# Application Notes

**DATRON DYNAMICS, INC.**
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**Part:** ..... Lug-nut key pattern

**Material:** ..... Leaded Steel Cylinder

**Machine Used:** ..... M8 Raptor

**Features Utilized:** ..... High Frequency Spindle & Automatic Tool Length Measurement

**Software Used:** ..... G-Code Supplied by Customer

**Total Cycle Time:** ..... 4.5 seconds

**Machining Details:**

.085" dia. end mill supplied by customer
30,000 rpm at 40 i.p.m.
.120" machining depth in one pass
coolant: Bath of Kool Mist - Formula #77
total machining time: 4.5 seconds
spindle wind-up: 7 seconds
spindle wind-down: 7 seconds

**Summary of the Application:**

We are able to offer the customer an excellent solution by utilizing our high frequency spindle and large working volume for batch production. The compact Datron machine offers a large work area which can allow the configuration of a dual pallet system (eliminating any cycle stops) while still maintaining significant part volumes per pallet. The steel part was machined without any burring demonstrating our machine stability and quality of spindle. Datron offers multiple I/O interfaces for any automated pallet changing systems that might be required by the customer. Optional spindle current analyzers for tool breakage detection is also available for optimizing cycle times in case of tool breakage. In conclusion, the Datron machine offers a competitive alternative machining solution with the capabilities of offering customized turn-key solutions to meet the needs of the customer.

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