

16. POWER PLANT MAKE/MODEL/SERIES

CONT MOTOR W670 SERIES E-237

33. NARRATIVE

WHILE FLYING IN FORMATION AT THE FLYING CIRCUS AERODROME IN BEALTON, VA, A WACO UPF-7 (NC32162) MADE A FORCED LANDING IN AN OPEN FIELD AFTER THE ENGINE QUIT. THE AIRCRAFT DEPARTED THE OPEN FIELD AND IMPACTED SEVERAL PINE TREES AT THE EDGE OF THE FIELD. THE PILOT WAS TAKEN TO THE HOSPITAL WITH A POSSIBLE SHOULDER INJURY PRIOR TO THE ARRIVAL OF FIRST RESPONDERS.

ARRIVING AT THE SCENE, THE AIRCRAFT WAS LOCATED APPROXIMATELY 50 FT. INTO THE WOOD LINE AT THE EDGE OF THE FIELD. IT HAD IMPACTED AND WAS RESTING AGAINST A LARGE PINE TREE ABOUT 10" BEHIND THE REAR COCKPIT. A VA STATE TROOPER, THE AIRCRAFT OWNER, AND THE AIR BOSS OF THE FLYING CIRCUS WERE AT THE SCENE. INITIAL REPORTS INDICATED THAT THERE WERE TWO PERSONS ONBOARD THE AIRCRAFT. IN A DISCUSSION WITH THE AIR BOSS HE STATED THAT THE PILOT WAS THE ONLY OCCUPANT ONBOARD. HE ALSO CONFIRMED THAT THE PILOT HAD GONE TO THE HOSPITAL BUT WAS UNSURE IF HE HAD DRIVEN HIMSELF.

WHILE ACCOMPLISHING A WALK AROUND OF THE AIRCRAFT, IT WAS OBSERVED THAT THE RIGHT WING (UPPER & LOWER) HAD SHEARED OFF OUTBOARD OF THE FUEL TANK.

BOTH FUEL TANKS DID CONTAIN FUEL AND WERE NOT LEAKING. THE AIR CLEANER SCREEN MOUNTED AT THE BOTTOM OF THE DISPLAYED SOME EVIDENCE OF DUST BUT OVERALL WAS CLEAR. THE BOTTOM PORTION OF THE 2 BLADED PROPELLER WAS BURIED IN THE GROUND AND RESTING AGAINST A TREE STUMP. THE UPPER PORTION OF THE BLADE/TIP WAS STRAIGHT AND DID NOT SHOW ANY SIGN OF ACCIDENT DAMAGE.

THE VA STATE TROOPER ON-SIGHT ADVISED THAT ANOTHER TROOPER WAS DISPATCHED TO THE HOSPITAL TO RECORD A STATEMENT FROM THE PILOT.

IN A STATEMENT MADE TO THE VA STATE POLICE AT FAUQUIER HOSPITAL, THE PILOT MR BRYON STEWART SAID: " 2:45ISH, THE ENGINE JUST QUIT. PUFF OF SMOKE & ENGINE ROLLED DOWN/STARTED TO SLOW THEN QUIT. FLYING IN CIRCLE FOR OPENING OF SHOW, 7 TOTAL PLANES UP THERE AT THAT TIME. WAS FLYING OVER CIRCUS GROUNDS WHEN ENGINE QUIT & HE THOUGHT HE WOULD HAVE ENOUGH POWER TO CIRCLE & GET BACK TO RUNWAY BUT REALIZED IT WAS NOT GOING TO MAKE IT & PUT IT DOWN IN FIELD. TOUCHED DOWN AT 50 KNOTS (55 MPH) THEN BOUT 45 MPH WHEN HIT TREES."

43. BRIEF EXPLANATION OF ISSUES INVOLVED

ON 6/30/14, A REVIEW OF THE AIRCRAFT LOGBOOK RECORDS WAS CONDUCTED AT THE OWNER'S HANGAR. THE MOST RECENT ANNUAL INSPECTION WAS CONDUCTED ON MAY 23, 2014, TACH TIME 2149.2 WITH NO RECORDED DISCREPANCIES.

A POST ACCIDENT INSPECTION OF THE AIRCRAFT ENGINE WAS ACCOMPLISHED ON JULY 1 & 2, 2014 BY THE AIRCRAFT OWNER AND HIS MECHANIC AT HIS (CJR) HANGAR. DURING THIS PROCESS, THE PROPELLER WAS REMOVED TO FACILITATE THE TURNING OVER OF THE ENGINE WITH A BAR ATTACHED THE CRANKSHAFT SPLINES. WITH GUIDANCE FROM THE ENGINE OVER HAULER, THE WIRING CONTINUITY FROM THE MAGNETO (LEFT), BATTERY IGNITION (RIGHT) AND FROM THE COIL TO THE DISTRIBUTOR WAS CHECKED. THE BATTERY WAS CONNECTED AND THE ENGINE STARTER WAS ENGAGED, TURNING THE ENGINE OVER AND VERIFIED BOTH MAGNETOS WERE FIRING WITH SPARK AT BOTH THE FRONT AND REAR PLUGS. THE ROCKER BOX COVERS FOR THE INTAKE AND EXHAUST WERE REMOVED FROM THE #2 CYLINDER AS WELL AS THE INTAKE ROCKER BOX COVERS FROM THE REMAINING CYLINDERS. THE ENGINE WAS THEN TURNED OVER BY HAND AND COMPRESSION WAS FELT, VALVE ACTION WAS NORMAL AND ALL FRONT SPARK PLUGS WERE REMOVED AND FOUND TO BE IN GOOD CONDITION. FUEL WAS DRAINED FROM THE CARB FLOAT BOWL, GASCULATOR AND BOTH WING TANK SIGHT GAUGES WITH NO EVIDENCE OF FUEL CONTAMINATION OR WATER. THE FUEL INLET STRAINER TO THE CARBURETOR WAS REMOVED AND FOUND TO BE CLEAN. THE CARBURETOR FLOAT WAS REMOVED AND FOUND TO BE INTACT WITH NO DISCREPANCIES NOTED. CARBURETOR BUTTERFLY VALVE WAS VERIFIED TO BE OPERATIONAL AS WAS THE MIXTURE CONTROL. ALL FUEL SAMPLES WERE BLUE IN COLOR, AS PER 100LL.

WITH THE AIR TEMPERATURE OF 84.2 DEGREES AND A DEW POINT OF 51.8 DEGREES, CARBURATOR ICING HAD TO BE CONSIDERED BASED ON THE DOT/FAA/CT-82-44 CARBURETOR PROBABILITY CHART. THERE IS NOT ENOUGH EVIDENCE TO SUPPORT THIS AS THE ENGINE WAS RUNNING FINE WITHOUT ANY ROUGH, MISSING PERFORMANCE DEGREDATION THAT WOULD BE ASSOCIATED WITH THE BUILD UP OF ICE IN THE CARBURETOR VENTURI.