



## *ADMET Delivers an Innovative Solution to Leading Corporate Jet Manufacturer*

### **Challenge**

A leading U.S. based manufacturer of private and corporate jets was called upon to expand maintenance capabilities to include the testing of shock strut assemblies, shock absorbers, and actuators for aircraft landing gear. Both main and nose gear were to be accommodated by a single system. To reach the largest potential market of business aircraft owners, a flexible, high capacity testing system was needed. Also, because each aircraft maker has their own maintenance testing requirements and they all differ in significant aspects, an adaptable testing system was required. This new capability required precision transducers, complex control, and the ability to adapt for different sizes and types of test assemblies. Critical to the test program was the ability to measure the rotational steering position of the loaded landing gear.

### **Solution**

The prospect submitted their specifications to a select set of uniquely qualified suppliers for comments. One test required applying a compressive uniaxial load, then twisting the steering knuckle and measuring torque and angle of rotation. ADMET analyzed the engineering data and responded to the opportunity with a unique solution. The solution was based on an inverted version of their rugged eXpert 1600 series servo hydraulic universal testing system and a rotating compression platen instrumented to measure angle. The jet manufacturers' customers demanded timely service so keeping test system downtime to a minimum was important. Thus, a testing system constructed with multiple domestic part sources was also a requirement. ADMET's eXpert 1600 series testers, made in the USA using off the shelf American made parts, satisfied this requirement. In the client's words "Once we reviewed each of the suppliers, we decided the only choice was ADMET." Two months later, the system was operational and training completed.

### **Results**

The eXpert 1600 series servo hydraulic universal testing system equipped with ADMET's MTESTQuattro® Materials Testing System has performed beyond expectations and without a single instance of service. The customer found the test system incredibly easy to use, and configurable to perform a variety of tests. When the customer is called upon to create a new method of testing, MTESTQuattro allows them to implement it in minutes. Since ADMET software allows installation on multiple computers, the client designs new testing procedures at their desks and downloads them to the testing system in the hangar. This saves a considerable amount of time and reduces errors. When loading and unloading the landing gear assemblies, they use a fork lift or winch so "bumping" into the testing machine is a common occurrence. Subsequent calibration verifications, done every three months, confirm that the force, torque and alignment have exhibited no ill effects. As stated in a recent follow up call with the client: "We have performed hundreds of tests, many consisting of thousands of cycles each, and the hundreds of hours of faultless operation have served to confirm our decision to purchase from ADMET, Inc. We consider ourselves fortunate to be an ADMET customer and their application and technical support continues to be responsive, friendly and professional."

