

Centerless Grinding
Vitrified CBN

Part: Engine Sleeve 5" Skirt diameter - 5.5" flange diameter and 11" O.A.L.

Part Tolerances: Roundness ± 0.00025 " tightest on flange diameter

Material: Cast Iron

Hardness: 40 - 52 Rc

Stock Removal: 0.010" on diameter

Wheel Specification: Wheel set 1pc. 24" x 1" x 12" 1pc. 24" x 8" x 12" Vitrified CBN (Maximxer)

Process (Before)

Conventional SiC Wheel

Wheel Speed: 5,000 S.F.P.M.

Work Speed: Regulating wheel rpm 100

Pieces per dress: 3

In-Feed per dress: 0.0004" 1 pass

In-Feed rate: 0.012" per minute - Dwell 22 sec.

Coolant: Synthetic

Total Cycle Time: 36 seconds

Process (After):

Vitrified CBN

Wheel Speed: 8,500 S.F.P.M.

Work Speed: Regulating rpm 100

Pieces per dress: 900+

In-Feed per dress: 0.0004" 1 pass

In-Feed rate: 0.019" per minute - Dwell 12 sec.

Coolant: Synthetic

Total Cycle Time: 20 seconds

Savings / Advantages: Production increase of nearly 2 times. Conventional SiC wheel lasted 7 days and change over took hours. CBN wheel lasted 9 months.