

ORDERING SPECIFICATION

ORDERING SPECIFICATIONS

The Super Seven is sold to customers all over the world so individual specifications are likely to vary according to the legislation of the country where the car is to be registered.

This guide is aimed primarily at UK customers although differences, other than left hand drive, are likely to be minor. If there is any doubt, Caterham Cars should be consulted.

Chassis

Apart from left or right hand drive, the basic chassis is available in three forms; short cockpit, long cockpit and long cockpit De Dion. The De Dion car is not available in short cockpit form.

Engines

Caterham currently supply two engines as standard equipment; the Ford 2265E 1600cc overhead valve crossflow unit, or the Cosworth BDR 16 valve double overhead camshaft engine.

The Lotus Twin-Cam, although unavailable new, can be fitted but it should be stressed that the engine gearbox and axle combination must be specified at the time of ordering the chassis.

We strongly recommend the use of the Ford 2265E engine and in particular the later 711M block which is considerably stiffer than earlier units. These engines are used in Formula Ford 1600 racing

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and are not only cheap and readily obtainable new and second hand but also very robust and easily tuneable.

The majority of Caterham Super Sevens sold have been fitted with this engine and when tuned to our 'Supersprint 1700cc specification around 135 bhp at the flywheel can be obtained reliably. A tuning kit to this specification is available and further tuning is, of course, possible. We will be happy to supply advice, parts and complete engines as necessary

It should be noted that the inlet manifold used by Caterham in order to fit Weber DCOE carburettors is specially manufactured to position the air filters correctly in the bonnet aperture without offsetting them so far as to cause clearance problems to the inside face of the front wing.

Customers should note that the use of an alternative manifold may cause problems

Similarly, Caterham can supply electronic ignition systems and standard distributors (pushrod or twin-cam) compatible with the vehicle wiring loom and the inlet manifold. Whether their performance is suitable for your specification engine is a question which can only be answered by your engine builder.

One problem applying to all Sevens is ground clearance. All engines should be fitted with a 'rear panel sump as fitted to an Escort 1600

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or early Capri (1969 - 1972), along with appropriate pick-up pipe and dipstick. The Capri sump is ideal since it provides the best ground clearance without loss of capacity and is already sufficiently baffled for hard road or road tyre' competition use. These can however, be rather difficult to obtain being no longer available as a new Ford part.

Gearboxes Back Axles

It is strongly recommended that the home builder chooses a specification of car that represents an original Caterham build. This will ensure the availability of spare parts and will help the car retain its residual value.

The following combinations are therefore recommended and as each chassis is built to order it is important that the following chart is studied first.

	Short Cockpit	Long Cockpit	De Dion	
	A	B	C	D
Engine	Ford OHV Lotus TC -	Ford OHV Lotus TC -	Ford OHV Lotus TC Cosworth BDR	Ford OHV Lotus TC Cosworth BDR
Gearbox	Ford Escort Sport Mk II	Ford Escort Sport Mk II	Ford Escort Sport Mk II	Ford Sierra XR4i 5 speed
Axle	Morris Ital/ Marina	Morris Ital/ Marina	Caterham De Dion	Caterham De Dion

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Original Caterham Sevens manufactured between 1974 and 1980 used the 4 speed gearbox fitted to the late model Ford Corsair GT and Mk I Cortina 1500GT (Ford part number 2821E7003AE) along with the rear axle from a Mk I or Mk II Ford Escort. Due to the age of the original vehicles these components are now very hard to come by and a miscellaneous kit can no longer be sourced for this combination. The basic chassis frames are still available on special order mainly to allow the rebuilding of old/damaged cars.

A) & B)

The optimum gearbox here is that fitted to the Ford Escort Mk II 1600 Sport and 1600 Ghia (Ford exchange part number 5004364), which combines close ratios with a cable clutch, integral bell-housing and one piece rear gear lever extension casting.

The axle from the 1700/2000 Marina or Ital is best since this incorporates the ideal 3.64 final drive ratio. This combination is the correct 1981 to 1986 standard specification and gives the best spares availability.

For information this axle is considerably lighter than the Ford item fitted to pre 1980 Sevens, as well as having a smaller differential casing allowing the greater interior space of the Long cockpit chassis.

Rear stud centres will be the same on this combination as the Triumph front hub.

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C) & D)

The De Dion chassis has been extensively re-designed to take either the four speed Escort Sport gearbox or the five speed gearbox from the Ford Sierra XR4i (Ford Part No.1645418), along with a special bell-housing adaptor provided by Caterham Cars. The De Dion assembly uses largely Ford parts notably the Final Drive housing and the rear hub and brake assemblies which are sourced from the Ford Sierra range, but unfortunately not from one model.

Such items as driveshafts and the De Dion tube itself, however are only available from Caterham Cars.

It should be noted that special front hubs with Ford stud centres will be needed, and these will be supplied automatically with the front upright kit if a De Dion chassis is specified.

Rear Axles

Morris Ital or Marina axles need to be both strengthened and modified for fitment into the Super Seven.

Since the exact positioning of the necessary brackets is critical to both the performance and safety of the finished car, only axles

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checked and modified by Caterham Cars should be used. If the axle is supplied to our works clean and clearly labelled at least three weeks before the kit is due for collection it should normally be possible to collect both together. If you intend to use your Seven for racing this axle should be baffled (see 16.4.5).

It should be noted that Marina/Ital axles should be supplied as a complete assembly cleaned and drained.

Wheel and Tyres

The following combinations are recommended to give the correct rolling radius and wheel/tyre ratio.

- | | |
|--|---|
| i) 5 ¹ / ₂ " x 13 wheels | 165 HR 13 Tyres (Live axle only) |
| ii) 6" x 13 wheels | 185/70 HR 13 Tyres |
| iii) 6" x 14 wheels | 185/65 HR 14 Tyres or
185/60 HR 14 Tyres
(De-Dion only) |

All wheels should have 19mm inset or negative offset. Stud centres as follows:

Combination C or D	4 stud 4.25 inch PCD (108 mm) 7/16 UNF thread (early) or * 12mm x 1.5 thread (late) according to age.
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Combination A or B	4 stud 3.75 inch PCD (95 mm) 3/8 UNF thread
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It must be stressed that the car has been designed around these wheel/tyre combinations and that under or oversize combinations will almost certainly cause problems with steering, handling, ride, gearing and speedometer calibration, body and ground clearance.

For competition purposes, 185/60 x 13 tyres will aid roadholding and lower overall gearing, but will cause ground clearance problems and cannot therefore be recommended for road use.

Speedometer Calibration

When ordering your kit, it is important to specify which gearbox/axle combination you are using along with the final drive ratio and wheel tyre size. If you do not, your speedometer may well be inaccurate which, apart from the consequences of being stopped for speeding, is illegal in the UK and EEC countries.

All live axle kits are supplied with the same speedometer labelled on the case $W = 1.00$ ($W = 0.625$ for k.p.h). Correct calibration is achieved by changing the plastic driven gear in the gearbox. Speedometer recommendations for the Escort Sport/ Marina or Ital cars are shown below.

Diff Ratio	No of Teeth on Driven Gear	Ford Finis Code for Driven Gear
3.64	22	1546878
3.89	24	6011062
4.11	25	1546789

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Five speed De Dion cars are fitted with differently calibrated speedometers depending on the differential ratio used. This is due to the fact that correct calibration cannot be achieved by a change of driven gear in the gearbox (in particular no gear is available from Ford to suit a 3.92 differential) therefore your gearbox should always be fitted with a 24 tooth gear Finis Code 6011058.

Speedometer Calibration		Diff Ratio
W = 1.00	(0.625 k.p.h.)	3.62
w = 1.10	(0.688 k.p.h.)	3.92 (standard)

All kits leave the factory with 3.92 calibration speedometers. If a 3.62 ratio Diff is fitted, please arrange to exchange the unit with factory PRIOR to clocking miles on it.

Ordering of supplementary kits and accessories

There have been a number of minor changes to the specification of the Seven recently and more are anticipated as we continually seek to keep up with changing legislation and make engineering improvements. It is important therefore that you always quote the chassis number of your car to us when ordering, especially when it is being built over an extended period, or we may unintentionally provide you with components incompatible with your basic kit.

Caterham Cars Relocation

In October 1987, Caterham Cars opened their new factory at Crayford in Kent. This means that the company is split into two locations

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with sales remaining at the Company's traditional site at Caterham and production expanded into this additional 23 500 sq ft facility.

Please note therefore that although you should place your order at Caterham your car and any subsequent parts should be collected from Crayford. However any queries relating to specification or availability must be addressed to our Caterham office, whilst technical queries during the build of your kit should be directed to Crayford.

Please call any of the following personnel on (0322) 59124/5/6:

Andy Noble

Peter Cooper

Mike Dixon

Jez Coates

Subsidiary Kit Listings

The remaining pages of this section contain a list of the subsidiary kits available to complete your car and their contents at the time of publishing this manual. Exact contents may change as minor improvements are continually made to the Seven's specification

Should you choose to incorporate parts sourced elsewhere than from us we strongly advise that second hand components are not included in the braking system.

IN PARTICULAR NEVER RE USE METAL BRAKE PIPES OR FLEXIBLE HOSES AS YOU MAY SEVERELY COMPROMISE THE SAFETY OF YOUR CAR

FRONT UPRIGHT KIT

1 pair	Vertical links	
2	Stub axles, nuts + 'D' washers + pin	
2	Steering arms + bolts	
2	Hubs (Triumph or Ford centres)	
2	Brake calipers	
4	Brake pads:	Material
	Live axle	2430/3401
	De Dion Drum brakes	2455/3401
	De Dion Disc brakes	3441
	(3401 and 3441 are asbestos free)	
2	Brake discs	
1 pair	Trunnions	
2 sets	Wheel bearings	
2	Grease caps	
2 sets	Brake dust shields	
2	Grease nipples	
2	1/2" nyloc nuts	
4	7/16" x 1 ¹ / ₄ " bolts + spring washers	
	(caliper to upright)	
8	3/8" x 1" bolts (hub to disc)	

FRONT SUSPENSION KIT

- 1 pair Wishbones
- 1 pair Top links
- 1 Anti-roll bar
- 4 Anti-roll bar mountings
- 4 5/16" x 2³/₄" bolts, nylocs and washers
- 2 Grease nipples
- 2 Road springs
- 2 Shock absorbers (fixed or adjustable seat)
- 8 Y9 bushes
- 4 636 bushes (2 fitted to top links, 2 to wishbones)
- 2 1/2" nylocs and washers (anti-roll bar)
- 2 7/16" x 2¹/₂" bolts and nylocs
- 2 5/16" x 1" bolts and washers
- 2 1/2" x 4" bolts, nylocs and washers
- 2 1/2" x 2¹/₂" bolts, nylocs and washers
- 2 1/2" x 3¹/₂" bolts, nylocs and washers

STEERING KIT

- 1 Rack and pinion assembly
- 2 Rack mountings
- 1 Steering column (upper and lower)
- 1 Universal joint
- 2 Track rod ends
- 2 Column bushes
- 4 1/4" x 2³/₄" bolts, nylocs and washers
- 2 1/2" plain nuts
- 1 1/2" thin nyloc nut and washer
- 2 5/16" x 1³/₈" bolts and nylocs

DE DION AXLE KIT

1	De Dion tube
2	De Dion end plates (ears)
1	Differential assembly
1 pair	Driveshafts including CV joints
2	Rear hubs
2 sets	Wheel bearings
2	Drive flanges
1	LH driveshaft nut and washer
1	RH driveshaft nut and washer
4	Blue bolts differential to propshaft
1	Breather pipe
1	Filler plug
1 pair	Brake backplates (or brake calipers)
2	Brake drums (or brake discs)
8	3/8" x 5/8" crown head bolts (discs only)
4	Brake shoes (or brake pads)
1	Handbrake cable (pulley to brake)
1 pair	Brake pipes with T piece, spacer, washer and hose
1	1/2" x 11" bolt and nyloc, 4 x 1/2" large washers
4	10mm x 40mm bolts and spring washers
4	10mm x 55mm bolts and nylocs (8 off disc brakes)
4	10mm x 65mm bolts and nylocs
20	10mm heavy duty plain washers
2	12mm x 65mm 1/2" shank bolts (diff)
10	1/2" x 7/8" thin spacer washers

REAR SUSPENSION KIT

- 2 Radius arms
- 1 'A' frame
- 2 Road springs
- 2 Shock absorbers (fixed or adjustable seat)
- 2 Y9 bushes 'A' frame
- 2 636 bushes 'A' frame (fitted)
- 2 636 bushes large radius arm and bush (fitted)
- 2 2030 bushes small radius arm and bush (fitted)
- 1 $2\frac{1}{2}$ " x $\frac{1}{2}$ " bolt + nyloc
- 2 4" x $\frac{1}{2}$ " bolts, nylocs and washers
- 2 $4\frac{1}{2}$ " x $\frac{1}{2}$ " bolts, nylocs and washers
- 2 $3\frac{1}{2}$ " x $\frac{3}{8}$ " bolts, nylocs and washers
- 1 Rear anti-roll bar assembly (if specified De Dion only)
 - Comprising: 1 Rear anti-roll bar
 - 2 Anti-roll bar mountings
 - 2 Grease nipples
 - 4 $\frac{5}{16}$ " x $1\frac{3}{4}$ " bolts,nuts,washers
 - 2 Drop links
 - 2 Rod ends (L/H thread)
 - 2 Rod ends (R/H thread)

MISCELLANEOUS KIT

2	Axle brake pipes (live axle only)
1	Handbrake rod + 2 clevis pins & clips (live axle only)
1	Axle breather (live axle only)
1	Handbrake strap, plate, bolts and nylocs (live axle)
2	Engine mounting rubbers, bolts and nylocs
2	Engine mounting brackets, bolts and split washers
1	Gearbox mounting, bolts and nylocs
1	Gearshift assembly & reverse stop (4 speed only)
1	Gearlever, extension and caphead bolts (5 speed only)
1	Gearlever knob, gaiter and self tapping fixings
1	Propshaft (bolts and nylocs live axle only)
1	Handbrake lever, barrel, bolts and nylocs
1	Handbrake cable and clevis (live axle only)
1	Handbrake cable, clevis, pulley & pin (lever to pulley De Dion only)
1	Throttle cable and barrel
1	Clutch cable, bolt and nyloc
1	Speedometer cable
1	Right angle drive unit, drive pin & circlip (5 speed)
1	Brake Hose Kit
1	Fuel filler neck, hose, grommet and jubilee clips
1	Screenwasher kit
1	Oil pressure sender
1	Water temperature sender
1	Battery, battery clamp and bolt
1	Coil, coil backplate and bolts

1	Steering wheel (Motolita if specified)
1	Set of horns (air horns if specified)
1	Spare wheel bolt and washer
1	Set of badges
1	Interior mirror
1	Radiator grille and clips
1	Tool bag and tools (jack, handle and wheel brace)
1	Scuttle edge trim
1	Gearbox mounting crossmember (4 speed De Dion only)
1	Gearlever mounting turret (4 speed De Dion only)
2	Gearlever stiffening plates (4 speed De Dion only)
12	Rivets for the above
1	4 speed transmission tunnel top and gearlever gaiter retaining ring (4 speed De Dion only)

5 SPEED GEARBOX KIT

- 1 Gearbox
- 1 Bellhousing
- 1 Spacer gearbox to bellhousing
- 1 Spacer gasket
- 4 12mm x 60mm special fine thread bolts
- 1 Speedometer gear (24 tooth), seal and cap
- 1 Clutch actuating arm
- 1 Clutch arm pivot and nylon bush
- 1 Clutch release bearing
- 1 Clutch cable bush
- 1 Clutch cable/arm rubber gaiter and clip
- 1 Reversing light switch

COOLING KIT

1	Radiator
4	Rubber bobbins, 5/16" nuts and lockwashers
1	Expansion bottle and cap
1	Thermostat housing
1	Thermostat
1	Electric fan switch
1	Overflow pipe and clip
1	Fan motor complete with blade
1	Radiator cap
1 set	Radiator hoses

EXHAUST KIT

1 set	Primary pipes (2 pieces standard system, 4 BDR)
1	Collector (2 inlets standard system, 4 BDR)
1	Silencer
1	Tailpipe (standard system only)
1	Exhaust guard and jubilee clips (2)
1	Silencer mounting bracket
1	Silencer mounting bobbin
1	Tailpipe mounting strap (standard system only)
1 set	Exhaust clamps (4 off standard system, 1 BDR)

LIGHTING KIT

- 2 Headlamp bowls
- 2 Headlamps
- 2 Headlamp wiring looms
- 2 Front indicator lamps
- 2 Front indicator brackets
- 2 Front indicator wing repeaters (not cycle wing kits)
- 2 Rear lamp units
- 2 High intensity rear foglamps
- 2 Reversing lamps
- 1 Rear number plate lamp
- Various fixings

INTERIOR TRIM KIT

- 1 pair Footwell carpets
- 1 Transmission tunnel carpet
- 1 Boot floor
- 1 Boot carpet
- 1 set Seats (fixed or adjustable as specified)
- 1 Bulkhead carpet (adjustable seats only)
- 2 Underseat carpets (adjustable seats only)
- 1 set Fasteners
- 1 Fastener rivetting tool

WEATHER EQUIPMENT KIT

1	Hood
1 pair	Hoodsticks
1 pair	Hoodstraps
1 pair	Sidescreens
4	Sidescreen hinges
2	Sidescreen hinge pins
2	Turnbutton sets
2	5mm x 25mm posidrive screws, nylocs and washers
2	5mm x 40mm posidrive screws, nylocs and washers
16	5mm x 16mm posidrive screws, nylocs and washers
1 set	Fasteners
1	Fastener rivetting tool