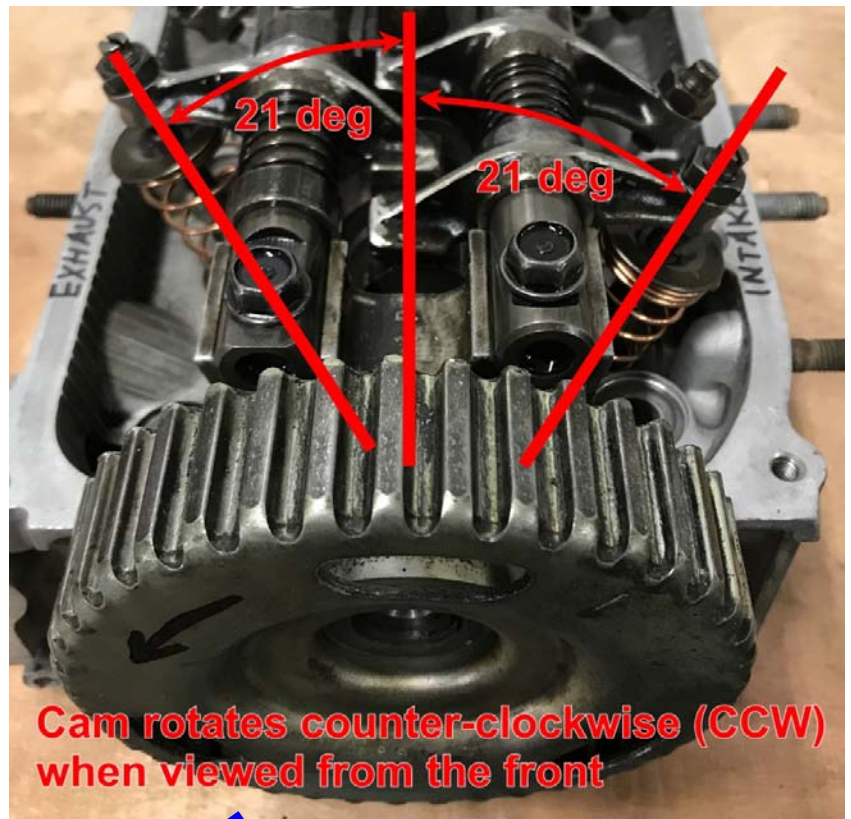


## Measuring OHC Rocker Arm Cams

Pictured to the right is the valve train from a 1984 Honda CRX D15A. The valve angles are 21 degrees from vertical, with the intake on the right, exhaust on the left. The cam rotates CCW when viewed from the front.



Cam Analyzer v4.3 'Plus' Performance Trends [ Honda CB250F.dat ]

File Edit Graphs Reports Test/Cam Setup Find TDC Settings Help Record(F5) Reg To: Hamms Machine

**Test/Cam Setup**

Back (ok) Print Help Refresh

**Test Setup**

Type of Cam Data: Measured with Electronics (highlighted)

Lifter (profile) Type: Solid

Rocker Arm Ratio: Intake Exhaust See note above

Actual Valve Lash, in: Intake .0039 Exhaust .0059

Electronic Measurement Settings

TDC Method: Intake Centerline

Cam Timing Value: 109

Cam Design: Custom

Number of Cylinders To Test: [dropdown]

Lifter Bore Angle Details (highlighted)

Camshaft Layout Details (highlighted)

See Virtual Follower Details (highlighted)

Measure Cam... On Cam Test Stand

More Options Options set to std Defaults

**Lift for Rating Events**: .040 inch (1.00 mm)

**Degree Wheel**

Type: TDC - 90 - BDC - 90 - TDC

**Help: Notes on Highlighted Item**

Click on the down arrow button to select how the cam lift data was generated. If you select 'Generate from Cam Specs', you can also specify the tappet lift from which duration and opening/closing events are measured. American aftermarket standard is .050". Metric and motorcycles use .040" (1 mm). Seat timing is also called 'advertised' duration and is not as accurate a method. p 21 IMPORTANT: Select 'Measured with Electronics' if you are using the Cam Test Stand.

To measure this on the Cam Test Stand you need to tell the program this info. First, go into the Test/ Cam Setup screen shown to the right. The next pages will show what you enter for Lifter Bore Angle Details, Camshaft Layout Details, and See Virtual Follower Details.

Click on Lifter Bore Angles for the screen to the right. Here you enter the valve angles when viewed from the front, 21 deg for the intake and -21 for the exhaust. Click on Keep Settings.

**Lifter Bore Angles**

**Lifter Bore Angle (LBA) Specs**

Number of LBAs Needed	2
Lifter Bore Angle #1	21
Cylinders Using LBA 1	1
Int or Exh LBA 1	Int Only
Lifter Bore Angle #2	-21
Cylinders Using LBA #2	1
Int or Exh LBA 2	Exh Only
Lifter Bore Angle #3	
Cylinders Using LBA #3	
Int or Exh LBA 3	

**Notes:**  
For most Overhead Cam or Inline Engines, choose '0' as the 'Number of LBAs Needed' and all these entries are disabled (not needed). Click on Help for more info on filling in these critical inputs. For most American V-8s, you can just pick a Cam Design from those on the Test Options screen, provided with the program.

Keep Settings Help Cancel Print

Click on Camshaft Layout Details for the screen to the lower right. Here you enter the info for the camshaft layout. Since this user was only interested in measuring 1 intake and 1 exhaust valve, it was not necessary to enter the full Firing Order, Lobe Description, etc. However, what is critical is to enter "Rotation (viewed from front)" as CCW (counter clockwise) and that the rotary encoder is mounted on the front of the camshaft with "Encoder Mounted On". Click on Keep Settings.

**Cam Design Layout**

**Cam Design Layout Specs**

Number Cyls on Cam	1
Type of Lobes	Intake and Exhaust
Intake Lobes per Cylinder	1
Exhaust Lobes per Cylinder	1
Firing Order	1
Offset ('odd') Firing	No
Cyls. Offset from #1	
Offset Crank Degree	
Lobe Description	J-11-E1-J
Rotation (viewed from front)	CCW
Encoder Mounted On	Front

**Dowel Pin/Keyway Timing from TDC**

Cam Degrees from TDC	
Direction from TDC	CW

**Notes:**  
Entries in this screen are quite complicated, and critical to accurate cam measurements. Click on the 'Help' button for details.

Keep Settings Help Cancel Print

Click on See Virtual Follower Details for the screen to the right. Fill in the geometry details. Be sure to specify "Cam Rotation" at the lower right as Counter Clockwise. You will see the drawing show "View from Front of Engine" and the drawing looks correct.

The exhaust geometry is the same, but the valve is on the other side of the camshaft, so you must uncheck "Exhaust Specs Exactly Match Intake Specs".

Click on the "Exhaust" tab at the top for the screen to the right. Enter the Geometry, but in the lower right corner, choose "Clockwise" for the cam rotation. That is because in the picture with the valve at the right, this is a view from the rear of the engine and the cam rotates CW in this view.

Click "Back (OK + save)" at the upper left. Now you are ready to measure this cam on the cam test stand.

