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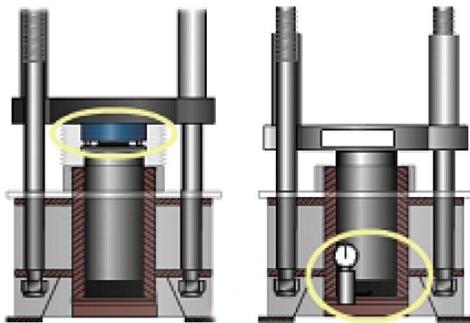
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Technical Tip: The Truth About Strain Gauge Load Cells vs. Pressure Transducers

White Paper: Adhesives in the Automotive Industry

You Asked - We Answered: Thermoset and Thermoplastic Composites ... What's the Difference?

### The Truth About Strain Gauge Load Cells vs. Pressure Transducers



Left Load cell measures force directly  
Right Transducer measures force indirectly

Load cells independently and directly measure the force being applied to specimens. Pressure transducers measure the force indirectly from the oil pressure observed in the cylinder. Which is superior? The answer is simple: Load cell technology due to the fact that some of the pressure in a hydraulic system has nothing to do with the load being applied to the specimen. For instance, moving the cylinder, raising the piston off the cylinder bottom, and even the weight of the oil itself creates pressure in the system.

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### Adhesives in the Automotive Industry

Adhesives bond materials are transversal to many different industries: from automotive to aerospace, electronics, medical, sports, and construction. Providing high-performance adhesive to aluminum, steel and other materials, structural adhesives have become an interesting and valid solution to replace welds and mechanical fasteners, helping to improve durability, reduce weight, and reduce manufacturing costs. In the automotive industry, reliability and durability are the most important characteristics, and structural adhesives meet these criteria better than most others. For applications in this industry, where adhesives are being used increasingly in safety-critical areas, it is necessary to carefully evaluate any possible decrease in performance that may occur when the adhesively-bonded joints are subjected to impact loading.

[Download our white paper](#)



**Q: Thermoset and Thermoplastic Composites ... What's the Difference?**

A: As composites continue to be adopted in more industries, fiber-reinforced plastics can be found in products that people interact with every day, including cars and sporting goods. Fiber-reinforced plastics consist of reinforcing fibers surrounded by a plastic matrix. There are several types of fibers that can be used including glass, carbon fiber, and aramid which give the material its high [tensile strength](#). The matrix gives the composite the compressive strength and, in the case of fiber-reinforced plastics, can be made using thermoset or thermoplastic polymers. [Read more](#)

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