Technical & mechanics

The four-cylinder engine, which is of traditional design apart from its alloy head and single overhead camshaft, is both a weakness and a strength. Its modest power output of 105bhp (DIN) doesn't endow much performance, but, for durability and low running costs, this 1897cc unit has an excellent reputation, as proved by its record across the 'Ponton' range. As installed in the 190SL, original carburettors are its main problem. The pair of Solex two-stage, twin-choke, sidedraught 44 PHH carbs were troublesome when new and have plagued owners who have stuck with them ever since. Contemporary road tests even complained about them, yet Mercedes failed to come up with improvements through eight years of production. The problem arises because the engine is not a crossflow design, so these handsome carbs sit directly above the exhaust manifold. This causes them to go out of tune and suffer from fuel vaporisation, which in warm weather makes the engine run hesitantly in traffic, die at tickover, flood, and refuse to restart. Even the most experienced specialists find it virtually impossible to tune the carbs to perform in stop-start conditions, leaving owners, in practice, having to find temporary respite in traffic by driving with the bonnet popped slightly open to let heat escape.

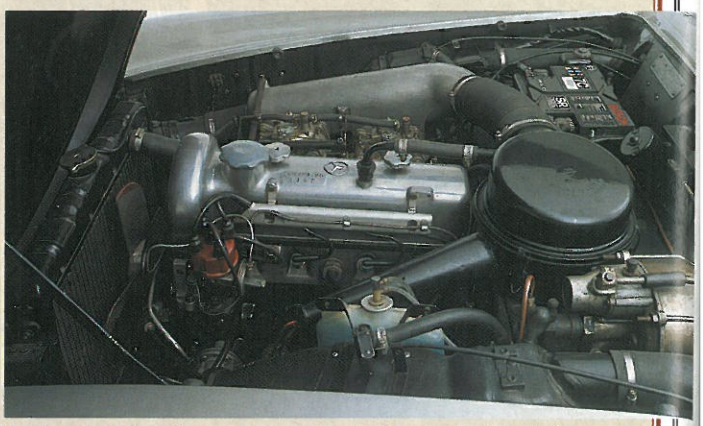
Many cars have been converted to Webers or Mikunis (a Japanese version of Solex), but the best solution – as fitted by Brian Gunney to our studio car – is later, simpler Solex carbs from twin-cam Alfa Romeos of the '60s and '70s. Although these remove top-end sharpness, they make a 190SL much more drivable in most conditions and look right under the bonnet. The complex originals can cost £2000 to overhaul, but these later carbs can be bought secondhand for about £250. They are simple to fit, requiring only minor linkage changes and special adaptor plates to mate to the air plenum chamber.

Some smokiness when starting from cold is common because the valves use an O-ring system instead of conventional guide seals, but there's no need to worry unless smoke is excessive. Low oil pressure, bearing noise on start-up and sustained exhaust smoke are the main indicators of an imminent rebuild. The needle on the oil pressure gauge should read close to maximum above 1800-2000rpm.

The engine itself can suffer internal corrosion, particularly between the ports, if it hasn't had a good inhibitor in the coolant.

TECHNICAL PROBLEMS

Right-hand-drive conversion isn't practicable, so, if buying in the UK, don't go for a left-hand-drive import unless you're happy to sit on the wrong side. The dashboard (with integral instrument binnacle) is a single aluminium casting that bolts to the top of the A-posts, so a donor car would be the only source for a right-hand-drive one. Conversions *do* exist, but they're rare.



Engine durable: clatter on start-up indicates timing-chain wear

Four-speed gearbox is generally robust, with strong synchromesh and quite a good shift. The only problem is a tendency, with high mileage, for the lever to slip out of gear when lifting off in top. The cause is excessive movement in the floating third/fourth hub, and rectification can be tricky because not all parts can be obtained new. In practice a specialist has to mix and match used parts from various gearboxes. Worn rubber and nylon bushes in the gear linkage create sloppy lever movement, but this is cheap to put right.

Absence of axle noise is a bonus, as pivot points wear – and develop groaning noises – if they haven't been greased regularly. Complexity means that repair costs can range between £150-£1500, depending on the exact nature of wear and whether any unavailable new parts are involved. The only propshaft weakness is that the rubber Rotoflex coupling on the back of the gearbox eventually needs replacement, but this is a familiar service item.

Braking problems are often due to a failing servo, which can cause slow response to the pedal or grabbing-on. Unfortunately, prognosis can't be made until a servo is dismantled, when the need for repair (perhaps fairly cheap) or replacement (a hefty £1400) will become apparent – so an uncorroded, efficient unit is a plus point. Right-hand-drive cars have a special master cylinder that's no longer available, so plenty of cars have been converted to a W113 component, which looks very different. A usable original that can be re-sleeved is a bonus.

Rear shock absorbers have a shorter life than the fronts, and new ones make a great difference to handling and stance. Strange handling effects can also arise if trailing arm mountings have been repaired badly. Retaining dimensional accuracy is crucial.

Tyre choice depends on driving taste. Many owners prefer original 6.40-13 crossplies, which look good because they fill the wheelarches neatly. Enthusiastic drivers prefer 175/70 or 185/70 radials (Michelins are best for looks and wear), but these drop the gearing because rolling radius is smaller – so they're less suited to long-distance driving.

PARTS PRICES

Front wing (left)	£663
Front wing (right)	£703
Rear wing	£564
Rear panel	£170
Front footwell	£90
Front grille	£3094
Rear bumper	£4793
Chromed stoneguard	£158
Hubcap	£20
Windscreen seal	£95
Piston	£134
Timing chain	£49
Water pump	£185
Set of sparkplugs	£9
Oil filter	£4
Head gasket set	£100
Sump gasket set	£76
Starter motor	£818
Clutch	£259
Wheel cylinder repair kit	£16
Shock absorber (rear)	£147
Spring (rear)	£134
Track rod end	£17
Track rod end	£419

Prices (including VAT) are from Jacksons (Bournemouth) Ltd; discounts are available