

## Examination Summary

Conducted 1/28/2020

At Continental Motors, Mobile, AL



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Summary & Factual Information: The IIC removed and crated the accident engine at the recovery company. The engine was subsequently shipped for examination at its manufacturer. A disassembly examination revealed the No. 1 connecting rod was separated from its crankshaft location. The connecting rod was found in a hole torn into the sump near the No. 6 cylinder and its piston pin end and its bushing were not present. The No. 1 connecting rod bearing end components and sections of its bearing were found within the sump. One connecting rod bolt was displaced from its nut and the other bolt separated neat its nut. The camshaft was deformed abeam the No. 1 crankshaft connecting rod location. The skirt end of the No. 1 piston was deformed and damaged. However, its piston pin was found in place. The No.2 connecting rod was found in place. However, one side of the piston and its skirt end were damaged. The sump contained debris consistent with damaged and liberated internal engine components.

Spark plugs exhibited normal wear and coloration when compared to a Champion Check-A-Plug chart. The piston pin bushings in the No. 2, 3, 4, and 6 connecting rods were displaced. The No. 2, 3, and 4 connecting rod bushings were chipped. The split lines for the No. 2, 3, and 4 bushings were found not clocked in accordance with SB07-1.

The connecting rods with displaced bushings were dimensioned and their bushings were extracted using a pressure gauge. The measurements did not reveal any findings that could explain the bushing migration.

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I can attest that the above summary is correct to the best of my knowledge:

**Edward F. Malinowski**  
**National Transportation Safety Board**  
**Air Safety Investigator**