

**NORTON**

SAINT-GOBAIN®

**WINTER****CASE STUDY**Norton Winter Vitron<sup>7</sup>  
Vitrified cBN Wheels**VITRON<sup>7</sup>****APPLICATION: GRINDING V6 CRANKSHAFT MAIN JOURNAL****THE CUSTOMER'S CHALLENGE**

A major automotive manufacturer was looking to improve and optimize their grinding performance when grinding a crankshaft main journal while maintaining part finish and quality.

*INCUMBENT INFORMATION*

Wheels: 600 mm x 29.3 mm x 140 mm and  
600 mm x 36 mm x 140 mm  
Competitive Vitrified cBN wheel

**VS.***NORTON WINTER VITRON<sup>7</sup> INFORMATION*

Norton Wheels: 600 mm x 29.3 mm x 140 mm and  
600 mm x 36 mm x 140 mm  
Vitron<sup>7</sup> (Both Wheels)

*MACHINE TYPE:* Landis Dual Wheel CNC Grinder  
Twin Journal Crank Center  
Wheel Peripheral Speed: 78 m/s [2,476 RPM / 15,315 SFPM]

*COOLANT:* Water Sol. Oil (5%) – Central System

*COMPONENT:* Forged Steel Crankshaft – 6 Cylinder  
60 Rc / 0.85 Ra Max / 0.840 mm Stock Removal

**Norton Wheel Achievements**

The new Vitron<sup>7</sup> wheels showed an improvement in parts per dress while power and force remained stable and very similar before and after dressing.

When compared to the incumbent wheel the Vitron<sup>7</sup> wheels ran 8X more parts.

The average dress frequency between the two wheels was 640 parts per dress.

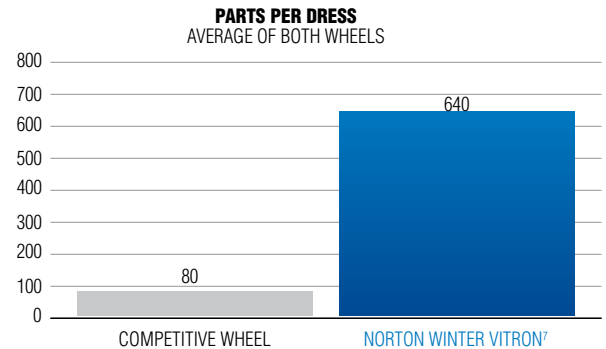
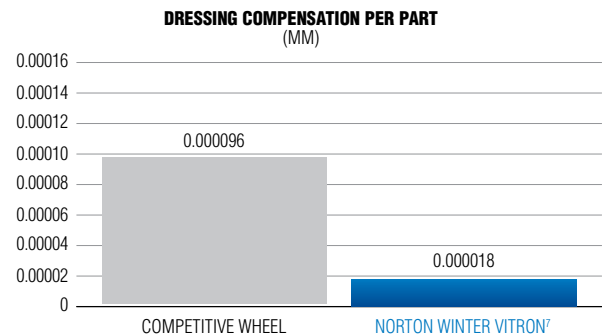
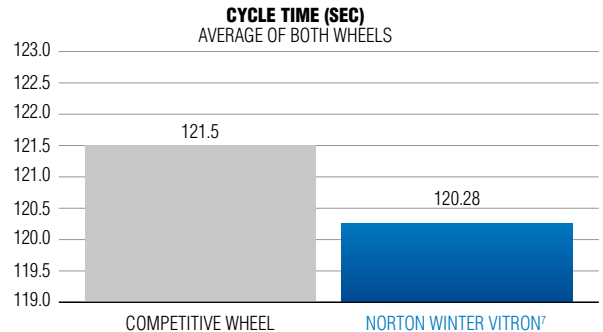
- Right hand wheel (Grinds 1 Journal) – 960 parts per dress
- Left hand wheel (Grinds 3 Journals) – 320 parts per dress

All parts passed residual stress testing and the average surface finish was 0.57 Ra.

The customer was impressed with the performance of the wheels and will be testing Vitron<sup>7</sup> wheels in additional applications and possibly at additional facilities.

**FORM #8823**

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