



## McFarlane Aviation Products

**Instructions for Continued Airworthiness**  
McFarlane Aviation, Inc. FAA-PMA Part Number MC0450066-5, MC0552130-11, &  
MC0452017-15 Airbox Seal Assemblies.  
FAA PMA Number: PQ3732CE

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Approved By:

 6/11/21  
Quality Assurance Manager

 6/11/2021  
Engineering Manager

 6/11/21  
Production Manager

### Revisions

Revision	Date	Summary
Original	01/12/2021	Original release

### List of Effective Pages

Page	Rev/Date
ALL	Original Release, 01/12/2021

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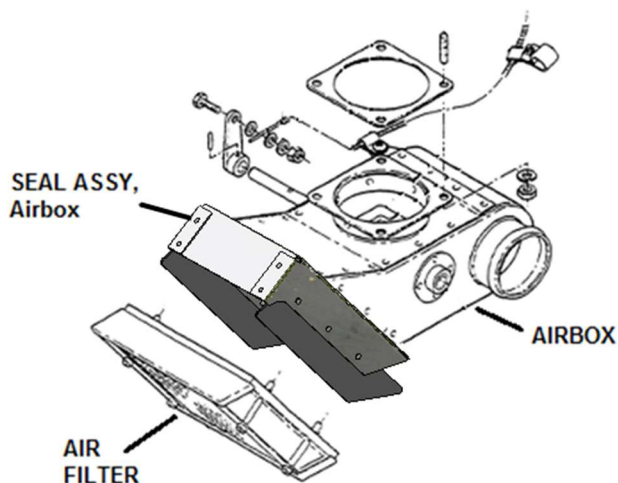
**INTRODUCTION**

This document is intended to provide for the continued airworthiness of McFarlane Aviation, Inc. PMA Airbox Seal Assemblies eligible for installation on Cessna 150, 152, and 172 series aircraft. The MC0450066-5, MC0552130-11, & MC0452017-15 airbox seal assemblies are comprised of a formed sheet metal shroud with seals riveted around the perimeter.

For all items not related to the installation of the McFarlane Aviation, Inc. airbox seal assembly, refer to the basic airplane model service and parts manuals.

**SYSTEM DESCRIPTION**

The seal assemblies bridge the space between the airbox and the air inlet opening in the lower cowling. This allows clean outside air to be directed through the air filter and into the airbox. The specific airbox seal assembly part numbers and their applicable eligibility is documented in Table 1.



**Figure 1: Cessna 152 Airbox Assembly**

**Table 1: McFarlane PMA Part Numbers**

McFarlane P/N	Cessna P/N	Descriptive Name	Eligible Cessna Model Aircraft
MC0552130-11	0552130-11	SEAL ASSY, Airbox	172L, 172M; F172L; F172M
MC0450066-5	0450066-5	SEAL ASSY, Airbox	152; A152; F152; FA152
MC0452017-15	0452017-15	SEAL ASSY, Airbox	150L; 150M; A150L; A150M; F150L; F150M; FA150L, FA150M
ABS-KT-01	N/A°	KIT, AIRBOX SEALS	172L, 172M; F172L; F172M
ABS-KT-02	N/A°	KIT, AIRBOX SEALS	152; A152; F152; FA152
ABS-KT-03	N/A°	KIT, AIRBOX SEALS	150L; 150M; A150L; A150M; F150L; F150M; FA150L, FA150M

\* Indicates partial model eligibility.

° Cessna does not offer a direct seal replacement part number.

**SPECIAL OPERATING INFORMATION**

The control and operation of the engine and air intake system do not change with the installation of the airbox seal assembly; see applicable Cessna 150, 152, & 172 Service Manuals for the operational control of the engine and air intake system.

**PART REMOVAL, REPLACEMENT, AND SERVICE INFORMATION**

**Airbox Seal Assembly**

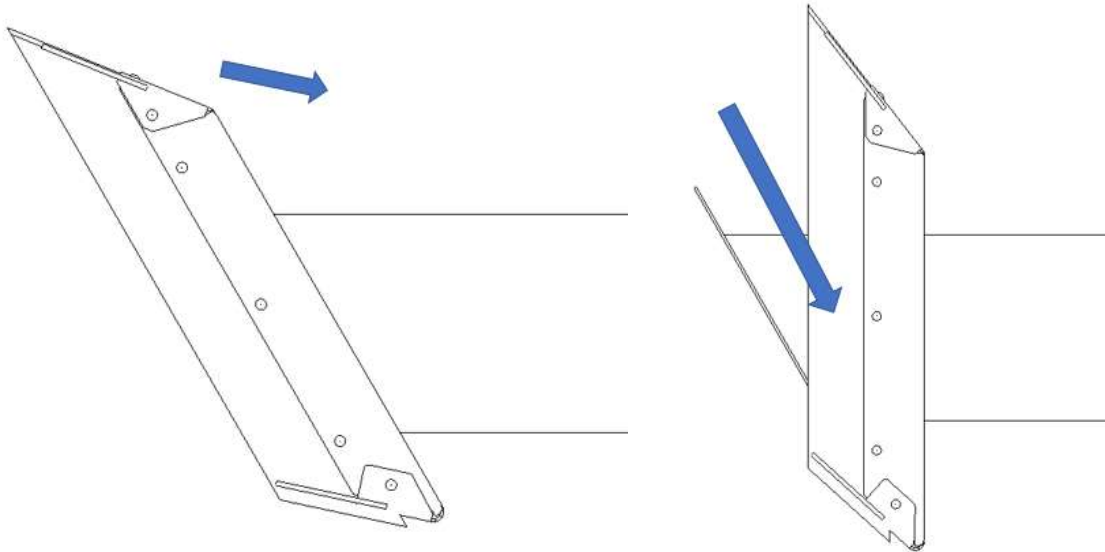
The McFarlane assemblies and replacement parts are listed under the column McFarlane P/N in Table 1 each are a direct replacement for their associated Cessna assemblies listed under the column Cessna P/N. The following instructions are the recommended process for removal and installation of these assemblies.

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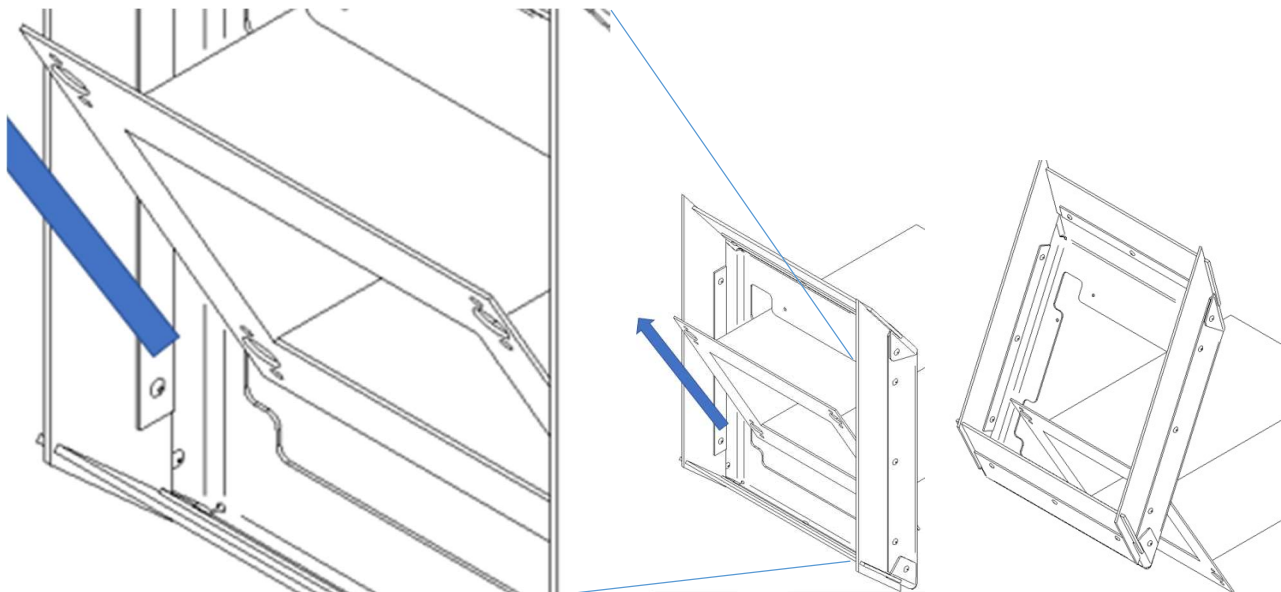
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**A. Removal**

- 1 – Remove fasteners that are securing the airbox air filter to the airbox flange to ensure filter is not damaged during airbox seal assembly removal.
- 2 – Remove any fasteners that are being used to secure the airbox seal assembly to the air box flange. Rivets are to be removed using the next largest size drill bit from the originally drilled rivet installation holes ((#30 size drill bit recommended).
- 3 – Tip the top of the airbox seal assembly back so that it's vertical. This can be accomplished with a firm push of the upper lip of the now freed seal assembly toward the body of the airbox.



- 4 – Align slots with the bottom corners of the square airbox flange and simultaneously tilt seal assembly back and firmly lift over and off the corners of the airbox flange.

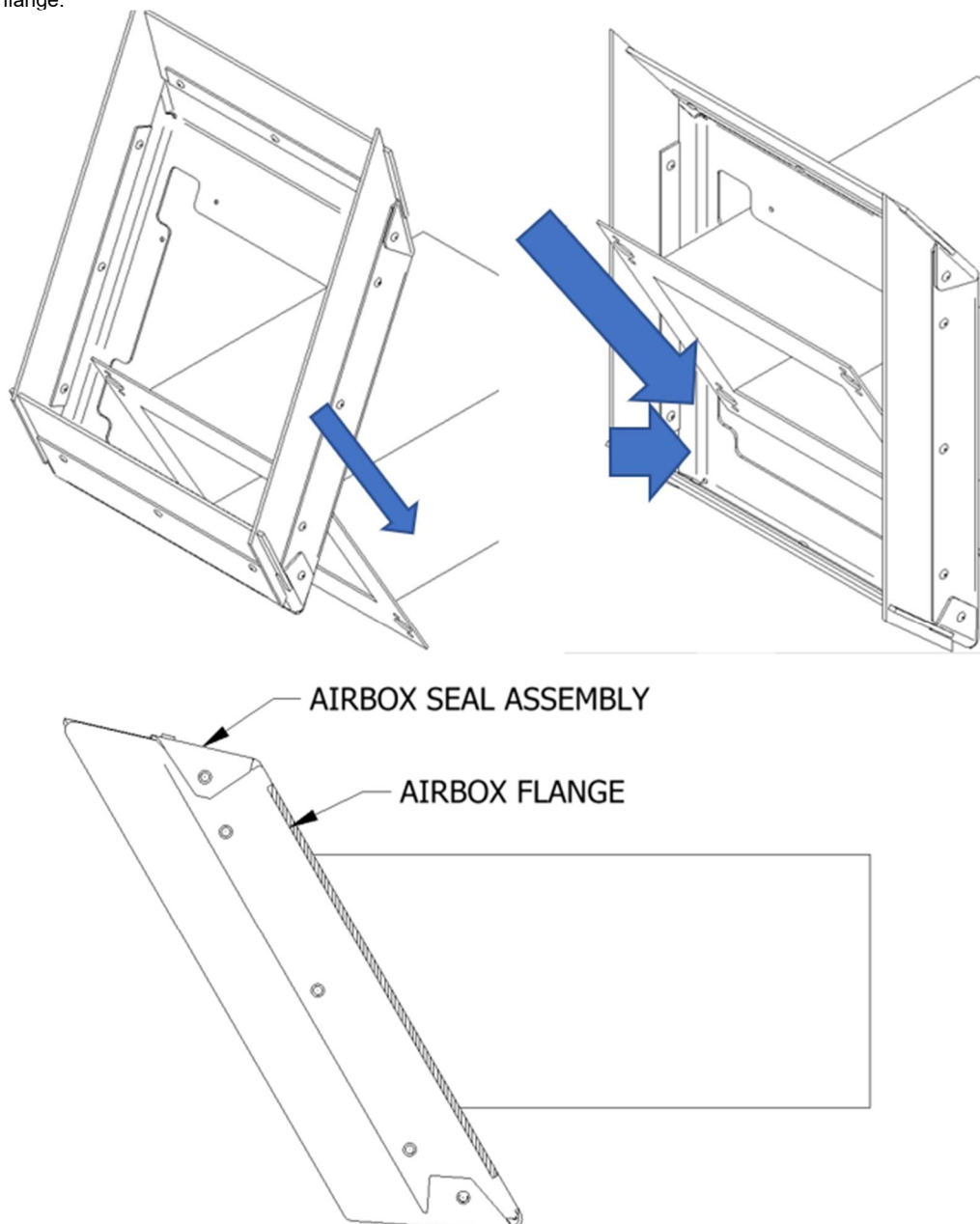


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**B. Installation**

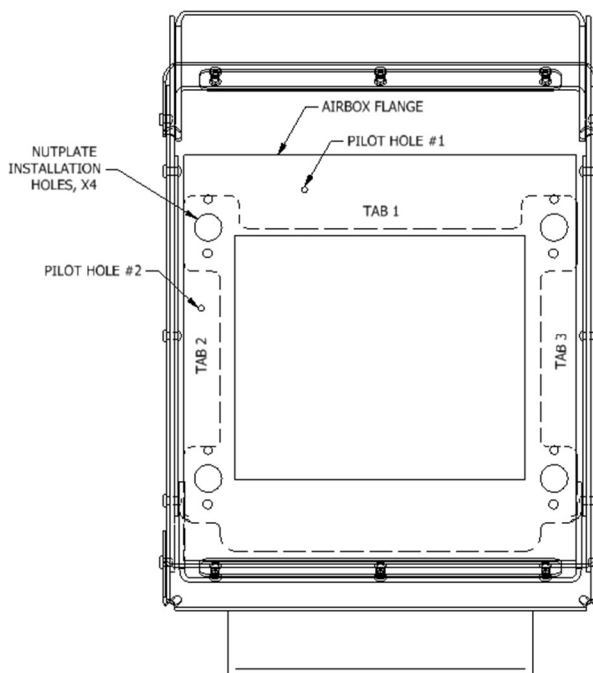
- 1 – Align upper corners of the square airbox flange with slots located at the extents of the cutout width of airbox seal assembly. Simultaneously press seal assembly down and pull back and behind bottom corners of flange until inside surface of the cutout is flush with the top of the airbox flange.



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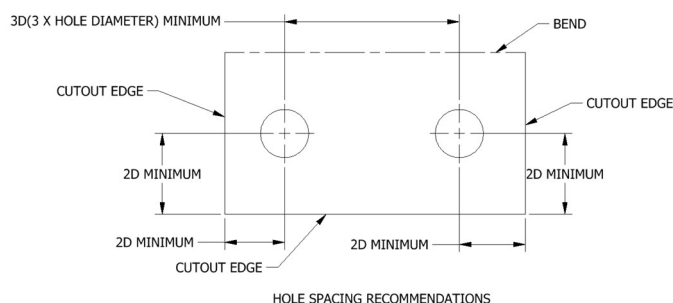
- 2 – The McFarlane Airbox Seal Assemblies has two pilot holes to aid in installation. Once seal assembly is in place, ensure that seal assembly is square to airbox flange by visually checking that nut plate installation holes are approximately centered in their rectangular slot locations in the cutout. Also check that both pilot holes are in the appropriate locations. Pilot hole 1 located on Tab 1 and Pilot hole 2 should both be visible through the existing holes in the flange before match drilling. Note: If this is a brand-new airbox installation there may be no existing holes to match.



- 3– While maintaining seal assembly square (with nut plate holes visually centered in the cutout slots, as shown in the figure above) on the airbox flange. Match drill one of the rivet pilot holes (either pilot hole #1 or #2). McFarlane pilot holes are sized for a #3 size rivet (#40 size drill bit ). Install a Cleco or other temporary retaining device into the hole just drilled.
- 4 – Before match drilling next pilot hole, ensure that seal assembly is still square. If seal assembly is not square, slightly adjust the part position while maintaining hole alignment between the existing match drilled pilot hole in airbox seal assembly and airbox flange. The adjustment is complete when the seal assembly is approximately square with flange again (as shown in figure above) and next pilot hole is fully covered by airbox flange. Once adjustment is complete use a Cleco to secure hole and help maintain part position for match drilling remaining holes
- 5 – Continue transferring hole pattern from the airbox flange to the tabs of the airbox seal assembly. A minimum of two rivet holes are required for each of the tabs. If a new hole is required to meet the two-hole minimum, follow instruction of step 6 for creating a new hole, otherwise move to step 7.
6. – While keeping hole retainers in place, mark additional rivet hole locations as needed. Holes spacing should be in accordance with AC43.13 hole spacing for rivet installation (Page 4–20, Figure 4–5).

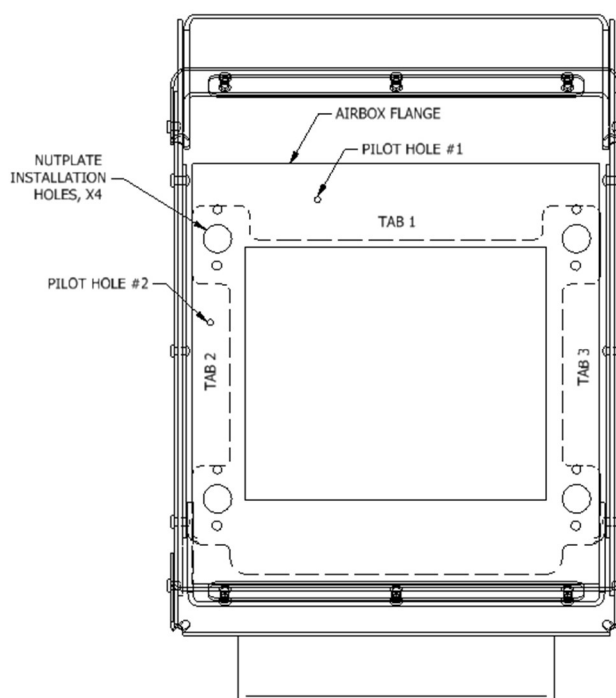
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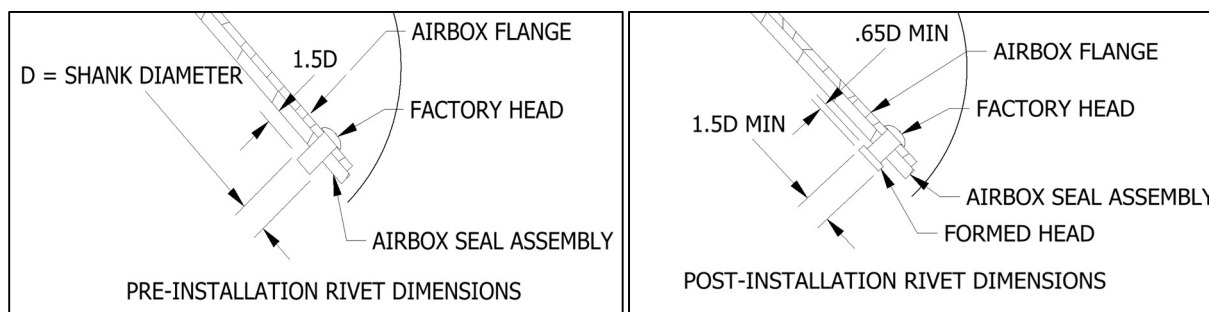


7 – Once all hole locations for rivets have been match drilled remove all temporary retaining devices from the part and remove seal assembly from airbox flange. Clean any drilling debris from both the part and flange. Deburring match drilled holes with appropriate deburring tool on airbox flange and airbox seal assembly is recommended prior to rivet installation.

8 – Place Seal assembly back on the flange and ensure all hole are properly aligned and part is square on the flange



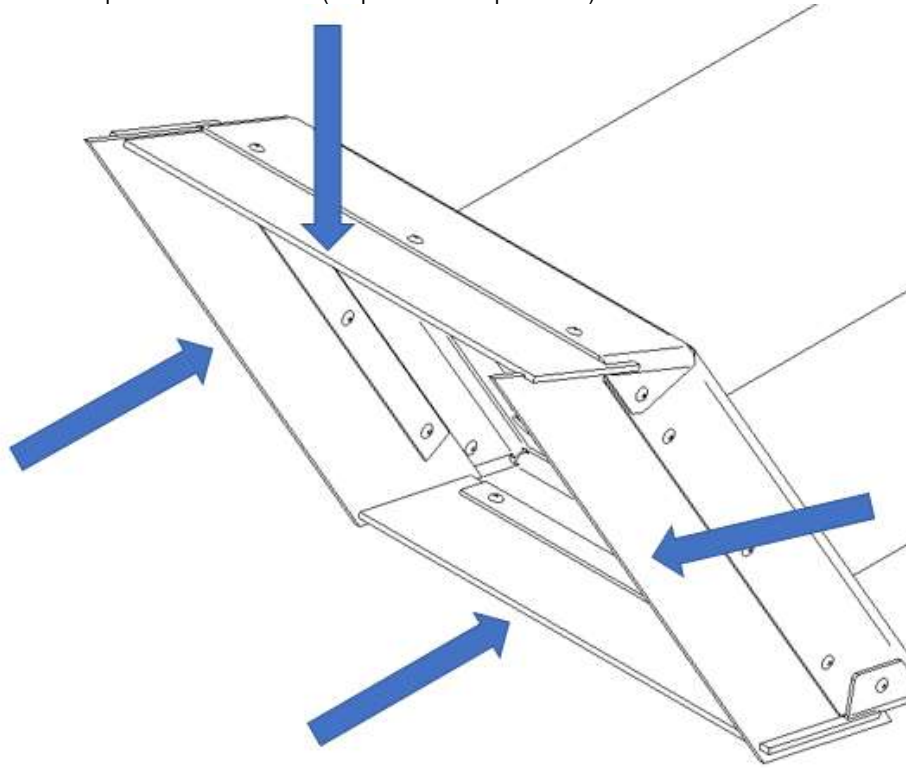
9. – Install rivets, using a rivet squeezer or other low impact riveting tool. Formed rivets should be in line with AC 43.13 Recommendations (Page 4-57, Figure 4-6)



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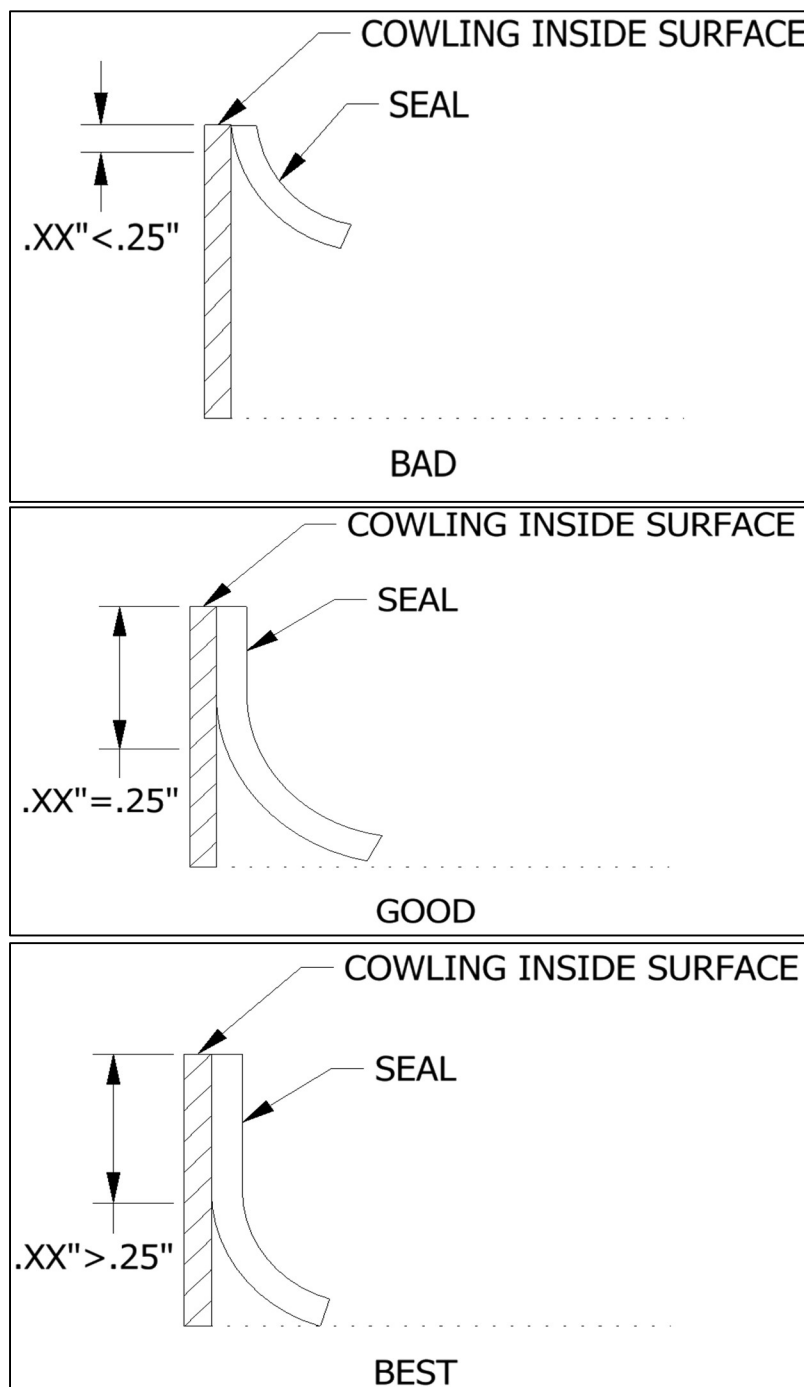
10. – Once installed and secured to the airbox, reinstall airbox air filter and test fit the cowling. The seal material may need to be trimmed to optimize the fit. If necessary, trim the seals with a razor knife or sharp pair of shears/scissors. Be cautious and remove small amounts of material at a time until the optimum fit is achieved. (Step 11 defines optimum fit)



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11 – Optimum fit of the seal assembly and the cowling is defined as full contact around at least a quarter inch past the airbox intake opening of the cowling.





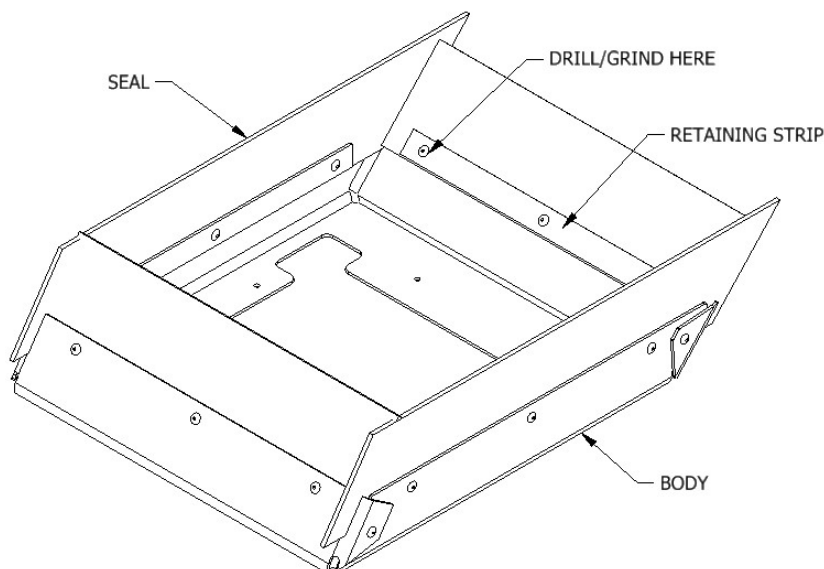
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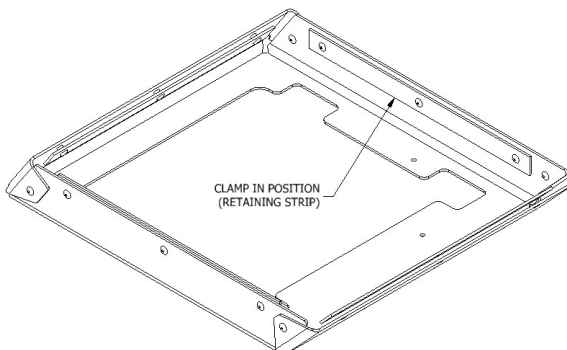
**C. Seal Replacement (ABS-KT 01, ABS-KT-02, ABS-KT-03)**

1 – Remove the airbox filter per the steps detailed in Section A.

2 – Drill or grind off the rivet head on the interior side of the assembly, for each of the effected/damaged seals. This will ensure minimal damage to the sheet metal body of the assembly.



3 – For each seal that is to be replaced, clamp the supplied retaining strip in place, and rivet together per section B above.



4 – The supplied seal will be slightly oversized to allow it to be trimmed for optimal fit. Test fit the seal and trim off small amounts of material until the desired fit is achieved.

5 – Repeat this process for each seal getting replaced.

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**TROUBLESHOOTING**

None applicable.

**PLACARDS**

None applicable.

**DATA**

All information to support the continued airworthiness of this replacement part is as defined herein and contained in:

- Relevant Cessna 150, 152, and 172 series Service Manuals.
- Relevant Cessna 150, 152, and 172 series Illustrated Parts Catalog.

**INSPECTION**

After installation, the McFarlane airbox seal assembly should be inspected at the same intervals as the original airbox seal assembly, as contained in the relevant Cessna model 150, 152, and 172 series Service Manuals.

**RECOMMENDED OVERHAUL PERIODS**

No additional overhaul time limitations exist with the use of these parts.

**AIRWORTHINESS LIMITATIONS**

The Airworthiness Limitations section is FAA approved and specifies maintenance required under Sec. 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved. No additional airworthiness limitations exist.

**ASSISTANCE & REVISIONS**

ICA revisions shall be made available on the McFarlane website, [www.mcfarlaneaviation.com/ICA](http://www.mcfarlaneaviation.com/ICA). For questions or assistance regarding these Instructions for Continued Airworthiness (ICA), contact McFarlane Aviation, Inc via email or phone. Email: [engineering@mcfarlaneaviation.com](mailto:engineering@mcfarlaneaviation.com) Phone: 1-800-544-8594 (within the US) or 1-785-594-2741.