

NTSB Materials Laboratory Report - Right Main Landing Gear Tire

ACCIDENT INFORMATION:

Place: Provincetown, Massachusetts
Date: September 9, 2021
Vehicle: Cessna 402C, N88833
NTSB No.: ERA21FA354
Investigator: Leah Read, ASI - ERA

DOCUMENTS EXAMINED:

Photos of a right main landing gear tire.

DETAILS OF THE EXAMINATION:

The right main landing gear tire was a Goodyear Flight Custom III with the following characteristics:

- Part Number: 650C86-3
- Size: 6.50-10
- Ply Rating: 8
- TT/TL: Tube-type
- Molded Skid Depth: 0.30 inch
- Serial Number: 11650176

The tire's tread exhibited two contact patches that were approximately 165 degrees apart from one another, each spanning most of the tread width. One contact patch had a length-to-width ratio of approximately 1.3 and the other had a length-to-width ratio of approximately 1.5. The trailing edge of each contact patch (the edge that would make and lose contact with the ground earlier during normal tire rotation) exhibited a jagged appearance, while the leading edge (the edge that would make and lose contact with the ground later during normal tire rotation) exhibited a comparatively continuous and curved appearance. Within the contact patch, the rubber tread exhibited a rough appearance with small tears in the rubber that generally progressed from the leading edge of the contact patch toward the trailing edge of the contact patch.

Skid depth measurements were made within and outside of each patch. Within the smaller patch (1.3 aspect ratio) the depth readings for each groove were 7/32 inch (0.21 inch) while the groove outside the patch was 6/32 inch (0.19 inch). Within the larger patch (1.5 aspect ratio) the depth readings for each groove were just under 8/32 inch (0.25 inch) while the groove outside the patch was closer to 7/32 inch (0.21 inch). The features were consistent with multiple skid events.

Donald Kramer, Ph.D.

Sr. Materials Engineer]