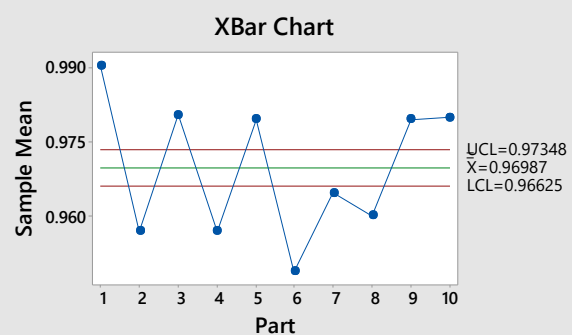
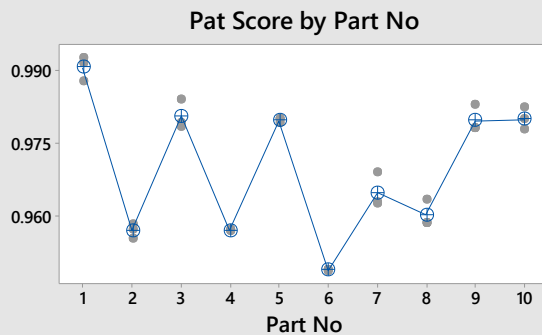
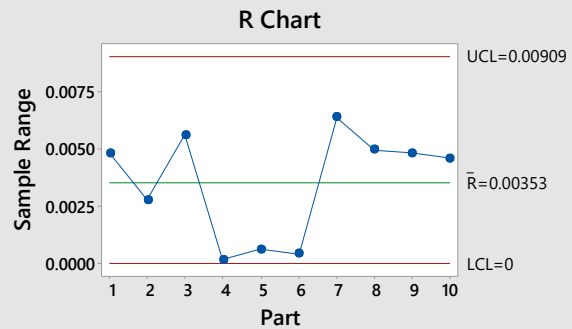
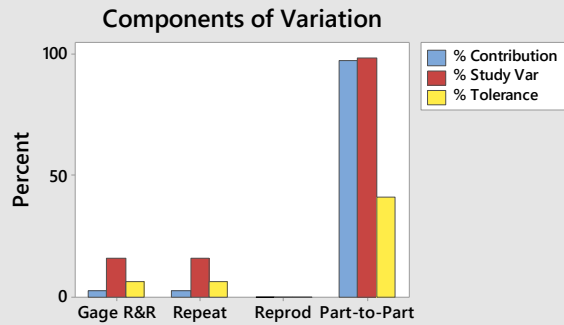


Gage R&R (ANOVA) Report for Pat Score

Gage name: Washer
Date of study: 06/23/2022

Reported by: AIS Technologies Group
Tolerance: 0.8 - 1
Misc:



Gage R&R Study - ANOVA Method

*** NOTE *** There are no operator values, or they are all the same. The operator factor will be omitted from the analysis.

Gage R&R for Pat Score

Gage name: Washer
Date of study: 06/23/2022
Reported by: AIS Technologies Group
Tolerance: 0.8 - 1
Misc:

One-Way ANOVA Table

Source	DF	SS	MS	F	P
Part No	9	0.0052179	0.0005798	110.013	0.000
Repeatability	20	0.0001054	0.0000053		
Total	29	0.0053233			

α to remove interaction term = 0.05

Gage R&R

Variance Components

Source	VarComp	%Contribution (of VarComp)
Total Gage R&R	0.0000053	2.68
Repeatability	0.0000053	2.68
Part-To-Part	0.0001915	97.32
Total Variation	0.0001968	100.00

Process tolerance = 0.2

Gage Evaluation

Source	StdDev (SD)	Study Var (6 × SD)	%Study Var (%SV)	%Tolerance (SV/Toler)
Total Gage R&R	0.0022956	0.0137739	16.37	6.89
Repeatability	0.0022956	0.0137739	16.37	6.89
Part-To-Part	0.0138383	0.0830300	98.65	41.52
Total Variation	0.0140275	0.0841647	100.00	42.08

Number of Distinct Categories = 8

Probabilities of Misclassification

Joint Probability

Description	Probability
A randomly selected part is bad but accepted	0.002
A randomly selected part is good but rejected	0.003

Conditional Probability

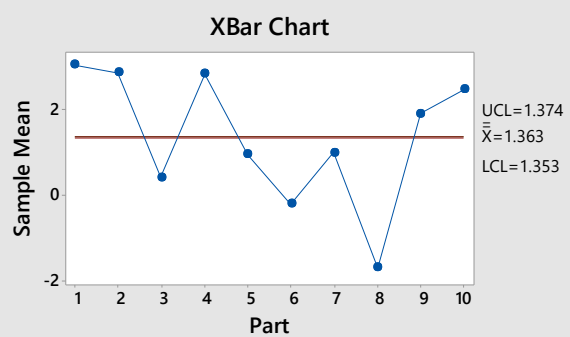
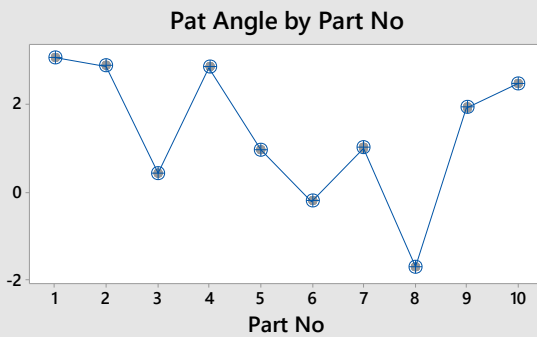
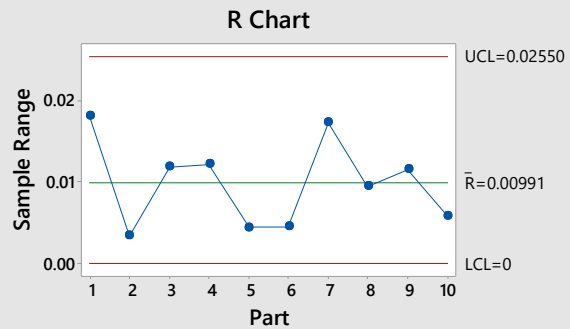
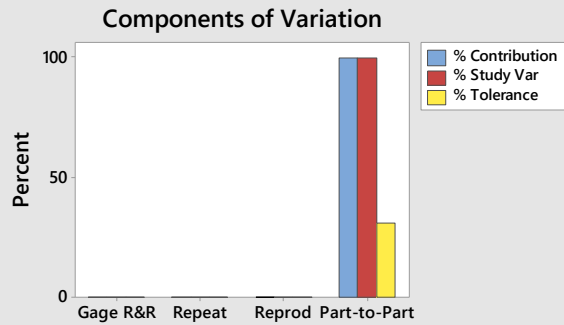
Description	Probability
A part from a group of bad products is accepted	0.135
A part from a group of good products is rejected	0.003

Gage R&R for Pat Score

Gage R&R (ANOVA) Report for Pat Angle

Gage name: Washer
Date of study: 06/23/2022

Reported by: AIS Technologies Group
Tolerance: (-15) - 15
Misc:



Gage R&R Study - ANOVA Method

*** NOTE *** There are no operator values, or they are all the same. The operator factor will be omitted from the analysis.

Gage R&R for Pat Angle

Gage name: Washer
Date of study: 06/23/2022
Reported by: AIS Technologies Group
Tolerance: 0.8 - 1
Misc:

One-Way ANOVA Table

Source	DF	SS	MS	F	P
Part No	9	65.9097	7.32330	203289	0.000
Repeatability	20	0.0007	0.00004		
Total	29	65.9104			

α to remove interaction term = 0.05

Gage R&R

Variance Components

Source	VarComp	%Contribution (of VarComp)
Total Gage R&R	0.00004	0.00
Repeatability	0.00004	0.00
Part-To-Part	2.44109	100.00
Total Variation	2.44112	100.00

Process tolerance = 30

Gage Evaluation

Source	StdDev (SD)	Study Var (6 × SD)	%Study Var (%SV)	%Tolerance (SV/Toler)
Total Gage R&R	0.00600	0.03601	0.38	0.12
Repeatability	0.00600	0.03601	0.38	0.12
Part-To-Part	1.56240	9.37439	100.00	31.25
Total Variation	1.56241	9.37446	100.00	31.25

Number of Distinct Categories = 367

Probabilities of Misclassification

Joint Probability

Description	Probability
A randomly selected part is bad but accepted	0.000
A randomly selected part is good but rejected	0.000

Conditional Probability

Description	Probability
A part from a group of bad products is accepted	*
A part from a group of good products is rejected	0.000

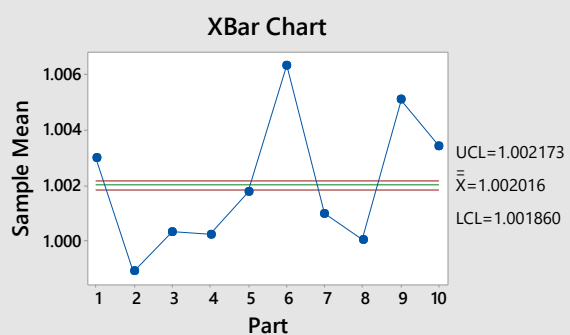
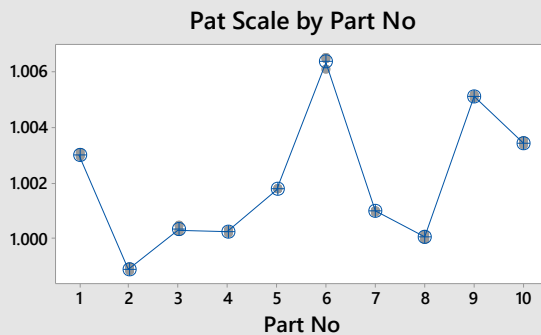
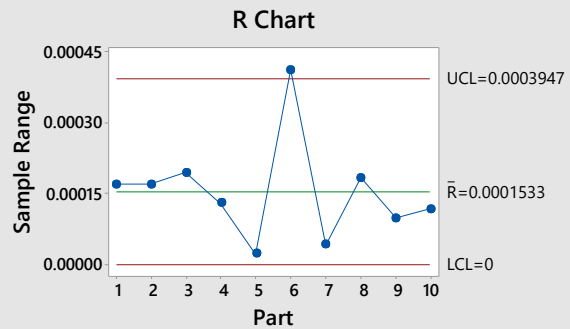
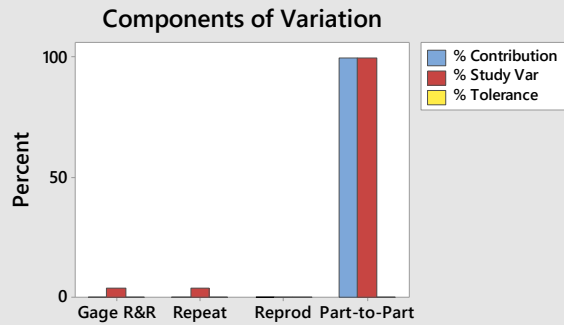
Probability of part within spec limits = 1.

Gage R&R for Pat Angle

Gage R&R (ANOVA) Report for Pat Scale

Gage name: Washer
Date of study: 06/23/2022

Reported by: AIS Technologies Group
Tolerance: (-10) - 10
Misc:



Gage R&R Study - ANOVA Method

*** NOTE *** There are no operator values, or they are all the same. The operator factor will be omitted from the analysis.

Gage R&R for Pat Scale

Gage name: Washer
Date of study: 06/23/2022
Reported by: AIS Technologies Group
Tolerance: 0.8 - 1
Misc:

One-Way ANOVA Table

Source	DF	SS	MS	F	P
Part No	9	0.0001561	0.0000173	1740.21	0.000
Repeatability	20	0.0000002	0.0000000		
Total	29	0.0001563			

α to remove interaction term = 0.05

Gage R&R Variance Components

Source	VarComp	%Contribution (of VarComp)
Total Gage R&R	0.0000000	0.17
Repeatability	0.0000000	0.17
Part-To-Part	0.0000058	99.83
Total Variation	0.0000058	100.00

Process tolerance = 20

Gage Evaluation

Source	StdDev (SD)	Study Var (6 × SD)	%Study Var (%SV)	%Tolerance (SV/Toler)
Total Gage R&R	0.0000998	0.0005989	4.15	0.00
Repeatability	0.0000998	0.0005989	4.15	0.00
Part-To-Part	0.0024034	0.0144205	99.91	0.07
Total Variation	0.0024055	0.0144329	100.00	0.07

Number of Distinct Categories = 33

Probabilities of Misclassification

Joint Probability

Description	Probability
A randomly selected part is bad but accepted	0.000
A randomly selected part is good but rejected	0.000

Conditional Probability

Description	Probability
A part from a group of bad products is accepted	*
A part from a group of good products is rejected	0.000

Probability of part within spec limits = 1.

Gage R&R for Pat Scale