

Autocavan

AUTOCAVAN is probably the best known and longest established name associated with VW tuning in the U.K. Geoff Thomas formed the company in 1968 and Autocavan became the first tuning firm to offer a wide range of American-produced performance parts to British Beetle enthusiasts, including 2 litre-plus air-cooled engine conversions and off-road racing equipment. Since the early 1970's Autocavan 2.1 and 2.2 litre Beetles have been used in autocross, autotests, and rallying, perhaps the most successful being Peter Harrold's 2074 cc autocross Beetle. In 1974 Autocavan produced the first 2.3 litre Beetle engine in the U.K. and both Peter Harrold and Geoff Thomas himself competed successfully in rallycross in big engined Beetles.

Autocavan expanded their range of tuning products to include water-cooled models and in 1976 developed the first 1800 cc Golf in Britain. Geoff is actively involved in motorsport and is regularly racing his 1800 cc Golf in the Cars & Car Conversions Modified Saloons series. In 1982 he scored two outright race wins, beating 3 litre Ford Capris and 3.5 litre Rovers!

As an experiment Geoff once fitted the Golf with a Rayjay turbo, giving 11 psi boost, plus a Weber twin choke carb. It broke the rolling road, giving 190 bhp at the wheels and still increasing!!

Autocavan's experience includes many special projects such as modifying VW engines for use in aircraft, fitting a 2.7 litre twin Webered air cooled engine in a Type 2 Van, modifying Porsche engines for racing, and enlarging the Golf to 1900 cc. Autocavan have also been involved in sponsoring the Formula Vee racing championship.

A large proportion of their business has always been the supply of competitively priced standard parts and accessories (by mail order), and in recent years this has grown such that they now have a network of distributors throughout England, Wales, and N. Ireland.



Geoff Thomas demonstrates Autocavan's tuning products by racing this 1800 cc Golf in the Triple C Modified Saloon Championship.

The headquarters at 103 Lower Weybourne Lane, Badshot Lea, Farnham, Surrey includes the main warehouse plus a workshop equipped to do most types of machining, welding, flow testing of cylinder heads, and other engineering work.

Autocavan are the U.K. distributors for the Scat range of performance products, which are manufactured by Scat Enterprises, Inc, at Redondo Beach, California. The Scat catalogue covers the total spectrum of parts for building an air-cooled race engine, whether for the drag strip or off-road racing. The catalogue starts with a specially designed crankcase, no less. This Scat Supercase is computer machined from a high strength aluminium casting and incorporates chrome-moly through bolts, cast-in baffles, increased bearing area, enlarged oilways, and will accommodate up to 94 mm bore cylinders and 88 mm stroke crankshaft. It is guaranteed not to break!

Scat also manufacture 'Volkstroker Pro-Comp' forged crankshafts, ultra lightweight stainless steel con-rods, and a wide selection of cams from the 'street bug or bus' up to the 'pro-drag' spec designed for 8500 rpm.

Dry sump oil systems, all types of Weber carbs and manifolds from the econo DVEG through to the full race 48 IDA, numerous exhaust systems (some galvanised), competition clutches, heavy duty trans parts, sumpguards, cable shorten-

ing kits for buggies, and customising parts like walnut dash panels — they're all available from Scat.

Autocavan's big bore conversions (which use NPR cylinders and pistons) are a popular method of rejuvenating a worn Beetle (or Type 2 or Type 3) engine and increasing the power without too much expense. A simple fitment of 83 mm barrels and pistons converts a 1200 Beetle engine to 1390 cc — it's just a bolt-on conversion needing no machining. Likewise 85.5 mm barrels and pistons convert a 1300 Beetle to 1584 cc, giving an extra 20% torque.

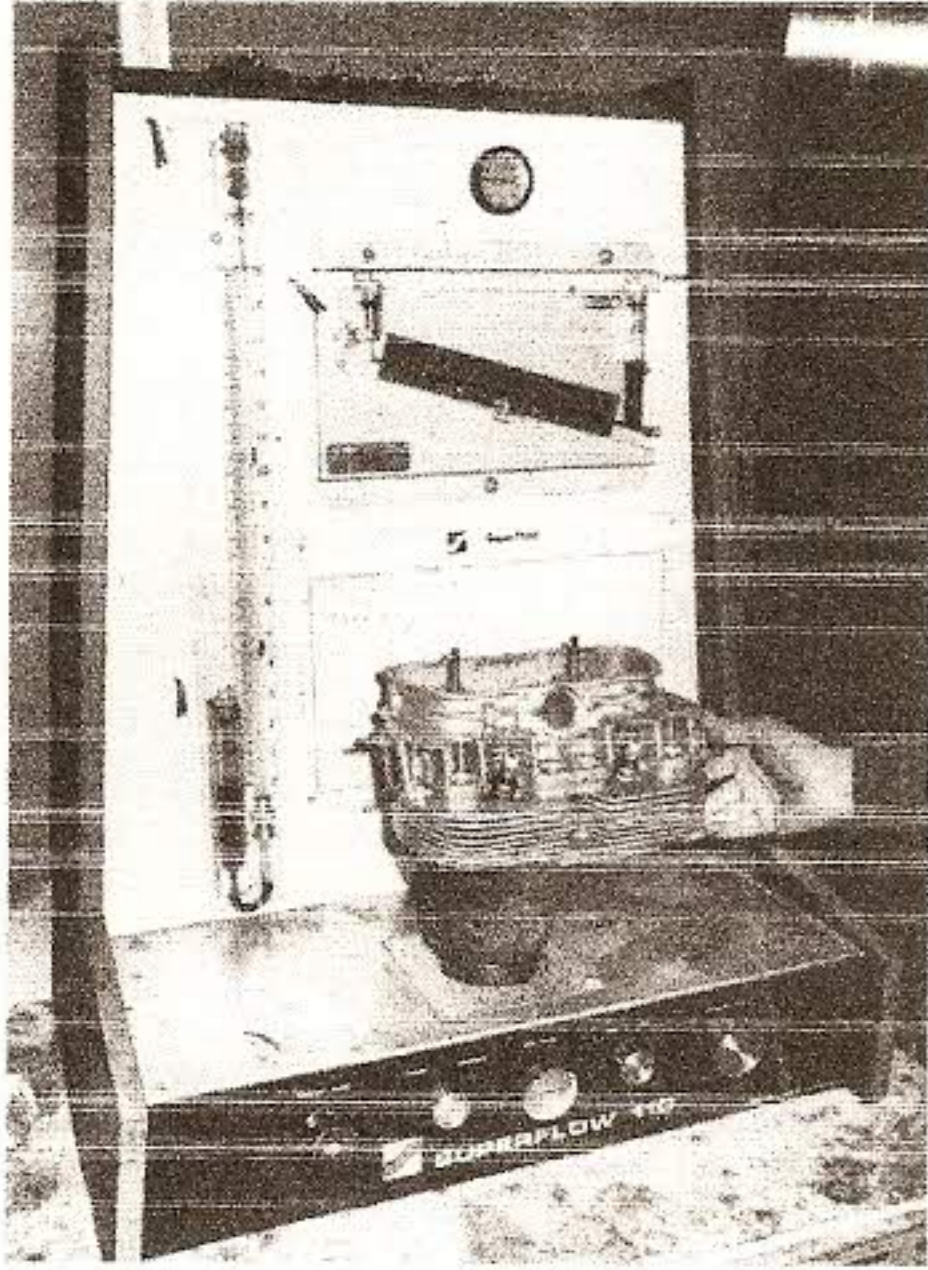
With machining of crankcase and heads (one of many machining services provided by Autocavan) you can fit 87, 88, 90.5 or 92 mm barrels and pistons. The latter, with the standard crank, gives 1835 cc.

Cylinder head modifications carried out at the Farnham workshop include raising compression, reprofiling combustion chambers and ports, and fitting larger valve seats for inlet valves of 40, 42 or 44 mm diameter and exhaust valves of 33, 35 or 37 mm.

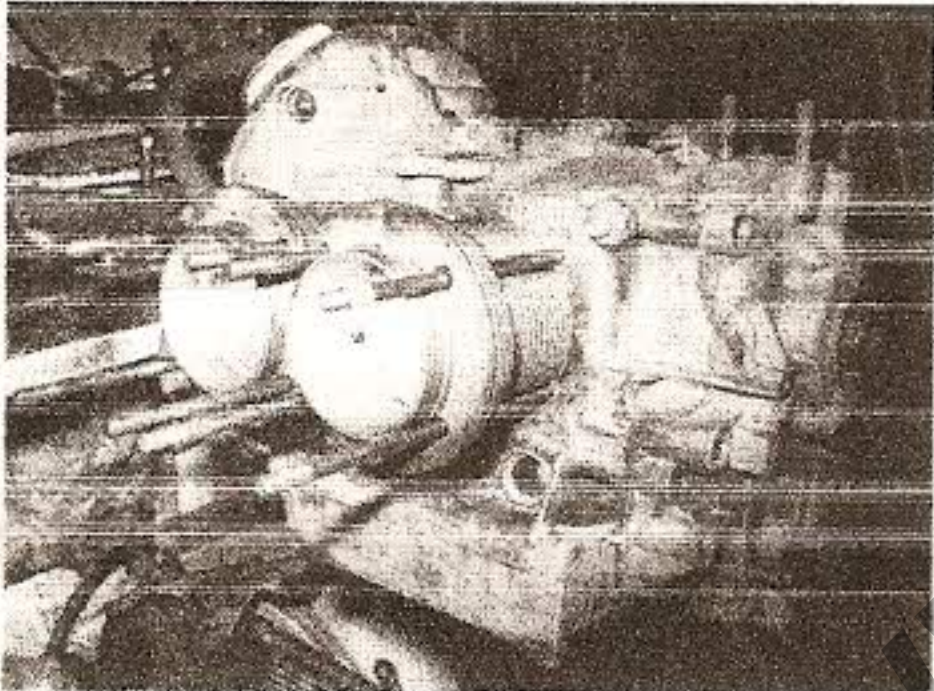
Carburettor conversions available from Autocavan for air-cooled engines are the Nikki 28/32 two stage carb which is a simple replacement for the standard item using a manifold adaptor, the Scat Holley-Weber with cast free flow manifold with end pieces for twin port or single port heads, a Holley twin choke with tubular manifold, dual twin choke Weber 40 DCN's

VOLKSWAGEN CAR
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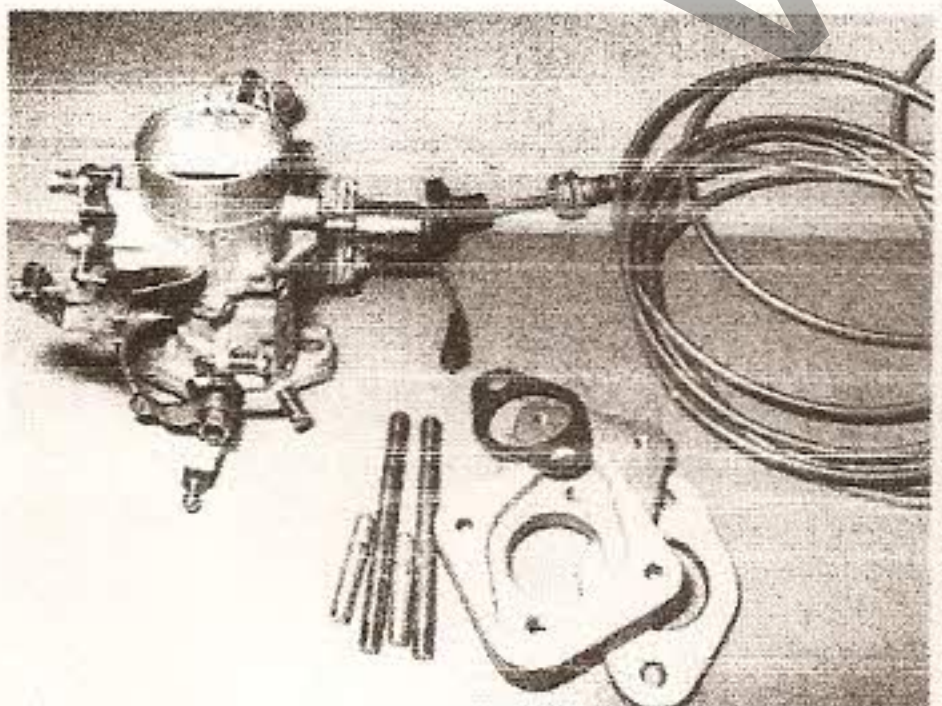
(only for twin port heads and engines of 1600 cc plus) and the ultimate, for competition use, dual Weber 48 IDA's. The last named are suitable for engines of 1900 cc upwards, revving to 6500 rpm.



Special rig for gas-flowing cylinder heads.

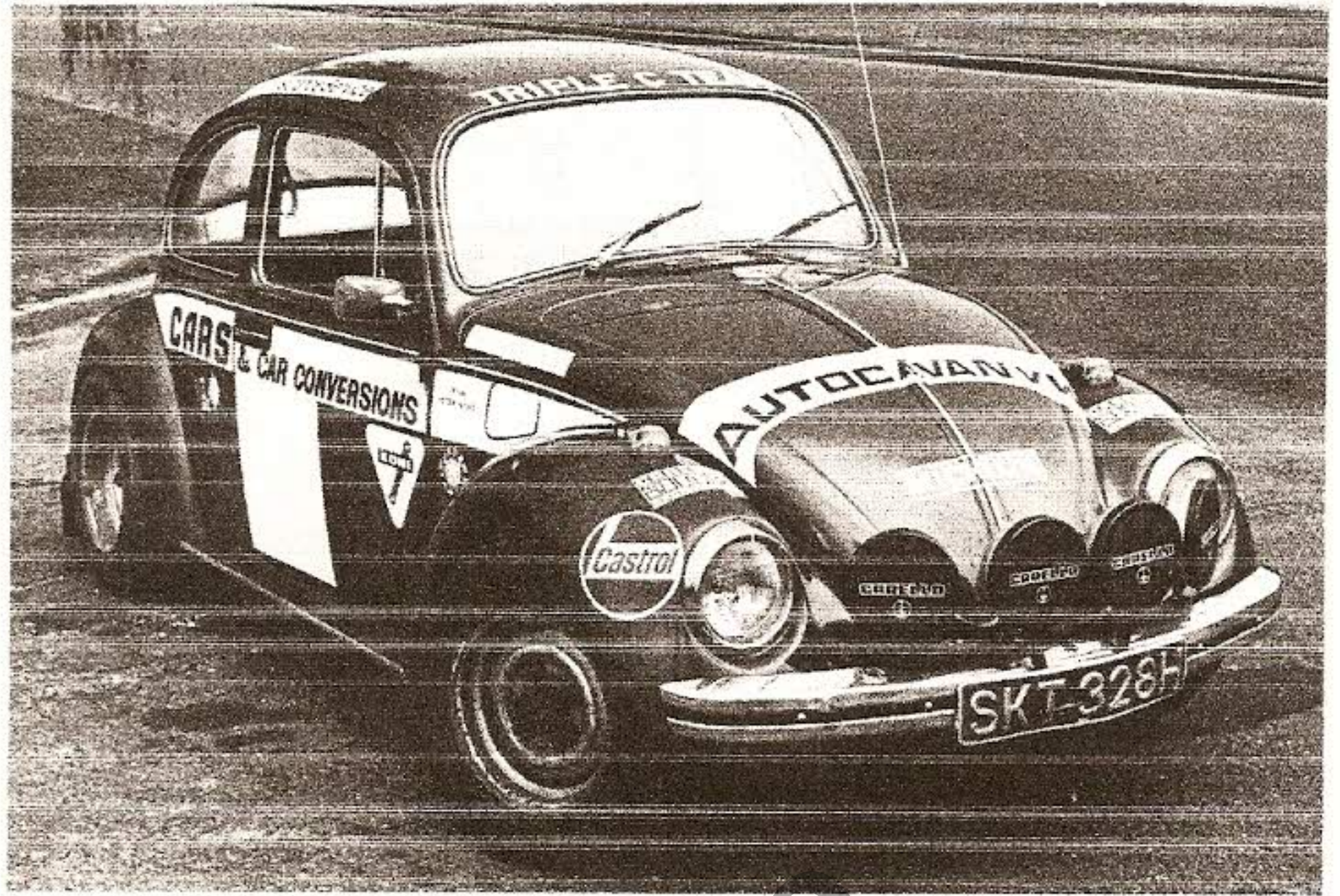


A partially assembled 1776 cc Beetle engine.



Weber carb conversion for Golf 1100.

Autocavan are also distributors for Crown Manufacturing Co. Inc. of Newport Beach, California, and can supply parts from the Crown catalogue of 'bulletproof' transmission components such as heavy duty diffs and side plates, additional spider gears, and super strong drive shafts. Crown VW transmissions are



Peter Noad drove this 2.1 litre Autocavan engine Beetle in autotests and rallies, winning no less than 8 autotest championships including the RAC National Championship in 1972-3.

designed to cope with the power of Chevrolet Corvair engines and the severe punishment of off-road racing in the States.

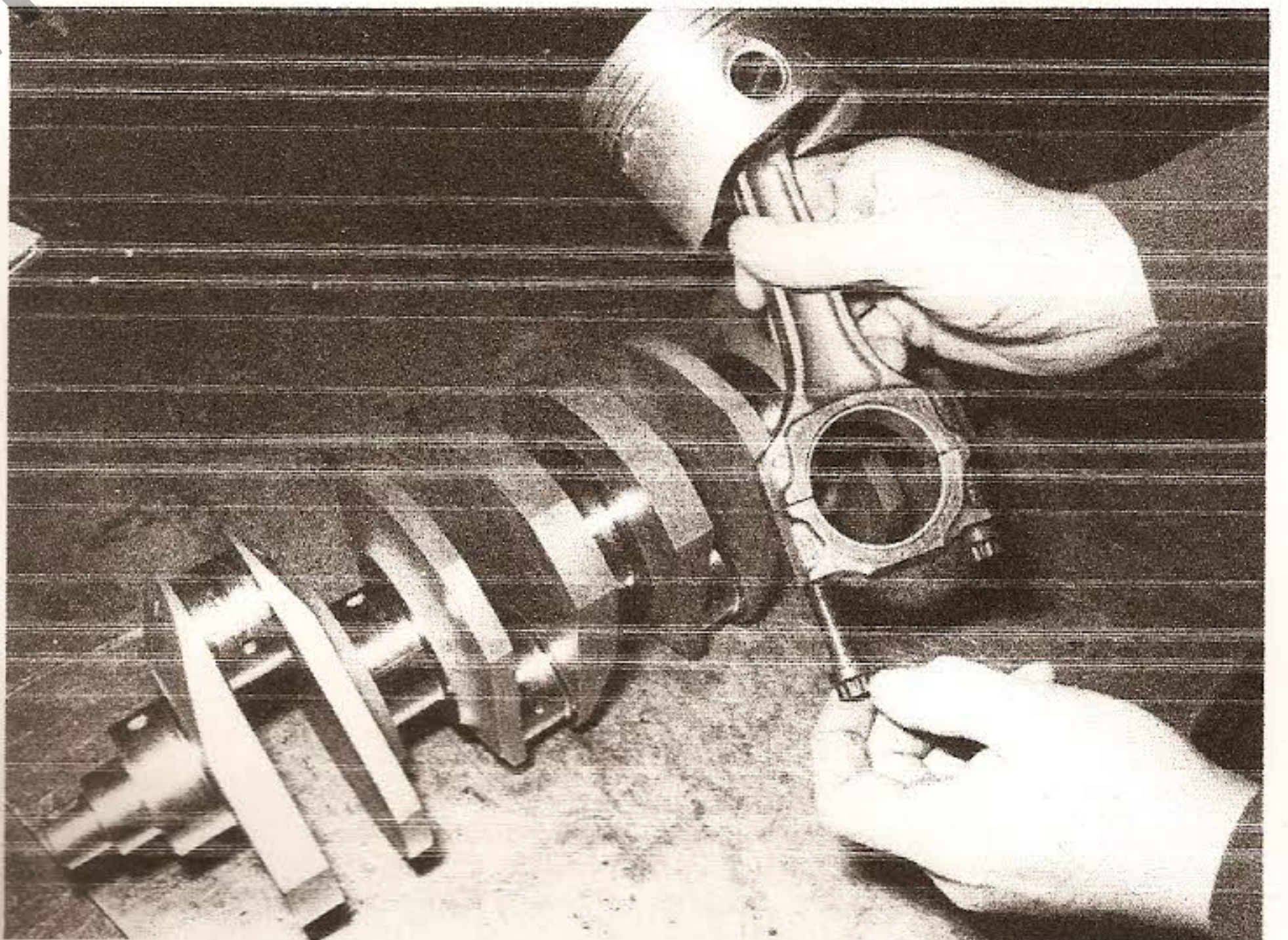
For water cooled engines (1500/1600 Golf, Scirocco, Passat, Audi 80) Autocavan can supply 88 mm, 90 mm, or 92 mm nitrided counterweighted crankshafts and 81 mm, 81.5 mm, 82 mm or 82.5 mm Powermax pistons. Geoff recommends the use of Wills rings to prevent head gasket problems when the bore is increased. There are bigger valves (39 mm inlet and 34 mm exhaust), race/rally camshafts, Ansa sports exhaust sys-

tems, and even a twin cam 16 valve head for the Golf/Scirocco, etc.

Carburettor conversions for the water cooled engine include a single Weber 28/36 DCD as a simple replacement for the stock Solex, and dual 40 DCOE or 45 DCOE twin choke Webers.

Koni shock absorbers are available for all models, plus the stiffer Koni Sport shockers for water cooled models (including Polo), and Bilsteins or Sachs struts for road, rally, or race.

There are Ferodo DS 11 competition brake pads for Golf/Scirocco, Sachs competition clutches capable of transmitting up to 250



Long stroke crankshaft for a Golf together with modified con-rod using aircraft-type bolts and 81 mm forged piston.

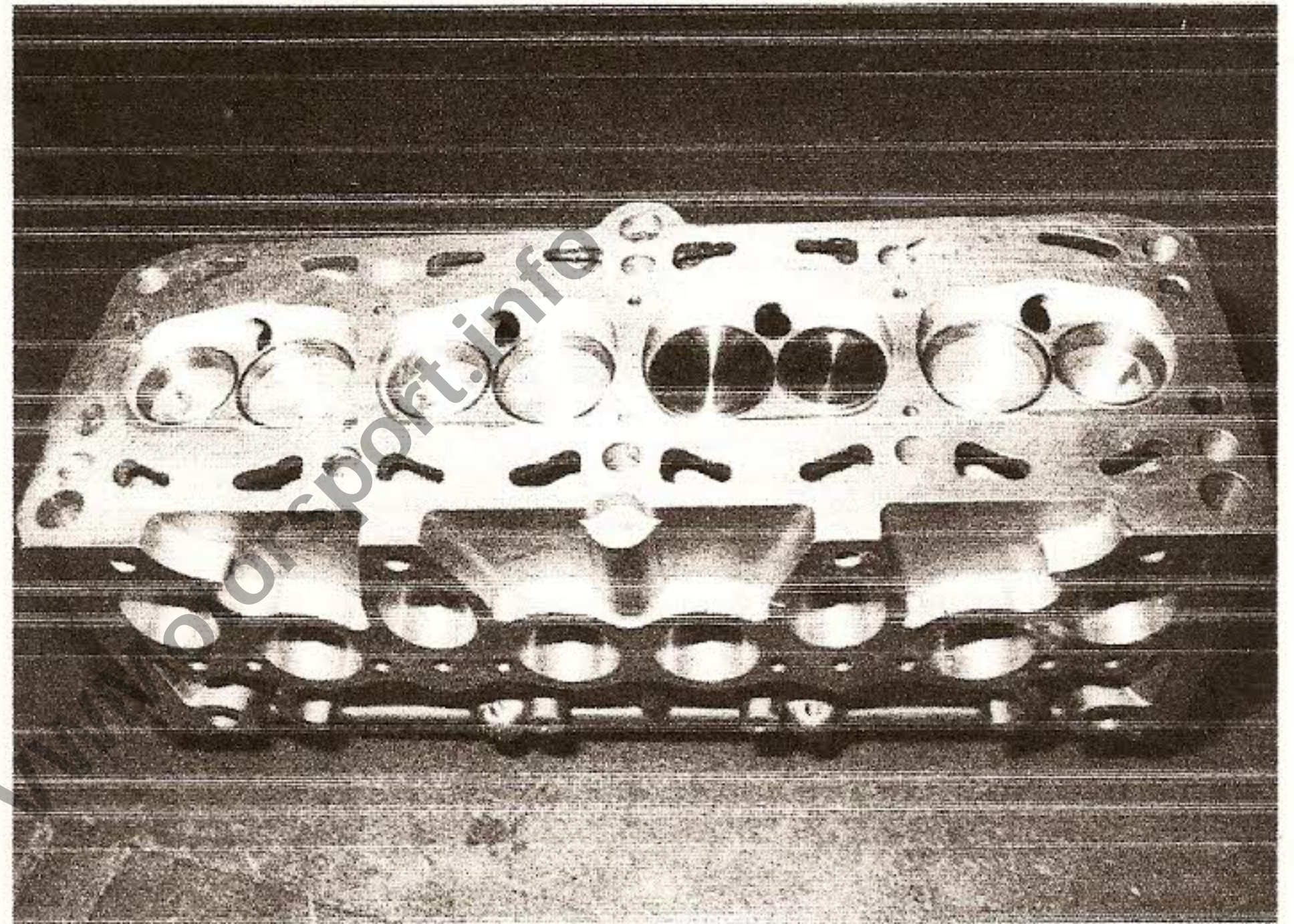
bhp, close ratio gears, and a choice of final drive ratios.

On the bodywork side they have fibreglass bonnet, wings and wheel arch extensions for the Golf, and Baja conversions for the Beetle.

Autocavan's operation is primarily geared to supplying parts, either directly or via their regional agents, to D.I.Y. customers. Their catalogue, including all the replacement standard parts as well as the tuning components, runs to several thousand items. It is a list of individual parts rather than complete engine



Autocavan also specialise in Porsche tuning. Here, a 924 is being attended to.



A modified Golf cylinder head with big valves.

conversion packages. For further details including prices you can either check out their ads or send

75p to the above mentioned address for the catalogue.

P.N.