Christopher Shorrock explains....

"SHORROCK POWER is the name we have given to the dramatically improved performance which you will achieve simply by bolting a Shorrock Supercharger to a modern motor engine.

The function of the Shorrock Supercharger is to feed each cylinder under pressure with at least a third more fuel mixture than normal. We thus achieve a similar percentage increase in effective engine capacity; for example, a 1500 c.c. engine effectively becomes a 2000 c.c. unit.

Performance tuning usually achieves extra power at the cost of higher engine r.p.m. A Shorrock Supercharged engine, on the other hand, can develop up to 50% more power than the standard motor *without an increase in r.p.m.*."

...and answers some questions from everyday motorists

Does supercharging impair the basic engine? *"On the contrary, extensive testing and over twenty years of experience prove that Shorrock superchargers not only increase thermal efficiency, but also reduce engine wear. This is because all cylinders operate with a mixture of equal strength. This distribution gives longer life to the engine and prevents local mixture reduction to any one cylinder. Furthermore, a common cause of bore wear is inadequate lubrication on cold starting. On starting, the Shorrock distributes to all cylinders the surplus oil which has collected in the supercharger casing, thus providing extra upper cylinder lubrication when it is most needed.*

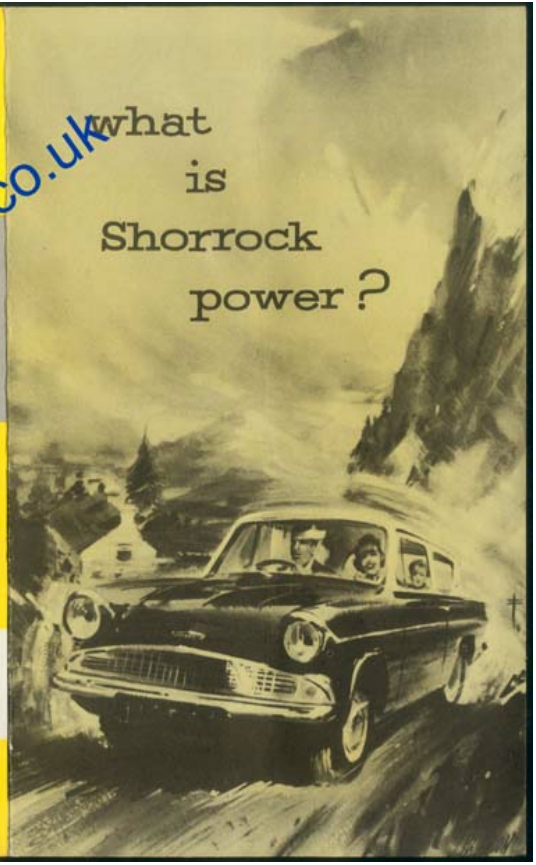
What modifications will have to be made to my engine? *"None! Most cars have sufficient space under the bonnet to take the Shorrock. The complete installation can be carried out by a competent owner-driver or appointed Shorrock stockist. The cost of 'sports-type' sparking plugs is the only 'extra'. When you change your car, your Shorrock can be transferred, providing the engines are of reasonably similar capacity."*

CHAPEL-ALLERTON MOTORS LTD.
194, HARROGATE ROAD,
TEL. 684020. LEEDS, 7.

ALLARD

THE ALLARD MOTOR COMPANY
24 CLAPHAM HIGH STREET, LONDON, SW4
Telephone: MACaulay 3201
World distributors for all SHORROCK Superchargers

what is Shorrock power?



PRINCIPLES OF THE SHORROCK SUPERCHARGER

WHAT IT DOES

The function of a supercharger is to allow a larger quantity, by weight of petrol-air mixture, to be fed to the engine than could be induced in the normal way.

With the SHORROCK-Supercharged engine operating at a maximum boost pressure of 7 lb./sq. in., air is drawn through the carburettor into a compressor, the capacity of which is so arranged that it draws a volume of air equal to the FULL SWEPT VOLUME (or capacity) of the engine PLUS ONE-THIRD. The power output is increased proportionately, i.e. 33% at least. Thus an engine of 1500 c.c. capacity supercharged at a pressure of 5 lb./sq. in. has the same effective capacity as an engine of 2000 c.c..

Pressure charging has not been more universally adopted in the past as it is only comparatively recently that a compressor has been designed to meet the requirements of the modern car in that the compressor should be quiet in operation and as reliable as any other part of the engine.

The Shorrock supercharger, with many exclusive features in its design, is eminently suitable for pressure-charging the normal car in addition to the supercharging of racing cars, having been proved in both spheres to be a unit of remarkable efficiency.

HOW IT WORKS

The Shorrock Supercharger is a positive displacement eccentric-drum-type compressor employing four vanes. The vanes are impelled by the internal rotor which is mounted eccentrically to the outer casing and through which the vanes pass. This construction makes practical the very fine clearances necessary for high efficiencies, since the vanes being mounted radially to the casing and anchored by the vane shaft cannot come into direct contact with the casing and can be run at very high speeds entirely without friction.

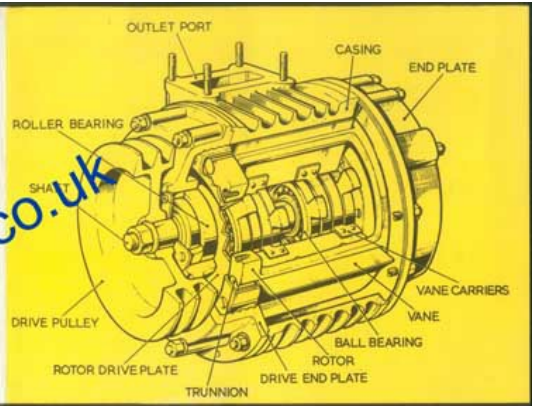
The four vanes passing through the rotor virtually sub-divide the crescent-shaped chamber into four separate chambers. The inlet port of the supercharger is so positioned that as one of the chambers receives its full volume of air, the adjacent chamber (on the inlet side of the unit) is increasing in volume and creating a vacuum at the inlet port.

Immediately the vanes have reached the position where the chamber between them contains the maximum volume, the volume between the vanes diminishes as the space between the rotor and the casing becomes less, thus compressing the charge within the supercharger itself before releasing it through the outlet port into the engine manifold.

Lubrication is fully automatic and only a very small quantity of lubricant is required for the supercharger to function with complete reliability.

The supercharger is preferably mounted on the [illegible] manifold side of the engine and driven by vee-belts from the front end of the crankshaft.

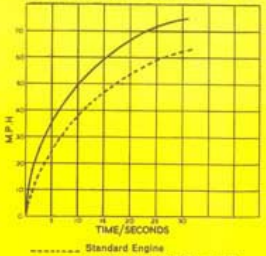
For competition work, it is sometimes [illegible] the back axle ratio to get maximum benefit but in the overwhelming majority of cases, no modification to any part of the car will be found necessary.



*** OVER 50% MORE POWER * SPIRITED ACCELERATION * BRISKER THROUGH THE GEARS * SPARKLING TOP GEAR PERFORMANCE * FEWER GEAR CHANGES * TAKE HILLS IN TOP * HIGHER MAX. SPEED ***

COMPARATIVE PERFORMANCE FIGURES

BMC 850 'A' SERIES ENGINE
(As fitted to Mini-Minor and Austin 7)
ACCELERATION THROUGH THE GEARS



Standard Engine
SHORROCK SUPERCHARGED

MAXIMUM SPEEDS
Standard Engine 70 m.p.h.
SHORROCK SUPERCHARGED 85 m.p.h.

BMC 950 'A' SERIES ENGINE
(As fitted to Morris Minor 1000)
ACCELERATION THROUGH THE GEARS

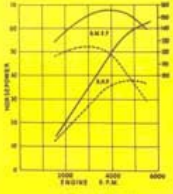
Standard Engine
SHORROCK SUPERCHARGED

MAXIMUM SPEEDS
Standard Engine 72·4 m.p.h.
SHORROCK SUPERCHARGED 86 m.p.h.

FORD ANGLIA 105E ENGINE

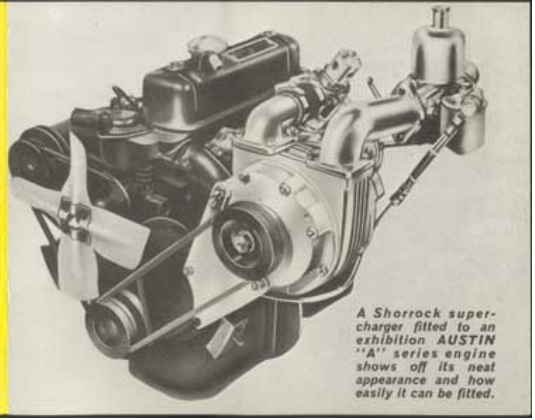
ACCELERATION THROUGH THE GEARS

POWER CURVES



Standard Engine
SHORROCK SUPERCHARGED

MAXIMUM SPEEDS
Standard Engine 73·8 m.p.h.
SHORROCK SUPERCHARGED 91·4 m.p.h.



A Shorrock supercharger fitted to an exhibition AUSTIN "A" series engine shows off its neat appearance and how easily it can be fitted.