

GRAND DESIGNS

Lancia Aurelia B10

Innovative, beautifully crafted and enormously influential

Lancia had a long history of innovation, having introduced monocoque construction and the integral boot to production cars. The subtle styling of the Aurelia concealed a catalogue of elegant and imaginative engineering solutions.

The Aurelia showcased four significant firsts. It featured the world's first production V6 engine, after the likes of Rover and Ford had failed for decades to devise geometry capable of making one run smoothly. It was the first car to use the coil-sprung, semi-

trailing arm rear suspension system that has become today's default solution. It was the first car to feature radial tyres as standard. And, if that wasn't enough, technical director, Vittorio Jano, adopted a rear-mounted transaxle, which until then had been confined to the racetrack.

The monocoque body, with its trademark Lancia absence of a B-pillar, demonstrated Italian styling at its best. Its mature elegance didn't go unnoticed by the world's manufacturers. In the UK, Gerald Palmer

drew inspiration to give BMC its fine range of Wolseley, MG and Riley saloons.

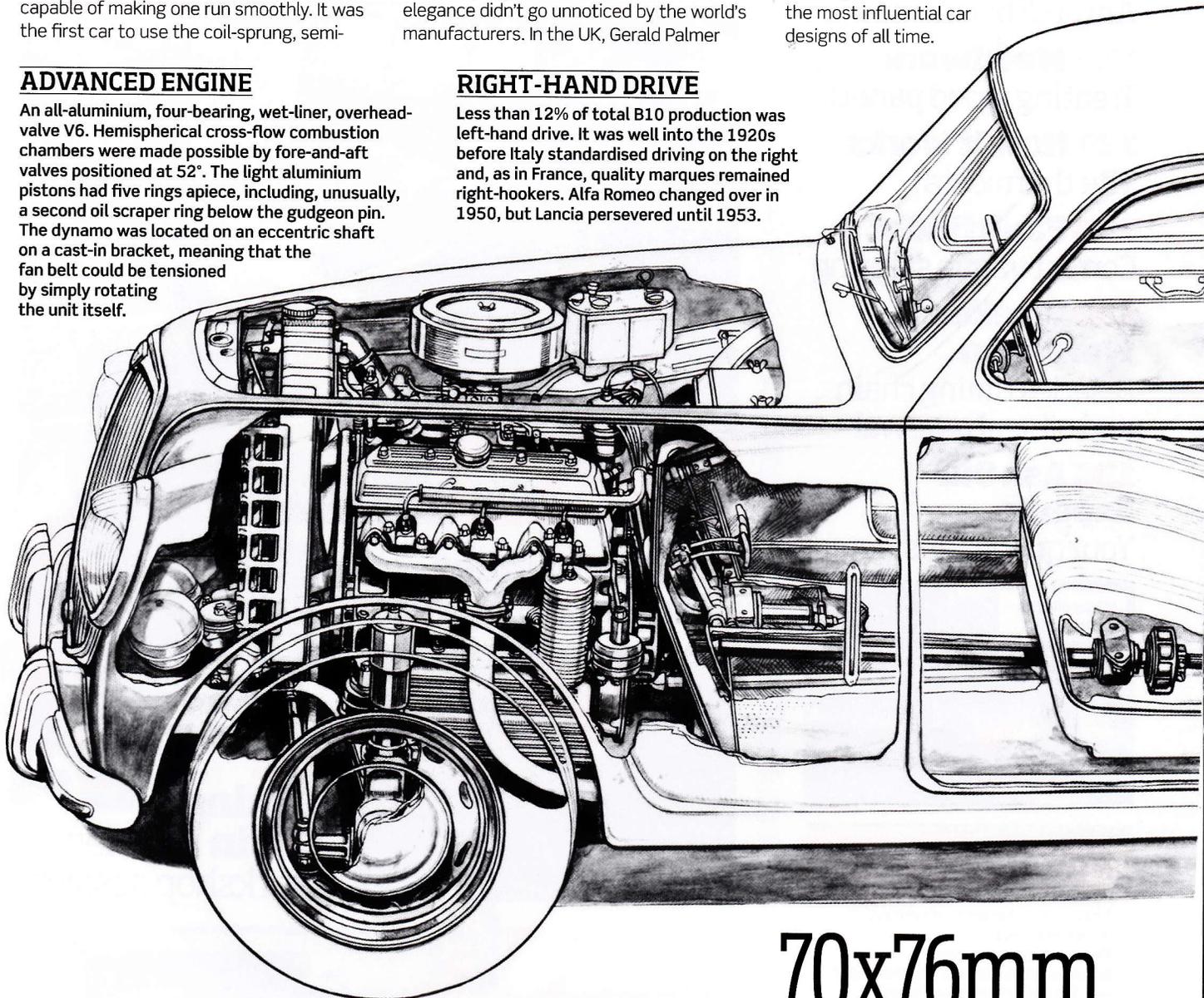
The aesthetic, dynamic and mechanical characteristics of the Aurelia can be summed up in one word: balance. Few, if any, other cars have combined such precocious engineering with such an absence of controversial eccentricity. Despite its low production, high price and limited market, the Aurelia is one of the most influential car designs of all time.

ADVANCED ENGINE

An all-aluminium, four-bearing, wet-liner, overhead-valve V6. Hemispherical cross-flow combustion chambers were made possible by fore-and-aft valves positioned at 52°. The light aluminium pistons had five rings apiece, including, unusually, a second oil scraper ring below the gudgeon pin. The dynamo was located on an eccentric shaft on a cast-in bracket, meaning that the fan belt could be tensioned by simply rotating the unit itself.

RIGHT-HAND DRIVE

Less than 12% of total B10 production was left-hand drive. It was well into the 1920s before Italy standardised driving on the right and, as in France, quality marques remained right-handers. Alfa Romeo changed over in 1950, but Lancia persevered until 1953.



FRONT SUSPENSION

Independent sliding pillar front suspension, first seen in 1898, became a Lancia trademark. On the Aurelia, it featured adjustable double-acting adjustable dampers and a bulkhead-mounted lubrication system. With minimal unsprung weight, it suffered slight track change in roll. The wide spacing of the car's wheels minimised this symptom.

ASSISTED BRAKES

The Aurelia employed finned SABIF hydraulic drums with leading and trailing shoes, mounted inboard at the rear. A hydraulic fluid reservoir pressurised by a sprung plunger, part of a combined unit that also lubricated the front suspension, provided a servo effect and a visual indication of falling fluid level.

70x76mm

BORE/STROKE

MONOCOQUE CONSTRUCTION

The body was a pillarless monocoque, with suicide rear doors and strong box-section side members. Lancia pioneered chassis-less construction in 1921 with the Lambda, after Vincenzo Lancia had been inspired, it is said, by the structure of a ship's hull.