

Chemtrol®

ACCELERATED FINISHING COMPOUNDS

Precision Finishing, Inc.

708 Lawn Avenue
Sellersville, PA 18960
Phone: 215.257.6862
Fax: 215.257.4162

sales@precisionfinishinginc.com
www.precisionfinishinginc.com

ACCELERATED SURFACE FINISHING CASE STUDY:

Custom Cams Inc. of Martinsville VA, (www.customcamsco.com)

Custom Cams Inc. of Martinsville VA, a manufacturer of cam shafts for the racing and street industry, contacted Precision Finishing to improve the RMS finish obtained by their current finishing process. We were able to meet these requirements using Chemtrol® Accelerated Surface Finishing (ASF) compounds.

PROCESS RESULTS

Accelerated Surface Finishing with Chemtrol® combines the benefits of low RMS non-directional mass finishing with chemical accelerants. The chemical accelerants significantly reduce the process time for hardened surfaces compared to mechanical abrasive methods. This reduced process time enables you to achieve a very low surface roughness with minimal metal removal and radiusing of the part.

ADVANTAGES OF ACCELERATED SURFACE FINISHING WITH CHEMTROL®

- Achieve Low RMS finishes without heavy metal removal or radiusing
- Achieve negative skew values by removing surface peaks while retaining micro valleys for lubricant retention
- Refine surfaces to mirror-like brightness and very low surface roughness
- Reduce friction, lower torque requirements and minimize surface wear thereby reducing operating temperatures
- Precision components are imparted with a "Run-In" surface condition
- Increase fatigue life

Chemtrol ASF Process

Finishing and waste treatment equipment utilized in the finishing process.



BEFORE



AFTER

Precision Finishing, Inc.

A Complete Source For Vibratory Finishing & Abrasive Finishing Equipment, Supplies & Services Since 1955

Crankshaft:	Viper	
Process:	Accelerated Finishing	
Surface Measurements Of 3rd Rod Journal		
	START	FINISH
Ra	5.75	1.39
Rz	42	9.2

Treated Crank Shafts *See the difference!*
Crank shafts treated with Chemtrol Accelerated Finishing Compound.

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ACCELERATED SURFACE FINISHING CASE STUDY:

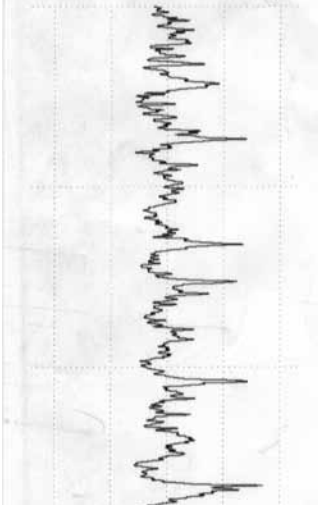
Custom Cams Inc. of Martinsville VA, (www.customcamsco.com)

BEFORE

```
Perthometer M2
Date 11/10/2008
Time 15:11
Lt 0.070 in
Lc 0.010 in
Ra 5.75 µi
Rz 42 µi
Rmax 53 µi
Rp 13 µi
Rpk 2.3 µi
Rk 15 µi
Rvk 15 µi

Rk list
Lc 0.010 in
Rk 15 µi
Rpk 2.3 µi
Rvk 15 µi
Mr1 6.5 %
Mr2 84 %

R Profile
Lc 0.010 in
VER 20.0 µi
```

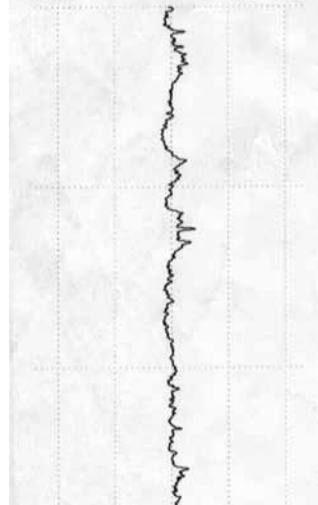


AFTER

```
Perthometer M2
Date 11/12/2008
Time 11:40
Lt 0.070 in
Lc 0.010 in
Ra 1.39 µi
Rz 9.2 µi
Rmax 12 µi
Rp 3.1 µi
Rpk 1.3 µi
Rk 4.0 µi
Rvk 3.4 µi

Rk list
Lc 0.010 in
Rk 4.0 µi
Rpk 1.3 µi
Rvk 3.4 µi
Mr1 8.2 %
Mr2 88 %

R Profile
Lc 0.010 in
VER 20.0 µi
```



Measurable Results Specialists take RMS readings on a profilometer to measure finishing results.



Treated Crank Shafts See the difference! Crank shafts treated with Chemtrol Accelerated Finishing Compound.