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# SERVICE INSTRUCTION

DATE: October 2, 2012

Service Instruction No. 1545  
Engineering Aspects are  
FAA Approved

SUBJECT: Expanded Clearance in Crankcase Nose

MODELS AFFECTED: 320/360 series Lycoming engines with crankcase casting part number C11B20061-R Revision M or later and C11B20061-L Revision M or later

TIME OF COMPLIANCE: As required

### NOTE

Incomplete review of all the information in this document can cause errors. Read the entire Service Instruction to make sure you have a complete understanding of the requirements.

Lycoming four-cylinder 320 and 360 series engine models can have a tight fit at the nose area (Figure 1) in some airframes. There is not enough clearance between the engine and adjacent airframe components such as airframe supplied alternator or air conditioning mounting brackets. This Service Instruction includes a procedure to remove crankcase material through burring from the crankcase rib for increased clearance in the nose for these engines in the impacted airframe applications.

### NOTE

This Service Instruction is NOT to be done on 390 series engines.



Figure 1  
Tight Fit in Nose Clearance - Airframe Bracket



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Remove interference material from the crankcase as follows:

1. Measure how much interference there is between the crankcase nose and the adjacent airframe components (airframe brackets, brush block support arm, etc.) to calculate in advance how much crankcase material must be removed for clearance of at least 0.025 in. (0.635 mm).
2. Remove the pre-calculated amount of material (not to exceed the burr/blend limits shown in Figure 2) from the external side of the crankcase rib using the burring process (using a pneumatic or electric die grinder with an approximate 0.250 in. (6.350 mm) diameter aluminum-cutting burr bit or rotary file to attain the necessary clearance).
3. Using a fine grade crocus cloth, blend all created corners and fillets to a radius of approximately 0.125 in. (3.175 mm).
4. Remove all dross and ground material shavings from the crankcase and engine parts.
5. Clean all affected parts, including the exposed aluminum, with an organic solvent such as acetone or toluene. Let the components air dry.
6. Measure the clearance in the crankcase nose end to make sure enough material was removed for sufficient clearance with the brackets.
7. Apply enamel touch-up paint to the exposed aluminum and air dry.

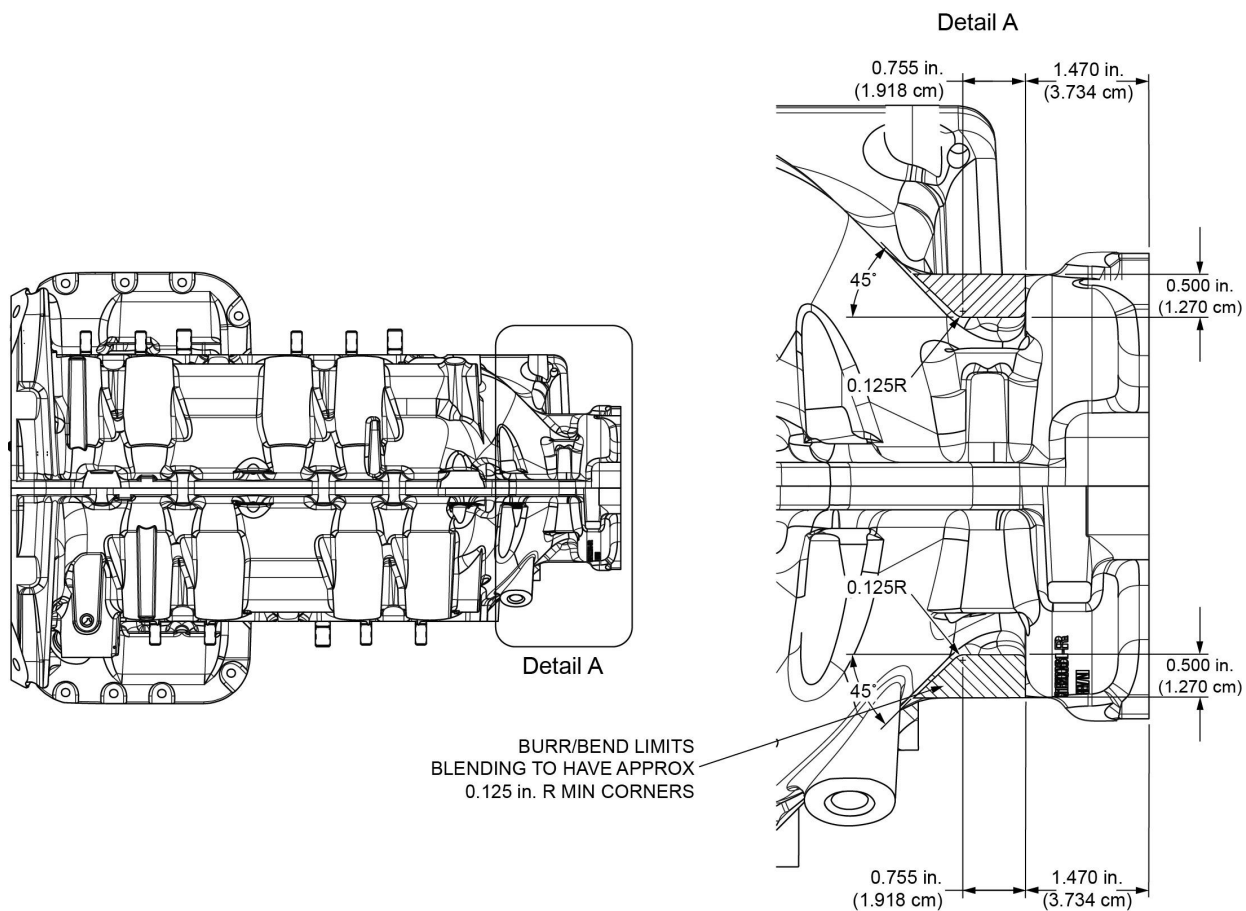


Figure 2  
Burr/Blend Limits on Crankcase Nose

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