

RAM AIRCRAFT, L.P.
SERVICE BULLETIN

SB2019-01

TECHNICAL PORTIONS ARE
FAA-APPROVED

SUBJECT: Hardware installation at upper forward-most bolt boss on RAM FAA-PMA crankcases

PURPOSE: To assure proper crankcase bolt grip

COMPLIANCE: At overhaul, anytime crankcase bolts are removed, or upon installation of propeller de-ice brush block bracket assy.

PRODUCTS AFFECTED:

Continental Motors, Inc. 520 or 550 cubic-inch front-alternator-type engines with FAA PMA Crankcase, (left half) serial number 18M001, 18M002, 19C004 thru 19C023, or 19F024 thru 19F037 only.

DOCUMENTS SUPERSEDED: None

PARTS SUPERSEDED: AN5-13A bolt or B40030-1 or B40030-2 Spacer


A. INTRODUCTION

Thirty-six (36) specific crankcase serial numbers (listed above) were manufactured by RAM Aircraft, LP (RAM) in 2019 under part number 2097-2 (left half only) with excess material removed by spot face machining at the upper-and-forward-most bolt boss only. No other bolt boss locations are affected. Engine overhaul facilities and engine installation mechanics need to be aware of this anomaly when installing hardware at this bolt boss location. For serial number identification, refer to Section B.

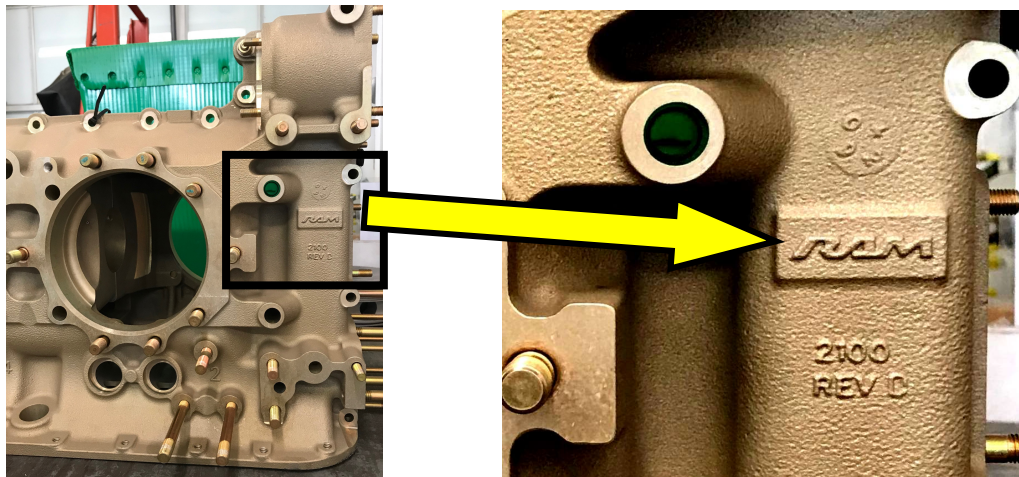
Hardware requirements differ, depending on whether (or not) the engine will be used in airplanes with electro-thermal propeller de-ice brush block bracket assembly. See section D for the required action for each configuration.

B. IDENTIFICATION

Identify RAM FAA-PMA crankcase by looking for the RAM logo embossed at the rear of the crankcase as shown in Figure 1. Identify RAM part number and serial number stamped at lower-most flange at nose end of crankcase as shown in Figure 2.

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LEFT CRANKCASE HALF



RIGHT CRANKCASE HALF

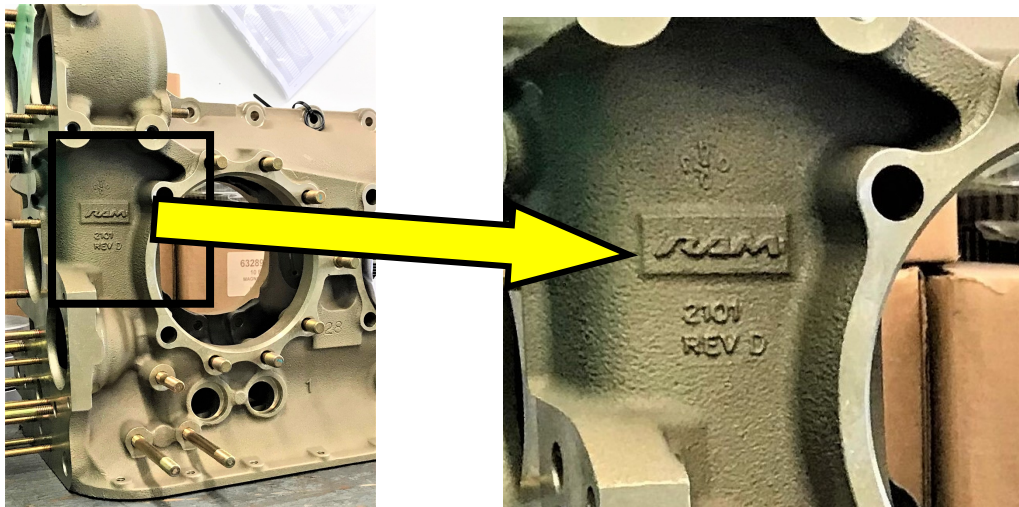

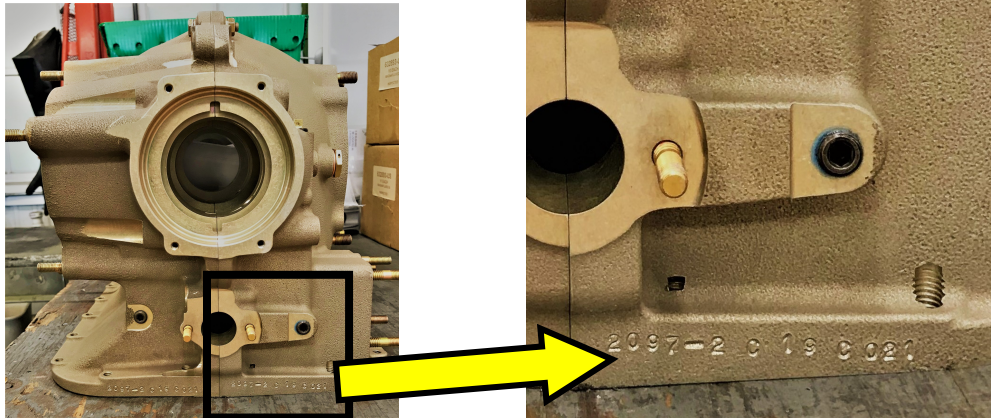


FIGURE 1
RAM FAA-PMA Crankcase Identification

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The Left crankcase half part number and serial number are metal stamped on the lower flange beneath the cam bore at crankcase nose as shown.

MARKING CODE EXAMPLE :

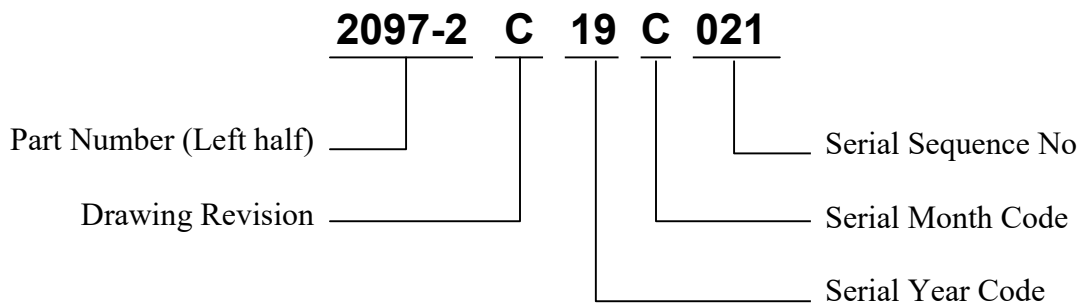



FIGURE 2
Part Number and Serial Number Identification

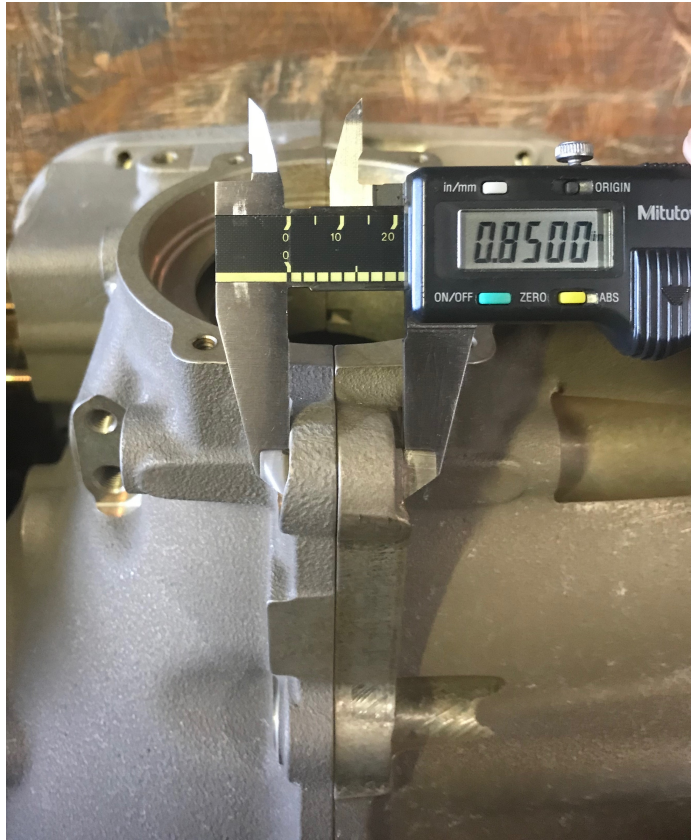
C. PHYSICAL MEASUREMENTS & ACCEPTANCE CRITERIA

Inspect left and right crankcase mating halves at upper-forward-most bolt boss. With crankcase halves mated together, measure across both halves at the bolt boss. The boss material thickness should be generally 1.0 inches. Each half should have equivalent thickness (approximately 0.5 inch each half). Mis-machined bosses will be evident as the overall total width is approximately 0.85 inches in lieu of the standard 1.00-inch width. See Figure 3.

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STANDARD MEASUREMENT (APPROX 1.00)




MIS-MACHINED MEASUREMENT (APPROX 0.85)

FIGURE 3
Upper-Forward-Most Bolt Boss Measurement

If total measurement across the Left and Right halves measures 1.00 inches (+/- .05 inch) no further action is required. Use standard hardware as specified in the applicable service manual or overhaul manual.

If total measurement is less than 0.95 inches, refer to Section “D” for corrective action.

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D. CORRECTIVE ACTION:

1. For affected engines installed without electro-thermal propeller de-ice systems, the bolt installed in the upper forward-most bolt boss (See figure 1), will need to be shorter than the standard bolt. Use bolt part number AN5-11A in lieu of the specified AN5-13A bolt in this location only. Alternatively, it is acceptable to use AN5-12A bolt with no more than two extra p/n AN960-516 washers to ensure that the nut may be properly tightened to required torque value with no possibility of bottoming on the bolt shank.
2. For affected engines installed with electro-thermal propeller de-ice brush block bracket assembly, it is acceptable to install a stack-up of washers (or a combination of washers and the standard spacer) between the crankcase boss and the bracket. Select the number of washers, p/n AN960-516 or AN960-516L as required to fill the space.

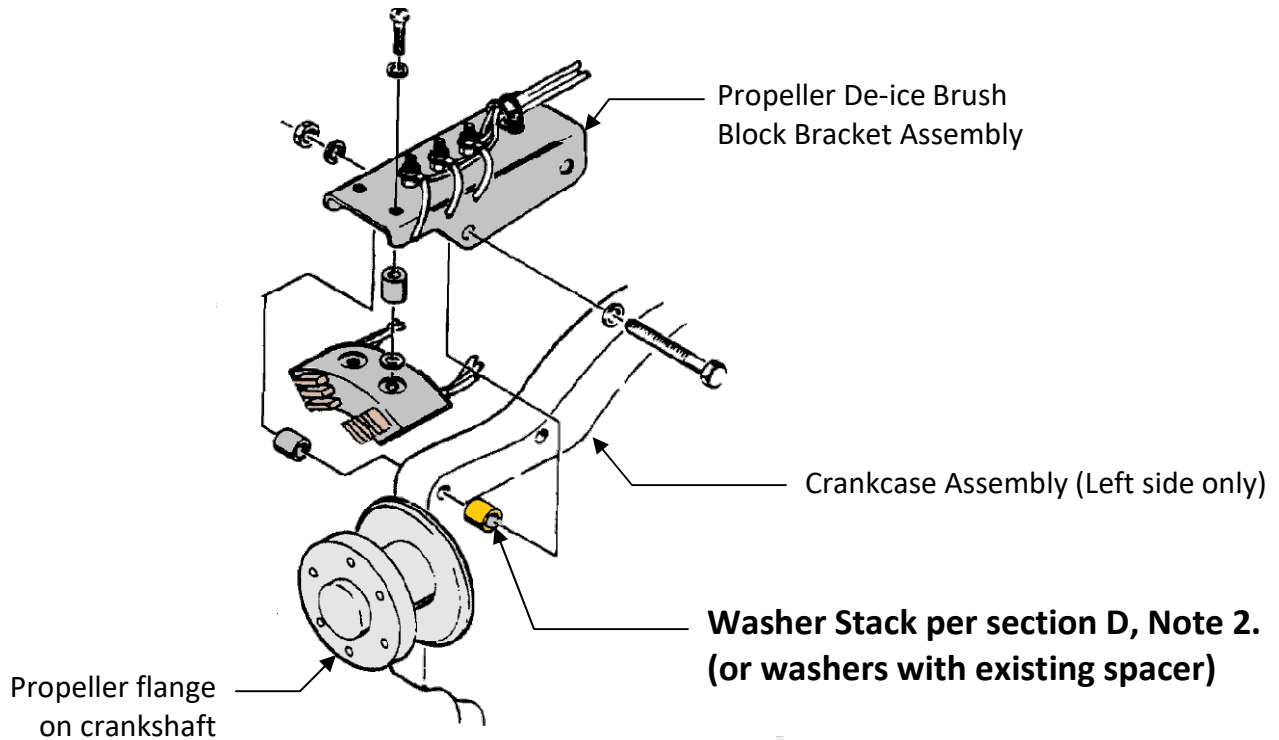


FIGURE 3
De-ice Brush Block Bracket and Spacer Installation

E. CONTACT INFORMATION:

RAM Aircraft, L.P. Customer Service Dept. at (254) 752-8381 between 8 AM and 5 PM C.S.T. Monday through Friday.

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