

# Engine Manufacturer Eliminates Scratches and Reduces Total Operating Cost of Cylinder Block Honing Operation by 33%

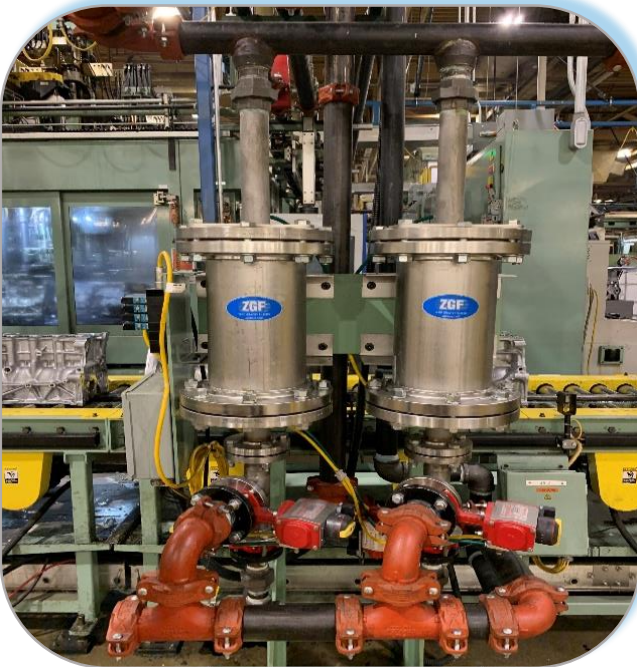
The Most Advanced, Automatic, Non-Disposable Liquid Filtration System



Metalworking / Honing



**Maggie MG2600 automatic, in-line magnetic separator protects engine block finish hone**



**Maggie MG2600, 2-Station automatic, in-line magnetic separator protects engine block rough hone**

## **Customer Challenge:**

A Japanese automotive manufacturer was incurring high operating costs at their engine plant due to quality issues in the cylinder block hone operation. They were getting scratches. It was determined that very small particles in the coolant were the root cause. These small particles also loaded/glazed the stones. In order to control the issue, frequent coolant and tooling changes were required. The frequent coolant dumps also resulted in excessive waste and CO<sub>2</sub> contribution which do not comply with the company's environmental stewardship guiding principles.

## **ZGF Solution:**

ZGF worked with plant engineering personnel to implement a solution. Small fines were passing through the existing vacuum drum filtration system and accumulating in the coolant and loading the honing stones. It was determined that improving filtration would eliminate these small fines (< 5 $\mu$ ) that were the source of the problem. ZGF provided individual Maggie magnetic separators on each hone. The Maggie has the capability to remove most magnetic particles 5 micron and larger, as well as particles as small as 1 micron without removing/depleting any components from the coolant.

## **Results:**

1. Eliminated scratches.
2. Extended life of honing stones reducing tooling expenditures.
3. Reduced dump/recharge frequency and annual cost for coolant & cleaning services.
4. Reduced waste disposal & CO<sub>2</sub> contribution
5. **Improved part quality and reduced hone operation costs by 33%**