

From: [REDACTED]
To: [REDACTED]
Subject: Email Materials Laboratory Report--ERA20LA326
Date: Wednesday, November 18, 2020 4:10:50 PM
Attachments: [ERA20LA326 Fractured Head Stud Evaluation.pptx](#)

Place: Honea Path, South Carolina
Date: September 21, 2020
Vehicle: Boeing Model E75 Stearman Kaydet (N1524M)
NTSB No.: ERA20LA326

Examination of fractured cylinder studs through photographs only. A summary of observations is included in the attached file.

--Mike B.

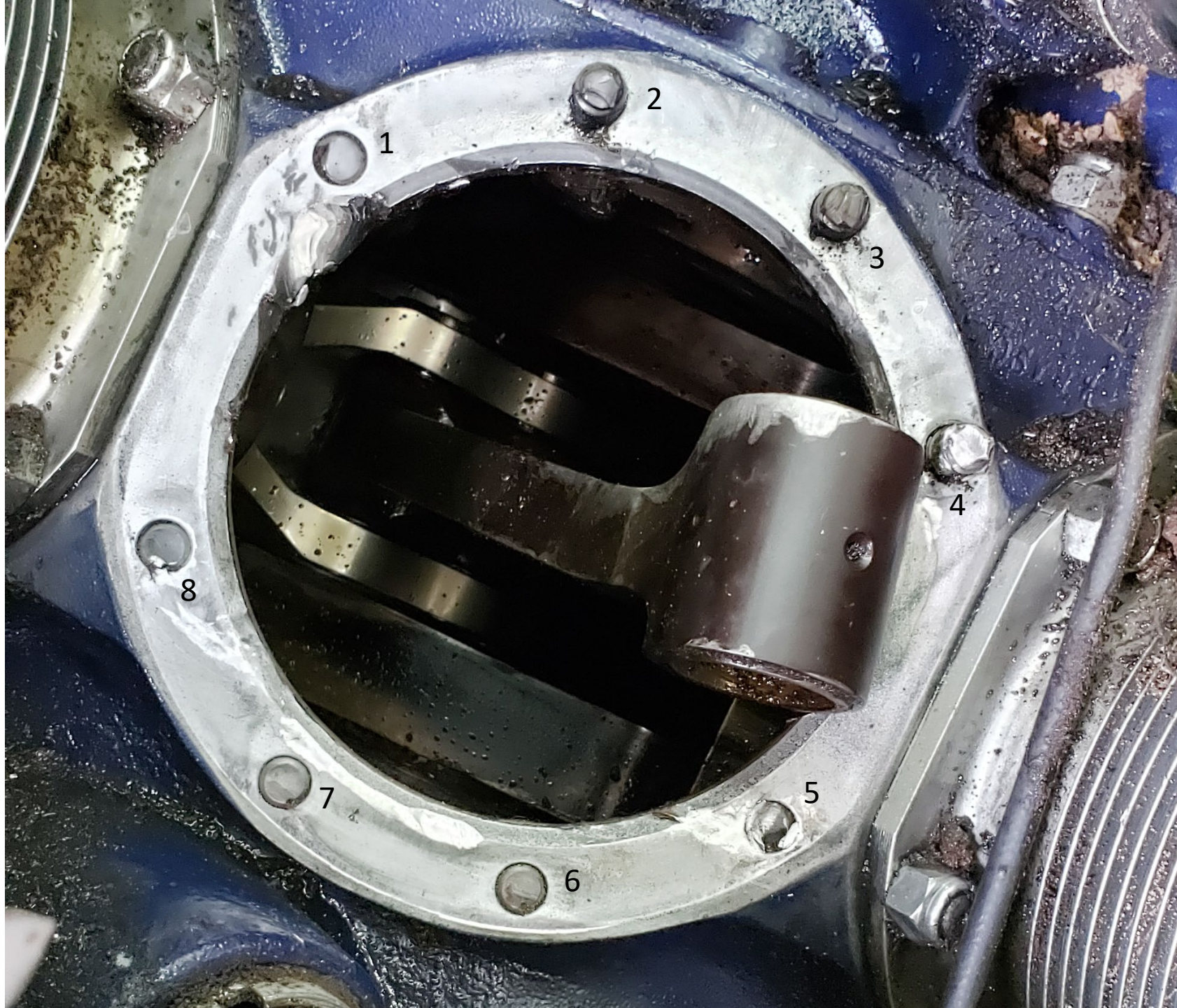
Mike Budinski

Chief, Materials Laboratory Division

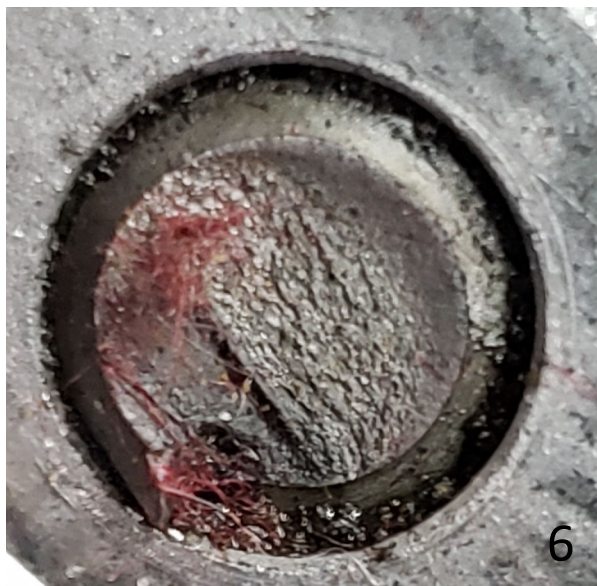
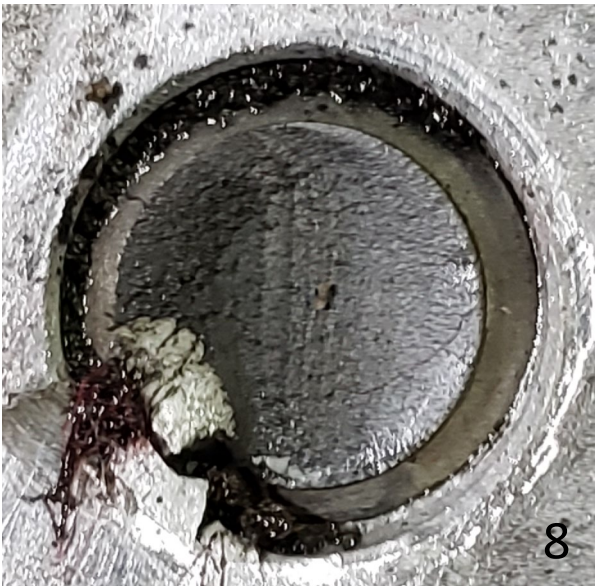
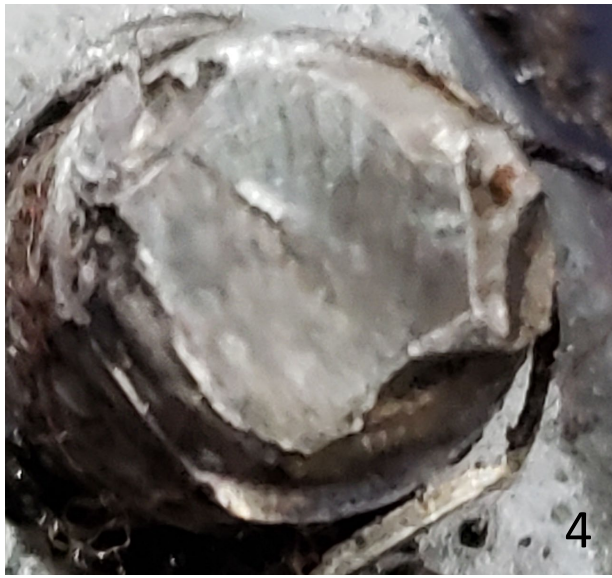
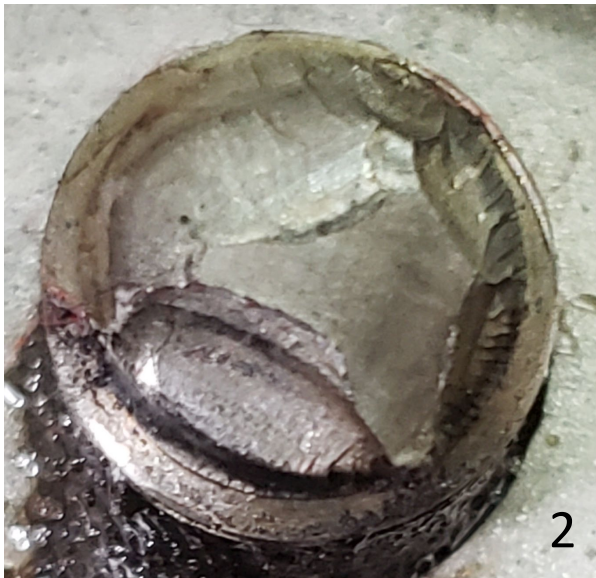
National Transportation Safety Board
Office of Research and Engineering
Materials Laboratory Division
490 L'Enfant Plaza East, SW
Washington, DC 20594

Office: [REDACTED]
Fax: [REDACTED]
iPhone: [REDACTED]

Stud locations arbitrarily
numbered 1 through 8



Closer view of each stud



Stud number	Fractographic observation
1	Features consistent with fatigue fracture
2	Mechanically damaged / image out of focus
3	Mechanically damaged / image out of focus
4	Mechanically damaged / image out of focus
5	Mechanically damaged
6	Undetermined / closer examination required
7	Features consistent with fatigue fracture
8	Features consistent with fatigue fracture