

# Memorandum of Conversation

Date: April 4, 2017

Time: 1500 central daylight time

Conversation Including: Richard D. Anderson, Jr; FAA Inspector

Conversation Regarding: CEN17LA070, N1337H

Duration of Call: 45 Minutes



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## Summary & Factual Information from Conversation:

NTSB Investigator Fox called FAA Inspector Anderson to discuss the investigation of an Aeronca 15AC (N1337H) that had a loss of directional control while landing on runway 27R at Oakland County International Airport on December 23, 2016. Inspector Anderson had also recently obtained additional installation information from the FAA Aircraft Certification Office that managed the Supplemental Type Certificate (STC) used to modify the accident airplane's wheels and brakes.

Inspector Anderson stated that for the past 25 years the airplane had been used in a float plane configuration with the main landing gear removed. According to maintenance documentation, on January 27, 2016, the airplane had been modified through the implementation of STC No. SA1114NW with Cleveland 8.00 x 6.00 main wheels, tires, and 6 inch external, single cylinder, dual piston brake assemblies. The landing floats were reinstalled on an unknown date during 2016. On December 17, 2016, the landing floats were removed, and the main landing gear and wheels were reinstalled to convert the airplane back into a conventional gear land airplane. The accident occurred during the second flight after the airplane was reequipped with the conventional landing gear.

Inspector Anderson examined the airplane after the accident and found the four 0.25 inch anchor bolts used to attach the left brake torque plate to its respective axle endplate had sheared. The unrestrained torque plate allowed the brake assembly to rotate with the brake disk that was attached to the wheel. With the forward rotation, the brake line was pulled around the gear leg until the 90° aluminum fitting that connected the brake line to the caliper assembly sheared. The tire inner sidewall exhibited a gash that partially exposed the inner tube. The inner tube did not rupture but was partially protruding from the gash in the tire sidewall. The sheared anchor bolts had worn a groove on the inboard surface of the left brake disk.

The STC No. SA1114NW installation instructions specified that the stock Cleveland brake torque plates be modified per the accompanying Installation Drawing No. 1200-4 and the use of 0.375 inch outside diameter (OD) to 0.25 inch inside diameter (ID) bushings. Installation Drawing No. 1200-4 specified that each torque plate required two 0.25 inch holes to be marked and drilled to ensure proper alignment with the landing gear axle endplate. Each torque plate was then attached to its respective landing gear axle endplate with four 0.25 inch anchor bolts and washers. The two 0.25 inch holes drilled in each torque plate did not require a bushing when installed with a 0.25 inch anchor bolt; however, the remaining two 0.375 inch holes used to attach each torque plate required 0.375 inch OD to 0.25 inch ID bushings to properly support the 0.25 inch anchor bolts.

Further examination of the airplane revealed that both torque plates were not modified and installed in accordance with the STC No. SA1114NW installation instructions. Specifically, the brake torque plates were not modified with the additional two 0.25 inch holes specified to allow proper alignment with the landing gear axle endplate. Additionally, both torque plates were installed with improperly sized bushings in several holes. The left torque plate, which had separated from the left landing gear axle endplate, had two bushing remaining; one bushing had the correct 0.25 inch ID, the other bushing had a larger 0.3125 inch ID. The right torque plate, which remained attached to the right landing gear axle endplate, was installed with four 0.3125 inch ID bushings. The improper torque plate installation allowed

for movement of the torque plate and the unintended transverse loading of the anchor bolts, which resulted in the fracture of the four 0.25 inch anchor bolts that secured the left brake torque plate.

--- End of interview summary ---

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I can attest that the above summary and factual information was taken on the above stated day, and is correct to the best of my knowledge:

Signed: \_ Andrew Todd Fox \_

Dated: \_ April 4, 2017 \_

**Andrew Todd Fox**  
**National Transportation Safety Board**  
**Air Safety Investigator**