

# Accredited

## Mechanical Properties

### Drill Drive

Used to qualify self-drilling screws by timing how long it takes them to penetrate sheet metal.

*SAE J78*

### Drive Test

Used to qualify self-tapping screws/bolts by installing them in pre-drilled plates and checking the formed threads.

*SAE J81, J933*

### Prevailing Torque

Used to qualify prevailing torque (lock) nuts according to industry specifications.

*IFI 124, 524, 100/107; ISO 2320*

### Proof Load Internal Threads

Used to qualify internally threaded fasteners by taking them to a test load for a set time, then checking for thread deformation.

*ASTM F606/606M; ISO 898-1*

### Proof Load External Threads

Used to qualify externally threaded fasteners by taking them to a test load for a set time, then checking for elongation.

*ASTM F606/606M; ISO 898-1*

### Torsional Strength

Used to qualify the torsional strength of small fasteners by applying torque until shear failure.

*SAE J78; J81; J933*

# Testing

## Mechanical Properties

### Tensile (Axial/Wedge)

Used to qualify parts (usually bolts) for strength. Parts are pulled until failure and must break according to industry standards.

*ASTM F606/F606M; ISO 898-1*

### Torque-Tension

Measures the thread friction and assembly torque as parts are tightened to clamp load.

*ISO 16047 (Clause 9); DTNA 49-00230*

## Micro-Examination

### Carburization

Used to determine the success of the case-hardening heat treatment process by measuring using a microscope.

*ASTM F2328; SAE J423*

### Decarburization

Used to measure the loss of carbon content during regular heat treatment by measuring using a microscope.

*ASTM F2328; ISO 898-1; SAE J419*

### Surface Discontinuities

Capability to check parts for external issues like cracking, fractures, or damaged threads.

*ASTM F788/788M, F812/F812M*

# Capabilities

## Material Properties

### Hardness (HRC, B, 15N, 30N)

Used to qualify fasteners for use according to industry specifications.

*ASTM E18, F606/606M*

### Hydrogen Embrittlement

Used to test for the effects of hydrogen-induced cracking, a corrosive concern in assembled joints.

*ASTM F606/606M; SAE J78, J81*

### Salt Spray (NSS)

Salt fog corrosion test used to qualify part coatings. Will pass the test if no red rust appears within the set time frame.

*ASTM B117*

### Cyclical Corrosion Testing

Duplicates real-world corrosion conditions in a laboratory environment. Used to evaluate joints, coatings, and design changes to reduce corrosion concerns.

*VOLVO ACT1; VOLVO-FORD ACT II*



# Additional Testing Capabilities

## Looking for more?

Here at Facil, we have a passion for solutions. We are proud to work with many other laboratories to provide the services you need. Just let us know what your testing requirements are, and we will find a solution for you.

## Future Capabilities

We are always looking to invest in the future and push entrepreneurship to its limits. We are currently looking to add torque-to-failure and ultrasonic testing to our facilities. If you are looking for a testing partner to develop innovative solutions to your testing needs, please let us know!

# Our Other Services

## Program Management

Engage our Fasteners in the concept stage of your projects to maximize your cost-savings and process improvements.

## Fastener Product Expertise

With our experience working with tens of thousands of fasteners, our fasteners are your one stop experts in fastening technology.

## CAD Drawings/Models

Let our knowledgeable CAD experts help you with your specific needs.

## Bolted Joint Design/Calculation

Work with our dedicated fastenering team on understanding your products.

## Bill of Material Optimization

Starting from your requirements or functional specifications, we develop the optimal BOM to maximize cost-effectiveness and quality.

## Value Analysis/Value Engineering (VA/VE)

By optimizing your sourcing strategy and installing next-generation fastening and supply chain solutions, our Fasteners speed your time-to-market and lower your total costs in your fastener value chain.



## Engineering Services Laboratory

# Contact Us

## Engineering Services

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