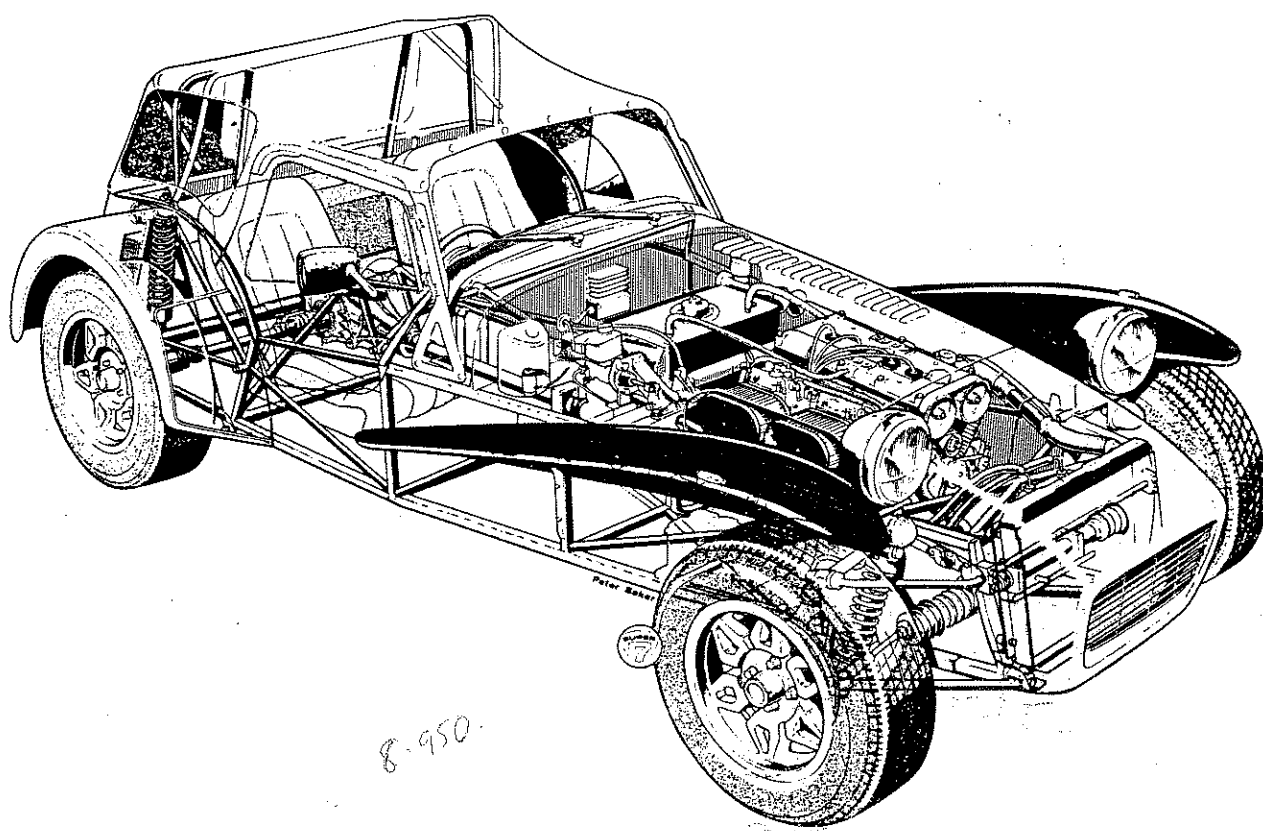




ASSEMBLY GUIDE

Caterham Car Sales
and Coachworks Ltd

CATERHAM
SUPER SEVEN[®]
1600 BDR 1986



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CATERHAM
SUPER SEVEN

KIT ASSEMBLY MANUAL

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INTRODUCTION

The Lotus Seven was originally launched to the public at the Earls Court Motor Show in 1957 as a successor to the highly successful, though relatively low volume, Lotus 6 which ceased production in 1955.

The original Series 1 Seven was produced with a Ford 100E 1172cc sidevalve engine and a 3-speed gearbox although later models were available with the Coventry Climax 1097cc engine or the BMC 948cc engine from the Austin A35, with the 4-speed BMC gearbox.

In 1960, after around 240 Series 1s were completed, the Series 2 car was introduced. This had a lighter spaceframe and fitted clamshell front wings for the first time, and a revised fibreglass nosecone which remains outwardly unchanged to this day.

Engine options followed on from the Series 1 although the 100E engine was soon phased out in favour of better BMC engines from the Austin Healey Sprite and the Ford 997cc 105E engine as fitted to the newly introduced Anglia.

Further options of the Ford Classic 109E 1340cc engine in 1961 initially, and later the 1498cc 116E engine from the Cortina in 1962 were available. These later models were known as Super Sevens and in Cosworth tuned form made shatteringly fast road/club race cars for their day.

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The Series 2 introduced the 'A' frame rear suspension which is still in production today and were made in considerably greater numbers than other Lotus Seven models, a total of some 1310 being built.

It was not until 1968 that the Series 3 Seven was launched and in appearance looked similar to the Series 2 except for wider wings to accommodate wider wheels and tyres. The chassis frame, however, was considerably stiffer and the 1600cc Ford 2265E crossflow engine and Ford Escort rear axle became the basic specification. This axle, incidentally, replaced that from the Standard 10 dating back to the early fifties which somehow Lotus had continued to use in the Series 2 right until the end. Axle failures were not uncommon!

The Super Seven was now available with the Lotus Twin-Cam for the first time and this, especially in 125 BHP Holbay form, became the fastest production Seven yet. Around 265 Series 3s were made.

By 1970 it was felt that the Seven, after 12 years, had become very dated and a successor, intended to reach the fast growing Beach Buggy market as well as that currently accommodated, was launched. This, of course, was the Seven Series 4.

Although intended to retain the character of the Seven, it was very different in appearance, having a simpler steel ladder frame chassis with stressed steel side panels enclosed by a fibreglass body. Engine options were carried over from the Series 3, but although around 600 cars were built - and it was certainly successful for a

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while - this car was dropped by Lotus in 1973.

Colin Chapman had for many years wanted to phase out the Seven from an increasingly upmarket range and indeed, without the efforts of Graham Nearn, it would probably have been dropped as early as 1966. Seven production had continued erratically for some years, firstly at Lotus Components and then at Lotus Racing, which closed in 1971. Series 4s were manufactured in a corner of the main factory for a while, alongside Elans and Europas, before the impending launch of the new Elite, and increasing financial difficulties at Hethel finally spelt the end of the car.

In May 1973 Graham Nearn's Caterham Cars took over all the remaining Seven parts, jigs, moulds and, most importantly, the manufacturing rights from Lotus. Subsequently about 40 series 4 Caterham Sevens were sold until it was phased out largely due to problems with component suppliers in 1974.

Much interest continued to be expressed in the classic Series 3 Seven, however, which enthusiasts had always preferred over the heavier and less agile Series 4. As a result, Caterham introduced an improved version of the Series 3 with a considerably strengthened chassis and numerous detailed modifications to upgrade the car in every way whilst preserving its appearance and character.

The Caterham Seven has therefore continued outwardly unchanged. Its specification has changed notably in respect of its engines and

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transmissions, as suppliers and motor manufacturers have updated their products.

Initially Caterham Sevens were fitted with Ford Escort axles, but supplies of this axle dried up in 1981 with the introduction of the FWD Mk III Escort. The replacement Morris Marina/Ital axle was fitted to approximately 500 Caterham Seven Series 3's between 1981 and 1986 when it too ceased to be available. Seeing that the writing was on the wall for small beam axles, Caterham then designed their own De-Dion rear suspension, based on Ford Sierra parts, which was introduced in 1986.

At much the same time, supplies of Ford Escort Sport semi-close ratio gearboxes also dried up so the chassis was re-engineered to accept the 5-speed gearbox from the Sierra.

When Lotus Twin-Cam engines ceased to be manufactured, Caterham first turned to Vegantune who were making their own version of this unit. Around 40 Sevens were fitted with this VTA engine of which 30 were exported.

Demand for an engine developing more power than the standard Ford 1600GT led Caterham to introduce their 'Sprint' specification, basically the 1600GT with twin Weber 40 DCOE carburettors and a mild performance camshaft. In 1984, the 'Supersprint' version of the same Ford engine was launched, this time bored out to 1691cc with larger valves and a high lift camshaft to produce some 135 BHP with minimal

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loss of tractability.

However the public continued to demand even more power and in addition sophistication, so the Ford Cosworth BDR with double overhead camshafts and 16 valves became available in 1985 followed by the even faster 'HPC' specification in late 1986.

The Lotus Seven has almost always been available in kit form and even largely built up (Component) cars for sale on the UK market have to be completed by the customer in order to avoid the requirements of National Type Approval.

Latterly, however, Caterham Cars have been unable to keep up with demand for semi-complete component cars and hence are once again supplying cars as full kits for 'home assembly by persons not engaged in the trade of manufacturing or assembling motor vehicles'.

This assembly guide has therefore been produced to give the non expert near comprehensive instruction as to how a car can be built to the same standard as those produced by Caterham Cars.

For more experienced builders, this guide may be somewhat elementary in its detail. However, no doubt some chapters will be helpful and we wish all our customers many hours of pleasure building a car that both they, and we at Caterham, can be proud of.