



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

June 7, 2021

ENGINE EXAMINATION SUMMARY

WPR19FA172

This document contains 2 embedded photos.

A. ACCIDENT

Location: Porter Ranch, California
Date: June 15, 2019
Aircraft: Nanchang CJ-6, N269AG
NTSB Investigator-in-Charge: Tealeye Cornejo

B. DETAILS OF THE INVESTIGATION

1.0 Engine Examination

Huosai Huosai-6JIA Engine

The engine was separated from the airframe. All engine accessories remained attached. Two of the 3 wooden propeller blades were ground down to the propeller hub housing. One wooden propeller blade was impact damaged and about 12 inches of the blade remained attached to the hub. The remaining portion of the blade was splintered in a manner consistent with opposite directional of rotation.



Figure 1: View of the recovered engine.

The front spark plugs were removed from the engine. The crankshaft was rotated by hand using the propeller. Rotational continuity was established throughout the engine and valve train.

The accessory case was removed, and all internal gears were intact and oil coated.

All cylinders examined internally using a lighted borescope. All visible internal areas of the cylinders, piston faces, intake and exhaust valves were unremarkable, however, corrosion was observed throughout. The number 2 cylinder was removed, and the internal areas of the engine were examined. Corrosion was evident throughout and no evidence of any mechanical malfunction was observed.

Both the left and right magnetos produced spark on all ignition leads when the drive shafts were rotated using a hand drill.

The ignition harness was impact damaged.

The sparkplugs installed were of an automotive style. The front 4, 5, 6, 7, 8, and 9 were impact damaged. Spark plugs 1, 2, 7, 8, and 9 were oil soaked within the electrode area. Spark plugs 3, 4, 5, and 6 were dark gray within the electrode areas. All spark plugs exhibited normal operational signatures.



Figure 2: Front spark plugs.

The induction system was impact damaged, with multiple intake tubes fractured away, exposing the internal areas of the induction system.

The exhaust was impact damaged and free of debris.

The fuel injection system was impact damaged. The throttle plate was in the “closed” position. The throttle cable remained attached to the throttle arm, however, was impact damaged. The throttle arm rotated slightly by hand, however, would not move full travel due to impact damage. The fuel inlet screen was free of debris.

The fuel pump was impact damaged.

Submitted by: Joshua Cawthra