



## THE SITUATION

**INDUSTRY:** Transportation

**MACHINE:** Mazak Horizontal Machining Center

**CONTROL:** Mazatrol Matrix Nexus 2

**MATERIAL:** Compact Graphite Iron

A customer is machining compacted graphite iron engine block components. They have two large identical Mazak horizontal machining centers running the same part and process. Both machines are running 6 parts per shift.



**41% CYCLE TIME SAVINGS**

SERIES #: J6120  
PRODUCT:  
**TMAC**

## THE SOLUTION

The customer implemented Caron Engineering's TMAC MP system on one of the two identical Maza machining centers. The machine running TMAC MP saw an immediate cycle time reduction of 25% using the adaptive control option. Adaptive control automatically adjusts the feed rate based on the materia conditions to optimize cutting time.

In addition, the operators were performing multiple critical checks throughout the process. With TMAC, these manual checks were no longer needed since TMAC runs these checks in real time. TMAC automatically calls a redundant tool when it detects excessive tool wear, allowing the machine to run unattended. By eliminating these manual checks and gaining the ability to run the machine unattended, cycle time on this part was reduced by an additional 16%.

The implementation of TMAC MP on this machine resulted in a total cycle time savings of 41%. They are now producing 10.2 parts per shift, compared to only 6 on the identical Mazak without TMAC. This customer is now ordering nine more TMAC systems.

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