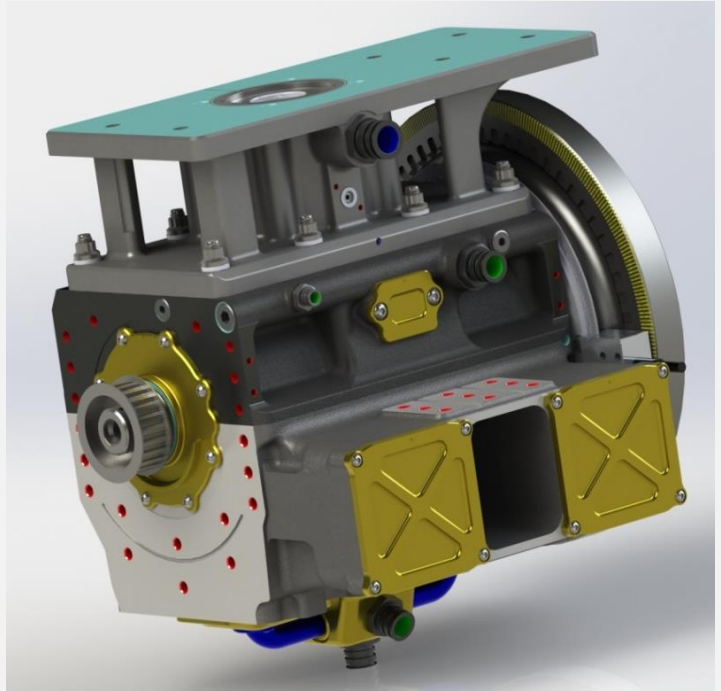


Single Cylinder Research Engine SC1

- 100% **fully balanced** primary and secondary forces. RPM **not limited** by balance mechanism.
- Balance forces resolved thru crank rather than block, less friction.
- Can use **stock** inline 4-cyl heads (firing cyl. #2) and their cam drives as well as **custom single** head.
- Lots of **sensor access**
- Features and **big cost advantage** compared to competition, and a \$/benefit ratio that makes DIY singles look unwise.



Specs	
Bore/Stroke Range	65 ->107mm
Peak Cylinder Pres.	300 bar
Max RPM	Piston, rings, and valve-train dependent, typ. < 9250
Weight/Materials	330lbs (150kg), ductile iron, 4130, 4340, 9510
Block Construction	Layered horizontally split, o-ringed
Mains/Studs	4x (1" thick) mains, 16x 12mm alloy studs
Main/Rod Journals	Conventionally split bearings, coated, 70/ 60mm
Cooling	Separate head and bore water cooling
Oiling	External pump, dry-sump crankcase

SC1 cutaway

Cylinder Head Adapter

Adjustable deck hts
and bore-crank offsets
Long version can hold 4
cyl heads firing cyl #2

Sensor Access,

BDC pegging sensor
shown, 4 flat water
cooled sides
available

AVL 365x shaft encoder mount

60-2 tooth
ECU crank trigger

WetLiner, CFD'd cooling optimized
Gas Oring Combustion Seal

Piston topLand
BDC IR temp location

LowerEnd Access

2 sides, 1
bottom; for
telemetry, extra
piston oiling etc.

Misc. Mount

Monster Girdle, 95lb
ductile iron ,4x 1" mains,
16x 12mm main studs

Billet alloy rod,
journal 60mm

Billet alloy crank
Superfinished, 360 deg
rod oiling, 70mm mains

Balance mechanism, 100%
primary and secondary, easy
wt. change from below,
forces resolved thru crank

Notes

- Replacement parts easily available, GM/Chrysler main/rod bearings, LSX rear seal..
- Racing influences,
 - Billet alloy center drilled rod, billet cryo'd alloy super-finished crank,..
 - Coatings; rings PVD, pins DLC, bearings graphite-moly
 - Quick disconnect AN plumbing connections
- All oil/water/electric/fuel ancillaries are remote
 - No parasitic losses of ancillaries (and their variances) affecting brake data
 - Initial warm ups can happen without engine rotation
- Dry sump gives:
 - Tighter control of oil temp than conventional wet sumps
 - Lowered windage losses, further reducing parasitic losses