

# The Origins of An Icon (Part 3)

Jaguar Australia are producing a content series called "The Origins of An Icon". Each month they are exploring some of Jaguar's greatest defining moments. The third in the series is as follows.



## THE 1950s THE C-TYPE, Le MANS, AND DISC BRAKES

After three XK120s made an exploratory trip to Le Mans in 1950, it was realised that Jaguar had the makings of a successful competition car if weight could be saved, and aerodynamics improved. Consequently, William Lyons was persuaded by Heynes and the Manager of the Service Department, Lofty England, that a car should be produced solely with racing in mind.

Hence was born the XK120C, or as the car is more generally known, the C-Type.

To reduce weight, a multi-tubular triangulated frame was chosen and designed by Bob Knight.

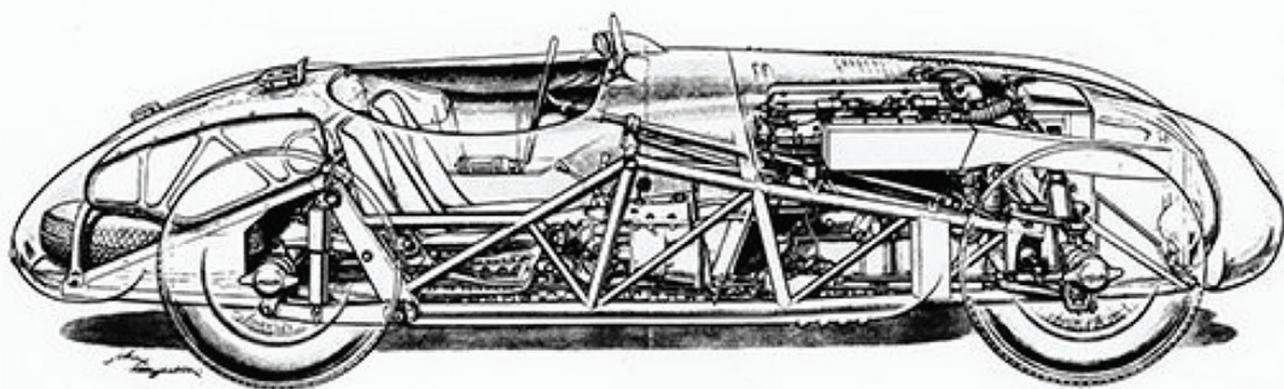
The strength of the design lay in a triangular box of tubes in the middle with sub-frames carrying the engine and front suspension. The crucial centre section, which contained the driver and passenger seats, was braced laterally, longitudinally and vertically.

The body was designed by aerodynamicist, Malcolm Sayer, who had joined the company from the aircraft industry.

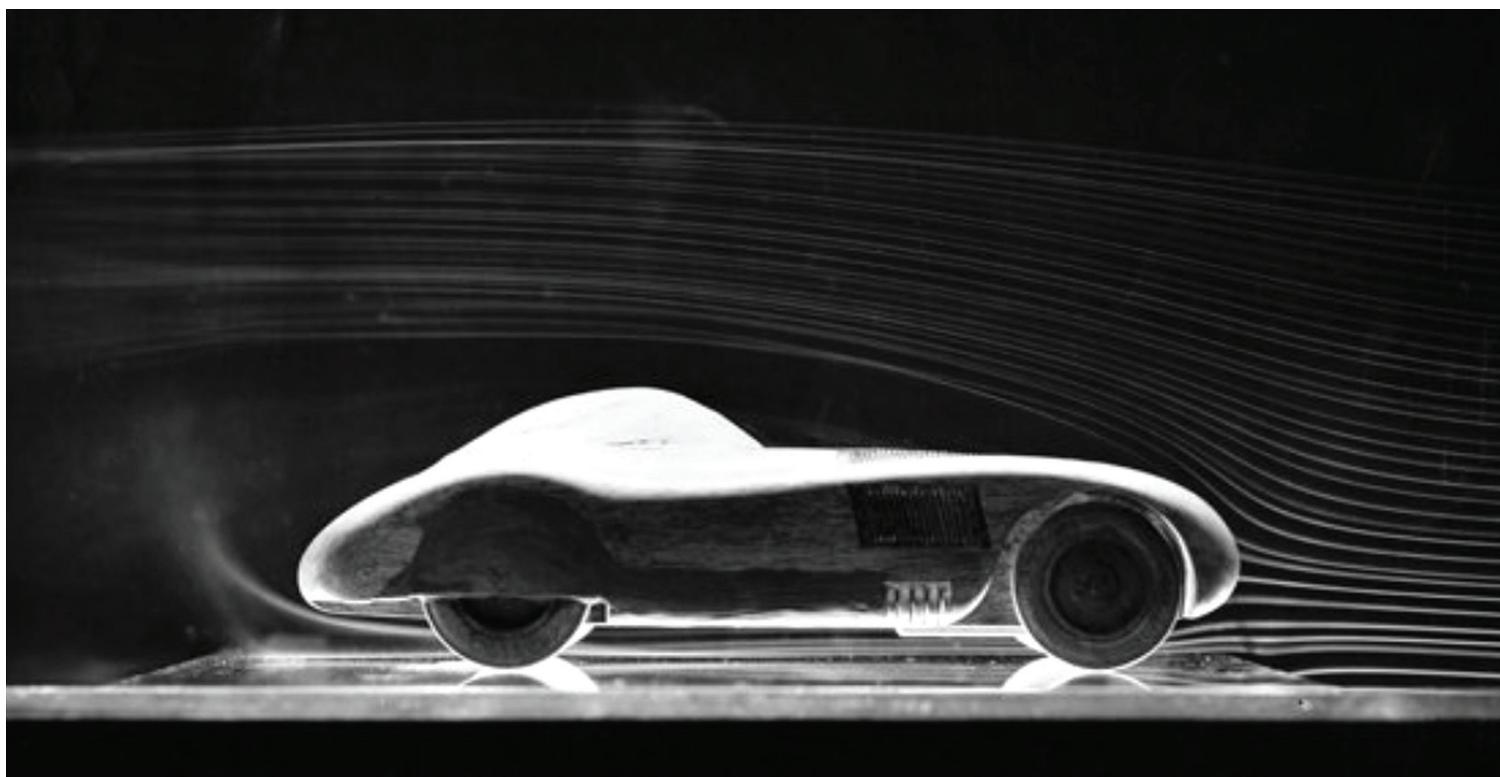
Sayer had studied automotive engineering at Loughborough University and then joined the Bristol Aircraft Company where he was immersed in aerodynamics.

Sayer's brief was to provide a body that was aerodynamically efficient. His work at Bristol Aircraft during the war was valuable, as he brought a new dimension to Jaguar with his method of working out the required shape mathematically. This was something that had hitherto been alien to the automotive industry and immediately gave Jaguar an advantage.

Many components were carried over from the production XKs including the engine but with larger exhaust valves, higher lift cams and larger SU carburettors. The engine was tuned to 260 bhp, the brakes were improved, and



**C-Type Cutaway Drawing showing  
Triangulated Frame**



## Malcolm Sayer Model

the rear suspension now used transverse torsion bars. The first cars were ready in the spring of 1951.

Almost immediately, three cars were entered at Le Mans for the 1951 race. During the race two cars retired but the third, driven by Peter Whitehead and Peter Walker, won at an average speed of 93 mph (150 km/h).

The C-type had brought Jaguar its first victory in the Le Mans 24-hour race.

The C-Type body was modified for the 1952 race, but all the team cars retired with cooling problems.

For the 1953 race Jaguar reverted to the original body design, albeit made of lighter gauge aluminium, and fitted the cars with the revolutionary disc brakes that Jaguar had been developing with Dunlop.

The three cars entered finished first, second and fourth.

The winners, Tony Rolt and Duncan Hamilton, averaged a speed of over 100 mph (161 km/h) for the first time in the history of the Le Mans race.

Jaguar engineers had been working in conjunction with Dunlop on a completely new type of brake that had, as yet, only been used on aircraft. The new development was the disc brake, and was to be Jaguar's secret weapon at Le Mans in 1953.

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*The 1951 24 Hours of Le Mans was won at a canter, with a 9-lap lead by Peter Walker and Peter Whitehead in their works-entered Jaguar C-Type. The popular adage of the time – “Win on Sunday, sell on Monday” – was particularly apt for Jaguar. It was later estimated that extra sales of US\$12 million were generated in the USA alone from their Le Mans win.*

The 24-hour race that year was notable for having representatives from most of the leading European motor car manufacturers and most of the top Grand Prix drivers.

With their fade-free brakes disc brakes the C-Types could decelerate at the end of the three and a half mile Mulsanne Straight from speeds of around 150 mph, time after time, with complete confidence and leave their braking far later than their rivals.

This resulted in the complete walkover, with the Jaguars finishing first, second and fourth.

Although the C-Type was a hand-built machine, it was listed in Jaguar's sales catalogue (at a price of £2,327), and of the 53 cars built, 43 were sold to private owners.

The C-Type was to be superseded by the legendary D-Type.

Thank you to the Jaguar Daimler Heritage Trust for their support on Jaguar history and photography. ■

Jaguar Australia



**Dunlop Disc Brake**