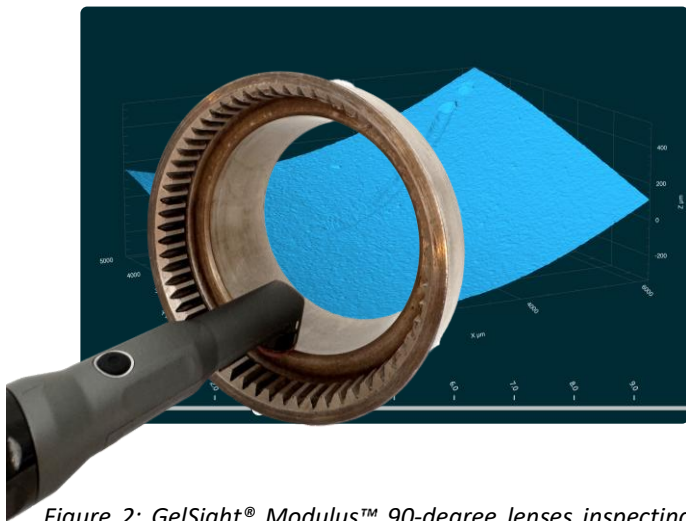


# Versatility Meets Accessibility with GelSight® Modulus™

Interchangeable lenses and comprehensive software enable inspection across every geometry



*Figure 1: GelSight® Modulus™ straight and 90-degree lenses inspecting a piston*



*Figure 2: GelSight® Modulus™ 90-degree lenses inspecting the inner diameter of a jet engine component*

## Swappable Lenses

GelSight® Modulus™ introduces a versatile interchangeable lens design, allowing users to seamlessly switch between 90-degree and straight lenses on the same sensor body. This modular approach gives inspectors the flexibility to adapt a single device to a wide range of part geometries and access constraints without needing separate dedicated tools. Operators can quickly hot swap configurations in the field to transition from inspecting areas with tight clearances with the straight lens to evaluating walls of bores with the 90-degree lens. Modulus lenses are serialized, and the software automatically detects the correct lens and loads the gel calibration based on the last use. This not only streamlines workflows, but also ensures consistent measurement performance across diverse applications.

The GelSight Modulus swappable lenses enable inspection of complex geometries, accessing nearly all of the surfaces of a piston (pictured left), including inspection within the wrist pin bore.

## Access to Inner Diameters

GelSight Modulus dramatically enhances the ability to inspect and characterize features or defects located on the inner diameters (IDs) of parts. GelSight Modulus can capture high-resolution 3D surface data from confined geometries within bores, tubes, and cavities. This breakthrough in accessibility allows manufacturers to confidently evaluate critical surfaces without destructive testing or replica creation, reducing downtime in production and maintenance environments.

The form factor of Modulus equipped with the 90-degree lens (pictured left) allows for inspection inner diameters down to 1".

## All the Measurement Capabilities of GelSight Mobile Software

GelSight Modulus is fully integrated with the existing GelSight Mobile software platform, enabling users to leverage the complete suite of measurement analysis tools they already rely on. By operating within the same intuitive, touch-optimized, software environment, Modulus delivers seamless access to analysis functions including surface roughness, defect characterization, corrosion assessment, hole quality inspection, and dimensional analysis.

GelSight Modulus configured with the straight lens is able to scan a scratch near the root of a turbine blade (pictured right). The Defect Detection function in the GelSight Mobile software then runs automatically to output a pass/fail status based on the characteristics of the defect, including length, width, depth, area, and volume.

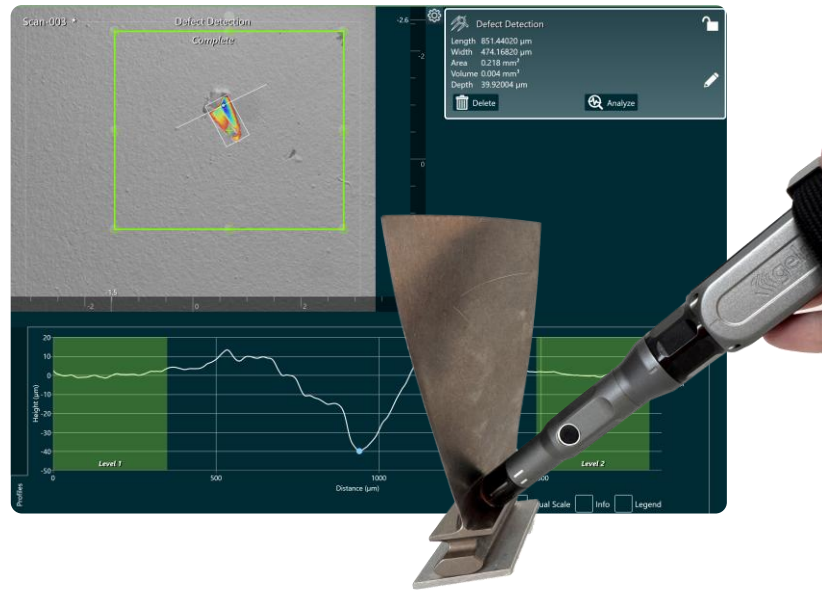
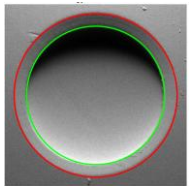
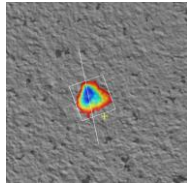


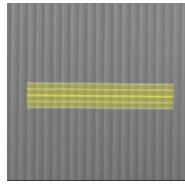
Figure 3: GelSight® Modulus™ straight lens scanning a defect at the root of a turbine blade



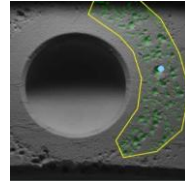
Hole Quality



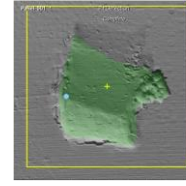
Damage



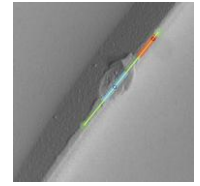
Surface Finish



Corrosion



Dents



Edge Defects

## Customer Success Story

During routine maintenance of CFM jet engines at a major MRO facility, technicians must remove fasteners and inspect the underlying hole areas for signs of corrosion, chipping, or other surface damage.

This workflow typically requires the use of replica material, and subsequent inspection of the replica. This jet engine MRO facility already uses GelSight Mobile to scan the replica directly, minimizing time spent sending the replica to the lab for measurement at a desktop system.

With GelSight Modulus, technicians can now directly access and capture surface data from the hole area without the need for replicas (pictured right). This eliminates multiple steps from the inspection process, cutting total inspection time from approximately 30 minutes to under one minute.

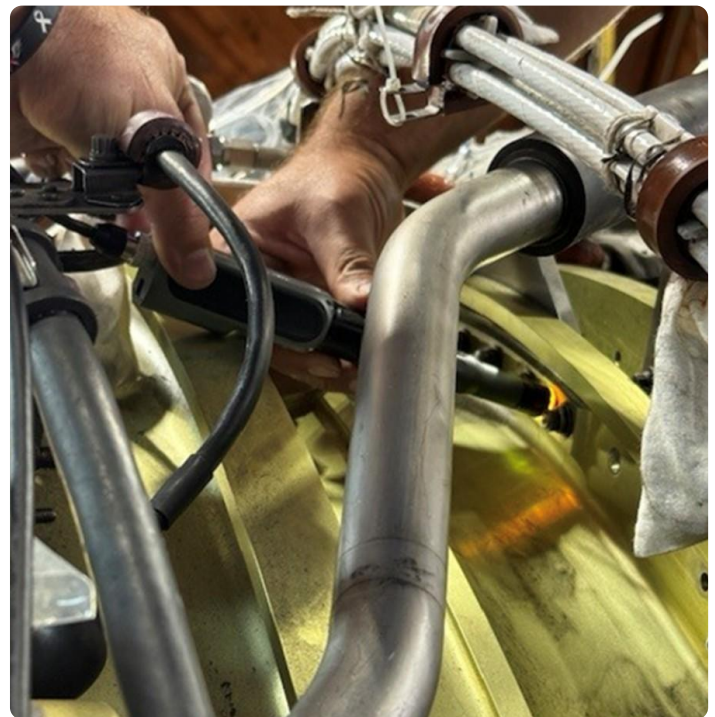


Figure 4: GelSight® Modulus™ Straight Lens scanning CFM engine fastener hole

09.19.25