

GAGE REPEATABILITY AND REPRODUCIBILITY DATA SHEET ANOVA METHOD

Part Number Required Outputs from Statistical Software	Gage Name	Appraiser A Ford STA
Part Name	Gage Number	Appraiser B
Characteristic Specification 3.00 5.00	Gage Type	Appraiser C
Characteristic Classification	Trials 3	Parts 10
	Appraisers 3	Date Performed 8/15/2004

APPRAISER/ TRIAL #	PART										AVERAGE
	1	2	3	4	5	6	7	8	9	10	
1. A 1	3.63957	3.93548	3.84455	4.16510	4.28118	3.43333	3.80442	3.93066	4.14554	4.22784	3.94077
2. 2	3.57531	3.93015	3.88189	4.22454	4.30886	3.44552	3.84481	3.90602	4.15316	4.21844	3.94887
3. 3	3.61748	3.89916	3.79324	4.18314	4.25248	3.36779	3.78816	3.89789	4.19837	4.24714	3.92449
4. AVE	3.61079	3.92160	3.83989	4.19093	4.28084	3.41555	3.81246	3.91152	4.16569	4.23114	$\bar{X}_a =$ 3.93804
5. R	0.06426	0.03632	0.08865	0.05944	0.05638	0.07773	0.05665	0.03277	0.05283	0.02870	$\bar{R}_a =$ 0.05537
6. B 1	3.58826	3.91847	3.85039	4.16154	4.22682	3.40564	3.80264	3.86563	4.14732	4.22073	3.91874
7. 2	3.62865	3.90653	3.84887	4.20828	4.23444	3.39446	3.80366	3.84912	4.09804	4.21870	3.91908
8. 3	3.63094	3.94514	3.85090	4.23495	4.27788	3.39599	3.80010	3.87503	4.12370	4.21311	3.93477
9. AVE	3.61595	3.92338	3.85005	4.20159	4.24638	3.39870	3.80213	3.86326	4.12302	4.21751	$\bar{X}_b =$ 3.92420
10. R	0.04268	0.03861	0.00203	0.07341	0.05106	0.01118	0.00356	0.02591	0.04928	0.00762	$\bar{R}_b =$ 0.03053
11. C 1	3.57734	3.88087	3.85293	4.17678	4.26467	3.43282	3.81052	3.85141	4.14072	4.22352	3.92116
12. 2	3.58268	3.87173	3.78054	4.16129	4.23876	3.37973	3.79959	3.88570	4.15189	4.21133	3.90632
13. 3	3.62865	3.87351	3.79680	4.17450	4.19888	3.39980	3.78664	3.85217	4.12522	4.22454	3.90607
14. AVE	3.59622	3.87537	3.81009	4.17086	4.23410	3.40412	3.79892	3.86309	4.13928	4.21980	$\bar{X}_c =$ 3.91118
15. R	0.05131	0.00914	0.07239	0.01549	0.06579	0.05309	0.02388	0.03429	0.02667	0.01321	$\bar{R}_c =$ 0.03653
16. PART AVERAGE	3.60765	3.90678	3.83335	4.18779	4.25377	3.40612	3.80450	3.87929	4.14266	4.22282	$\bar{X} =$ 3.92447 $R_p =$ 0.84765

GAGE REPEATABILITY AND REPRODUCIBILITY DATA SHEET ANOVA METHOD

Part Number Required Outputs from Statistical Software	Gage Name	Appraiser A Ford STA	
Part Name	Gage Number	Appraiser B	
Characteristic 3.00 5.00	Specification	Gage Type	
Characteristic Classification	Trials 3	Parts 10	Appraisers 3 Date Performed 8/15/2004

<i>Anova Report</i>	Standard Deviation (σ)	% Tolerance	% Contribution
Repeatability (EV)	0.0243	7.30%	n/a
Reproducibility (AV)	0.0127	3.80%	n/a
Appraiser by Part (INT)	0.0000	0.00%	n/a
GRR	0.0274	8.23%	n/a
Part-to-Part (PV)	0.2805	14.02%	n/a

Gage system O.K

Note:

Tolerance = 2.00

Total variation (TV) = 0.28180

Number of distinct data categories (ndc) = 14

Gage discrimination acceptable