Adopted: May 1, 1944
File No. 3146-43

REPORT OF THE CIVIL AERONAUTICS BOARD
on the
Investigation of an Accident Involving Aircraft During a Local Pleasure Flight

William Oscar Brummitt, age 42, and his passenger, Jack M. Edge, age 40, were fatally injured in an accident which occurred near the Lakewood Airport, Atlanta, Georgia, about 7:45 p.m. on July 25, 1943. Brummitt held a student pilot certificate and had flown approximately 21 solo hours, all in the type airplane involved. Edge, a non-revenue passenger, was not certificated as an airman. The aircraft, a Piper J3C-50, NC 30644, powered by a Continental 50 h.p. engine and owned by J. D. Selman, was demolished.

Brummitt issued his own flight clearance and took off from the Lakewood Airport about 7:25 p.m. on a local pleasure flight. He practiced several take-offs and landings and on the last landing approach, contact was made with the ground a considerable distance down the 1400-foot runway. Before the plane had stopped rolling the pilot applied power and made a take-off toward the east. When the plane had reached an altitude of approximately 75 feet, about 200 feet beyond the end of the runway, the engine began to misfire and the pilot attempted to turn back to the field. During this turn the aircraft was stalled and dived to the ground nose-first near the east end of the east-west runway.

Witnesses were not agreed as to whether the engine had cut out completely or misfired and operated irregularly, and the manner in which the propeller was broken neither disproved nor substantiated their varied opinions. The ignition switch was in the "on" position, and there was evidence of gasoline having drained from the tank in the vicinity of the wreckage. Dual controls were installed and operative. It could not be determined just where or when the passenger boarded the aircraft.

The engine's single magneto was tested and found to be operating normally. Two of the four spark plugs showed small lead deposits on the electrodes; one plug was short circuited by one of these metallic globules which was bridged across the sparking gap. Microanalysis of the metal-like globules showed them to be almost pure lead. In the light of past experience it is known that such lead globules are sometimes formed when leaded fuel is used and engine operating conditions are such that the ethylene dibromide constituent of the Ethyl fluid fails to combine completely with and volatilize the lead. On the other hand, if the spark plugs were coated with lead-containing deposits as a result of prior operation on leaded fuel, subsequent operation of the engine at or near maximum power output on an unleaded fuel of excessively low octane number would have produced severe detonation, and reduction of the lead compounds already present might have produced the observed globules of metallic lead.

The pilot's attempt to turn back to the field at such a low altitude was an exercise of very bad judgment, even though the terrain ahead was rough and heavily wooded.

While the direct cause of this accident was engine failure following take-off, its seriousness was the result of a series of pilot errors culminating with an attempt to return to the airport.

BY THE BOARD

/s/ Fred A. Toombs
Secretary