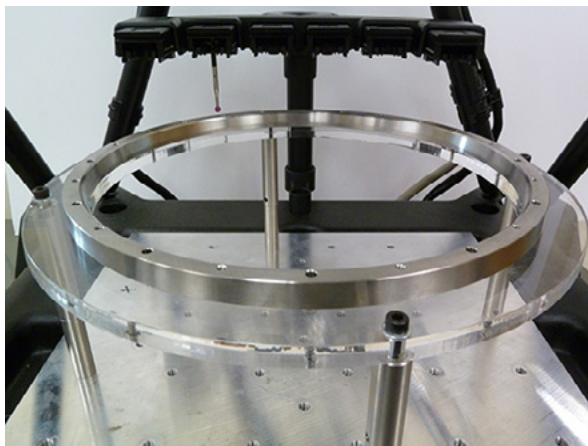


Gauge R&R study – taper-mount steel ring

Industry: Drives



Type 1 Gauge R&R

Type 1 tests are simple repeatability trials with one operator, one part and multiple repetitions. Results show gauge repeatability.

Test conditions, type 1

Gauging cycle time: 48 sec
Number of repetitions: 32

Test results, type 1

Feature measured	Cg	Cgk	% of tolerance
∅ Main bore diameter	5.97	5.91	3.35
○ O/D circularity	2.96	2.96	6.76
∠ 30° cone angle	2.86	2.77	6.98
▭ Top face flatness	8.37	8.37	2.39

Type 2 Gauge R&R

Type 2 tests involve multiple operators, multiple parts and multiple repetitions. Results give an indication of real world conditions, including factors such as gauge repeatability, fixture distortion and operator inconsistencies.

Test conditions, type 2

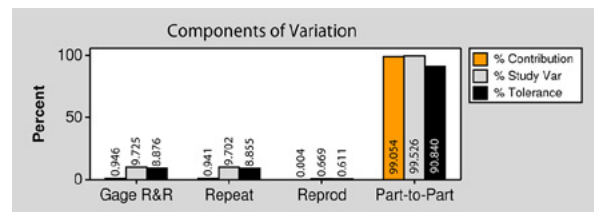
Gauging cycle time: 48 sec
Number of components: 6
Mastering frequency: 6
Number of operators: 3
Number of repetitions: 5
Total gauging operations: 90

Test results, type 2

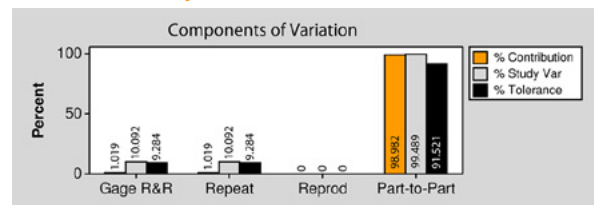
Feature measured	Tolerance	% of tolerance*
∅ Main bore diameter	0.05	8.88
○ O/D circularity	0.08	9.29
∠ 30° cone angle	1°	9.33
▭ Top face flatness	0.10	6.42

*R&R of measuring process (using Equator) as % of tolerance

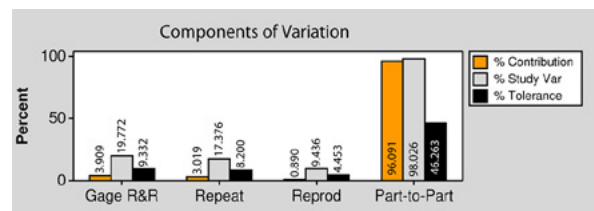
∅ Main bore diameter



○ O/D circularity



∠ 30° Cone angle



▭ Top face flatness

