

Rover 620SDi (Diesel)



THIS BRAND NEW DIESEL OIL-BURNER IS an in-house design and is nothing to do with new owner BMW's diesels, or the Perkins Prima collaborative effort that sat under the bonnets of the recently terminated Maestro and Montego.

Like the Prima (but unlike the BMW designs), this new L-Series two-litre diesel is a direct-injection engine. It comes with all the latest features and facilities that ensure it already passes the stricter pollution regulations due to be enforced by 1997. This means

that it's equipped with exhaust gas recirculation and an oxidation exhaust catalyst, as well as full electronic control of the latest Bosch mechanical injection system. This doesn't come cheap, of course, and although the lower-trim 620i/115bhp is closest in power output, this SDi is priced alongside the 130bhp Si petrol version.

Nevertheless, with turbocharger and intercooler, performance doesn't disappoint, but comparisons with the older Montego look less impressive when fuel consumptions are compared:

| | 620SDi | 620i (petrol) | Montego 2.0DLX |
|--|-----------|---------------|----------------|
| Capacity (cc/bhp) | 105/4200 | 1997/115 | 1994/81 |
| Torque (lb ft/rpm) | 155/2000 | 127/4200 | 116/2500 |
| Maximum speed (mph) | 117 | 119 | 98 |
| 30-70mph through gears (sec) | 11.1 | 10.7 | 14.9 |
| 30-70mph in 5th/4th (sec) | 22.9/14.6 | 25.5/18.7 | 35.2/22.0 |
| Mph per 1000rpm in 5th/4th | 25.9/19.8 | 22.3/18.2 | 26.6/20.3 |
| FUEL | | | |
| Suburban/gentle rural use (mpg) | 41/54 | 27/38 | 44/60 |
| Typical mpg overall | 45 | 33 | 50 |

The other advantage that figures can't describe is the running refinement of the latest engine. It uses a sound-deadening cover under the bonnet, and careful electronic control of the fuel burn, especially in the warm-up phase, also contributes to abating the "death rattle" characteristic of diesels (particularly those with direct injection). Its governor is gradual in its intervention and allows up to 5000rpm, but we experimented and found the best acceleration by changing up earlier. This Bosch pump is expensive to buy, but Rover feels its sophisticated control of fuelling is worth it, including its ability to compensate not only for temperature, but also for altitude and even engine wear, learning and adapting as it goes.

Another direct injection boon is this engine's easy cold starting; in anything other than sub-zero temperatures, it can hardly wait for its glowplugs to operate. Incidentally, there are three glowplugs – the other cylinder is tucked behind the injection pump, so Rover left the glowplug out. Oil and filter changes are due every 12,000 miles – the same as on a petrol version.

Driving the 620SDi nevertheless feels slightly incongruous after the sublime smoothness and hush of the Honda-powered petrol version. This diesel's biggest impediment is going to be the excellence of the other engines in Rover's current line-up. Still, if fuel costs are paramount, the level of noise and vibration of this latest effort will be acceptable. It's certainly impressive, by direct-injection standards, in its ability to deliver the expected economy with surprisingly sprightly acceleration, especially in fourth gear. Neither does the car's handling or steering feel in any way compromised and, we must say, it never smells like a diesel, whether you're inside or standing and waving it goodbye.

| PERFORMANCE | | | | | | |
|--|----------|-------|----------|------|---------------------|------------------------|
| Acceleration time in seconds | | | | | | |
| STANDING START | 0-30mph | 3.4 | 0-60mph | 10.5 | 1/4 mile | 18.0 |
| THROUGH THE GEARS | 30 | 40 | 50 | 60 | 70 | |
| | 1.8 | | 4.2 | | 7.1 | |
| IN 5TH GEAR | 7.2 | | 12.8 | | 17.7 | |
| IN 4TH GEAR | 3.8 | | 7.2 | | 10.6 | |
| | 20 mph | 30 | 40 | 50 | 60 | 70 |
| 5TH/4TH SPEED RANGES | 17.9/9.6 | | 10.5/6.8 | | | |
| | 12.8/7.2 | | 10.1/7.4 | | | |
| Maximum speed | | | | | | |
| REVS PER MINUTE | 1st | 2nd | 3rd | 4th | 5th | |
| | | 4600* | 4600* | 4525 | | |
| | | | | | | 1 24 3 63 5 117 |
| | | | | | | 2 41 4 91 mph |
| | | | | | | *for best acceleration |
| FUEL CONSUMPTION | | | | | | |
| Fuel grade for tests: diesel | | | | | | |
| Normal range | | | | | mpg | |
| Hard driving, heavy traffic | | | | | 32 | |
| Short journeys in the suburbs | | | | | 41 | |
| Motorway – 70mph cruising | | | | | 43 | |
| Brisk driving, mixed roads | | | | | 47 1/2 | |
| Gentle driving, rural roads | | | | | 54 | |
| Typical mpg overall | | | | | 45 | |
| Realistic tank range* | | | | | 52 litres/515 miles | |
| *based on fuel gauge/warning lamp and filling station experience | | | | | | |

TECHNICAL SPECIFICATION

ENGINE

Type and size front-mounted, transverse 4 in line; water-cooled. 84.5mm bore x 88.9mm stroke = 1994cc. Iron block and alloy head; 5 main bearings

Compression ratio 19.5:1

Valve gear single (belt-driven) overhead camshaft, actuating two valves per cylinder via hydraulic tappets

Fuel system turbocharged and intercooled direct injection diesel with two-stage computer control of mechanical injection pump. Oxidisation exhaust catalyser and exhaust gas recirculation

Ignition system compression ignition with (3) electric preheated glowplugs for sub-zero starts

Maximum power 105bhp at 4200rpm

Maximum torque 155 lb ft at 2000rpm

TRANSMISSION

Clutch diaphragm-spring, dry plate; hydraulically operated. Pedal load/travel: 26 lb/5 1/2 in

Gearbox 5-speed (all synchromesh) and reverse. Ratios: first 3.25, second 1.89, third 1.12, fourth 0.85, top 0.65

Final drive 4.2:1, to front wheels

Mph per 1000rpm 25.9 in top, 19.8 in 4th (on Dunlop 185/65R15 88H SP200 tyres)

Rpm at 70mph 2700 in top gear

CHASSIS details as for petrol versions (see R9330)