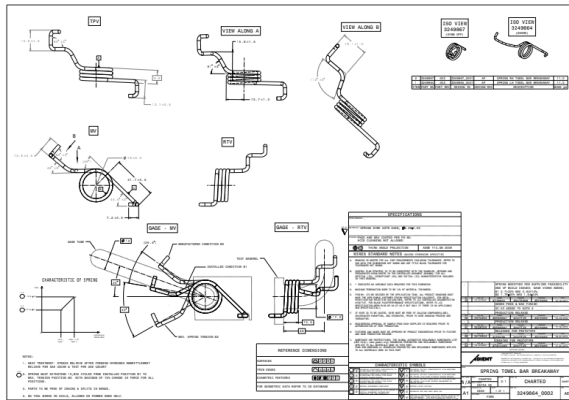


3D GD&T Spring Inspection

Automated inspection of springs is a known difficult problem. Ajile has developed a complete solution that allows for the capture of 360 degree views of springs from a random starting orientation.

The inspection system creates a complete stitched point cloud from the individual point clouds for the various angles captured from the turntable and compares this to a CAD file and then measures various parameters of the spring to see how they compare to the GD&T specified parameters for the product.



Ajile has developed a robust inspection system that leverages two of our DepthScan 3D imagers and a rotational turntable.

The system captures multiple 3D scans of the spring from different angles as it rotates, ensuring complete surface coverage.

Each individual point cloud is referenced by the absolute angular position of the turntable using the Ajile absolute magnetic encoder. The data is then processed and stitched together into a full 3D model using proprietary alignment algorithms.

This enables precise measurement of key GD&T features, even on complex or tightly wound spring geometries.



