

WENDOVER TEST FLIGHT OPERATIONS

March 10-12, 2003

Monday March 10

Assembly began about 9:30am continuing until 2:00pm with a complete aircraft inspection about 3:00pm.

Engine run-up, low and some high speed taxi tests were complete. Hobbs meter time before taxi operations commenced was 4.0 hours and at the time of shut down for the day was 4.4 hours.

Flight test operations ended and aircraft was returned to the hanger at 7:00pm

Tuesday March 11

Operations began at 7:00am. Some adjustments were made from data and concerns gathered the previous day. Inspections were complete around 10:00am and high speed taxi tests resumed until 1:30pm. At 1:30pm the aircraft and all observers were moved to the far side of runway 120.

First flight (2:20pm) – lasted 9 seconds during which the aircraft traveled approximately 350 feet at a height of 4 feet AGL. Airspeed recorded by the pilot was 40mph; wind steady at 090 degrees at 7 knots; 5.5 on the Hobbs meter at the end of the flight; airport density altitude 5500 feet.

The weather was mostly clear with temperatures near 70 degrees. The airplane appeared very stable in all respects as observed from the ground. The pilot reported the same but that control pressure and pilot workload was high. The canard lifted at about 32mph on the airspeed indicator and the lift off occurred at about 38mph. The ground speed recorded by the chase vehicle was approximately 35mph.

Second flight (2:33pm) – 4 seconds long then touched down; flew 15 seconds; about 4-5 feet AGL for 1200-1500 feet; engine rpm 4200; airport elevation 4240 feet; density altitude 5500 feet.

Third flight (2:43pm) – 22 seconds; 10 feet AGL; 1500+ feet.

Fourth flight (3:40pm) – 1 minute 26 seconds; 10 -15 feet AGL; 6000+ feet; take off roll 900 feet; landing rollout 300 feet.

Fifth flight (3:50pm) – 1 minute 34 seconds; 20 + feet AGL; 6000+ feet; shorter take off roll.

Sixth flight (3:56pm) – 1 minute 22 seconds; exceeded 25 feet AGL; full length of runway (8500 feet) including take off and landing rolls. This was the last flight of the day. Hobbs meter time was 6.5 hours. Note: the oil temperature and CHT were near red line.

Wednesday March 12

Operations began at 6:30am. We installed an oil cooler to help lower the engine operating

temperatures. Most of the Salt Lake City, Wasatch Front and local media were on hand. This halted ground and flight tests until 12:30pm. At 11:00a.m. Jake Garn was oriented to the aircraft and provided several low and high speed taxi runs to familiarize him with the ground handling characteristics of the aircraft since it is anticipated he will pilot the aircraft at some time in the future. Increased engine rpm limit to 5000 rpm.

First flight (1:00pm) – 39.55 seconds; take off roll 350 feet; flight 1500 feet long; roll out 5 seconds 150 feet; 15 feet AGL; 55mph airspeed; OAT 14 degrees C; altimeter 30.04; density altitude 5300 feet; wind 070 degrees at 5mph; engine rpm 4800.

Pilot noted that all flight controls were effective; however, the work load on the pilot was very high with the canard back pressure excessive. An adjustment to the canard travel and control force was made to reduce the work load on the pilot.

Second flight (1:30pm) – take off roll 300 feet in 15 seconds; flight 6500 feet in 1minute 30 seconds; roll out 100 feet; airspeed 56mph; chase vehicle ground speed 45mph; 100+ feet AGL; wind 10 knots at 070 degrees.

Third flight (2:00pm) – take off roll 150 feet in 15 seconds; flight 6000+ feet in 1 minute 26 seconds; 100+ feet AGL (possibly 200 feet). The engine drive chain tightener failed just before the end of the flight which ended flight test operations for a while. Returned to the hanger area and arranged for a new part to be delivered from Logan. The new part arrived about 5:00pm. We installed the part, checked out the engine and returned to flight testing about 5:30pm.

Fourth flight (5:45pm) – a full runway flight was made at about 100-200 feet AGL; all systems operated normally.

Fifth flight (6:00pm) – Wayne Larsen (test pilot) decided to make a complete circle which originated at the north end of runway 120. Climbing to an approximate altitude of 200 feet by the end of runway 120, Larsen commenced a left turn and proceeded to make a full circle; however, the wind was too strong on the downwind leg requiring that he turn back to the right into the wind for a short distance and then another right turn to the downwind leg from which he entered the base leg and finally landed on runway 120 shortly past the point of beginning.

Total flight time was slightly over 5 minutes covering a distance of 5-6 miles at about 200 feet AGL; engine rpm 5000; CHT 350; airspeed 55mph. Work load on the pilot was exhausting thus ending flight test operations. However, some moderate to high speed taxi tests were done at the close of the day with the last one ending in a propeller support strut failing and entering into the prop. This ended all further flight test operations at the Wendover Airport.

Thursday March 13

The aircraft was disassembled and loaded into the truck. We returned to Logan.