

AIRCRAFT DAMAGE WAS LIMITED TO THE LEFT WING, L/H AND R/H MAIN LANDING GEAR, PROPELLER, AND SUBSTANTIAL DAMAGE WAS NOTED TO THE LEFT WING ATTACH POINTS. ON THE AFTERNOON OF JULY 3, 2021, OXYGEN (O2) SENSORS WERE INSTALLED ON EACH OF THE ENGINE CYLINDERS EXHAUST PIPES FOR ENGINE TUNING PURPOSES TO DETERMINE IF THE ENGINE WAS RUNNING RICH/LEAN. THESE O2 SENSORS RECEIVE THEIR POWER FROM THE ENGINE COMPUTER. A POST ACCIDENT DOWNLOAD OF THE GARMIN FLIGHT DIRECTOR INDICATED AN INCREASE ELECTRICAL POWER DEMAND DURING THE ENGINE RUNS FOR ENGINE TUNING. DURING THE ENGINE TUNING RUNS THE MAXIMUM POWER SETTING WAS NOT OBTAINED DUE TO THE INABILITY TO SECURE THE AIRPLANE IN PLACE. WHILE PERFORMING THESE ENGINE RUNS THE MECHANIC/TECHNICAN DID NOT MONITOR THE ELECTRICAL SYSTEM LOAD. THE O2 SENSORS REMAINED INSTALLED TO COLLECT INFLIGHT ENGINE PERFORMANCE DATA. THE DATA INDICATES THAT THE INCREASED ENGINE POWER SETTING REQUIRED FOR THE FLIGHT PLACED AN INCREASED ELECTRICAL LOAD ON THE ENGINE COMPUTER EXCEEDING THE 15 AMP RATING ON THE CIRCUIT BREAKER DURING THE CLIMB PORTION OF THE FLIGHT. IT IS RECOMMENDED THAT A THOROUGH ELECTRICAL LOAD ANALYSIS BE PERFORMED WHEN ADDING ELECTRICAL COMPONENTS AND ALSO A MAXIMUM POWER ENGINE RUN BE ACCOMPLISHED PRIOR TO THE NEXT FLIGHT UPON COMPLETION OF ANY ENGINE TUNING THAT HAS BEEN PERFORMED.