



Lathe Alignment Report

Project Name: Lathe 1495-SR

Date Printed: 10/5/2017 at 10:04 AM



Report Issued By:

Company Name:
Address:
City, State, ZIP:
Email:

Machine Information:

Factory: Alpha 12
Machine: 4lr53
Notes: The machine appears to have been crashed.

Setup Information:

Spacing and Dimensions

Units:	in., in/ft	Headstock A:	12.00
Number of Points:	10	Headstock B:	6.00
Starting Point:	1	Tailstock A:	10.00
Spacing Increment:	12.00	Tailstock B:	4.00

Tolerance Bands

Straightness:	.0005
Tailstock Center:	.0010
Tailstock Angular:	.0005
Spindle Axis Parallelism:	.0003
TS/Saddle Axis Parallelism:	.0004

Target Information

Target Name:	Karl's Target
Interface:	R-358HR
Serial Number:	56788765
Calibration Date:	10/4/2012
Description:	Target for Karl to Test With

Laser Qualification

Orientation	V Center	H Center	V Slope	H Slope
Inverted Laser	.0051	-.0019	.0118	.0085
Normal Laser	-.0045	-.0045	-.0016	-.0074
Mounting Offset	.0003	-.0032	.0051	.0006

Lathe Bed Straightness

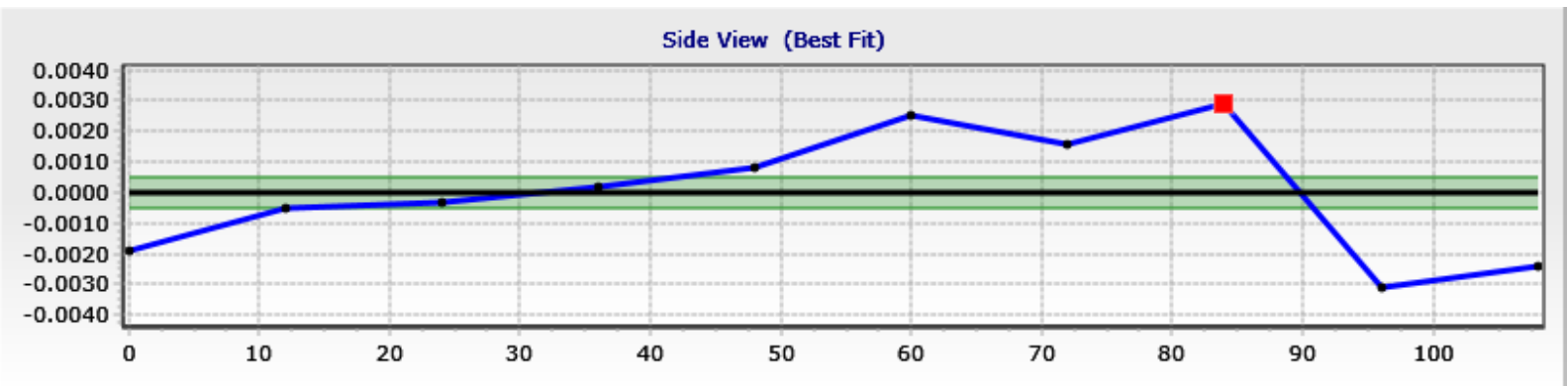
Summary

	Straight.(TIR)	Tol (+/-)	I/O	Bed Parall.	Tol (+/-)	I/O	TS/S Parall.	Tol (+/-)	I/O
V TS	.0060	.0005	✗	-.0007	.0004	✗	-.0007	.0004	✗
H TS	.0012	.0005	✗	.0000	.0004	✓	.0000	.0004	✓
V Saddle	.0016	.0005	✗	.0000	.0004	✓			
H Saddle	.0007	.0005	✗	.0000	.0004	✓			

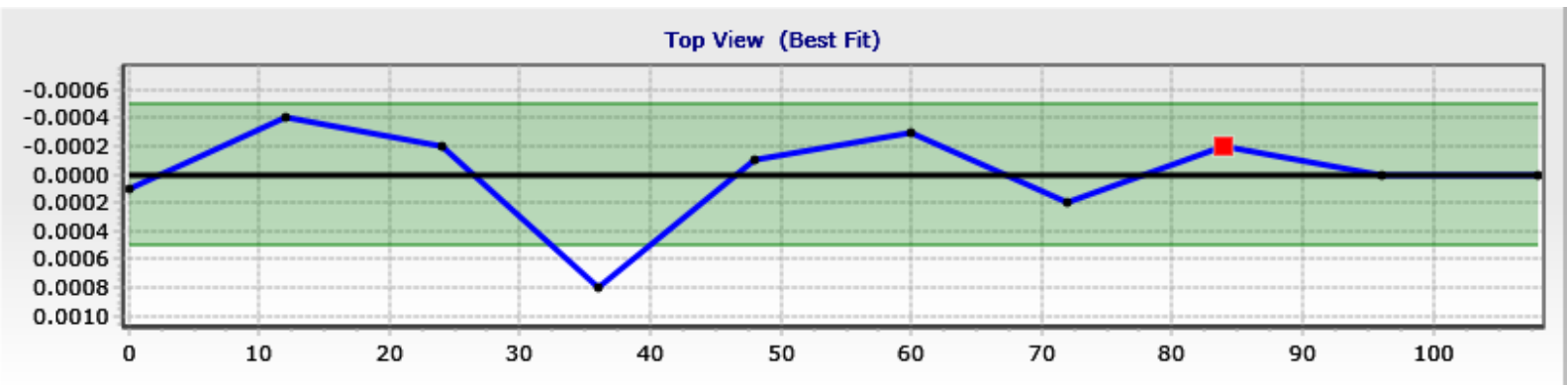
Lathe Bed Straightness Plots

Data Source: Tailstock Plot Reference: Best Fit View: Center

Side View Flatness



Top View Straightness



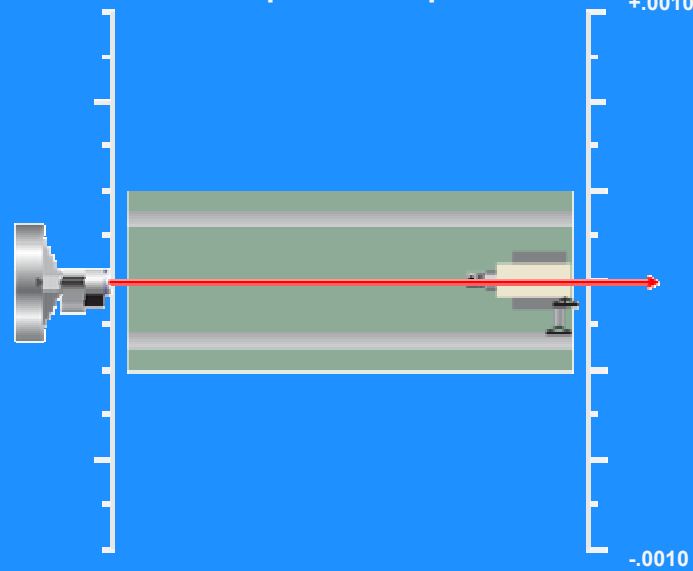
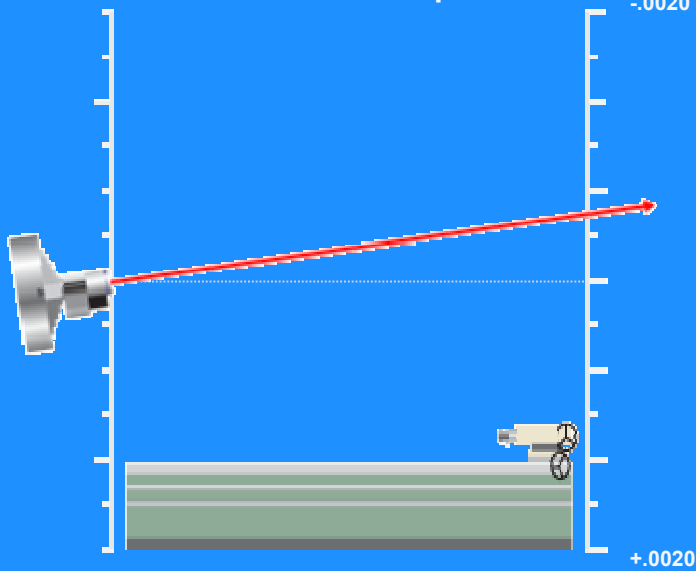
Saddle Parallelism

Side View
Side View Slope I/O
 -.0007 ✓

Top View
Top View Slope I/O
 .0000 ✓

Side View Slope

Top View Slope



Front Shim

Back Shim

Front Move

Back Move

-.0084

.0084

.0000

.0000

Lathe Bed Data

Point	Distance	Tailstock VC	Tailstock HC	Tailstock VS	Tailstock HS	Saddle VC	Saddle HC	Saddle VS	Saddle HS
1	0	-.0054	-.0078	.0257	.0036	-.0061	-.0075	.0369	-.0052
2	12.00	-.0047	-.0082	.0121	.0176	-.0056	-.0080	.0294	.0079
3	24.00	-.0051	-.0080	.0203	.0138	-.0050	-.0082	.0197	.0178
4	36.00	-.0054	-.0070	.0245	-.0114	-.0046	-.0079	.0107	.0133
5	48.00	-.0055	-.0078	.0254	.0086	-.0044	-.0079	.0085	.0139
6	60.00	-.0045	-.0080	.0097	.0152	-.0052	-.0083	.0207	.0181
7	72.00	-.0061	-.0075	.0370	-.0002	-.0054	-.0081	.0247	.0109
8	84.00	-.0055	-.0079	.0285	.0062	-.0053	-.0076	.0238	-.0017
9	96.00	-.0122	-.0077	.0230	-.0039	-.0054	-.0078	.0240	.0000
10	108.00	-.0122	-.0077	.0230	-.0039	-.0054	-.0079	.0241	.0052

Spindle Axis Alignment

Laser Position	V Center	H Center	V Slope	H Slope
Laser Inverted/Target Normal	-0.0041	.0003	.0093	.0124
Laser Normal/Target Inverted	.0128	.0071	.0026	.0074
Laser Normal/Target Normal	-0.0131	-0.0074	.0018	-0.0054
Mounting Offset	-0.0046	-0.0040	-0.0016	-0.0079

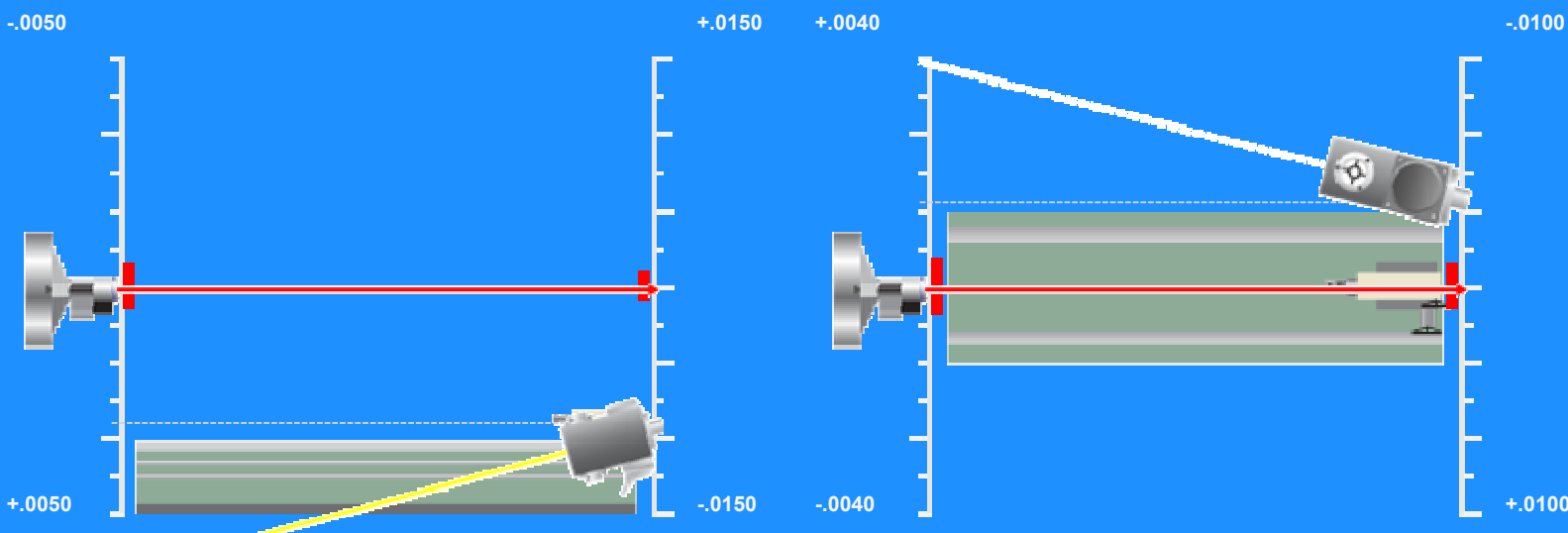
Headstock/Tailstock Alignment Results

Side View

V.Center	I/O	V. Slope	I/O
-0.0084	✘	.0033	✘

Top View

H. Center	I/O	H.Slope	I/O
-0.0034	✘	.0025	✘



Front Shim

-0.0049



Back Shim

-0.0381



Front Move

-0.0065



Back Move

-0.0314

