



## **NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety  
Washington, D.C. 20594

January 27, 2022

# **EXAMINATION SUMMARY**

**ERA22LA107**

### **A. ACCIDENT**

Location: Winter Haven, Florida  
Date: January 12, 2022  
Time: 1427 EST  
Airplane: Piper J3-C65, N88509

### **B. EXAMINATION PARTICIPANTS**

Lynn Spencer - IIC  
Air Safety Investigator (ERA)  
National Transportation Safety Board  
Ashburn, VA

Jim Holmes  
Aviation Safety Inspector  
Federal Aviation Administration  
Orlando, FL

Rick Riccardi  
Aviation Safety Inspector  
Federal Aviation Administration  
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Dan Boggs  
Air Safety Investigator (ERA)  
National Transportation Safety Board  
Ashburn, VA

Brian Watson  
Aviation Safety Inspector  
Federal Aviation Administration  
Orlando, FL

## **C. SUMMARY**

On January 12, 2022, about 1427 eastern standard time, a Piper J3C-65 float-equipped airplane, N88509, was substantially damaged when it was involved in an accident near Winter Haven, Florida. The flight instructor and pilot receiving instruction sustained serious injuries. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 instructional flight.

The examination took place at Florida Air Recovery in Jacksonville, Florida, on January 27, 2022.

## **D. EXAMINATION NOTES**

### **1.0 Airframe**

- Aileron control cables – Wings were removed for recovery; FAA Inspector Jim Holmes stated that all controls continuities, including aileron, were confirmed at the accident site prior to recovery.
- Rudder and elevator control continuity obtained from control surface to the cockpit
- Elevator Trim – Full nose down
- Engine control position – Forward and rear throttle controls at “full open.”
- Tachometer – 1400 RPM
- Airspeed Indicator – 70 m.p.h
- Magnetos – Both
- Substantial damage to empennage, engine mounts, wings, and fuselage

### **2.0 Engine**

- Tach time 420 (Tenths digit unreadable due to instrument separation with panel mount/impact damage)
- Propeller remained attached the engine and canted left; one propeller blade cut to facilitate propeller rotation.
- Continuity of crankshaft & camshaft confirmed when propeller rotated by hand
- Spark plugs, top – Worn-out to normal based on Champion Aviation check-A-Plug Guide
- Right magneto fractured off at impact; sparked strongly at all leads
- Left magneto sparked strongly at all leads
- Borescope examination of all cylinders revealed carbon deposits consistent with rich mixture and/or automotive fuel use
- Cylinder compression check – all cylinders passed cold
- Carburetor was partially fractured off engine and removed
- The fuel shut-off on the carburetor was safety wired to “ON” position
- Carburetor bowl contained about 3 tablespoons of light blue liquid consistent in color and odor with low-lead AvGas

- The jet, float and needle valve showed normal with light surface corrosion noted on the needle valve.
- Oil filter not cut open

### 3.0 Propeller

- Blades 1 & 2 – leading edge abrasion; no twisting, bending or rotational scoring

### E. EXAMINATION PHOTOS



*Photo 1- View of propeller and cowled engine prior to examination*



*Photo 2 - Photo of wreckage from left (wings removed for recovery)*



*Photo 3- Photo of wreckage from right (wings removed for recovery)*



*Photo 4 - Engine with cowling removed*



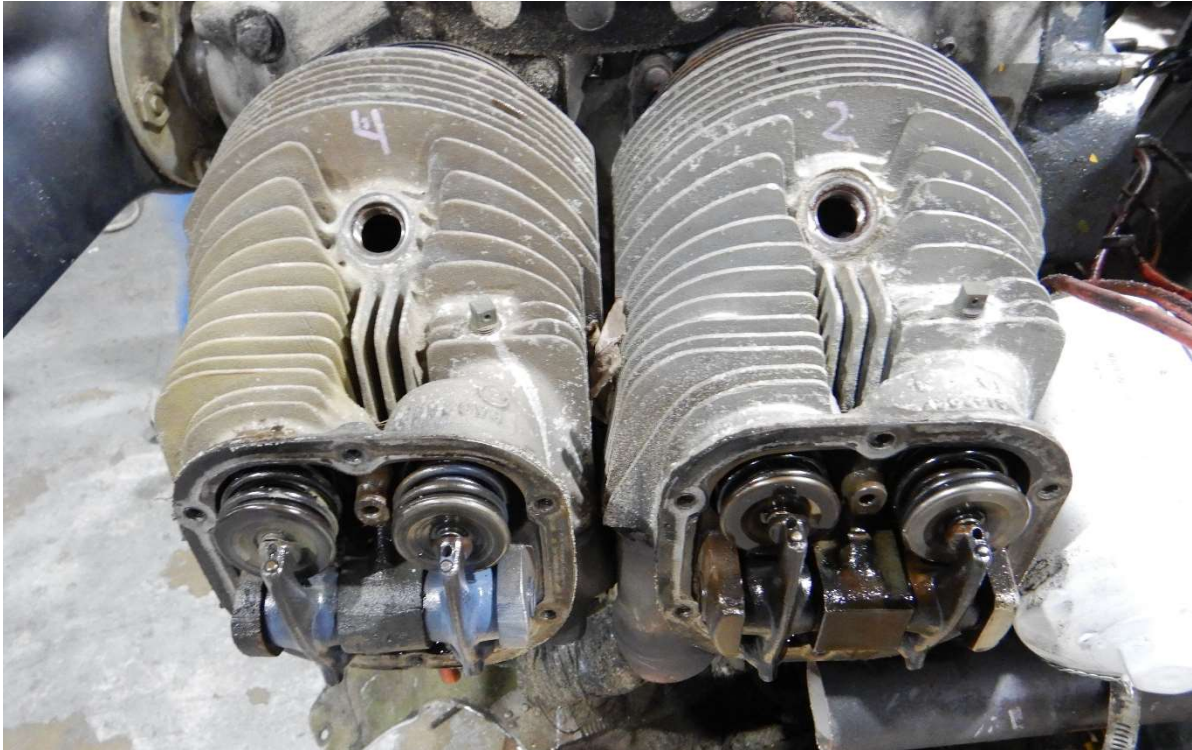
*Photo 5 - Throttle control*



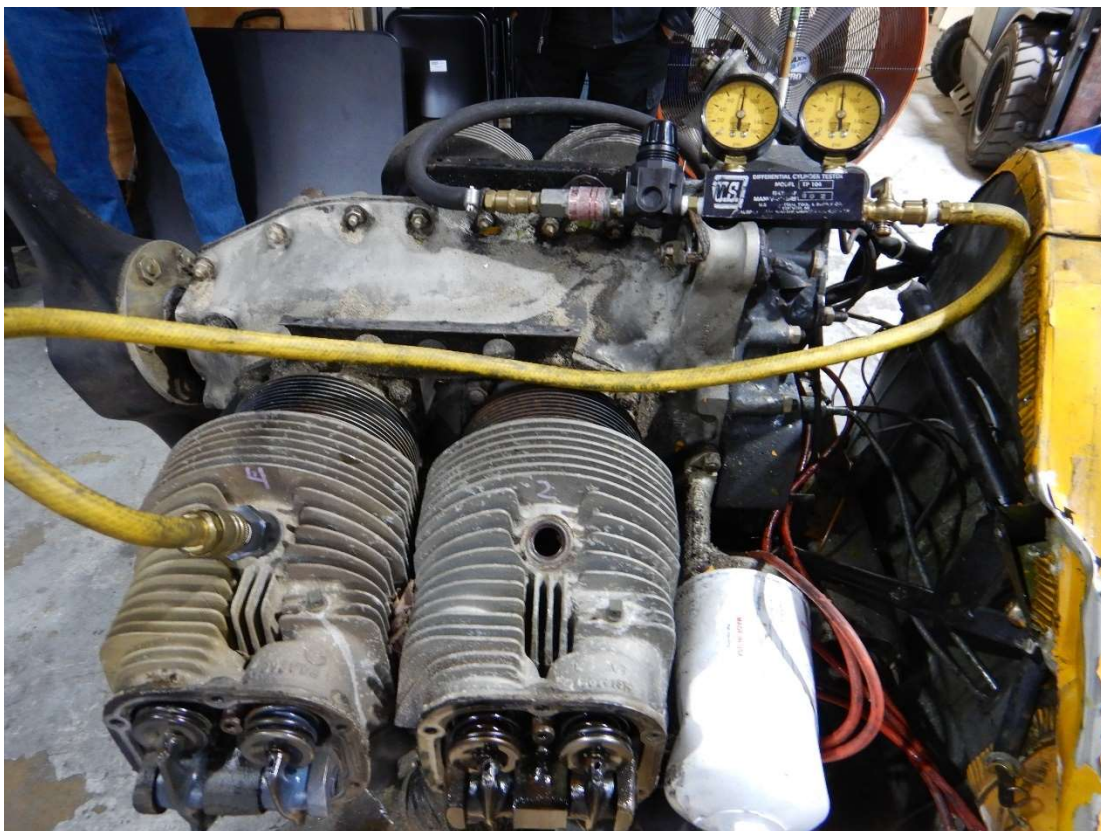
*Photo 6 - Top spark plugs*



*Photo 7 - Cylinder Nos. 1 and 3 with spark plugs and rocker covers removed*



*Photo 8 - Cylinder Nos. 2 and 4 with spark plugs and rocker covers removed*



*Photo 9 - Compression test of cylinder No. 4*