



Four Cycle Opposed Piston Engine

AEV Design Proposal

Engineering Computer Systems

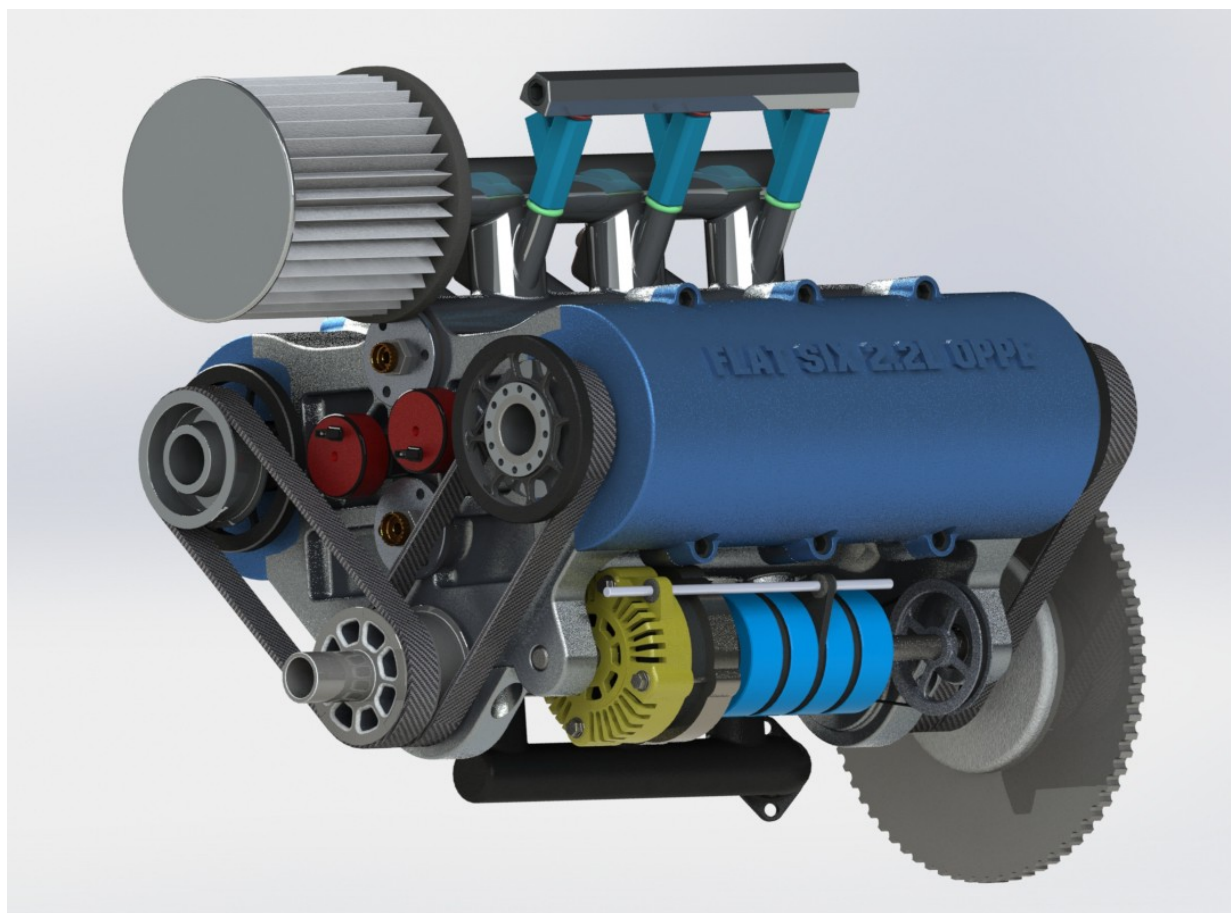
1149 N. Geyer Rd. Kirkwood, MO 63122 (314) 966-8313 edco@ecs-innovation.us

Project: Proposal for AEV application to opposed piston engine architecture.
Reference: USPTO Application Number 63322518
Date: November 15, 2022
Prepared for: Website presentation

This proposal is a three cylinder opposed piston engine with 75 mm bore and 84 mm stroke. It is naturally aspirated and readily adaptable to turbocharging. As designed in 3D CAD it boasts a weight of 150 pounds. Extrapolating performance data from real time power this example could develop 260 horsepower and 320 pound feet of torque in it's NA EFI configuration. In a midsize passenger vehicle it would outperform it's class in fuel economy and emissions measure. The AEV actualizes opposed piston architecture in a traditional package for universal adoption. The example drawn is eighteen inches wide crank cover to cover and twenty inches deep pulley to flywheel. Height is nominally eighteen inches, excluding the flywheel and air filter.

Section 1. Assembly

Opposed Piston Engine / Four Cycle / Three Cylinder / Gas EFI / Natural Aspiration





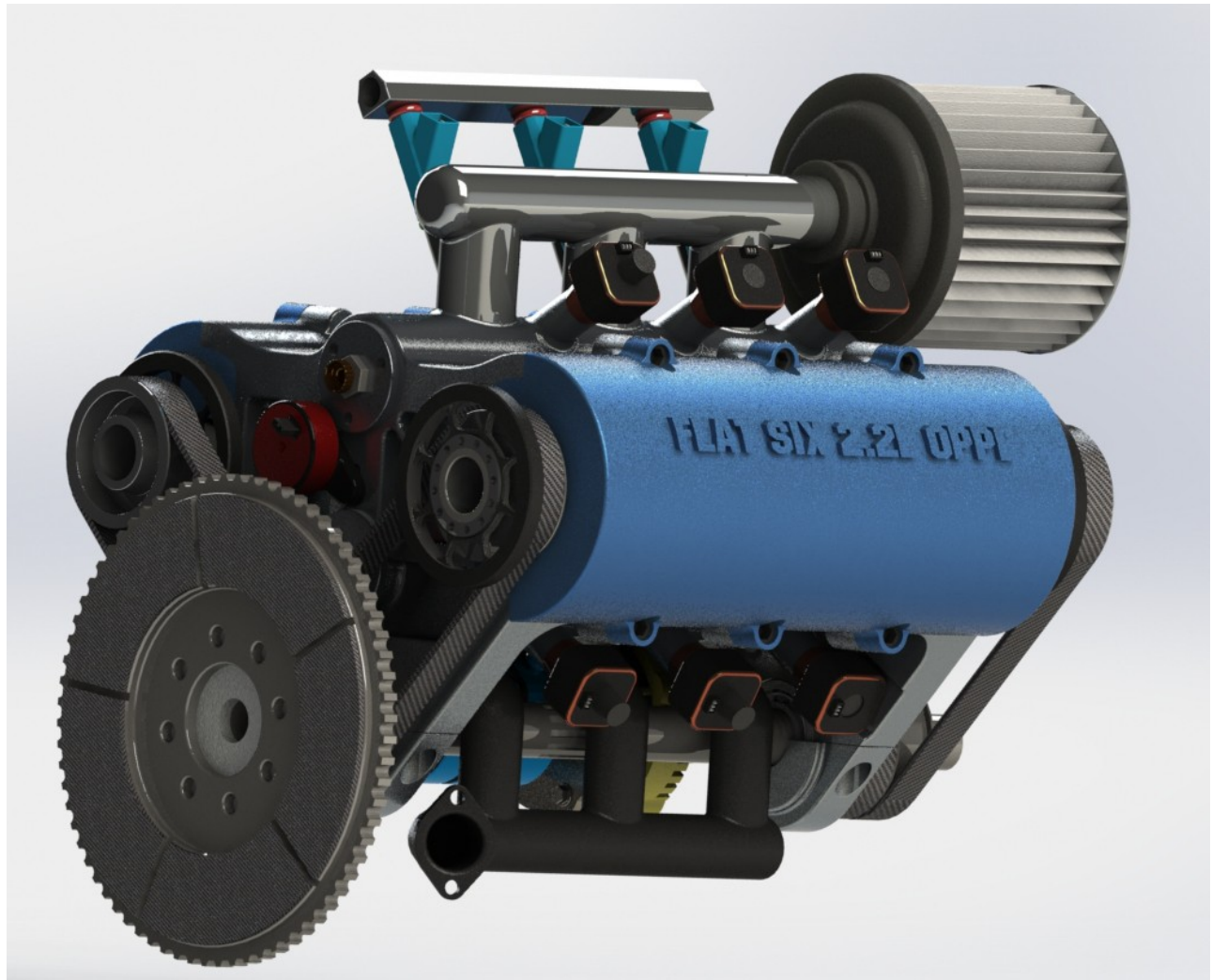
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All graphics are hi-res, over zoom to study detail.



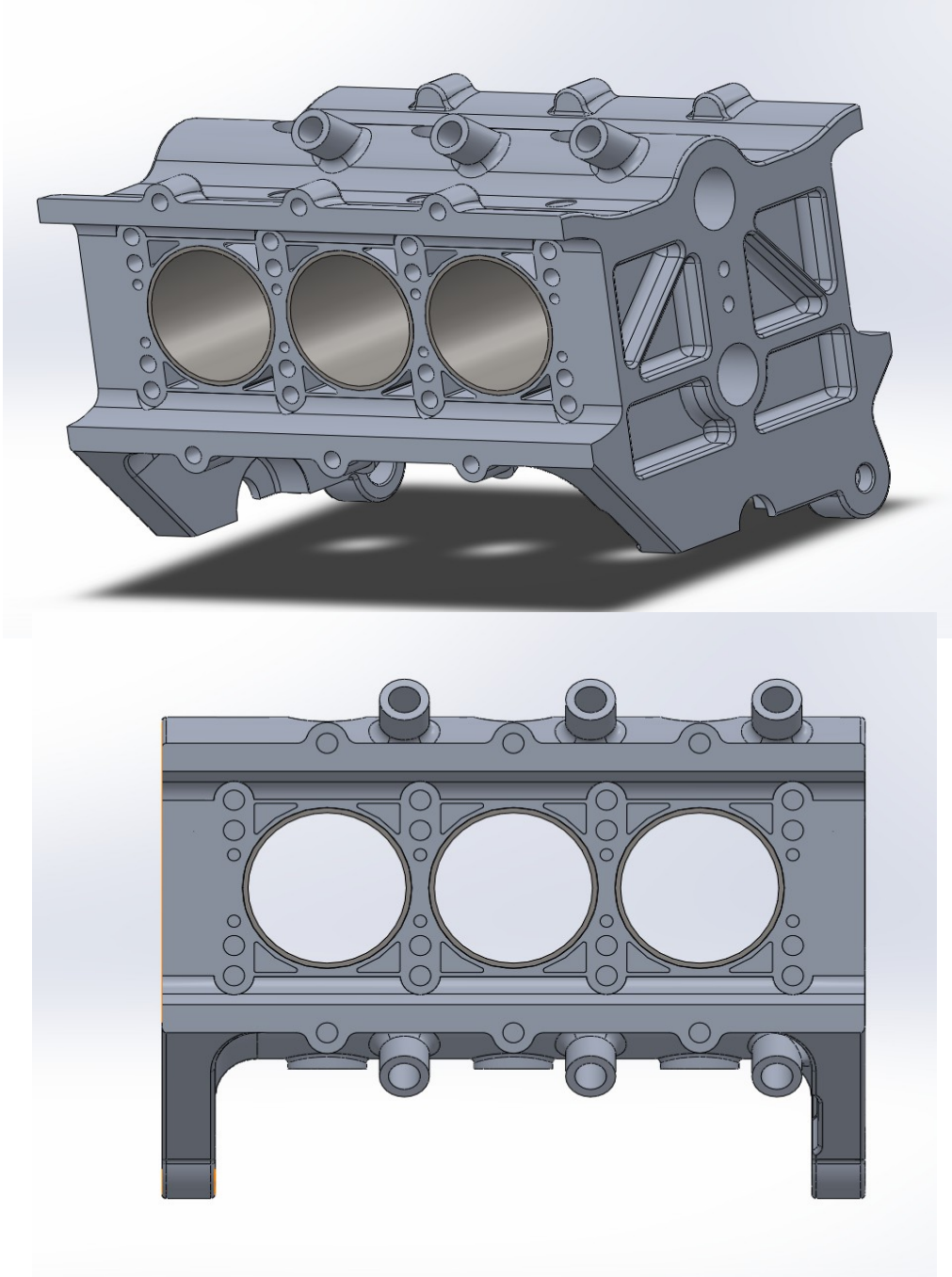


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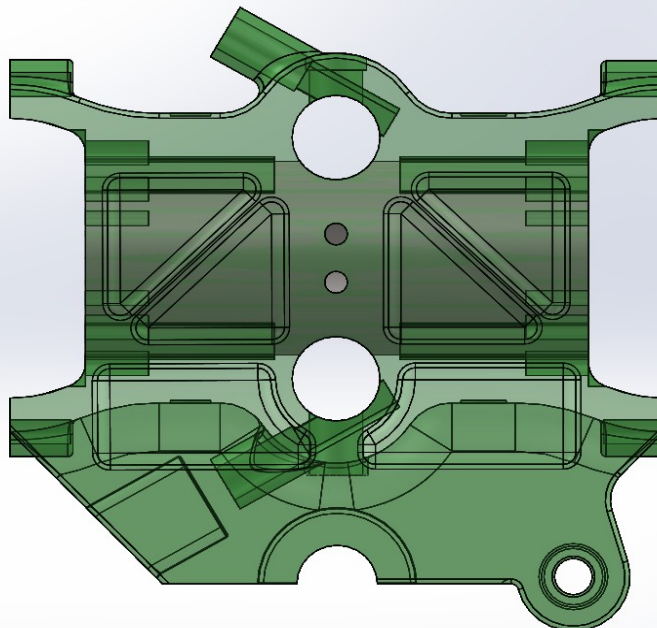
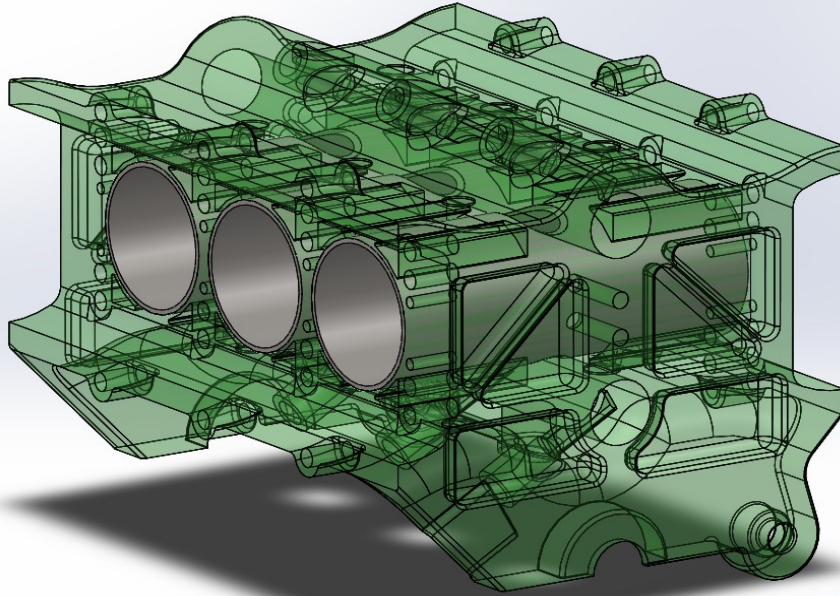


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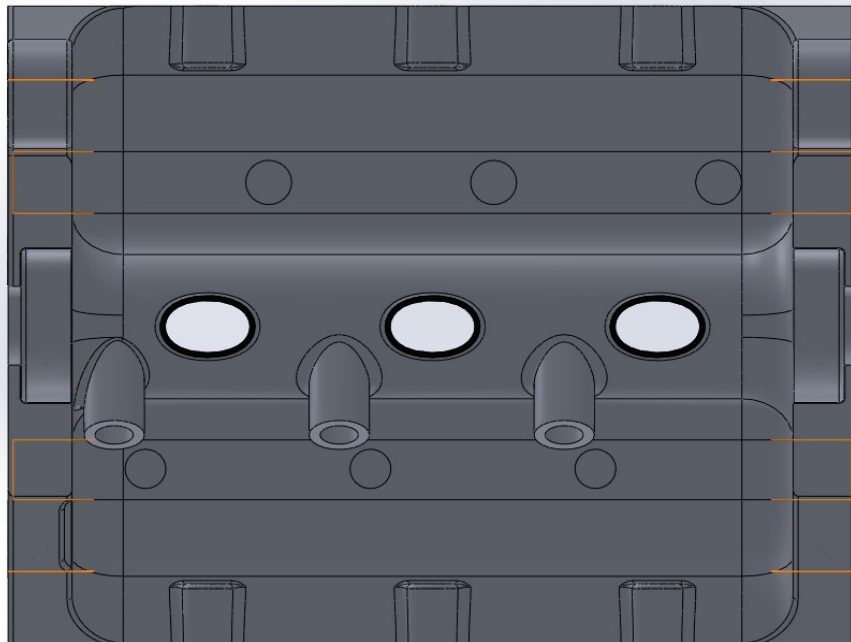
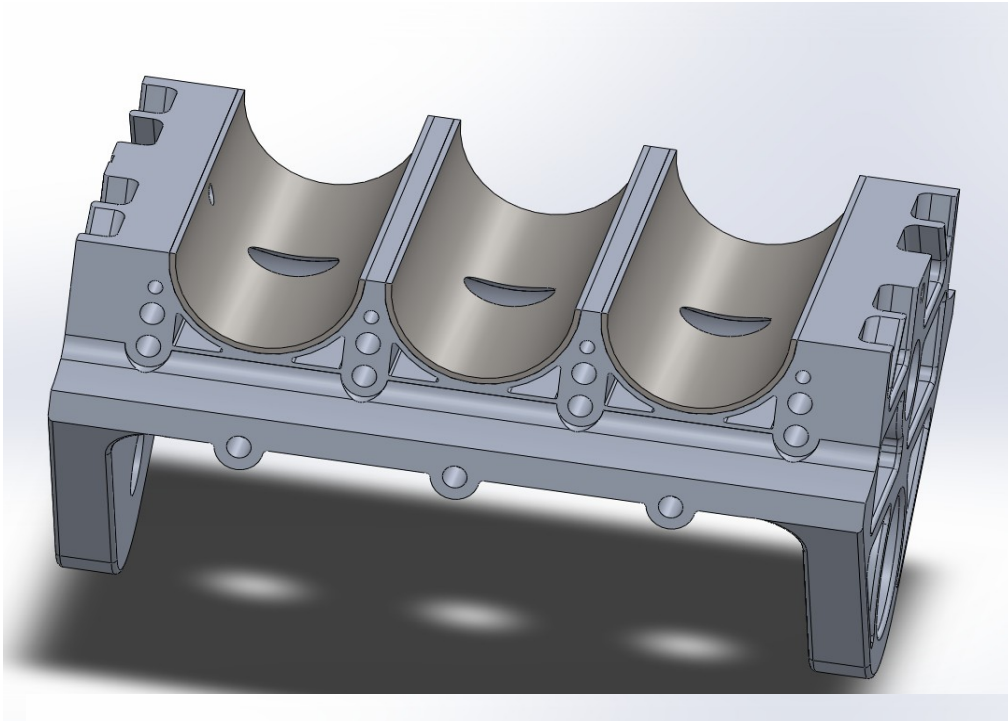


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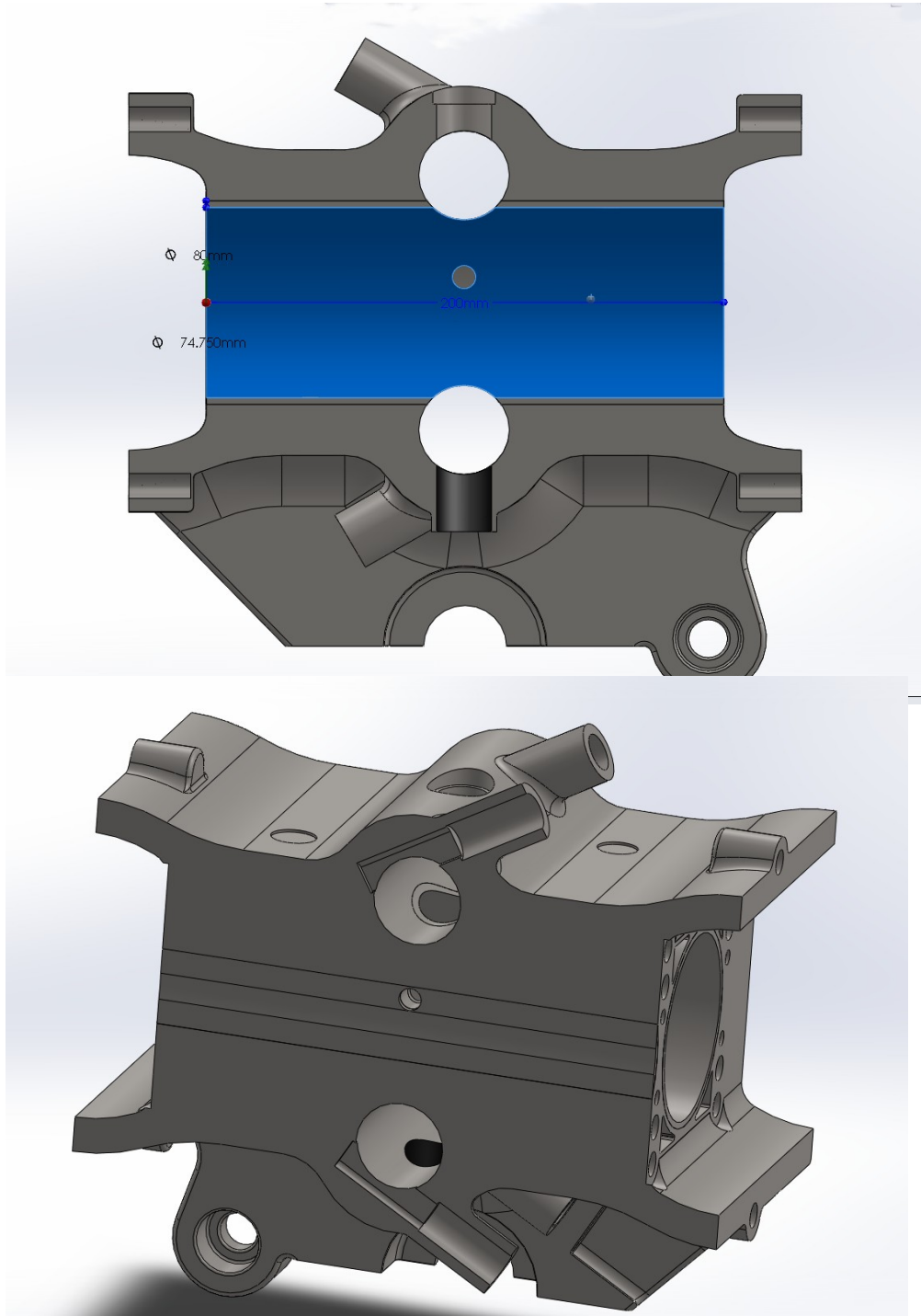


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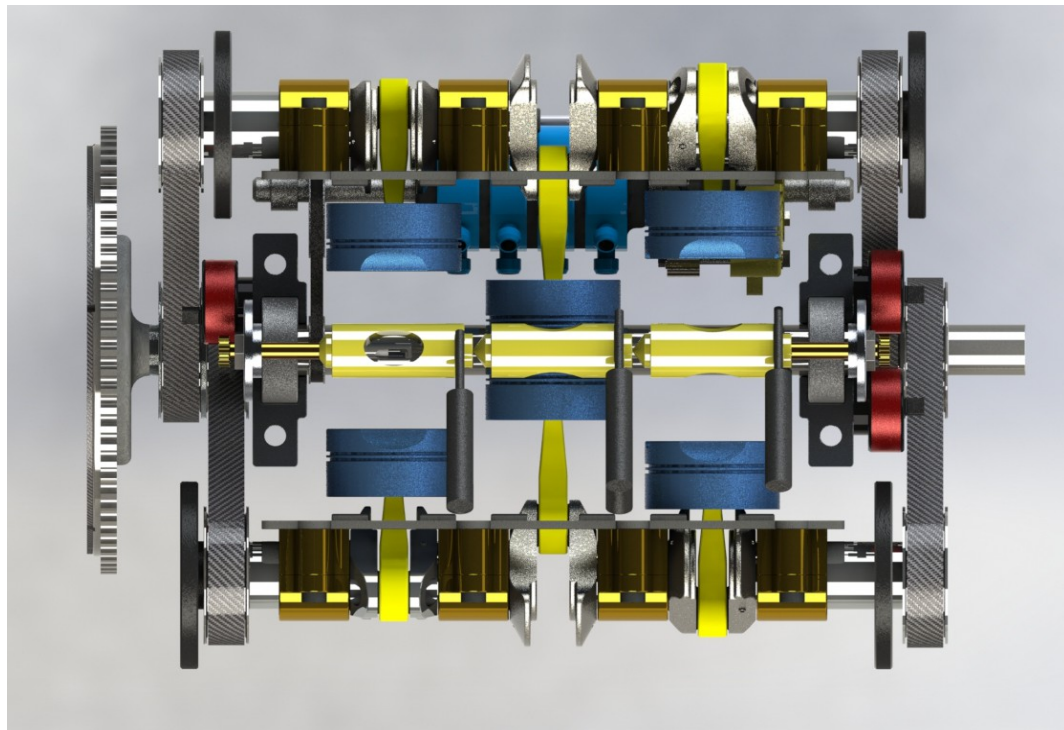
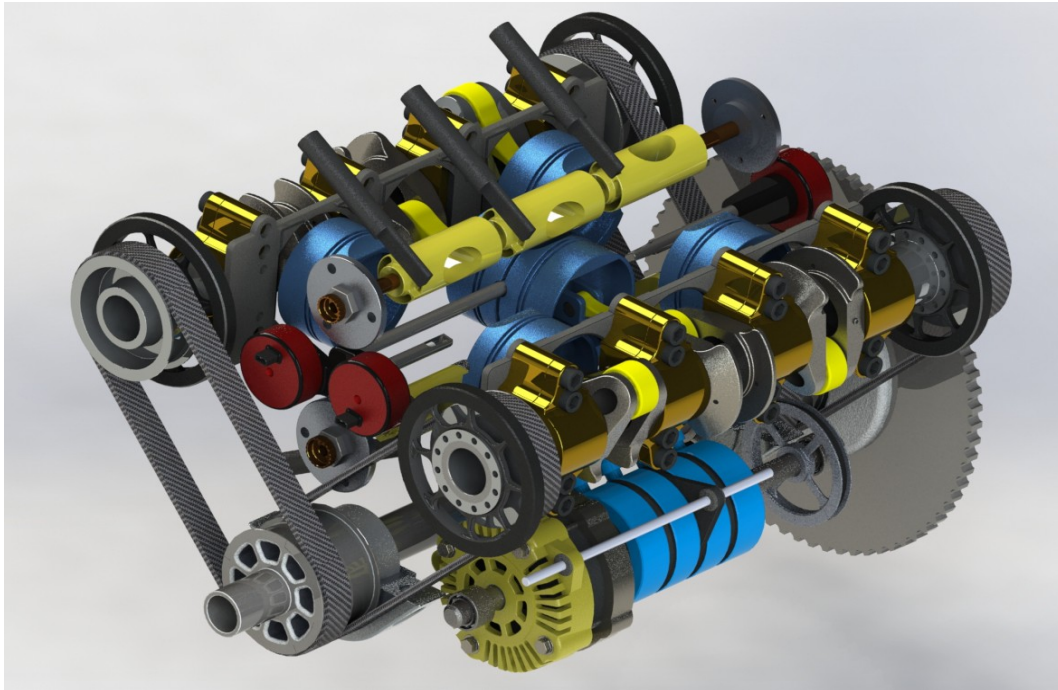


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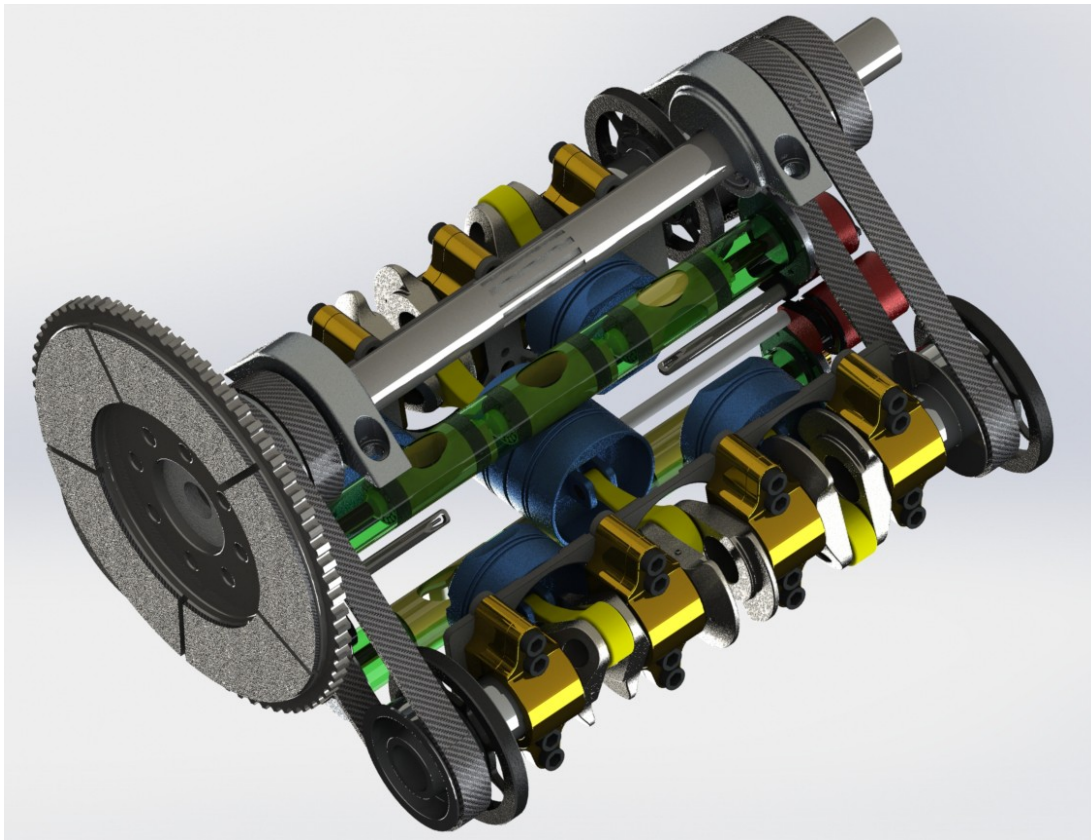
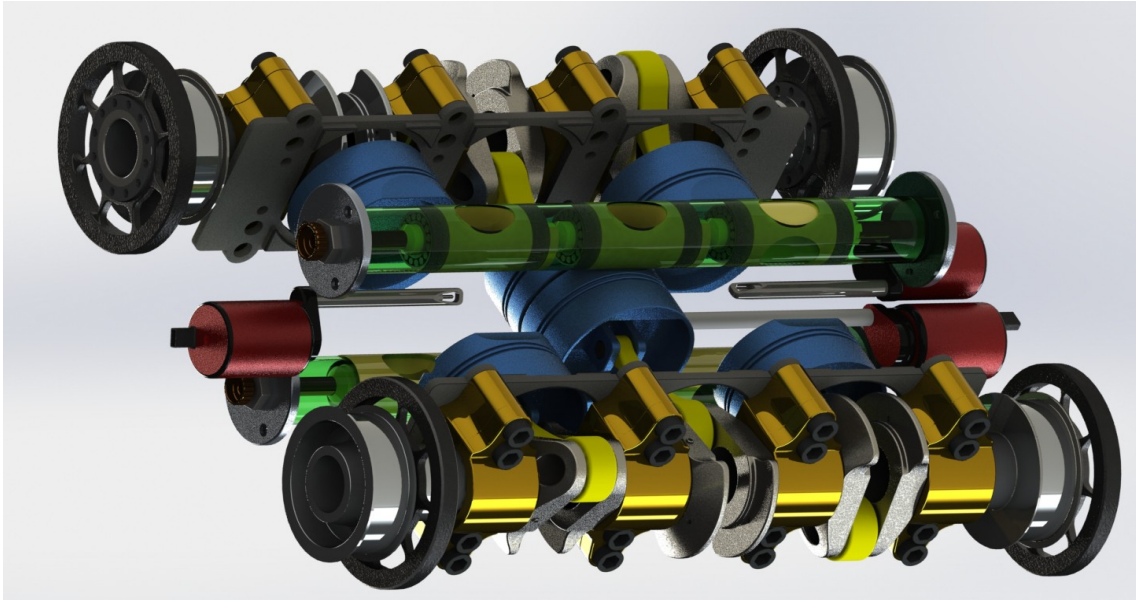


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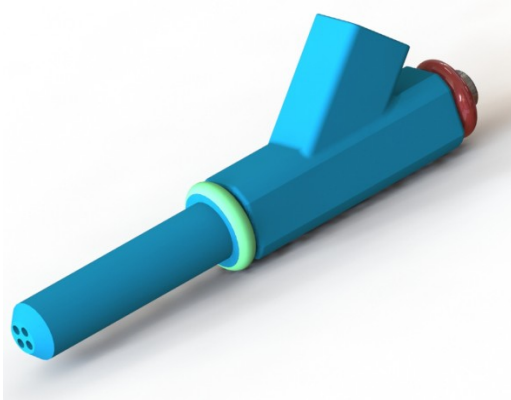
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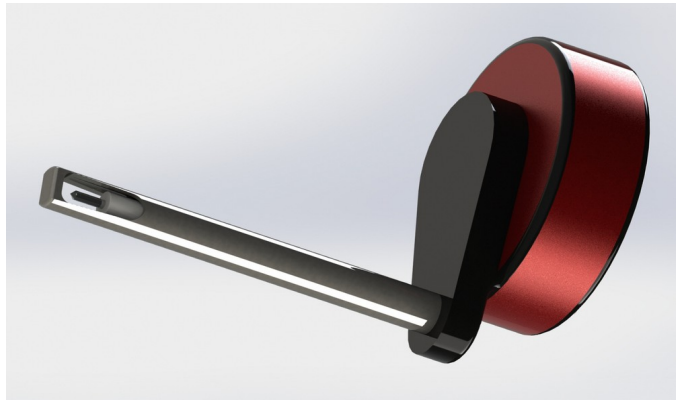
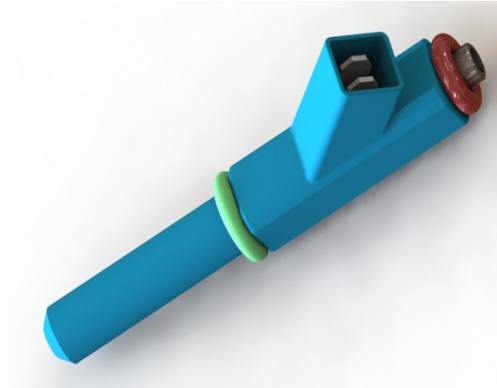
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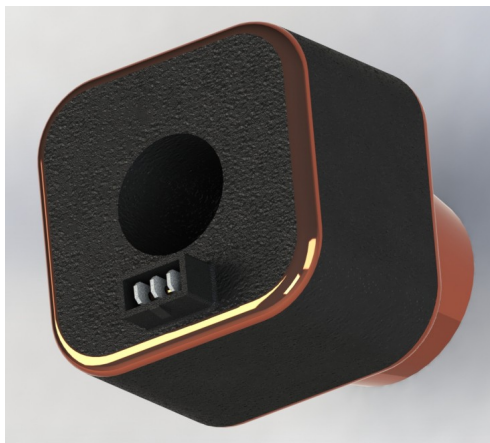
Section 2. Components



EFI



Coil On Plug Igniter



Voice Coil Actuator - valve driver

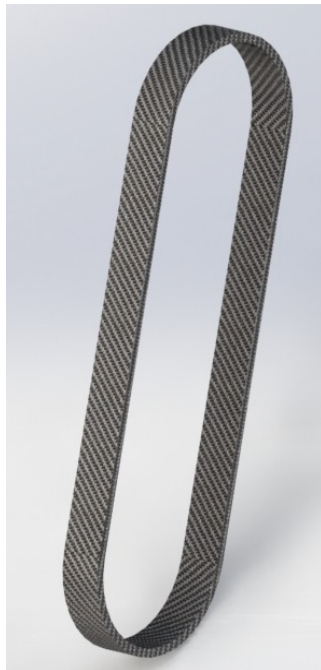
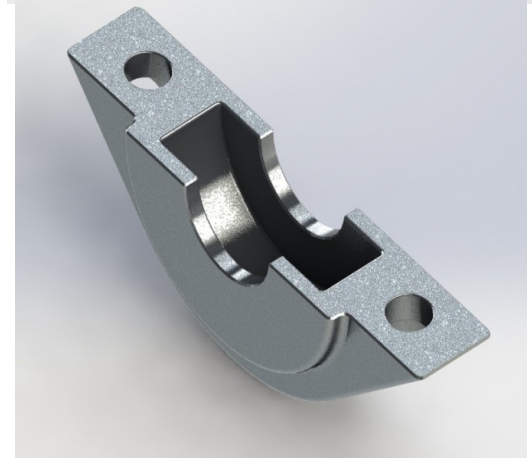
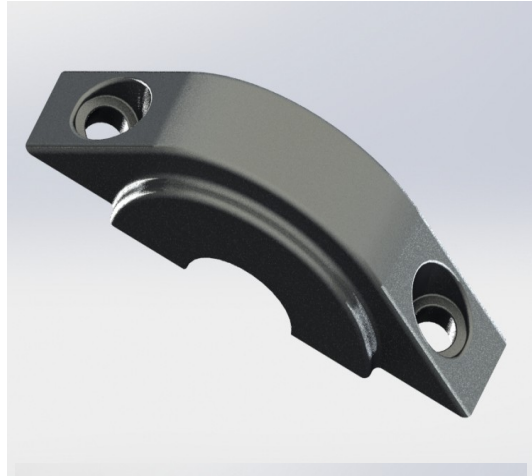
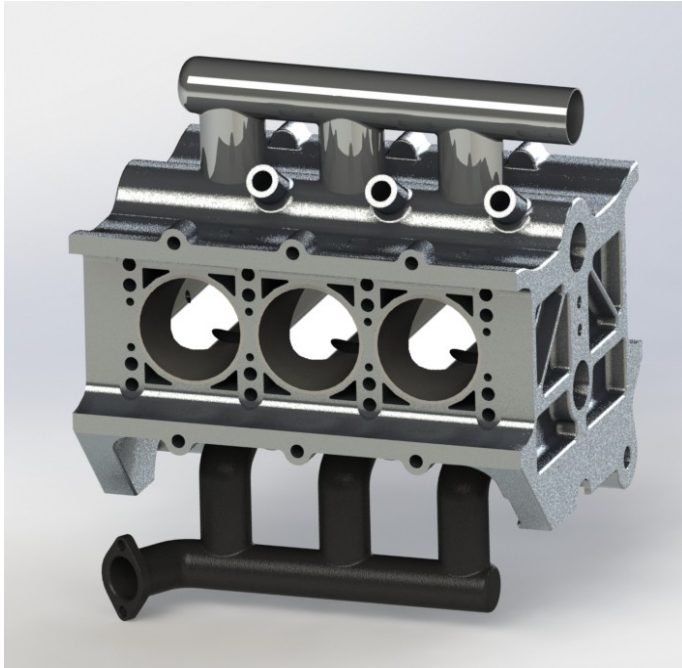


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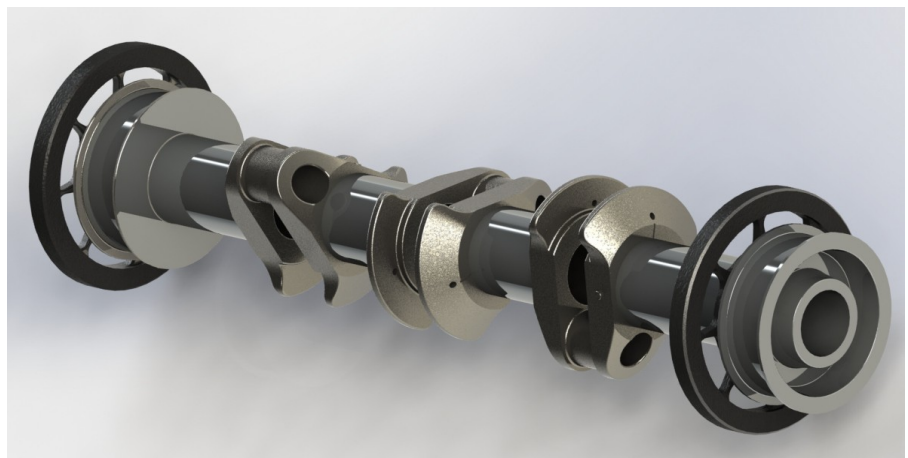
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Continental Synchrochain
carbon fiber timing belt



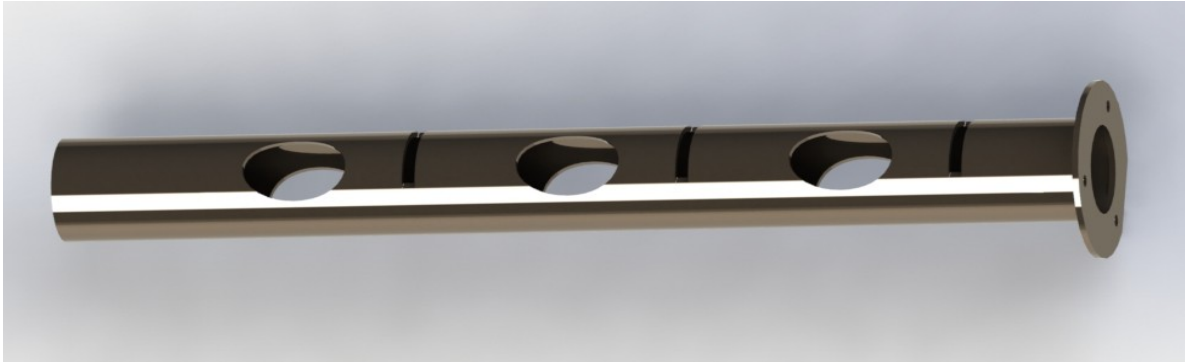


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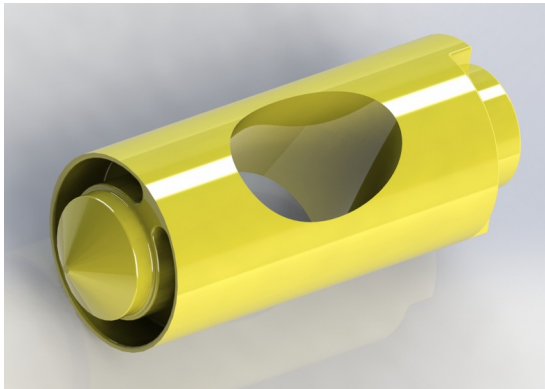
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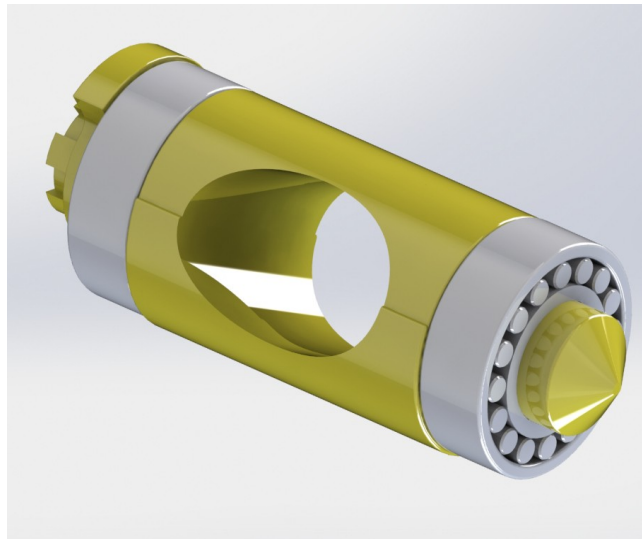
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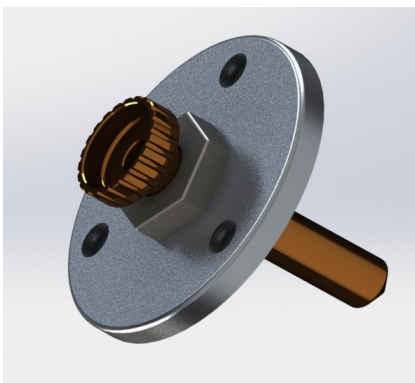
Polished duranickle valve sleeve



Intake AEV



Exhaust AEV, relief on backside



Adjustable micro-setter for AEV alignment



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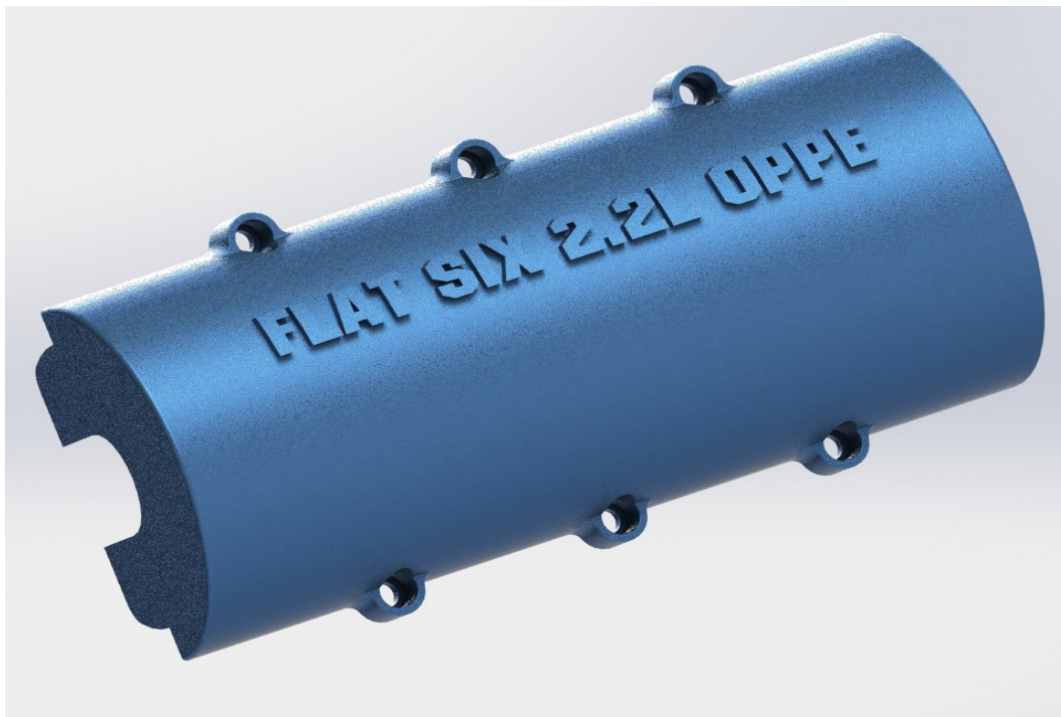
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Mastershaft.



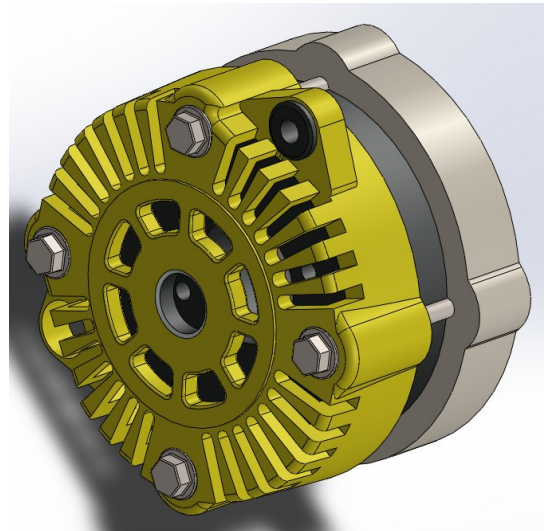
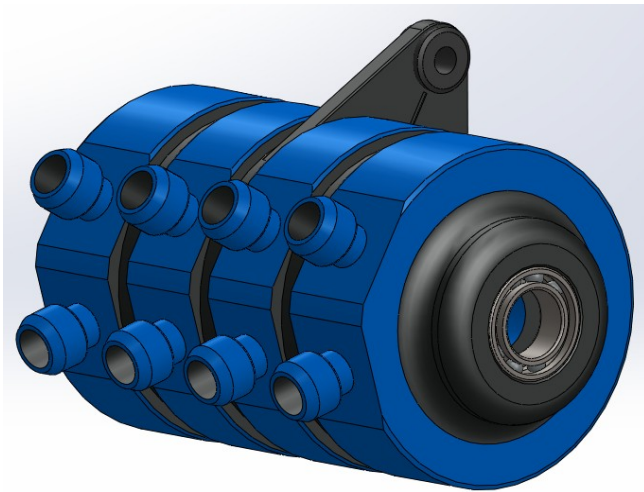
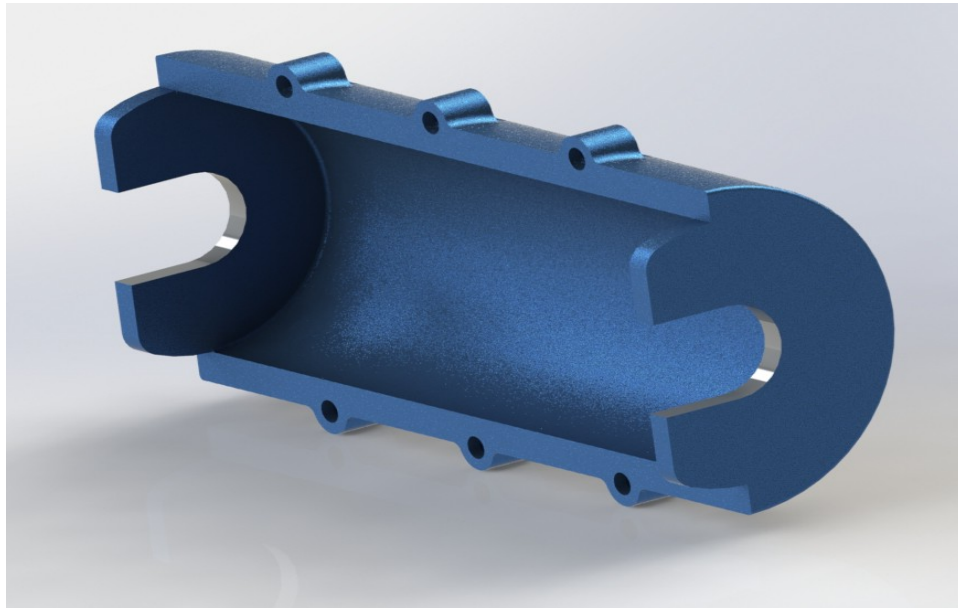


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Splined shaft driven accessories, 4 stage dry sump and alternator.

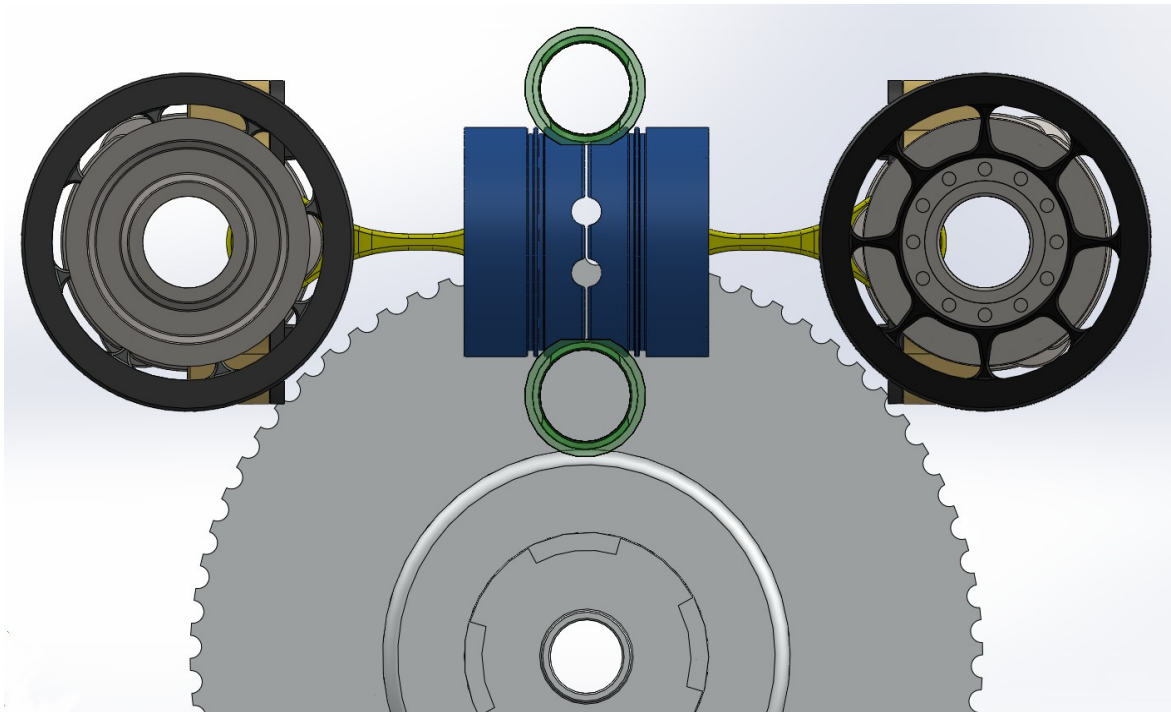
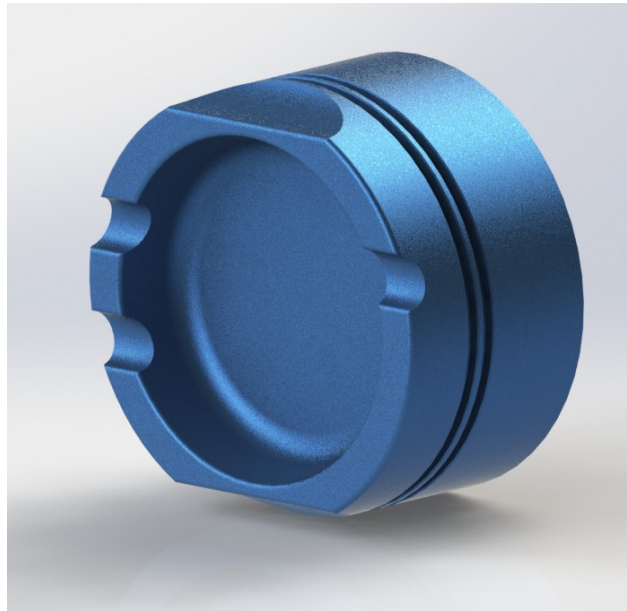


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Bonus Material Four Cylinder OPPE-Military-Industrial

