



Upgrading for everyday use

# Improving the Rover P6

With a little work, the Rover P6 can be made to behave itself in modern traffic. David Hill teaches the old dog some new tricks.

**B**URYING one's Auntie may not be considered the most palatable of pursuits, but when Rover introduced their radical P6 in 1964, they carried out that very act. The company's staid image was well and truly laid to rest by the introduction of a car with an overhead camshaft, discs all round, front suspension incorporating bellcranks and horizontal springs, and De Dion rear suspension.

In the 1960s, Rover attached a few extra lights, removed the hubcaps and took the car rallying. The fact that they didn't do a lot more to the P6 implies that it was good enough for competition in near standard form. In reality, aspects like homologation and development probably had a bearing on the matter.

## KEEP IT COOL

IMPROVING the P6 for use in today's circumstances is perhaps more practical. The Rover's high specification means that little need be done under the bonnet to improve the car. The 2000SC (single carburettor) can be converted to twin carburettors from the 2000TC, but it's usually easier to transfer the whole engine from a scrap car, because the TC's cylinder head, exhaust manifold, throttle linkage and choke cable are different.

The snag with further upgrading lies in the limitations of modern fuel. The 2000TC was designed to use five star petrol and its 10.5:1 compression ratio can cause damaging pre-

ignition. In fact, the later 2200SC and TC models were given a 9:1 ratio, allowing the use of four-star fuel. Consequently, the earlier cars' behaviour can be improved by cylinder head work of the porting and polishing variety, but skimming the head to increase compression ratio is a fairly silly thing to do.

The 2200 model's capacity was achieved by increasing the bore of the engine from 85.7mm to 90.5mm. This, and the addition of larger exhaust valves, gave 115bhp at 5000rpm, with 136lb ft torque at 3000rpm. This latter figure was 10lb ft up on the 2000 and the maximum torque appeared 500rpm lower down the range. So, the benefit of this factory upgrading exercise was flexibility rather than sheer power.

Having said that, a look at the contemporary figures shows that the 2200SC gave the same 126lb ft as the 2000TC and a relatively paltry 98bhp. This illustrates the advantages of fitting the TC's twin H88 or H1F6 SUs to the 2200SC but it's worth noting that the specification of the camshafts differed, albeit to a small extent.

It's also notable that Rover fitted an oil cooler to the TC. However, the standard cooler is a touch undersized for the job, so it would be preferable to enhance the performance of modern oils with the aid of a good 13-row oil cooler.

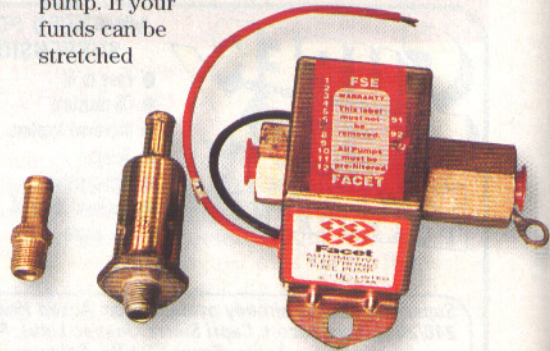
The four-cylinder P6 units were reliable, and tuneable to a degree. The V8s, however, offer more scope because their all-alloy ex-

Buick motors have received more attention from tuners over the years. The result is that the low compression V8's 156bhp can be nudged up to beyond 250bhp, given a good basic motor and a suitably bulging wallet.

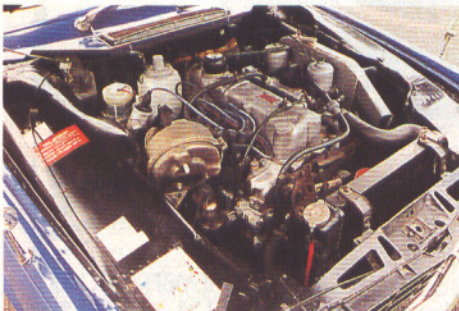
From standard form, the V8 can be mildly improved by using such items as an uprated distributor — the American Mallory dual point is available, as is an electronic alternative. The Holley carburettor is another purchase worth considering. These carburettors are rated in cubic feet per minute and the Holley 390 is ideal for the Rover V8. As ever, a free-flow air filter is a useful addition.

There are two words of warning to contemplate when upgrading your P6 with larger or newer components from the Rover range. Firstly, the SD1 V8 shares some, but not all of the parts of the pre-SD1 engine. Secondly, as the pictures show, fitting a V8 into a Rover 2000/2200 shell is not as easy as it might seem. Conversely, early SD1 five-speed gearboxes have been fitted to V8 P6s. This entails using the early SD1 bellhousing and the P6 automatic propshaft, and care must be taken to avoid the later SD1 gearboxes, which have an electronic speedometer signal generator.

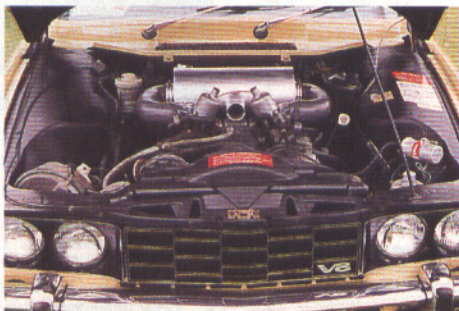
Regardless of capacity, the engines used in the P6 were big units, and one consequence of a tight engine bay is vapour lock in the fuel lines. With the exception of the US air-conditioned cars, all the P6s used an AC mechanical fuel pump, so would benefit from a good electric pump. If your funds can be stretched



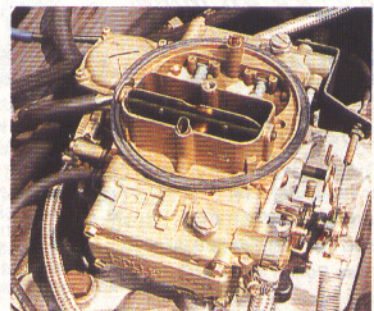
*Heat under the bonnet can cause vapour locks in fuel lines. Replacing the mechanical fuel pump with an electric unit, or an electronic pump like this one, will help prevent embarrassing flat spots and stalling in hot weather.*



*Cramped P6 engine bay (this is a 2200TC) offers room for an electric fan and an oil cooler. Fan should be fitted ahead of radiator. These measures will prevent the engine from overheating in traffic.*



*V8 engine bay is even tighter. Note difference in the inner wings; this is why putting a V8 in a 2000 shell would be difficult at best. In any case, it's possible to pick up V8 models for very little cost.*



*Four-barrel Holley 390 carburettor suits Rover V8 admirably, if you want extra power. There's choice of manifold castings to enable bonnet clearance.*



to adding a pressure regulator to the pump, the overall driveability of the car would improve, especially in hot weather. Similarly, an electric fan would help matters, with the added attraction of enhanced economy.

## INERTIA REELING

VIDEO footage of the works rally Rovers raises a question — were spare sills on the team's parts list? During hard cornering, the works cars rolled over like a fat Labrador which wanted its belly tickled. A word with fellow scribe Mark Dixon, who campaigns a 2000 in classic rallying, produced a solution to body roll. Mark consulted Demon Tweeks (01978 664466) who supplied V8 rear springs to be used all round with competition dampers. According to Mark, these, and 28psi in all the tyres, have reduced the effects of inertia dramatically. A roll cage was tailored for and fitted to the same car by Safety Devices in

Soham, Cambs (01353 624624), who would happily repeat the exercise.

Braking was one area where the P6 was well served in standard form. Despite the car's hefty 29.1cwt laden weight, the anchors are excellent. Stainless braided flexible brake pipes improve the feel of any hydraulic system and a good fluid is essential. For the ultimate part-swapping uprate on a 2000/2200, use the bigger discs and calipers from the V8.

The benefit of modifications like these is that the car remains visibly standard. With the P6, this is an important aspect: I came across one with Wolfrace wheels and General Grabber tyres — it was like an encounter with a high-heeled nun. In a similar vein, major tuning would be misplaced on a car like the P6: a better course of action is to concentrate on reasonable improvements to the current components' efficiency.

*Thanks to P6 owners Andrew Martindale and Roland Shaw for their help with this feature. Also S&G Walker of Chelmsford (01245 460214), suppliers of new and remanufactured Rover parts, and*

*YKC Engineering (01904 608899) for the loan of special parts seen here.*



*Adjustable dampers allow the suspension to be fine-tuned. Spax units have click-stop adjustment and supplier will generally have information on basic settings. V8 rear springs uprate suspension on four-cylinder cars.*



*Unseen but invaluable, Goodridge Aeroquip braided brake hoses improve the feel of any braking system, even the P6's excellent set-up. This happens because they don't balloon under pressure like ordinary hoses.*



## TUNING TIPS

- Even increasing front tyre pressures by around 3psi will reduce inherent understeer.
- Fit V8 rear springs all-round on four-cylinder cars to reduce body roll.
- Don't increase compression ratio for extra power, you could damage the engine.
- On high compression models it's important to set ignition timing accurately, to avoid pinking.
- Fit 13-row oil cooler to keep engine cool in summer.
- Twin carburettor conversion is not as easy as it looks — often better to swap complete engine for TC version.
- Five-speed gearbox from SD1 can be fitted to V8 models.
- Fit a good electric fuel pump preferably with a pressure regulator.
- Braided hoses improve braking.