

# "FATE IS THE HUNTER"

by Brian Enbom, TTCF Member

## IMPORTANT LESSONS FROM A 310J OWNER

I joined Twin Cessna Flyers in 1990 after I received my multi license in a 310J. In Jan of 2001, I purchased another 310J in Arkansas and my wife and I flew it home to California. After I departed into ice fog, I imagine the seller and his AI went to the chalk board and marked: Arkansas 1, California 0. Many years and lots of money later, we had a good and capable 310 and enjoyed it for many trips across country, to Mexico and to Canada.



*Repairing prop damage that occurred to the aircraft while parked led to the discovery of other issues - and some lessons learned about aircraft maintenance.*

Last November, we flew from Northern California to Long Beach for the AOPA convention. We parked at Mercury Aviation. Upon returning to the aircraft on the Sunday of the convention, I noticed that two of the three left engine prop blades were bent. One was bent in, one was bent out, and one was not bent at all. We had upgraded the plane about 5 years previous with Hartzell Top Prop conversions, and the props only had about 250 hours on them. Mercury denied any wrong doing and said that I must have hit something on the runway. I thought that was doubtful as I had been awake upon landing and taxiing to their ramp. Thus the insurance company, Chartis was called and the plane was towed to Tom's Aircraft Maintenance,

next door to Mercury.

Tom and Francis at Tom's aircraft took charge of fixing the problem. The engine was removed and sent to Tim's Aircraft in Long Beach. I subsequently visited Tim's shop and found it very clean and well managed. Tim was very helpful in explaining all the issues of the engine inspection after a prop strike. I opted to have the engine overhauled both with a bottom overhaul and a top overhaul.

The left engine had about 950 hours and after disassembly, the crankshaft was found to not pass NDT. Additionally, a crack was found in the case on a main journal bearing support. The case was sent to Nickson's for welding and the crank was replaced with a VAR crank. We also replaced several accessories as well as the camshaft and lifters due to dissimilar metal corrosion. (Due to sitting and not running every week).

The prop was sent to Santa Monica Propeller and two new blades were installed and the prop was overhauled.

Since the LH engine was now overhauled, I directed

Tom's Aircraft to remove the RH engine as well and send it to Tim's Aircraft Engines and have it overhauled to the same condition as the LH engine that had endured the prop strike. That engine also had camshaft corrosion and had a score on one of the crank journals. All was repaired with some accessories overhauled as well.

During this time period, the Annual Inspection was due. With the exception of two annual inspections, I have been doing the annual with the help of an AI for 20 years. I have the Rig it Right video and instruction booklet and have done the gear every year. This year, however, Tom's aircraft found the down lock tensions to be out of spec.

After further inspection, it was found that the torque tubes were cracked. (Cessna Service bulletin this past year giving these parts a life limit of 5000 hours. My plane has 5,600 hours on the airframe.) The left hand gear had 5 lbs of down lock pressure. So we ordered new torque tubes. During my previous annual inspections, my AI would check the rotational play in the main gear. If there was excessive play, I replaced the bushings in the gear and brought the movement down to his liking. However, Tom's found several gear links to be worn and replaced several links along with bushings and bolts to tighten up the lateral play of the gear.

Tom's also found the Cleveland brake calipers to be warped. I had installed shims as allowed, but was unaware that only one shim could be used. Since the Cleveland calipers were not made anymore, we had to replace the entire brake system, calipers, rotors, as well as wheels.

The total bill for the repair amounted to \$95,000. \$35,000 was covered by Chartis insurance, and the balance by yours truly.

The lessons to be learned are important:

1) Fly your aircraft weekly to keep oil on the camshaft and the lifter interface. If you cannot fly your aircraft weekly, use straight viscosity oil - not synthetic or multi-grade as those will not stick to the rotating parts as long as the straight weight oil will.

2) You can do your own maintenance with the oversight of an AI, but periodically, you need to have a Twin Cessna repair center have a look at your aircraft.

With the gear problem, if Mercury Aviation had not run into the LH prop with their fuel truck, I would have not been aware of the gear problem until the next annual, which was 3 months away.

# 310J LESSONS

With the down lock tension light, the possibility of a gear up on landing was quite high. With the LH engine having a crankshaft that did not pass NDT, the possibility of a major engine failure was quite real. If either one of those scenarios had happened, the probability of the insurance company declaring the aircraft a total loss was high.

Thus “Fate is the Hunter” as the book title goes: The total cost of the repairs was more than the current market value of the aircraft. My portion of the repair was not. We will continue to fly N3042L as long as we physically can, and enjoy as much of it as possible. Who knows? Maybe next year we can add a Garmin 500 to make her an aircraft 46 years younger than she is.

