

Michael Hicks
Air Safety Investigator
OAS-WPR

Date: 10/20/2022

Subject: WPR22LA355 (N204BH)

Contact: Jeff Newcomer
Aviation Safety Inspector
Federal Aviation Administration

The following is a synopsis of the communication between FAA Inspector Newcomer and the Investigator-in-charge regarding the airplane accident involving N204BH that occurred in Big Bear, California (L35) 9/25/2022@0930pdt.

1. UPON LANDING ROLLOUT THE PILOT FAILED TO MAINTAIN CONTROL OF THE AIRCRAFT. WHEN THE PILOT APPLIED BRAKES IT WAS DISCOVERED THAT THE LEFT BRAKE HAD FAILED AND THE RIGHT BRAKE WAS STILL FUNCTIONING. THE AIRCRAFT HAS A FREE CASTORING NOSE WHEEL AND BECAUSE OF THIS WHEN THE RIGHT BRAKE WAS APPLIED THE AIRCRAFT BECAME UNCONTROLLABLE. THIS CAUSED THE AIRCRAFT TO STEER TOWARDS THE RIGHT CAUSING IT TO IMPACT A HANGAR.

THE PILOT INDICATED DURING THE APPROACH, THE SPEEDS HE USES IS 80 MPH OVER THE FENCE AND THEN SLOWING TO BETWEEN 70 TO 75 MPH IN THE FLARE. HIS EXPLANATION WAS THE AIRCRAFT DESCENT RATE IS 500 FEET A MINUTE AT 80 MPH BUT BECOMES UNSTABLE IF THE AIRCRAFT IS FLOWN AT SLOWER SPEEDS. HE FURTHER INICATED THE AIRCRAFT MANUFACTURE DID NOT PROVIDE A CHECKLIST BUT HE WAS ABLE TO PROVIDE THE MANUFACTURE FIRST FLIGHT APPROACH TEST SPEED STATEMENT "WHEN YOU TURN ONTO FINAL APPROACH YOU SHOULD MAINTAIN 70 MPH, OR 15 MPH ABOVE THE STALL SPEED YOU

OBSERVED". THE PILOT SAID THIS AIRCRAFT MODEL TENDS TO HAVE A NOSE WHEEL SHIMMY ISSUE ON LANDING ROLLOUT. THE FREE CASTORING NOSE WHEEL HAS A NOSE DAMPENING SYSTEM BUILT INTO THE ATTACHING MECHANISM. THE TECHNIQUE HE IDENTIFIED HE USED TO ELIMINATE THE SHIMMY PROBLEM IF IT OCCURS IS TO LIFT THE NOSE WHEEL OFF THE GROUND AND USE AERODYNAMIC BRAKING AS LONG AS POSSIBLE WHICH USUALLY GETS THE AIRCRAFT BELOW THE SHIMMYING SPEED.

2. INSPECTION OF THE AIRCRAFT FOUND THAT THE LEFT WHEEL PANT INNER ATTACHMENT BRACKET REAR RIVETS HAD FAILED CAUSING THE BRACKET TO SWING UPWARDS AND SLICE THRU THE HYDRAULIC BRAKE LINE. MAINTENANCE RECORDS FOR THE PREVIOUS TWO YEARS WERE SUPPLIED AND REVEALED THIS AIRCRAFT HAD MULTIPLE REPAIRS AND/OR REPLACEMENT OF EITHER THE BRACKET OR THE RIVETS FOR THE LEFT AND RIGHT WHEEL PANT. RECORDS ALSO SHOWED THIS AIRCRAFT HAD A SIMILAR EVENT ON MARCH 27, 2022, WHERE THE LEFT WHEEL PANT BRACKET HAD FAILED CAUSING THE BRAKE LINE TO BE PULLED OUT OF A FITTING WITH A SUBSEQUENT GROUND LOOP BUT CAUSING NO OTHER DAMAGE TO AIRCRAFT OR PROPERTY. THIS AIRCRAFT HAS AN UPGRADED DISK BRAKE SYSTEM THAT REQUIRES A MODIFIED WHEEL PANT ATTACHMENT BRACKET FROM THE ORIGINAL DESIGN IN ORDER TO HAVE PROPER CLEARANCE OF THE BRAKE CALIPER.

THE AIRCRAFT SUSTAINED DAMAGE TO THE NOSE LANDING GEAR, A COMPLETE SEPERATION OF THE ENGINE MOUNTING BRACKET FROM THE FUSELAGE, FIREWALL DAMAGE FROM ENGINE IMPACT, LEFT AND RIGHTWING REAR ATTACH POINT DAMAGE ON FUSELAGE, AND BOTH WINGS HAD REAR ATTACHMENT POINT SEPERATION WHICH INCLUDED THE ADJACENT WING RIBS.

THE PILOT PERFORMS ALL THE REPAIRS TO THIS AIRCRAFT THRU A REPAIRMAN EXPERIMENTAL AIRCRAFT BUILDER CERTIFICATE. HE HAS RECENTLY PURCHASED THE SAME MAKE AND MODEL OF AIRCRAFT IN A KIT WITH THE INTENTION OF BUILDING IT USING ANY OF THE SALVAGABLE PARTS FROM THE ACCIDENT AIRCRAFT. INITIALLY HE SAID HE WAS PLANNING TO USE HEAVIER GAUGE METAL FOR THE WHEEL PANT BRACKETS BUT WHEN HE WAS QUESTIONED ABOUT WHAT ADVANTAGE HAVING THE WHEEL PANTS INSTALLED

THERE WAS, HE SAID IT WAS MINIMAL AND HE BELIEVED LEAVING THEM OFF
ALTOGETHER WAS A BETTER OPTION TO NOT HAVE A REOCCURING PROBLEM.

NOTHING FOLLOWS