

VibrAlign Laser Alignment Tips

Validity Rule

There is a rule called the validity rule. It states that the sum of the top and bottom readings should equal the sum of the side to side readings. In your case the top and bottom readings are taken at 12:00 and 6:00 respectively. The side readings are taken at 3:00 & 9:00. So $12:00 + 6:00$ should equal $3:00 + 9:00$. In the real world this sum is never exact. But a large disparity is an indication that something mechanical is wrong.

Here is how to use the system to check for validity:

1. Go into the horizontal shaft alignment program (program #1)
2. Enter any dimensions for A, B, C. Use the real values if you are about to do an alignment. Or, simply enter a value of 10 for each dimension if you are simply checking for validity.
3. Set the heads in the 9 o'clock position.
4. Press the 9:00 measurement symbol to zero the detector values. The detector values are displayed in the small panels below the representation of each TD.
5. Now rotate to 12:00 position and write down both TD values.
6. Rotate to 3:00 position and write down both TD values.
7. Rotate to 6:00 and write down both TD values.

You should have a table that looks something like this:

Posi-	TDS value	TDM
9:00	0	0
12:00	20	-5
3:00	-15	7
6:00	-35	12



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In my example the numbers add up perfectly:

S unit: $0 + -15 = -15$ and $20 + -35 = -15$

M unit: $0 + 7 = 7$ and $-5 + 12 = 7$

In the real world the number will almost never add up perfectly, but as the machines are aligned better and better the sums will be closer and closer.

