



# SUPERABRASIVES

CBN AND DIAMOND PRODUCTS



SuperAbrasives.com 248.348.7670

## VITRIFIED CBN for CAMSHAFT and CRANKSHAFT GRINDING

For over 30 years, SuperAbrasives has focused on providing our customers with top quality, high performance products all while delivering a high level of responsiveness and customer service. We pride ourselves on our Continuous Improvement Program and effectively providing our customers with the most cost-efficient solutions for the job.

**What can we do for your business?** Help bring your grinding processes to the next level while lowering your grinding costs!



### CBN VITRIFIED PRODUCTS

#### High Concentration CBN wheels for Camshaft and Crankshaft Grinding

Vitrified CBN wheels for camshaft and crankshaft grinding are a specialty at SuperAbrasives. We have developed numerous bond systems designed for these high precision applications and have options to fit you're cam or crank application. Ask about our newest bond technology - it produces superior results!

- Produce Surface Finish as low as 0.25Ra
- Increase parts per dress
- High In-Feed Rates up to 1.25 Q Prime
- Grind both Steel and Cast Iron with the same spec
- Both Rough and Finish Grind
- Adaptable in Wheel Sets and Multi-Layer Depths

Ask about our experience with these cam and crank applications...

- Lobe
- Journal
- Bearings
- Fuel Pump Drives
- Pin Bearing
- Main Bearing
- Thrust Face
- Post Wall
- Flange End

### TECHNICAL SUPPORT AND CUSTOM SERVICES

#### Application Support for Camshaft and Crankshaft Grinding

At SuperAbrasives we also provide application support to our customers by working with you to optimize your grinding process. We use the following steps to walk through your applications to achieve the success you require.

- Application Evaluation
- Application Analysis
- Application Recommendations
- Product Development
- Product Implementation



**Ask us about the techniques we use for each step along the way**

If you would like to learn more please call our Application Specialists at 248-348-7670 or email us at [sales@superabrasives.com](mailto:sales@superabrasives.com).

# CAMSHAFT LOBE GRINDING CASE STUDY

In our continual efforts to offer our customers new and exciting technology we've developed a new bond structure specifically for camshaft lobe grinding. This new specification out performs our already superior traditional spec on the new more difficult to grind materials like carburized steel, 52100, 100cr6, 51crv4; while remaining free cutting reducing thermal damage and holding surface finish. Ask us for more details about this outstanding advancement.

## CAMSHAFT LOBE GRINDING APPLICATION:

**Machine:** Fives - Landis

**Part:** 16-18 Lobe Camshaft

**Material:** Carburized Steel 58-62 HRC

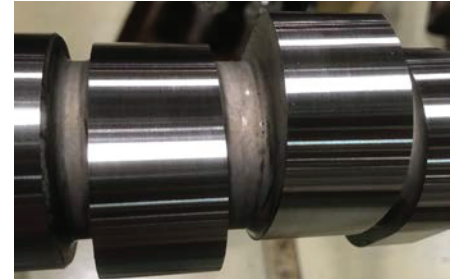
**Stock:** 2mm over the Diameter

**Finish Requirement:** 12 Ra

**Wheel Size:** 400MM x 37.5MM x 5MM Depth - Style 1A1 (Type1)

**Wheel Cutting Speed:** 80 m/s

**Coolant:** Synthetic /Straight Oil



Lobe after 24<sup>th</sup> part per dress  
15 Ra finish

## Tool Life of SuperAbrasives Traditional Wheel:

**Parts per Dress:** 160 - 180 Lobes - 2 Spindle Machine for Lobe and Journal Grinding

**Total Part per Wheel =** 10,000 – 15,000 parts

## Tool Life of SuperAbrasives Advanced Specification Wheel:

**Parts per Dress:** 350 - 400 Lobes - 2 Spindle Machine for Lobe and Journal Grinding

**Total Part per Wheel =** 25,000 parts

## Summary and Added Application Benefits:

- Reduced Wheel Change Down Time
- 80-100% Increased Tool Life
- 50% Reduction in CPU
- Reduction to induced Part Burn



Wheel after 8,000 Lobes – 300X



Wheel after 8,000 Lobes – 10X



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