Lessons Learned ASE EMB-120 Accident

Overspeed History

1. May 3, 1988; 12K/ 220 KIAS 153 % overspeed, #1 pulled levers to flight idle, recovered and landed.

2. July 2, 1988; 11K/ 180 KIAS 163% overspeed, no other information recovered.

3. July 8, 1988; 18K/ 184 KIAS 143% / 128% overspeed both propellers, Final approach crash, assumed pilot placed both settings below flight idle detent.

4. December 14, 1988; 9.5K/ 190 KIAS 135% overspeed when pulled to flight idle, shutdown and landed.

5. May 1, 1989; 2.3K/ 250 KIAS 120% overspeed when #1 was reduced to flight idle, recovered and landed.

6. January 24, 1990; Final approach 158% overspeed when #2 reduced to flight idle, recovered and landed.

7. April 5, 1991; Brunswick, GA. The EMB-120 Brunswick accident was preceded by a series of propeller control system problems, noted above, that highlights an overspeed problem for the integrated airplane and propeller control.

AD 90-17-12 mandating a Beta Lockout on EMB-120 aircraft, effective September 17, 1990.

8. July 21, 1992; Final approach 150.4% / 120.4% overspeed, recovered and landed. This aircraft had in-flight lockout installed per AD, the circuit breakers were pulled.

From 1988 to 1992 there were 8 occurrences of propeller overspeed during approach. Six of these airplanes did not have a beta lockout device installed. Two of these overspeed excursions were not recoverable.

On October 11, 1991 a Flight Data Recorder (FDR) and a Cockpit Voice Recorder (CVR) was required to be installed on EMB-120 aircraft. The aircraft involved in the July 21, 1992 incident had a FDR and the beta lockout installed. The FDR had shown the beta lockout circuit breakers were pulled.