

PROJECT

## SMM

# Power Density improvement demonstrated on a certified engine

**Funding:** European (Horizon 2020)

**Duration:** Jan 2016 - Nov 2017

**Status:** Complete

**Total project cost:** €825,358

**EU contribution:** €500,000



**Call for proposal:** H2020-CS2-CFP01-2014-01

[CORDIS RCN : 199473](#)

### Objectives:

SMA currently manufacture a 4 cylinder air cooled diesel engine. It will render this product more competitive in the market place if it has a higher power output (+20%) and is lighter (10%). This proposal by Ilmor Engineering Ltd presents a program of work to achieve these objectives.

It is proposed to use start of the art analysis techniques and invent solutions for:-

- a. Cooling the cylinder head.
- b. Improved strength coupled with simplified assembly and manufacturing of the crankcase.
- c. Improved layout of the engine with regard to the turbocharger position.

### Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

**Institute type:** Public institution

**Institute name:** European Commission

**Funding type:** Public (EU)

### Lead Organisation:

**Ilmor Engineering Limited**

**Address:**

QUARRY ROAD  
BRIXWORTH NORTHAMPTONSHIRE  
NN6 9UB  
United Kingdom

**EU Contribution:** €500,000

### Technologies:

Road vehicle propulsion  
Tyre materials and mixing processes

**Development phase:** Research/Invention

**STRIA Roadmaps:** Vehicle design and manufacturing

**Transport mode:** Road transport

**Transport sectors:** Passenger transport

**Geo-spatial type:** Other