

Aircraft Registration Number N54476 reported having engine trouble requested to land. Aircraft landed RWY 28 and became airborne again over departure end. Turned North and landed West side of airport North of RWY 10/28.

On March 1, 2018, inspectors from the Flight Standard District Office (FSDO) 19 were assigned to conduct an accident investigation on Piper Aircraft Model **PA-PA-32-300**, registration number **N54476** and serial number **32-7440055**. Inspector Antonio De Leon, Francis Lauterborn and Jimmy Mygatt traveled to Pompano Beach municipal airport to conduct the aircraft accident. On arrival, the Broward County Sheriff's Office officer greeted the FAA inspectors. Broward Sheriff Officers Christian Sandberg badge number [REDACTED] and M. Mateo badge number [REDACTED] were onsite. Mr. Sandberg stated that he had interviewed the pilot and passenger neither individual needed onsite medical assistance. Moreover, he would provide this office with a statement of the event. See statement below:

"On March 1, 2018 at or about 0952 hours, I responded to Pompano Airpark, located at 1001 Ne 1 0th St, Pompano Beach, in reference to a plane crash. The airplane had come to its final rest on the west side of the field along the fence-line, between Sand and Spurs Equestrian Park and the Goodyear Blimp Hangar. Upon my arrival, I observed a small framed aircraft (1 973 Piper Cherokee 6-300 tail-number N54476) entangled with the fence north of the Goodyear tarmac. I observed plane debris leading up from the center of the tarmac to aircraft's point of final rest. It should be noted the aircraft sustained massive damage, and had both wings partially or completely torn off: thereby rupturing both fuel tanks".

"Prior to my arrival on scene, Pompano Beach Fire Rescue (PBFR, Run #505 1, Rescue 263 and Rescue 24) were treating both the pilot and passenger for injuries. The on-scene PBFR Engine was also present and hosing down the aircraft with fire retardant foam to avoid any fire from the aircraft's leaking fuel. Deputy Mateo CCN [REDACTED] was on scene interviewing the pilot, identified as Eric Pierce. Deputy Davis CCN [REDACTED] advised me he had spoken with employees from the Goodyear Blimp Hangar who had witnessed the crash, and that there was possible video surveillance at the hangar. It should be noted neither pilot nor passenger reported any injuries in the crash, but were later transported to the hospital".

"I then met with Gary Hencken, who was being treated in the PBFR rescue truck. Hencken stated he had been a passenger in the aircraft, but that he was a pilot as well. Hencken explained shortly after take-off from the Pompano Airpark the manifold pressure of the engine had dropped, indicating an engine problem. Hencken said the pilot made the decision to return to the field, and notified the Air Traffic Control Tower (ATC) that he was making an emergency landing. Hencken stated their approach speed was high, and that they may have touched down late on the runway. Hencken explained that upon making ground contact, the pilot had attempted to throttle back the engine but it did not respond. Hencken said at this time they had attempted to pull back the mixture, but the engine would not respond and shut off. Hencken said the pilot then attempted to go-around: fly another flight pattern to re-attempt a landing. Hencken advised they

made a hard right turn, and ended up making a hard landing on the Goodyear Blimp tarmac to avoid the large hangar. Hencken advised to me he was a pilot, but wouldn't state to me his pilot's license number, due to the fact he was just a passenger and not the Pilot-in-Command (PIC)".

"I then met with the pilot Eric Pierce, who stated he was the PIC. Pierce explained the aircraft belongs to the Pompano Beach Flying Club, of which he is a member. Pierce advised during the start-up of the aircraft this morning he had noticed that one magneto did not produce a drop in engine Revolutions per minute (RPM). Note: an aircraft magneto is a self-sufficient engine driven electrical generator that uses permanent magnets and coils to produce high voltage to fire the aircraft spark plugs. Pierce explained due to the magneto not producing a drop in RPM he had determined that maintenance was needed for the aircraft to be airworthy.

Pierce stated he had obtained permission and then taxied the aircraft over to South Florida Aircraft Maintenance to conduct the necessary maintenance. Pierce explained after the mechanic at the business had completed the repairs he had again prepared for take-off. Pierce advised ATC cleared him for take-off on runway 28 (heading west). Pierce advised when he was climbing through 800 feet, approaching 1000 and preparing for a cruising climb, the engine manifold pressure had dropped down to 13" inches of Mercury. Pierce said this indicated an engine problem, and he had made the decision to return to the airfield to perform an emergency landing. Pierce advised ATC had cleared him to land on runway 28 (heading west).

Pierce explained due to the ongoing engine issue he made the decision to maintain a high approach speed. Pierce said upon landing and making contact with the ground he had attempted to throttle back the engine, but it was unresponsive. Pierce stated he then made the decision to make the decision to go-around, and make another attempt at landing. Pierce advised he made a sharp right turn immediately upon going airborne as he wanted to stay over the field. Pierce explained Hencken had then helped out as well, and they ended up making a hard landing onto the tarmac of the Goodyear Blimp facility. Pierce said the aircraft then skidded across the tarmac and crashed through the fence".

On March 2, 2018 contacted the pilot in command Mr. Eric A. Pierce and advise him that he would need to meet with Federal Aviation Administration Inspector to conduct an interview and he would need to submit a written statement of the occurrence. Mr. Pierce provided the following statement.

“On Thursday March 1, 2018, I obtained standard weather briefing via Duats through foreflight for flight to occur this day between KPMP-MYAM (marsh Harbor Bahamas). I then conducted a pre-flight inspection on N54476, a PA32-300 Cherokee 6, owned by the Pompano Beach Flying Club, of which I am a member at KPMP. I was accompanied a fellow rated pilot by the name of Gary Hencken. I was the pilot in command for the flight; he was a passenger”.

“I then started the aircraft engine and ultimately conducted a pre-takeoff run-up, which included a magneto test. I did not like the magneto performance, so I selected to shut down the engine and obtain maintenance service to test the magnetos. After the inspection by a certified A&P mechanic at South Florida Aircraft Maintenance, it was determine that the wire from leg magneto was broken. The mechanic repaired and performed a ground based run up and test of both magnetos, which tested satisfactory to both the mechanic and myself”.

“I then re-loaded my passenger, restarted the engine and obtained a taxi clearance to the runway 28 run-up area on the East end of the field. I then conducted another pre-takeoff run-up in accord with the aircraft’s owner manual/POH checklist. The engine performed normally and I then obtained a taxi clearance and taxied to the active runway, runway 28 for departure”.

“Upon departure to the West all systems appeared normal in the climb and I entered a right hand traffic pattern (Cross wind and downwind) to depart the pattern to the East. Upon crossing the shoreline, I began a climb configuration and was switched off the tower frequency by the Tower Controller. Before I had a chance to call Miami Approach for a DVFR squawk, I observed a significant drop in the manifold pressure (power). I instructed my pilot rated passenger we confirmed I fly the plane you contact the tower. Gary informed them of we were returning immediately to the airport for a precautionary landing”.

“I turned to the right and joined a straight in approach for runway 28. Upon crossing the shoreline, I felt I was a little high, but higher is safer until the runway is made. I then reduced the throttle at the appropriate moment and for Runway 28 for a landing. I estimate that I touched down less than a 1/3rd of the runway; however, there was a substantial quartering tail wind causing me to have a high ground speed during the rollout. I had the throttle quadrant all of the way back by touch down however the engine was stuck in full power. While attempting to break, Gary said “Eric cut power the power”, I responded, “I had” in reaction he grabbed my and pulled back. I had also cut the mixture and without an immediate response, it was now apparent I had another issue. I elected to go around, applied full power and mixture full rich, and commenced an immediate turn to the right to avoid the Goodyear blimp’s hanger. The right wing impacted the ground, spinning the aircraft to a rest in a SE direction. We immediately exited the aircraft”.

On March 2, 2018, contacted Mr. Gary Hencken the passenger onboard the aircraft with Mr. Pierce and advise him that he would need to provide a chronological statement. Mr. Hecken sent his account of the event as follow:

“On Thursday 03/01/2018, around 8:15 AM, observed Eric do what seemed to be a thorough preflight inspection. Eric then got ATIS, radioed ground control and requested taxi to active and got clearance to run up area for runway 28. At 8:20 AM, I observed Eric w checklist checking items very carefully. When Eric did the magneto check, he observed the left magneto malfunction engine running rough and requested taxi back to ramp. 8:30 AM, Eric called someone from flight club/mechanic and after a few conversations was instructed to do a series of checks including a run up for 3 minutes at 2500 rpm including leaning out engine at 2500 rpm”.

“At 8:35 AM, Taxied in front of Sheltair (Main FBO) maintenance hangar and Eric did checks that he was instructed to do but after 5 minutes of trying items engine was still rough and magneto inoperable. Eric then requested from ground taxi to SFAM shop/hanger where the problem would be diagnosed. At 8:45 AM, SFAM checked out problem and the diagnosis was that there was a bad wire/connection. Please note that they also found a few other items needing attention such as an exhaust hose clamp completely hanging, connection terminal not FAA compliant, etc. Other items that were “suspect” was how much time since required magneto rebuild, exhaust stain, etc. A few items were then repaired and we were told we were “good to go”. At 9:45 AM, Eric checked ATIS, got ground clearance to run up area for runway 28 and taxied to run up. Run up was completed, magneto working properly, engine seemed smooth and got tower clearance for takeoff”.

“At 9:50 AM, took off on runway 28, made right turn for eastbound heading, and got instructions for frequency change crossing shoreline from pompano tower. A couple minutes later at approximately 1200 feet Eric told me, he was having problems with obtaining proper manifold pressure and that it was dropping. I observed him push full mixture, full throttle and his response was power was dropping and engine sounded irregular. I told Eric to turn IMMEDIATELY back to airport, focus on flying airplane and I would communicate on radio w tower. I called tower, advised of power loss then corrected to partial power. They gave IMMEDIATE clearance to land on runway 28. Eric proceeded carefully and prepared for landing. It seemed to me that everything was going to be ok until Eric reached threshold started pulling back power and tried to pull the nose for proper flare. The plane never responded and we seemed to have full power and no response whatsoever w power control-increasing speed, bouncing the airplane several times on runway. Eric then pulled the mixture back completely but no response. Plane continued at high speed w little runway left and in an attempt to avoid the inevitable which was crashing straight ahead pulled up the nose and steered right to turn downwind on airport. Plane climbed then stalled. All I heard was loud crash, plane came to a stop and we both rushed out of plane”.

On March 1, 2018, contacted Mr. Ameer F. Mohamed by phone the owner of Aviation Specialty Services LLC., the maintenance facility that conducted maintenance on the aircraft magneto before the crash. Mr. Ameer was not available to provide access to the facility or the maintenance logbook because other commitment. On March 6, 2018. Mr. Ameer submitted the following written statement.

“On Thursday March 1, 2018, it was brought to my attention that one of the Pompano Beach Flying Club airplanes crashed near the airport. Upon arriving at the airport, I met with one of the club members who accompanied me to the crash site. Through discussion, he informed me that the pilot was experiencing magneto problem that morning prior to departure and he had the problem looked at by South Florida Aircraft Maintenance on the west end of the airport. I saw a picture of a wire terminal end resembling that of a magneto P-lead terminal end”.

“Upon arriving at the crash site, from first view I could tell that the airplane was a total loss. Very sad. Speaking with the pilot, who was still on the scene he began to explain what caused him to return to the field after departure. After fixing the magneto problem, which I am not clear as to what the problem really was, the pilot and single passenger departed for the Bahamas. The pilot stated that after departure and heading approximately east over the shoreline he retarded the power to establish a cruise climb power setting. Upon doing so he said he had a loss of manifold pressure. He contacted the control tower and told them he was experiencing partial power loss”.

“He kept the speed of the airplane high and upon landing at runway 28 with a strong tailwind as to his recollection doing about 120 (knots/MPH?) was not able to lower the engine power after pulling back on the throttle. They then decided to take back off and making a right turn. The airplane did not have enough power to sustain flight and crashed on the ramp in front of the Goodyear Blimp hangar travelling North, breaking through the fencing, spinning around and hitting the other fence with the left wing, which brought the aircraft to complete stop”.

“After studying the scenario, why was the speed so high upon landing if they had the airport and landing made. Also if the power did not retard when they pulled the throttle back, was the mixture control pulled back as well, was the ignition switch in the off position or the fuel selector in the off position? Just my thoughts. I completed an Annual Inspection on this aircraft back on January 12, 2018 and the aircraft have been flying since and have accumulated approximately 47 hours with no further work done on the engine”.

On Thursday March 1, 2018, contacted Mr. Agustin Maiz the maintenance technician who performed maintenance on aircraft N54476 before the accident. Mr. Maiz provide an account of what took place at Aviation Specialty Services LLC. Maintenance facility.

“Eric Pierce, the pilot of N54476, approached my boss David Fogarty, A&P-IA and explained that he felt the magnetos were running rough on N54476, the Piper Cherokee VI he was preparing to fly. David Fogarty asked me to take a look at the above referenced aircraft, as he was busy on other tasks. I boarded the aircraft with the pilot, Eric Pierce. I started the engine on the first try and verified that we had good oil pressure. I increased the power to 2000 RPM's, then reduced power to 1700 RPM's, selected ignition switch to the "LEFT" magneto position and observed no change in RPM, switched back to "BOTH", then to the "RIGHT" magneto position and noticed a 75-RPM drop. I reduced power to an idle of 650 RPM's, selected ignition switch to "OFF" position. I observed a slight drop in RPM's but noticed that the engine continued to run. I then moved the mixture lever to idle and the engine stopped running within seconds”.

“I exited the aircraft, removed the engine cowling and noticed that the left magneto P-lead terminal was disconnected and broken. I installed one new aviation terminal (P/N: MS25036-103) on the left magneto Plead and secured it to the left magneto using the existing $\frac{3}{8}$ " nut and split safety washer. The pilot, Eric Pierce noticed that the right exhaust shroud clamp was loose and hanging on the exhaust stack. I secured the existing clamp. I boarded the aircraft and started the engine on the first try and verified we had good oil pressure. I increased the power to 1700 RPM, selected ignition switch to "LEFT" magneto position and noticed a 75-RPM drop. I then selected ignition switch to the "RIGHT" magneto position and noticed a 75-RPM drop. I reduced power to idle and selected ignition switch to the "OFF" position and the engine stopped running”.

“I quickly selected ignition switch back to "BOTH" and the engine ran smooth again. I pulled the mixture lever back to idle and engine stopped running within seconds. I exited the aircraft, reinstalled the engine cowling, and then cleaned the grease and fingerprints from around cowling. The pilot, Eric Pierce, and his single passenger, boarded the aircraft. The engine started after the second try. They began taxing toward the runway. Minutes later, I saw the aircraft taking off on runway 28 heading west. After reaching about 400 feet, the aircraft turned right and began heading east. I returned to my daily duties and did not observe the aircraft thereafter”.

On March 02, 2018, inspector Francis Lauterborn and Jimmy Mygatt Visited Aviation Specialty Services LLC., the maintenance facility and review aircraft N54476 logbook. The logbook entries were as follow:

1. Performed engine run-up. Found left magneto RPM not dropping when left magneto selected on ignition switch.
2. Placed ignition switch in off position, engine continues running.
3. Found broken terminal on left magneto P-lead.
4. Installed new terminal (P/N: MS25030-103) on left magneto P-lead and reconnected.
5. Performed engine run up. Found left & right magneto drop to be 75 RPM. Tested ignition switch and found ok.
6. Secured loose clamp and exhaust shroud.

On March 19, FAA Inspector Antonio De Leon and Francis Lauterborn traveled to Port St. Lucie to inspect aircraft N54476 at Florida Air Recovery to ensure the last discrepancy worked by the maintenance technician Mr. Agustin Maiz, A&P # [REDACTED] was performed in accordance with the manufactures maintenance manual. The Left Magneto in question was inspected for proper maintenance repair. The P-Lead repair was performed in accordance with the aircraft maintenance manual. Both magneto wire splices were inspected, no loose end or detachment wire were found. Several pictures of the magnetos wire splices and conduit were taken illustrating that there were no malfunction of the repair. Based on the inspection conducted by FAA inspectors at the aircraft accident site, maintenance facility, logbook entry, and aircraft

recovery facility, the FAA inspector's opinion, believe that the magneto P-lead wire splice repair did not affect the airworthiness of the aircraft in this Accident.

On April 19, this office received the aircraft data plate from Florida Air Recovery, on April 25, 2018; receive an email from Carl Kennedy aircraft N54476 owner advising this office to send the aircraft data plate to Mr. David Huie representative from Old Republic Insurance Group, which insured the aircraft.