



RECORD OF EMAIL

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Date: April 7, 2021
**Person Contacted: Nicholas Kacludis (Parker Hannifin, Sustaining Engineering Manager/
Air Safety Investigator)**
NTSB Accident Number: WPR20LA104

Narrative:

On an email from Nicholas Kacludis, the following is a summary of what he stated:

- On March 25, 2021, an examination of the hydraulic power pak and emergency release valve was accomplished at the facilities of Parker Hannifin, with Jeremy Katt - Parker Hannifin Air Safety Officer, John Nardelli – Manufacturing Test Engineer, and Albert Nixon – National Transportation Safety Board (remote), present.
- The parts arrived well packed in bubble wrap and their cleanliness was noted.
- After visual inspection of each unit, it was decided to conduct an acceptance test procedure on each part.
- The Hydraulic power pak showed no sign of fluid level in the sight glass for the reservoir. Additionally, the filler plug was removed, and the filler hole was found to be dry with no sign of fluid.
- It was verified that the power pak had pressure switches updated per Piper SB964B.
- The hydraulic power pak was tested in the “as received” condition, with no visible fluid. The test system hoses, and pump were filled with MIL 5606 hydraulic fluid. The pressure switches operated as expected. Next, a test was conducted to monitor flow performance at various pressures. Flow in gpm and amperage were measured at 300, 500, 800, 1,100, and 1,300 psi. Due to the lack of hydraulic fluid, the power pak was not cycle for more than 25-30 seconds to

prevent overheating. The flow was measured at .375 gpm at 300 psi and diminished at each successive psi, to a final flow reading of .15 gpm. The required flow at 1,325 psi is .46 gpm.

- Next hydraulic fluid was added to the power pak reservoir. During this test sequence, the final fuel flow was .85 gpm at 1,325 psi and was successful at meeting the minimum required flow of .46 gpm.

- The emergency release valve was tested in the "as received" condition. The first test verified the flow of the valve. A pressure line was connected to the UP side of the valve. The valve lever was rotated to the open position and a hand pump was connected to the pressure line to apply psi to the valve. At low pressure, fluid flowed through the valve. The valve was rotated to the CLOSED position and was successful. Next, the valve was pressurized to 1,600 psi in the same CLOSED position and pressure was held for one minute with no leakage. After the pressure hold, an attempt was made to rotate the valve to the OPEN position. The valve was successfully rotated but did not release pressure. Two bolts on the valve bracket were noted to be missing lockwire. These bolts are to be torqued and lockwired to prevent movement of the valve setting. The valve bracket and valve lever were at the most extreme setting that would produce the least amount of movement to actuate the valve. A calibrated torque wrench was used to loosen the bolts, however no measurable removal torque could be recorded as the bolts were finger tight. The valve bracket was then set with both bolts torqued to the proper specification and the valve operated correctly and released pressure in the OPEN position.