeners. Or, widespread corrosion is corrosion of a frame, chord, stringer, or stiffener and an adjacent skin or web bay.

NOTE: Any corrosion that exceeds the published allowable limits must be reported to Cessna Aircraft Company. (Refer to the Structural Repair Manual, Chapter 51, Major Structural Damage Report and Repair Requests.) This determination should be conducted jointly with Cessna Customer Service before any repairs are started. Refer to Step 6, Reporting.

3. Procedures For Recording Inspection Results
   A. Record the Inspection Results.
      (1) It is not mandatory to record the inspection results, but Cessna Aircraft Company recommends that records be kept to help the operator develop and adjust their individual CPCP when necessary. The records will make sure the identification, repeat interval, and class of corrosion is monitored. The data can identify whether there is more or less corrosion at repeat intervals. The data can also be used to determine if more frequent inspections are necessary.
Table 2. Example Corrosion Prevention and Control Program (CPCP) Form

<table>
<thead>
<tr>
<th>INSPECTION AREA</th>
<th>INSPECTION INTERVAL</th>
<th>CLASSIFICATION OF OBSERVED CORROSION (CORROSION CLASS)</th>
<th>REPAIRS/NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landing Gear (Note)</td>
<td>6 Months</td>
<td>None</td>
<td>Record any information that will be useful in future inspections or repairs.</td>
</tr>
<tr>
<td>Nose Landing Gear Wheel Well (Note)</td>
<td>6 Months</td>
<td>Class 1</td>
<td>Record the extent of the damage, type of corrosion, repairs completed and add any information that will be useful in future inspections or repairs.</td>
</tr>
<tr>
<td>Main Landing Gear Wheel Well (Note)</td>
<td>6 Months</td>
<td>Class 1</td>
<td>Record the extent of the damage, type of corrosion, repairs completed and add any information that will be useful in future inspections or repairs.</td>
</tr>
<tr>
<td>Horizontal Stabilizer Aft Spar Assembly (Note)</td>
<td>6 Months</td>
<td>None</td>
<td>Record any information that will be useful in future inspections or repairs.</td>
</tr>
<tr>
<td>Vertical Stabilizer Aft Spar Assembly (Note)</td>
<td>6 Months</td>
<td>None</td>
<td>Record any information that will be useful in future inspections or repairs.</td>
</tr>
<tr>
<td>Aft Wing Spar Assembly (Note)</td>
<td>6 Months</td>
<td>Class 2</td>
<td>Record the extent of the damage, type of corrosion, repairs completed and add any information that will be useful in future inspections or repairs.</td>
</tr>
<tr>
<td>Speed Brake Cove Area</td>
<td>9 Months</td>
<td>None</td>
<td>Record any information that will be useful in future inspections or repairs.</td>
</tr>
<tr>
<td>Flap Cove Area</td>
<td>9 Months</td>
<td>Class 1</td>
<td>Record the extent of the damage, type of corrosion, repairs completed and add any information that will be useful in future inspections or repairs.</td>
</tr>
<tr>
<td>Rudder Cove Area</td>
<td>9 Months</td>
<td>None</td>
<td>Record any information that will be useful in future inspections or repairs.</td>
</tr>
<tr>
<td>Elevator Cove Area</td>
<td>9 Months</td>
<td>None</td>
<td>Record any information that will be useful in future inspections or repairs.</td>
</tr>
</tbody>
</table>

**NOTE:** This item is a Chapter 5 requirement. The interval can be shortened but can not be extended beyond the interval specified in Chapter 5.

4. Corrosion Inspections and Detection Methods

A. Typical Inspection Methods.

   (1) Remove all equipment or components that can interfere with your ability to clearly view the inspection area.

   **NOTE:** In some areas it may be necessary to use equipment such as a borescope to see the inspection area.

   (2) Fully clean the inspection area before starting the inspection. Refer to the airplane wash instructions found in the applicable maintenance manual.
(3) Carefully examine the inspection area for any indication of corrosion. Refer to the applicable procedures found in the airplane Structural Repair Manual.

   (a) Special attention should be given to inspection areas that have had corrosion repairs in the past.

   (b) It is possible that nondestructive testing is necessary after some disassembly if the inspection shows a bulge in the skin or corrosion below structural splices or fittings. Refer to the applicable Nondestructive Testing Manual for information on NDI testing.

   **NOTE:** Corrosion can be detected by looking for paint blistering or popping since that is an indicator that corrosion is underneath the paint.

5. Corrosion Evaluation and Classification

   **CAUTION:** Remove only the minimum amount of material to completely remove the corrosion. Removal of too much material can result in additional repairs and rework.

   A. Remove all of the corrosion from the structure or component.

   **NOTE:** A magnifying glass can be a valuable tool to use to make sure all the corrosion has been removed.

   B. Measure the Depth of Corrosion Damage.

   (1) You can remove a small area of corrosion with an MPK wipe.

   (2) Use a suitable method to measure the depth of the corrosion damage.

   **NOTE:** For additional information on the measurement of corroded areas, refer to Chapter 51 of the applicable Structural Repair Manual or the Non-Destructive Testing Manual.

   C. Determine the Corrosion Class

   (1) Classify the corrosion found as Class 1, 2 or 3. Refer to Table 1. Definitions.

   (a) Any corrosion that exceeds the published allowable limits must be reported to Cessna Aircraft Company. (Refer to the Structural Repair Manual, Chapter 51, Major Structural Damage Report and Repair Requests.)

   D. If Class 1 corrosion is found that does not exceed the published allowable limits, refer to the applicable procedures in the airplane Structural Repair Manual.

   (1) Repair the structure.

   (a) It is recommended that you document the results of the inspection and the repair to use when evaluating your Corrosion Prevention and Control Program.

   E. If any corrosion that exceeds the published allowable limits is found:

   (1) Fill out the Structural Damage Report and Repair Request and the Major Structural Damage Reporting Form. (Refer to the applicable Structural Repair Manual, Chapter 51, Major Structural Damage Report and Repair Requests.)

   (2) Provide enough information to determine if the condition is a possible urgent airworthiness concern.

   (3) Use the Structural Damage Report Fax cover sheet and send both forms to Cessna Citation Customer Support.

6. Reporting

   A. You must contact Cessna Aircraft Company about all corrosion that exceeds the published allowable limits or if corrosion is found on components without published allowable limits. Refer to Step 5, Corrosion Evaluation and Classification.
7. Program Implementation

A. Cessna Aircraft Company strongly recommends you start a Corrosion Prevention and Control Program as soon as possible. This is the most cost effective way to prevent or control corrosion.

   (1) When a Corrosion Prevention Program is started it is important to do the items that follow:

      (a) Start with the baseline areas listed in this section.

      NOTE: If corrosion is found during completion of the baseline CPCP inspection tasks, Cessna recommends a general visual inspection of all exterior aircraft surfaces, including underneath the fairings, to assure that any and all corrosion is found and repaired. All areas where corrosion is found should be added to the baseline CPCP.

      CAUTION: Inspections and intervals developed for a CPCP cannot replace the inspections required for an ICA (Instruction for Continued Airworthiness) or Chapter 5 Task. ICA and Chapter 5 Tasks can, and should be part of a CPCP. An ICA or Chapter 5 Task that is used in the CPCP may have the interval shortened to be done more frequently, but never lengthened beyond the specified time frame.

B. Adjusting the CPCP intervals.

   (1) The operator may adjust the intervals for the inspection, CIC application and airplane exterior wash/rinse using the following guidelines:

      (a) If no corrosion is found, the CPCP inspection interval may be extended, but not past the Chapter 5 interval, if applicable.

      (b) If only Class 1 corrosion is found then the CPCP interval is correct.

      (c) If Class 2 or 3 corrosion is found the CPCP inspection interval must be shortened.

      (d) In addition to adjusting the CPCP inspection intervals, the operator may also adjust the wash/rinse interval and apply CIC to assist in preventing corrosion, but not past the Chapter 5 interval, if applicable.

C. Factors Influencing Corrosion Occurrences.

   (1) If you find Class 2 or Class 3 corrosion, consider the following:

      (a) Is there a presence of Corrosion Inhibiting Compound?

      (b) Is there a presence or condition of protective finish?

      (c) What was the length of time since the last inspection and/or application of corrosion inhibiting compound?

      (d) Was there inadequate clean-up/removal of corrosion prior to application of corrosion inhibiting compound, during previous maintenance of the area?

      (e) Are the moisture drains blocked or is there inadequate drainage?

      (f) What was the environment, the time of exposure to the environment and the use of the airplane?

      (g) Was there a variation in past maintenance history and or use of the airplanes in the operator's fleet?

8. (Refer to Figures 1 thru 6.) Corrosion Severity Maps

A. This section contains maps that show areas of the world where the potential for corrosion on airplane structure is mild, moderate, or severe.

B. Corrosion severity zones are affected by atmospheric and other climatic factors. The maps shown in this section are to be used as guidance when types and frequency of required inspections as well as other maintenance are determined.
CAUTION: Airports that use deicing fluids such as potassium formate or those with chemical properties similar to urea or salt must be classified as severe corrosion environments regardless of how they are classified on the following maps. Failure to follow the severe classification for airplanes that operate in these environments can result in corrosion damage to the airplane.

CAUTION: An airplane that flies into any severe corrosion areas during its operational route will be classified as operating in a severe zone.

(1) (Refer to Figure 1.) For the corrosion severity map for North America.
(2) (Refer to Figure 2.) For the corrosion severity map for South America.
(3) (Refer to Figure 3.) For the corrosion severity map for Africa.
(4) (Refer to Figure 4.) For the corrosion severity map for Asia.
(5) (Refer to Figure 5.) For the corrosion severity map for Europe and Asia Minor.
(6) (Refer to Figure 6.) For the corrosion severity map for the South Pacific region.
Figure 1. North America Corrosion Severity Map (Sheet 1)
Figure 2. South America Corrosion Severity Map (Sheet 1)
Figure 3. Africa Corrosion Severity Map (Sheet 1)
Figure 4. Asia Corrosion Severity Map (Sheet 1)
Figure 5. Europe and Asia Minor Corrosion Severity Map (Sheet 1)
Figure 6. South Pacific Corrosion Severity Map (Sheet 1)