



ROOSTER BOOSTER

On its announcement Reliant's SS1 was hailed as a brave move to revive the mass-market small sports car. However, power production has not been its strong point, so we were keen to put Rooster's turbocharged version to the test.

Think what you will of this particular Scimitar's styling, there is no doubting its capabilities when it comes to cornering. Sure, the short wheelbase can make the SS1 feel a little nervous at times, especially on bumpy corners, but when tested to the full the car actually hangs on tenaciously and its steering sends plenty of information as to what the front wheels are actually doing.

The problem stems from the engine room. Ford's CVH engine has never been noted for its smoothness and longitudinally mounted in this plastic body it seems to have fun sending all kinds of resonance and harshness to the four corners. Reliant have chosen the old carburetted XR2/3 variant for the more poky version of the SS1, the XR3i's injection apparently not being an easy fit under the bonnet. With 96bhp against the injection unit's 105, it lacks ultimate urge, with the result that the driver

tends to hang on to each gear in an effort to squeeze the most out of the car — accentuating the top-end harshness.

It would be possible to make the more powerful engine fit, by modifying the manifold, but this would hardly be worthwhile for an extra 9bhp. Robin Rew, who runs Silverstone-based Rooster Turbos, has come up with the answer in the shape of a turbocharger conversion to add an extra 44bhp.

Robin has got together with the highly respected Turbo Technics concern to adapt their existing Escort XR3/3i conversion, which itself formed the basis for the Ford RS Turbo set-up. Turbo Technics have a close link with Garrett AiResearch, whose blowers they use, through founder Geoff Kershaw, who was previously employed by Garrett.

The basis of this particular conversion is a single T3 turbocharger, which sits neatly to the left of the engine, high up under the bonnet, conveniently placed for the exhaust connection. An air to air intercooler, next to the radiator, cools the intake air on its lengthy journey to the cylinders and fuel is supplied by the standard Weber carburettor, modified to provide the correct mixture both when sucking and when being blown.

The T03 features a built-in wastegate, which is set to restrict maximum boost pressure to 0.5 bar (just over 7psi). To cope with this, Rooster remove the pistons and machine them until the compression ratio is down to 8:1, while a new vacuum unit is fitted to the distributor to give retarded

ignition settings under boost, thus reducing the possibility of detonation occurring.

A new exhaust manifold is cast in a nickel-iron alloy to feed the turbine and the front section of the exhaust pipe is enlarged to reduce back-pressure downstream of the blower. Oil is supplied to the blower from the main gallery and returned to the sump by a special union, while a high-pressure pump gives the fuel the necessary urge.

The 140bhp teams up with a matching 140 lb ft of torque at 3000rpm, but even

There is not so much as a boost gauge or a single, solitary 'Turbo' legend

with this sizeable increase the chassis is deemed to be well up to the job. Robin Rew does not see any necessity to modify suspension, brakes, wheels or tyres, although his own car is equipped with adjustable rear dampers.

The conversions are carried out at Rooster's workshops, but if anyone wants to buy a new SS1 ready modified these are available from Will Sparrow Ltd, of Alcester, Warwickshire.

Robin was kind and trusting enough to let us loose with his own personal car for a few days to put his handywork to the test. We