

## BASIC ASSEMBLY

The kits as supplied by Caterham Cars will assemble without special jigs and tools and are very much designed around the amateur car builder with basic facilities.

We suggest that when you get the kit home, the chassis be supported on 4 axle stands which will give both stability for safe working and ready access. Ideally these should be positioned at each end of the second chassis crosstube adjacent to the rear wishbone mounting at the front (see Fig.3), and at each end of the chassis crosstube supporting the front of the fuel tank at the rear.

A work bench for sub assembly jobs would be helpful along with a good vice for both holding items stable and lightly pressing parts into position.

Although brute force will never be necessary if assembly is carried out in the right sequence, a soft copper/hide or plastic/rubber hammer will be useful to aid striking items into place without causing damage.

Each Caterham Super 7 kit is supplied with a computer print out, providing a breakdown of the basic starter kit, subsidiary kits and options supplied.

The first page of this shows your name, your kit number and your

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order number. Please make a note of your order number as this is the reference by which we know you and your kit. and will ensure that, no matter how long you take to assemble your car, subsequent packages will be compatible.

On the lower half of the first page and on page 2 is a list of sequence numbers. 01 to 06 give a breakdown of the basic kit, i.e. Chassis Body Unit (CBU), brakes and pedals, instruments switches and wiring loom, windscreen and wipers, fibreglass and fuel tank.

Sequence numbers 07 onwards give a list of packages you have selected to be supplied with your kit, e.g. front suspension, rear suspension cooling,etc

After the listing of your selected packages and options, each package is broken down into part (product) numbers and quantity required. It should be noted that in most of these packages the final item is a hardware or Z pack. Each Z pack is given its own breakdown listed after the final option listing.

It is important to note that these hardware packs are listed in alpha numeric order, for example hardware pack ZBC02 will come before ZRB01 even though the boot cover is listed after the roll over bar in the options list.

The hardware packs consist mainly of nuts and bolts with other sundry fasteners such as ty-wraps and jubilee clips. A simple part numbering system is used to identify nuts, bolts, setscrews and

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washers:

BOLTS: (shank only partly threaded)

Designated initially with a B followed by thread type, shank diameter and length.

Thread types are quoted as:

F = UNF
C = UNC
M = Metric

Diameter and length sizes are given in inches for UNF and UNC and in mm for metric e.g. BF 7/16 x 2<sup>3</sup>/<sub>4</sub> is a UNF threaded bolt of 7/16" diameter and length 2<sup>3</sup>/<sub>4</sub>"

SETSCREWS: (shank wholly threaded)

Designated initially with an s followed by thread type, diameter and length e.g. SM 10 x 30 is a setscrew of metric thread, 10mm diameter and 30mm length.

NUTS:

Designated initially with an N, followed by thread type, nut type and length. Nut type is either:

Nyloc	Y
Plain	P
Brass	B

Length is quoted as either full F or half H

e.g. NFYH 5/16 is a UNF Nyloc, 5/16" diameter half nut.

WASHERS:

Designated initially with a W followed by the type (Spring S or Plain P), the duty (most Caterham washers are heavy duty H) and finally M for optional metric.

e.g. WSH 1/4" is a 1/4" diameter heavy duty spring washer

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Please note that the kit does contain some special fasteners unique to Caterham Cars, these are designated with their own individual product numbers.

The following points are helpful tips to bear in mind when assembling your kit:

1. Always test fit items to ensure that you understand their correct location and that they do fit. It may occasionally be necessary to ease mounting holes for certain bolts. IF YOU HAVE ANY DOUBTS - RING US.
- 2 Always assume that bolts and fasteners are not properly tightened until they have been specifically checked.
3. Check all fluid levels before operation, rear axles and 5-Speed gearboxes are particularly easy to overlook.
4. Apply the correct tightening torques. Where not specified, please use the following table as a guide. Over-tightening can often cause more problems than under-tightening, such as sheared bolts and studs, and incorrect stresses.

Thread Size	Spanner Size A/F	Torque (lb/ft)
1/4 UNF or UNC	7/16	5-7
5/16 UNF or UNC	1/2	12-15
3/8 UNF or UNC	9/16	20-25
7/16 UNF	5/8 or 11/16	40-45
1/2 UNF	3/4	50-60

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All safety critical fastenings supplied by Caterham Cars are high tensile conforming to British Standards 1768 (Imperial) and 3692 (Metric). Customers supplying their own should only use high tensile fasteners marked either "8.8" or "12.9" on the head, particularly when attaching suspension, steering, upright and axle kits. Any unmarked bolts should not be used.

The car is assembled with predominantly Imperial nuts and bolts but in some areas Metric items are used.

The following should provide a helpful guide :-

Suspension & Steering	UNF
Engine	UNC
Gearbox (Escort Sport & 5-Speed)	Metric
Live Axle	UNF
De-Dion Axle	Metric

5. In order to ensure ease of assembly and subsequent maintenance, we suggest the use of the following:
  - a) Castrol LM grease (or equivalent) for general use wherever movement occurs.
  - b) 'Rubber Lube' to ease assembly and operation of rubber bushes and grommets.
  - c) 'Copper Slip' anti-sieze compound where lubrication is not needed to ensure easy future disassembly.
  - d) 'Loctite' thread locking fluid where the application prevents the use of nylon locking (Nyloc) nuts or spring washers.

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Please note that all sealants should be applied very sparingly and the thinnest possible layer achieved, any excess should be wiped away immediately once the components are assembled.

6. The kits provided by Caterham (from the factory at Crayford) include all the items needed to build the car but, due to the sheer number of different components, it is sometimes possible that parts are omitted or duplicated. We therefore strongly recommend that you check that all items listed on your computer print out are correctly provided on receipt of your kit. If you live some distance away from Crayford, we suggest that this check be carried out on our premises to avoid disappointment and delay on your return home.
7. Due to the nature of the motor industry, it is frequently necessary for us to change suppliers and/or make minor changes to the car's specification. This will generally be explained to you on collection, but if you come across something which differs from these instructions, please do not hesitate to contact us.
8. The golden rule must be 'WHEN IN DOUBT, ASK'. Caterham Cars happily provide technical back up when required.
9. Basic starter kits as supplied by Caterham are unpainted, the bodywork being bare aluminium and the wings and nosecone pre-impregnated fibreglass.

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If you wish your car to be painted, we advise that the following be either removed or fitment delayed until painting is complete.

- i) front and rear wings, nosecone
- ii) front wing stays
- iii) bonnet catches from both bonnet and chassis
- iv) windscreen
- v) windscreen wiper spindle rubbers

Considerable masking is necessary before a Seven can be sprayed so, if you are proposing to get a local bodyshop to do the job. significant cost savings can be made if you do this yourself.

If you intend that the headlamp bowls should match the rest of the car, ensure that the lighting kit is ordered for collection at the same time as your starter kit.

You will notice that the rear of the car is marked in order that the holes for the popper bases which secure the hood are correctly located. These should be drilled with a 5/32" drill before painting.

You should note that cars are normally supplied with wings unfitted so a small amount of additional work is necessary to attach them. (refer section 9.5.6) From mid 1988 the rear front wing stays will be deleted and the wing mountings in the chassis strengthened to compensate.

10. Due to the composition of the subsidiary kits and their necessity to link together, it is important to study the whole manual before commencing assembly.

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It is structured in a manner that presents a logical build sequence but the car does not have to be assembled in this precise order.

In particular the propshaft is supplied in the miscellaneous kit. With De Dion cars it is not possible to install the propshaft once the differential unit has been fitted and therefore we recommend that the rear axle, rear suspension and miscellaneous kits are purchased together.

The miscellaneous kit in either variety of car contains items relating to the rear axle, engine, gearbox, braking and interior which are covered in sections prior to that dealing specifically with this kit.

11. Seven Builders should take care to observe basic safety precautions whilst assembling their kits since tools parts and materials incorrectly handled can cause injury.

In particular your attention should be brought to the following:

- i) do not work underneath a car that is not properly supported, a jack alone is not sufficient
- ii) avoid prolonged and repeated contact with oils, particularly used mineral oils, which will result in the removal of natural fats from the skin, leading to dryness, irritation and dermatitis and the ultimate possibility of skin cancer.
- iii) First Aid treatment should be obtained immediately for open



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cuts and wounds

iv) we advise the use of barrier creams, applied before starting potentially oily jobs, to help the removal of oil from the skin. Wash with soap and water to ensure all oil is removed (skin cleansers and nail brushes will help) and do not use petrol, diesel fuel, thinners or solvents for washing skin.

v) where there is risk of particles getting into your eyes, for example when working underneath your car or while drilling or filing some form of eye protection is recommended.

FRONT JACKING POINTS

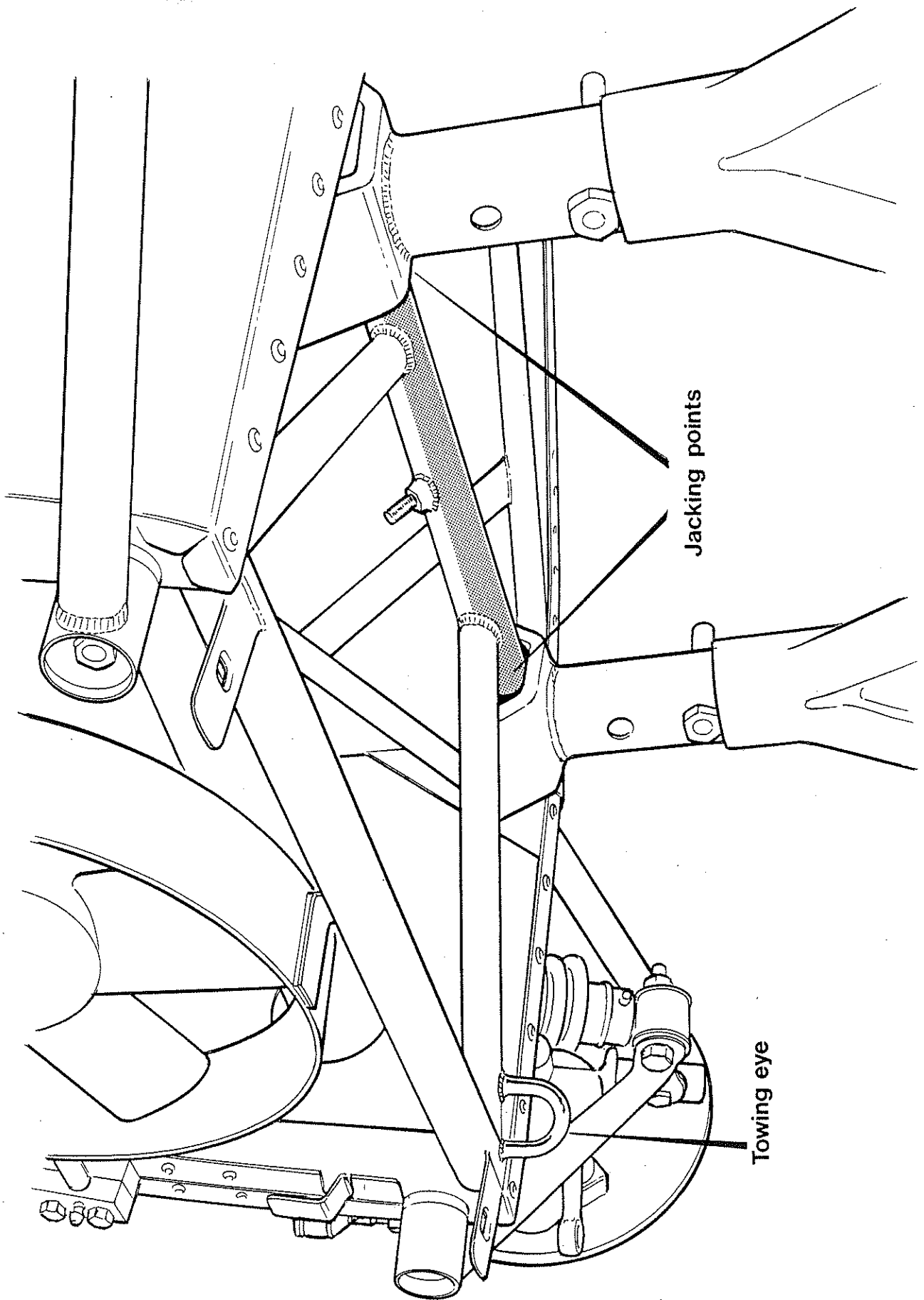


Fig. 3