

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN23LA403

COMPONENT EXAMINATION SUMMARY

September 30, 2024

A. ACCIDENT

Location: Wheeling, IL
Date: 08/21/2023
Time: 13:15 CDT
Aircraft: Israel Aircraft Industries 1125 Westwind Astra; N39TT

B. COMPONENT EXAMINATION SUMMARY

IIC	Aaron Sauer NTSB Denver, CO
Systems Engineer	Robert Wansker NTSB Washington, DC

SUMMARY:

On August 21, 2023, about 1315 central daylight time, an Israel Aircraft Industries 1125 Westwind Astra airplane, N39TT, sustained substantial damage when it was involved in an accident near Wheeling, Illinois. The pilot and co-pilot were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 positioning flight.

.

COMPONENT EXAMINATIONS:

Anti-skid Control Box:

For the Anti-skid Control Box (Control Box), P/N 6003089-2, S/N NOV90-066, Rev C, PUI had no repair information. The control box was original to the accident airplane.

After initial inspection, the control box was submitted through the functional test instruction (FTI) procedures (FTI6003089-2, Revision B, Dated Nov 10th, 1987). The control box passed all tests in the FTI procedures.

Anti-skid Valves:

For P/N 6003090-1, S/Ns JUN.95-154 and JUL.85-20, Parker Meggitt Braking Systems Division (Meggitt) does not have any repair or manufacturing records for the units under test (UUT) prior to the last 10 years. The manufacturing dates are noted in the S/N as June 1995 and July 1985 respectively. Meggitt does have the FTI and is able to test the anti-skid control valves (valve).

Both valves had excessive dirt and grime on the exterior of the housings. The electrical connector pins were undamaged and free of corrosion, but also had dirt and particulates present due to not being shipped with protective caps.

After initial inspection, the valves were submitted through the FTI procedures (FTI6003090-1, Revision D, Dated May 16th, 2011).

Valve S/N JUL.85-20 met all requirements for all electrical and hydraulic tests. Valve S/N JUN.95-154 passed all but the insulation resistance test in the electrical section. The insulation resistance test was lower than the requirement by 5 MΩ, which the systems group considered minimal and not significant enough to degrade the valve during operation. All tests were performed except for proof pressure as Meggitt typically performs proof pressure testing to certify new units.

During the hydraulic testing, a hydraulic sample of each valve was taken to determine if contamination was present prior to testing on the hydraulic test bench. Contamination was present. For S/N JUN.95-154 the size of contamination present was class SAE 9A (70 μm). For S/N JUL.85-20 the size of contamination present was class SAE 10A (38 μm).

Wheel Speed Transducers:

After initial inspection, the transducers were submitted through the FTI procedures. All transducers passed the FTI.