

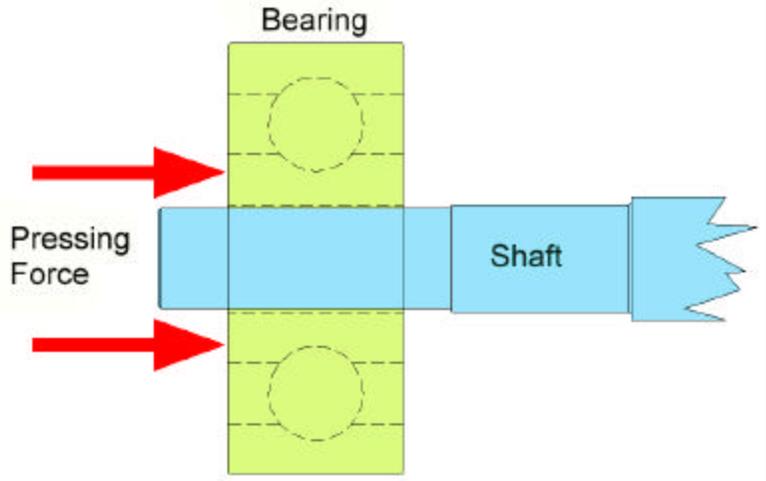


A Problem Solver Application Bulletin

Precision Assembly Monitoring/Verification

The **Signature Technologies SA-2000 “SAM”** module, and **Signature Technologies “SamView™”** Software package can be used to monitor the force vs. distance characteristics of press-fit assemblies, and “snap-together” type assemblies.

The illustrated method can perform the same type of test every stroke of the machine so that each part can be individually verified as having been assembled acceptably with properly sized components. The system works by measuring the force required to displace the assembled component onto its mating part.

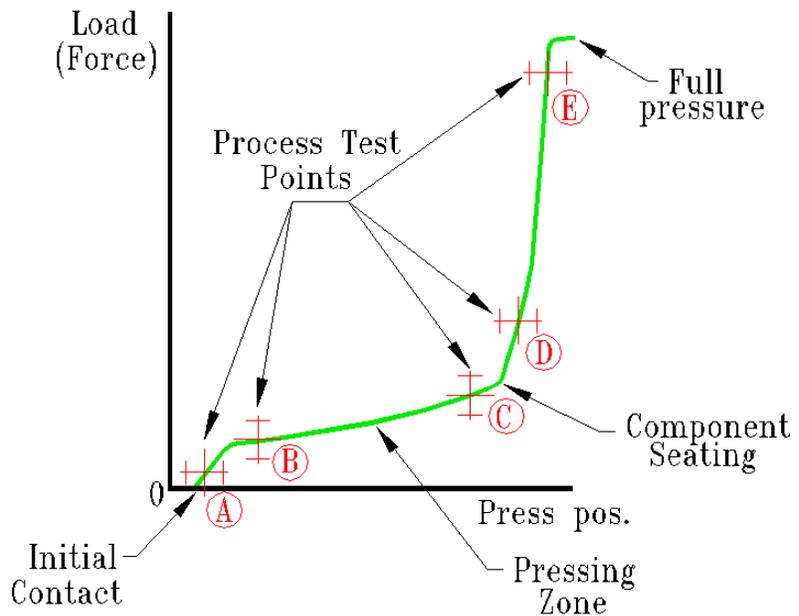


The **Graph** the right shows the type of force vs. press position signature that could be expected

The process test points are completely programmable and can include:

- A:** initial contact point
- B:** initial pressing force
- C:** full-engagement force
- D:** seating confirmation
- E:** max press force verification

The **SAM™** module can handle inputs in groups of 8 up to 56 total points. If desired, **Signature Technologies** can provide controls to adjust the forming station(s) dynamically based on the dimensional measurements.



Signature Technologies can supply a wide variety of solutions for various manufacturing process problems dealing with measurement, verification of properties, tool condition, and machine health. We can also “close the loop” by performing process adjustments in response to specific variations in force, location, or shape of the work piece, as well as more simple controls which can track and reject specific parts which don’t meet specific quality criteria.

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