Challenge
Niacc-Avitech Technologies is an aircraft component overhaul and manufacturing facility in Fresno, CA. The company repairs and overhauls starters, generators, fuel assemblies, cable harnesses, electronics, brake and hydraulic components, and other aircraft appliances and components. The company also has a build-to-print division that supplies major customers with electrical rotors, starters, and wire harnesses.

Niacc recently received a customer request to add overhaul and servicing capabilities for landing gear shock absorbers to its portfolio of services. The technical specifications meant that Niacc would need new test equipment. It was difficult for Rayan Kabeer, Niacc's head of engineering and product development, to find a test machine that would apply the right amount of load, some 49,000 pounds. The offerings from other companies were either too big or too small. They could have custom built a machine, but the time and money associated with that were too great.

Solution
After a rigorous diagnostic assessment of Niacc's needs, ADMET's Account Director recommended ADMET's ExPress/eXpert 1600 Universal Testing Machine equipped with the MTESTQuattro materials testing system.

Specifically, the configuration that worked best was the ExPress 300 kN (60,000 lbf) dual-column servo-hydraulic materials testing machine equipped with the MTESTQuattro materials testing system. This is a Microsoft Windows-based software product that controls tests, collects and reports data, and offers sophisticated tabular and graphical representations of test results for analysis and comparison. The machine arrived within six weeks of the initial conversation.

Results
Mr. Kabeer is especially pleased with the MTESTQuattro materials testing system. "The best thing about ADMET is that, with their software, we can control the test pretty much hands-off," he said. MTESTQuattro also graphically plots the test results and highlights any test parameters that are out of tolerance, making it easy to spot failures. The results are saved in a database that, by regulation, is kept for two years after the part has been shipped.

Thanks to the investment in ADMET technology, Niacc was able to respond to its customer's request for a new line of testing and is now providing the service to other customers that operate the same aircraft. Additionally, there are other similar aircraft that use the same type of shock absorber. The ExPress machine Niacc purchased from ADMET can be used to test these and other larger shock absorber assemblies, further extending the market and driving new business.