

## ATTACHMENT OF LIGHTING KIT

The lighting kit includes all the parts needed to make the Seven comply with lighting requirements under United Kingdom Construction and Use regulations. If the instructions in this section are followed, all legal requirements will be fulfilled.

If alternative parts are used they must be 'E' marked and fitted in accordance with diagram 11.1 or your vehicle will not comply with Construction and Use regulations. (See also wiring diagram at rear)

### 11.1. Rear Lights

1.1 The kit includes two identical rear light assemblies which comprise rear, brake and indicator lights. They are mounted on rubber blocks which ensure that the lights are vertical when fitted. These units can be turned around on the blocks to enable the amber indicator lights to be on the outside.

1.2 The rear wings are marked with two dots which give the position for the rear lights. Drill the lower innermost hole to 4mm and the outer mark 5mm to take the wiring.

1.3 Remove the lenses from the rear lamps along with the bulbs noting that the indicators use a single filament and the rear/brake lights a double filament bulb. You will see that there are four square holes in the metal base plate which tie in with dimples in the rubber block. Drill these through the rubber with a 4mm drill ensuring this is at 90° to the base plate.

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1.4 Each rear light unit is attached using four long self tapping screws, the upper ones being longer. Feed the wiring through the 5mm hole you have drilled and attach the rear light with one of the shorter screws at its bottom inside corner. Adjust for levelness and drill through into the wing using the 4mm drill for the remaining three holes. We suggest that you remove the unit and clear away the swarf before finally fixing in place. Replace the bulbs and lenses.

1.5 The wiring is connected to the main loom using 'bullet' connectors into insulated sleeves provided with the kit. Fit the sleeves onto the exposed bullets on the loom checking that they have been pushed fully home. A fine nosed pair of pliers may be useful here. Feed the wires from the light unit through the grommet under the wheel arch and connect to the loom as follows:-

	Left side Unit	Loom	Right side Unit
Rear light	red	<del>red/black</del> red/white	red
Brake	green/mauve	green/mauve	green/mauve
Indicator	green	green/red	
Indicator		green/white	green
Earth	black	black	black

1.6 For neatness, bind the wires from the light unit together with insulation tape and clip them out of harm's way with a tywrap to a block screwed onto one of the protruding ends of the light mounting self tappers.

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### 11.2. Reversing Lights

2.1 The reversing lights are fixed to the rear wings below and slightly inboard of the rear light units. The builder has flexibility with their exact location, but we suggest that the bottoms of the reversing lights are 1" above the bottom of the wings, and the inner edge 2" outboard from the beading at the inner edge of the wing.

2.2 Dismantle the reversing light unit, removing the lens and bulb and reveal two holes in its metal base.

Having established the correct positioning on the wing, mark and drill two 5mm holes for the fixing bolts and a further hole large enough to take the live wire connection.

2.3 You will, no doubt, have noticed by now that the reversing light is provided with a spade connector whereas the loom uses bullet connectors.

In order to establish a connection a bullet connector should be fitted to the green/brown wire from the reversing light.

2.4 The reversing lights are bolted to the rear wings using

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two 5mm x 16mm screws and nylocs noting that the green/brown earth lead fitted with an eyelet connector should be fed through the grommet from the car and secured to the reversing light by one of these.

2.5 Replace the bulb and lens, taking care not to overtighten the lens retaining clips which may crack.

### 11.3. Rear Fog Lights

3.1 The twin rear fog lights are attached to the back panel of the car and again the exact positioning is down to the builder. We suggest they are fitted with their bottom edges 1" up from the bottom of the back panel and with their inner edges  $2\frac{1}{2}$ " outboard of the outer edge of the spare wheel carrier. It is wise to check their position relative to your spare wheel prior to fitment, especially if oversize wheels are being used.

3.2 Having established your chosen positioning, drill two 5mm clearance holes for their locating studs and a central 9/16" hole for the main body of the light. Bolt in place using large plain washers to prevent distortion of the back panel and 5mm nyloc nuts.

~~YELLOW~~  
~~ORANGE~~

3.3 The live red/~~yellow~~ leads are connected using 'bullet' connectors to the red/orange wires from the main loom on each side. The plastic loom protection should be stripped back to allow the black earth wire to be shortened and doubled back onto one of the fixing screws.

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### 11.4. Rear Number Plate Lamp

4.1 Dismantle the lamp unit and secure onto the spare wheel carrier using the two studs with 5/16" AF nuts and lockwashers.

4.2 Feed the red wire through from the loom into the back of the unit and clip the bullet into the live socket provided in the centre of the light unit. The number plate light is earthed through its base so no connection is needed.

### 11.5. Front Indicator Repeaters (Flared wings only)

5.1 These are attached to the outer edges of the front wings where dimples in the glass fibre clearly indicate their location.

5.2 Dismantle the repeater assemblies removing bulb and lens. Drill through the front wings at the marked points with a 5mm drill for the outer holes and a 9/16" drill for the centre.

5.3 Remove the studs from the unit and bolt the repeaters into place using 5mm x 16mm Posidrive screws and nylocs. Attach the black earthwire to one of the mounting screws, enlarging the tag hole to suit, in the process and replace the bulb and lens.

5.4 The repeaters are wired in with the main front indicators - see section 11.7.

### 11.6. Headlights *KEM*

6.1 The headlamp bowls are mounted upon brackets which are

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part of the upper front wing stays. The front indicator mountings (flasher brackets) also attach at the same point and are secured in place by the nut holding the bowl assemblies. (Cycle wing cars have separate headlamp/indicator brackets)

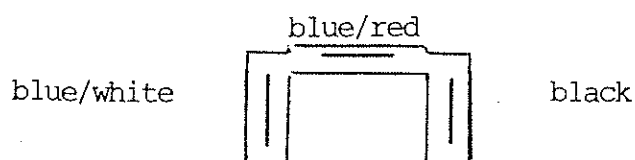
6.2 Mount the headlamp bowl on top of the front wing support with its cast base above the bracket. Fit the indicator mounting over the protruding thread of the headlamp bowl and secure into place underneath the wing support with the large 15/16" AF nut and lockwasher.

Tighten until the headlamp bowl can move but does not flop about. Note that the flasher brackets are handed and that the indicator itself mounts in front of the bracket.

6.3 The wiring for both headlight and indicator is part of the main wiring loom which should be fed through rubber grommets provided in the outer skin of the chassis.

The head and sidelight wiring should be fed upward through the hollow headlamp bowl mounting into the headlamp itself. The metal clamp and screw are not necessary.

6.4 The headlamp wiring can now be clipped into place within the plastic three point plugs provided as follows, viewed from the front:



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6.5 The sidelight bulb holder connects to the loom using bullet connectors red to red and black to black.

RED/WHITE (RH)  
RED/BLACK (LH)

6.6 The headlamp itself is attached to the chrome plated rings at the front of the headlamp bowls. Remove these rings by undoing the top screws noting how these retain a U shaped small bracket. These screws are only undone sufficiently to allow the ring to clip off.

Noting which way up these rings fit, attach the headlight unit to the inside of the rings using three wire spring clips. These spring clips are a tight fit and may need easing slightly before they can be stretched into position. Note also that they can apparently be fitted either way up. Ensure that they are fitted TOWARDS THE OUTSIDE OF THE RINGS since otherwise they will prevent the ring/headlamp unit fitting into the bowl.

6.7 Connect the main headlamp wiring plugs and clip the sidelights into the back of the headlights. Hook the bottom of the ring into the lip on the headlamp bowl and swing the ring/light assembly up into position, securing with the top screws. Check that the headlights are the correct way up in their mountings, the word LUCAS where applicable should be horizontal. Final alignment should be carried out using a headlight beam aligning device which all garages should have.

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### 11.7. Front Indicators

7.1 The indicator units are fitted with rubber insulator/protectors which must first be removed. At the back of these protectors are the holes through which the wiring is fed and these will need to be opened up.

7.2 Fit the rubber protectors onto the mounting brackets and feed the wiring through from behind. There will be four wires to be connected: green/red LH (or green/white RH) and black from the loom and green and black from the repeater. Connect the black earth wires and the remaining pair of wires together.

7.3 There are several ways of connecting the relevant wires together including soldering or crimping into suitable 'bullets' but probably the easiest method uses the small connectors provided with the indicator units themselves.

Remove the existing connectors and strip the bare wires back about 1/4". Feed paired wires into the female end of the connector until the bared wires emerge from the other end at which point they are bent back. These can now be pushed into place on the indicator unit noting that the live connector attaches to the rear end and the earth connector to the side.

7.4 With the wiring attached the indicator unit is slid back into its protective sleeve and secured to the bracket with 3/16" nyloc nuts.

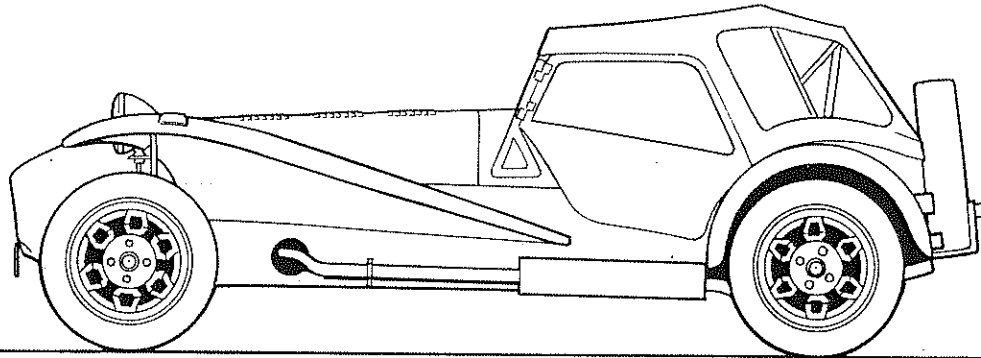


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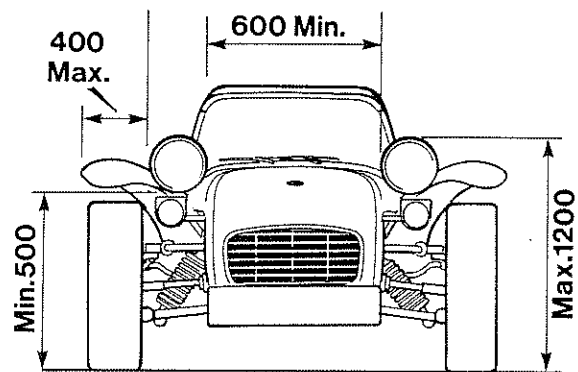
### 11.8. Final Testing

When all connections are made to the engine and the battery is installed, all the electrical functions can be checked. If there are any problems, recheck your connections and check that the bulbs have not been damaged in transit. In the unlikely event that problems persist, either contact Caterham Cars or an automotive electrician.

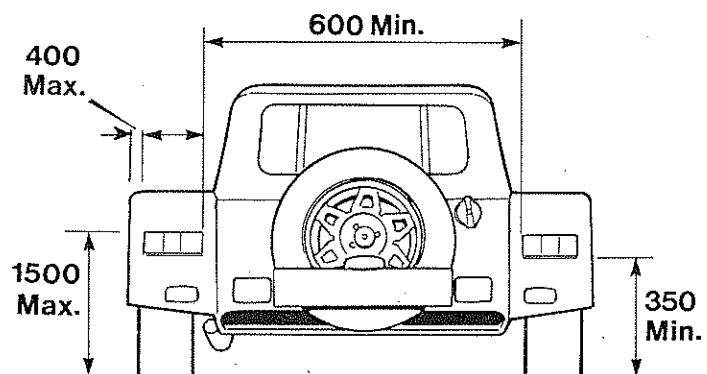
## Lighting - Legal Requirements



Position of  
Headlamps



Position of  
Rear Lamps



Dimensions in millimetres  
unless otherwise stated

	<i>Min. height</i>	<i>Max. height</i>
Fog Lamps	250	1000
Direction Indicators	430	2290

Fig 11.1