

Section N - Cooling System

N.B. Cooling System part numbers begin with (K)

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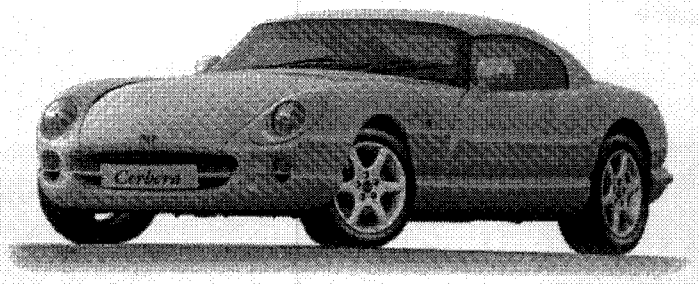
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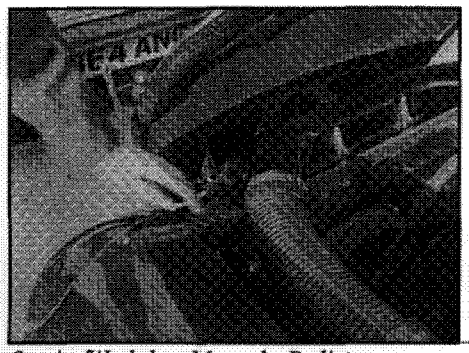
F
Coolant Replacement

Notes



Service / Workshop Manual

Radiator



Service/Workshop Manual - Radiator

1

Remove the air flow sensor plug which is situated on the N/S of the car.



Service/Workshop Manual - Radiator

2

Remove the inlet ducts from the air filter box by loosening the Jubilee clips.



Service/Workshop Manual - Radiator

3

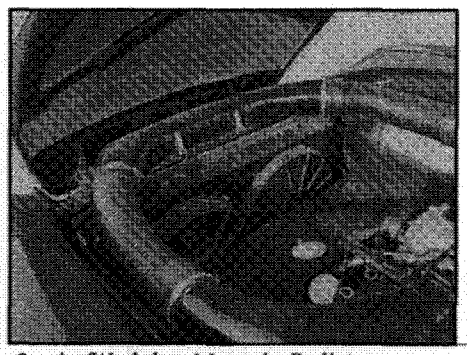
Next remove the split pins on the two securing clips on the front of the box and undo the clips.



Service/Workshop Manual - Radiator

4

The filter housing should now come free.



Service/Workshop Manual - Radiator

5

To gain access to the radiator remove the F1 panel.



Service/Workshop Manual - Radiator

6

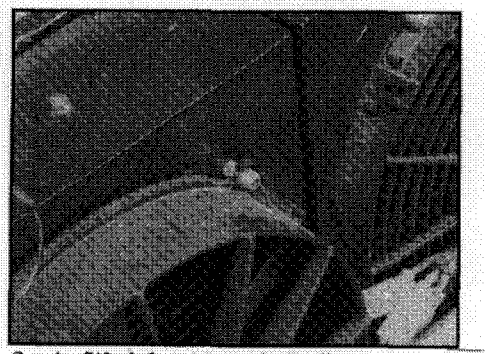
Remove the top and bottom radiator hoses.
Starting with the bottom - to allow fluid to drain out.



Service/Workshop Manual - Radiator

7

If A/Con disconnect both fan wires.
N.B. Noting which wires went to which connector.
If standard disconnect single fan wiring.



Service/Workshop Manual - Radiator

8

If A/Con remove the largest fan by unbolting the 4 x M6 nyloc nuts.



9

Remove the 2 securing M8 nut on each side of the radiator and then lift out of the car.

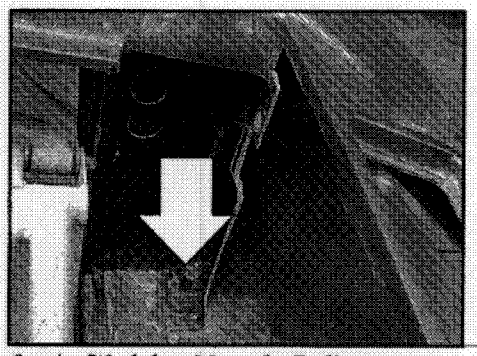
Service/Workshop Manual - Radiator



10

When replacing the radiator the cooling system will have to be bled.- as described in its relevant sub-section.

Service/Workshop Manual - Radiator

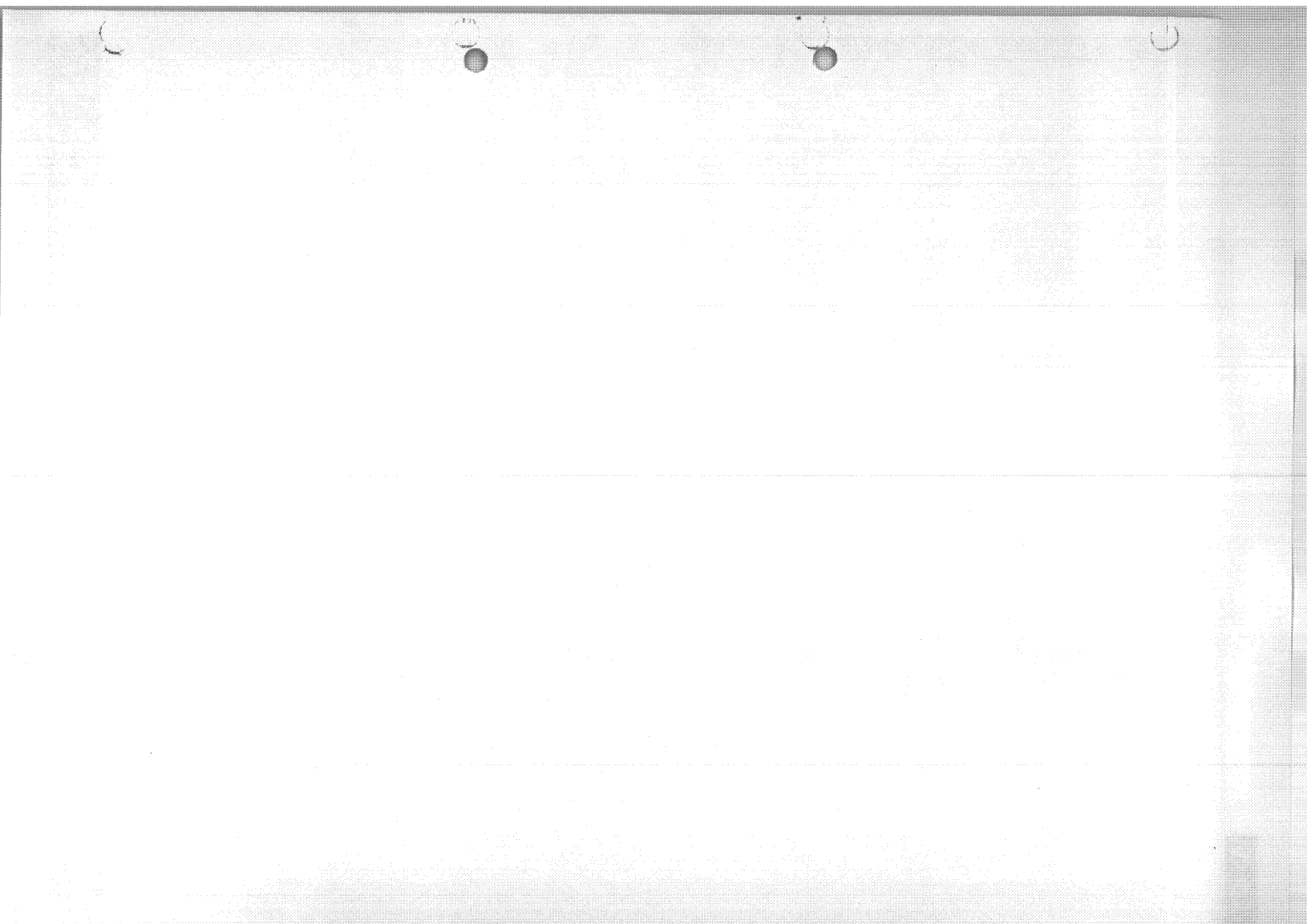


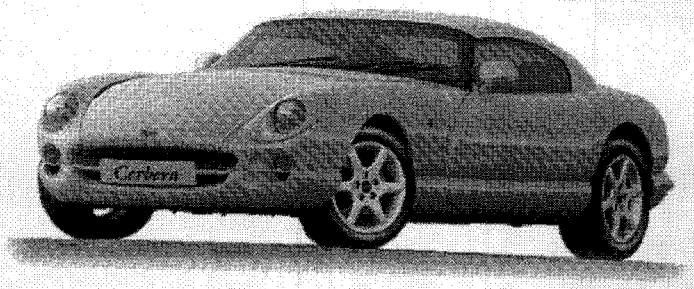
11

Locate the radiator Mtg. pins in the two locational holes and then replace nuts.
Ensure that the mtg. pins have the rubber spacers in place.
Coolant Specification 3 parts water to 1 anti-freeze. Capacity 15 litres.

Service/Workshop Manual - Radiator

Notes





Service / Workshop Manual

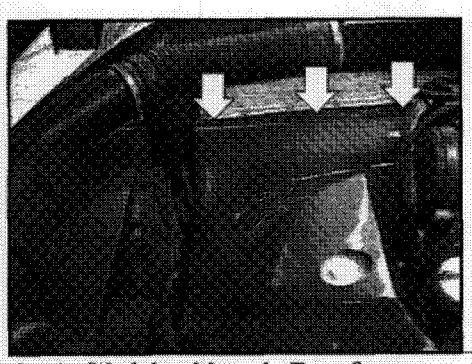
ECU Temperature Sensor



Service/Workshop Manual - Temp Sensor

1

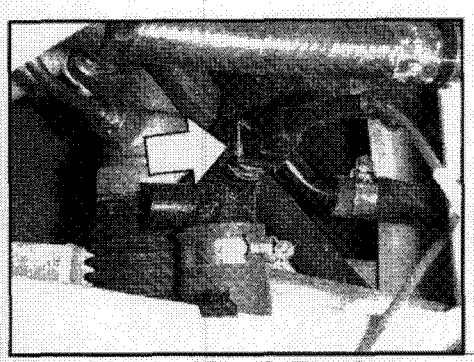
The temperature sensor for the cooling system is located in the engine bay under the F1 panel.



Service/Workshop Manual - Temp Sensor

2

Remove the 6 x M8 allen bolts which secures the F1 panel.



Service/Workshop Manual - Temp Sensor

3

The sensor is located on the top of the outlet cooling pipes - as shown.



Service/Workshop Manual - Temp Sensor

4

To remove unclip the sensor connector.



Service/Workshop Manual - Temp Sensor

5

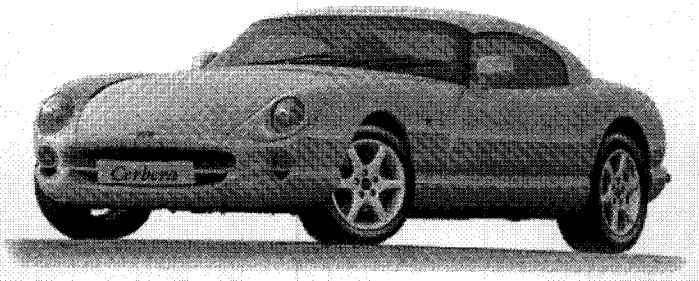
Unscrew the sensor from the coolant piping. The sensor is connected directly to the ECU which determines when the fans come on.



Service/Workshop Manual - Temp Sensor

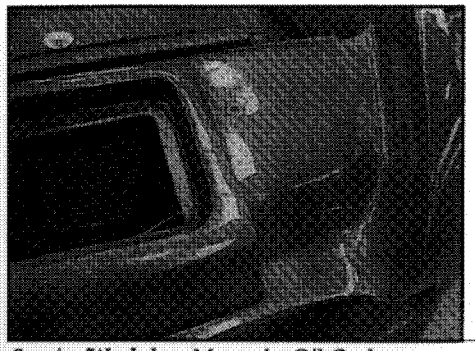
6

To replace reverse the outlined procedure. Ensure to bleed system on reassembly.



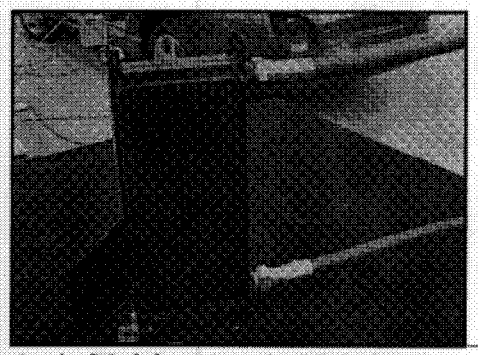
Service / Workshop Manual

Oil Cooler



1

To remove the oil coolant matrix firstly remove the M8 counter sunk allen bolt which secures it to the body of the car. This is located at the N/S nose of the car under the bonnet. (same position as the V.I.N. but on the opposite side of the body).



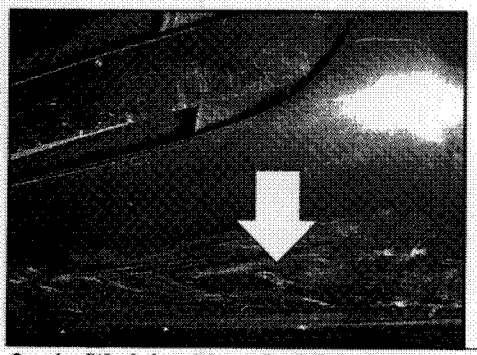
2

Undo the oil coolant piping from the oil cooler matrix. access can be gained via the access panel in the front of the front N/S wheel arch. The picture is of an oil cooler and piping out of the car.
N.B. - The oil in the system will drain out so be sure to have a container for the fliud to drain into.



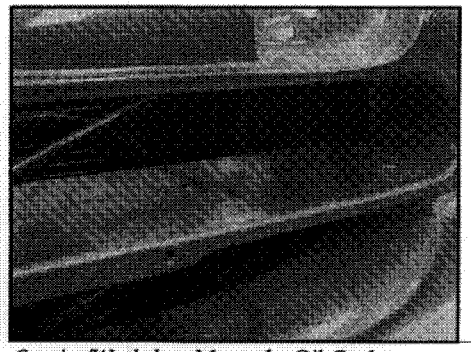
3

Then remove the air filter box - as described in its relevant section.



4

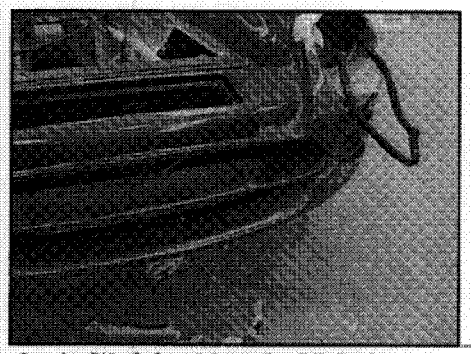
Remove the 2 X M8 allen bolts from underneath the front grill area.



5

Service/Workshop Manual - Oil Cooler

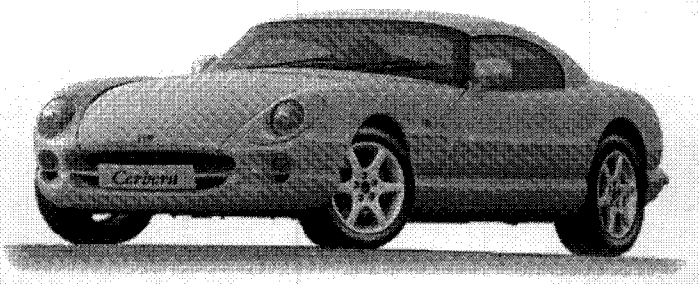
The oil cooler will then be able to slide to the left.



6

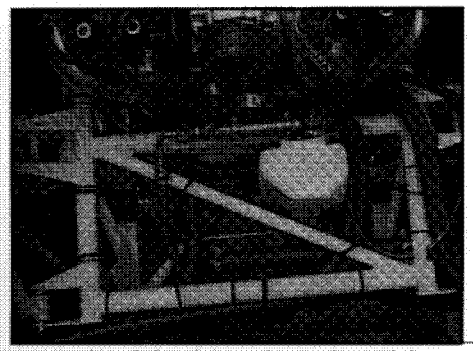
Service/Workshop Manual - Oil Cooler

Remove the oil coolant matrix from the car through the air filter box hole.
To replace reverse the outlined procedure remembering to refill and bleed the system.
- refering to the relevant sections for instructions on these procedures.



Service / Workshop Manual

Water Cooling Piping



Service/Workshop Manual - Coolant Piping

1

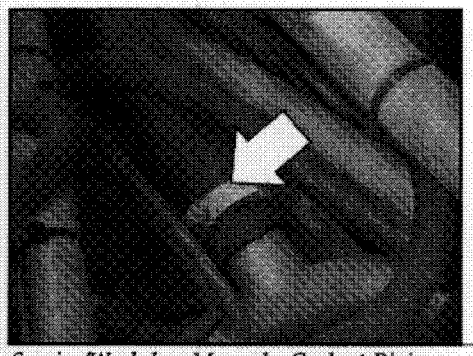
The water cooling piping is made up of rubber hoses sections which are joined by jubliee clips from the radiator to 2 metal pipe sections which inturn are conected to the engines cooling rails and the fluid reservoir.



Service/Workshop Manual - Coolant Piping

2

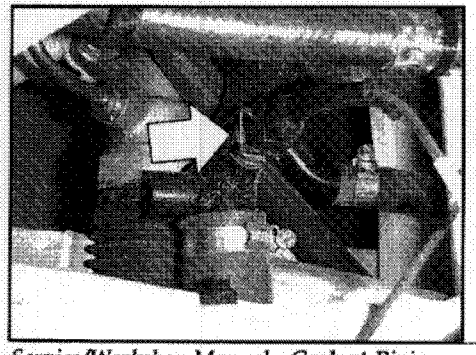
To replace a section of the rubber piping or even a section of the metal piping, drain the system - as described in the:-
"bleeding the coolant system"



Service/Workshop Manual - Coolant Piping

3

Then, simply disconnect the relevant section of hose or metal tubing by undoing the relevant jubliee clips.

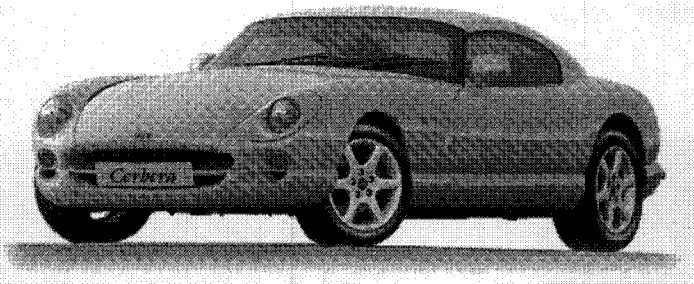


Service/Workshop Manual - Coolant Piping

4

Remembering to disconnect the temperature sensor or the temperature gauge when the section of tubing which houses them has to be removed.

Notes



Service / Workshop Manual

Bleeding the Coolant System



Service/Workshop Manual - Coolant Bleeding

1

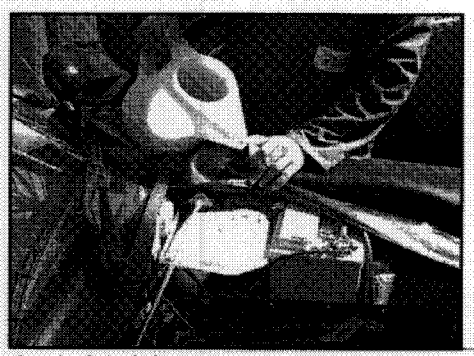
Remove the coolant reservoir cap located under the upper engine bay cover on the N/S of the car.



Service/Workshop Manual - Coolant Bleeding

2

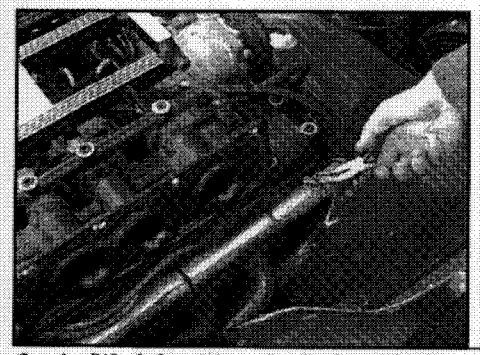
Remove the bleeding plug which is located on the O/S of the radiator.



Service/Workshop Manual - Coolant Bleeding

3

Top up the reservoir with fluid until the excess spills out of the bleed plug on the radiator.

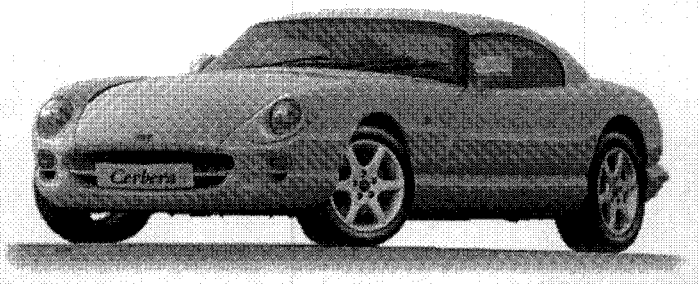


Service/Workshop Manual - Coolant Bleeding

4

Replace the bleed plug and then bleed any air from the system using the bleed valves on the coolant rails. Once no more air is being expelled tighten the valve, check the level of coolant in the reservoir and replace the cap. Run the car and then re-check for air.

Notes



Service / Workshop Manual

Replacing the Coolant



1

Service/Workshop Manual - Coolant replacement

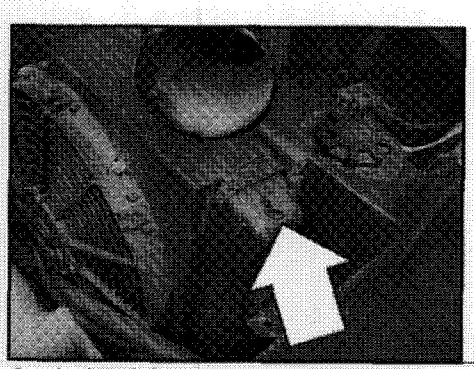
To replace the cooling system fluid, all the existing fluid has to be drained. To do this the lowest part of the system, which is the lower piping connecting to the radiator, has to be dis connected.



2

Service/Workshop Manual - Coolant replacement

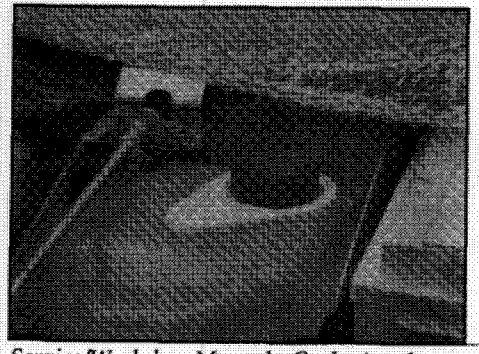
Once all the exsisting fluid has been drained reconnect piping.



3

Service/Workshop Manual - Coolant replacement

Remove the bleeding plug which is located on the O/S of the radiator.

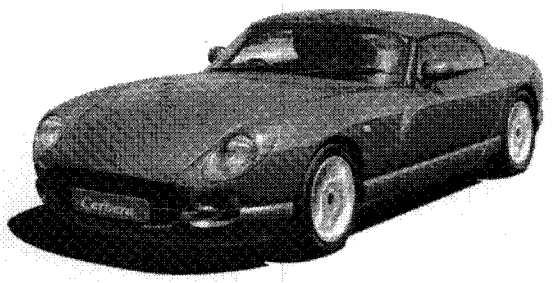


4

Service/Workshop Manual - Coolant replacement

Remove the coolant reservoir cap and refill with coolant. 15 litres - 3 parts water, 1 part anti-freeze.
Then bleed the system as descrided in the relevant section.

Notes



Section O - Fuel System

N.B. Fuel System part numbers begin with (L)

contents

A

Fuel Pump

B

Fuel Filter MKII



Service / Workshop Manual

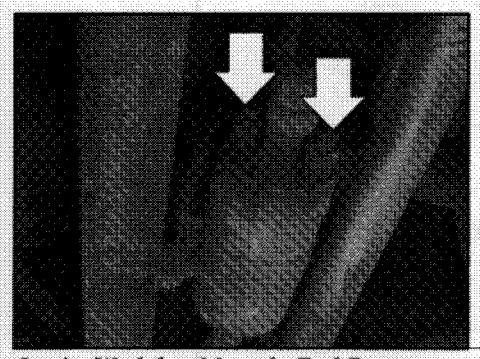
Fuel Pump - Removal and Replacement



1

Service/Workshop Manual - Fuel Pump

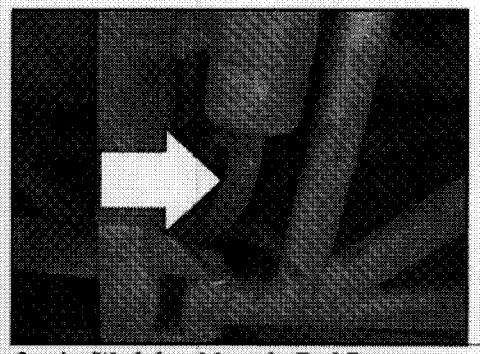
The fuel pump is located on the rear N/S of chassis.



2

Service/Workshop Manual - Fuel Pump

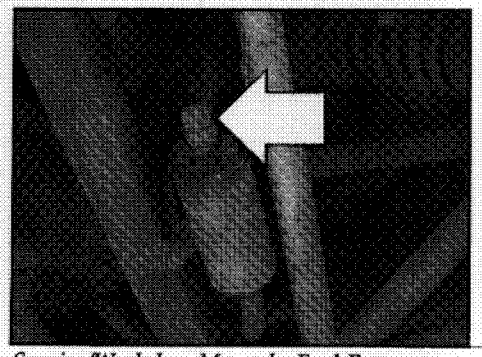
Remove the positive and negative connectoring wires.



3

Service/Workshop Manual - Fuel Pump

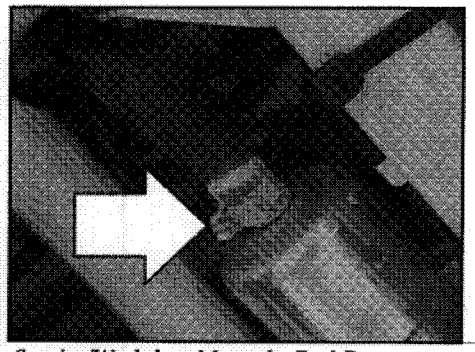
Next clamp the fuel pipe to fuel pump rubber hose.



4

Service/Workshop Manual - Fuel Pump

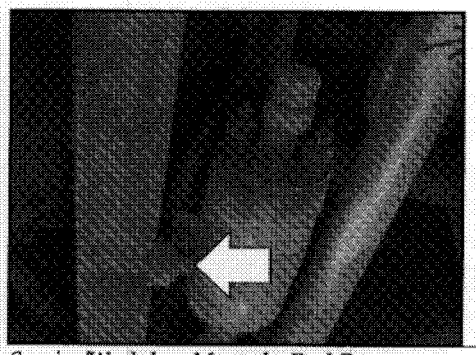
Next remove the banjo nut from the same end and slide off the hose fitting. Discarding the copper washer.
N.B.- some petrol will leak out.



5

Service/Workshop Manual - Fuel Pump

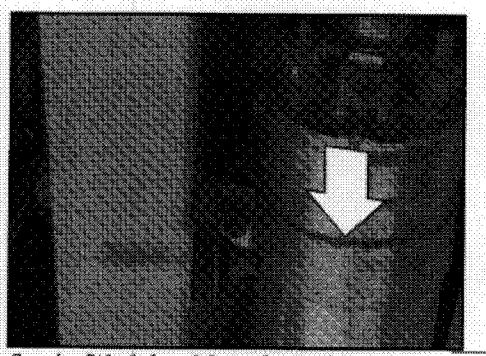
Undo the jubliee clip which secures this rubber hose to the fuel pump.



6

Service/Workshop Manual - Fuel Pump

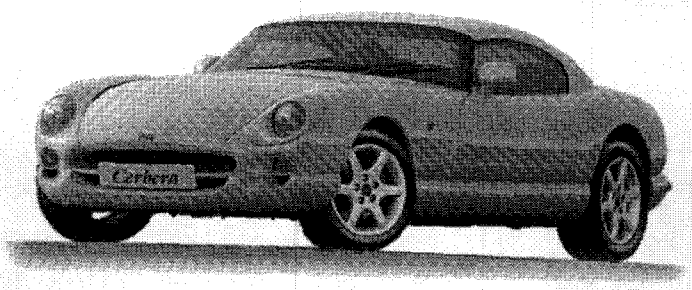
Remove the pinch bolt on the securing bracket.



7

Service/Workshop Manual - Fuel Pump

Finally slide the pump out of the bracket.
To replace reverse the outlined procedure.
Ensuring the wire connections are correct and you have replaced the copper washers .



Service / Workshop Manual

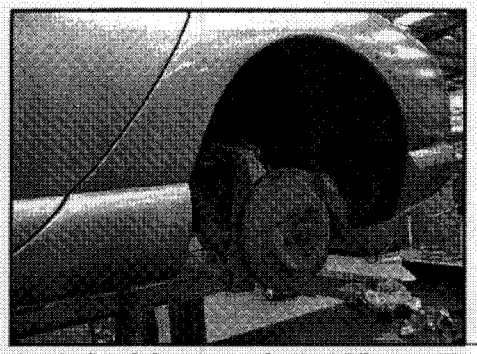
Fuel Filter MKII 8/97 ONWARDS



Service/Workshop Manual - Fuel Filter MKII

1

The fuel filter on the cerbera is mountded in two positions:-
(A) Pre 8/97 cars will have a fuel filter mounted on the top of the rear of the chassis in a similar position as the Griffith and Chimaera models.
(B) Cars made after 8/97 will have a fuel filter mounted under the N/S wheel.



Service/Workshop Manual - Fuel Filter MKII

2

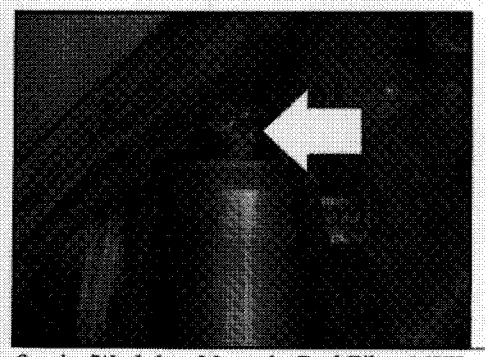
To complete the operation of changing a fuel filter a second pair of hands will be needed. Raise the car on a ramp at shoulder level. Remove the rear N/S wheel.



Service/Workshop Manual - Fuel Filter MKII

3

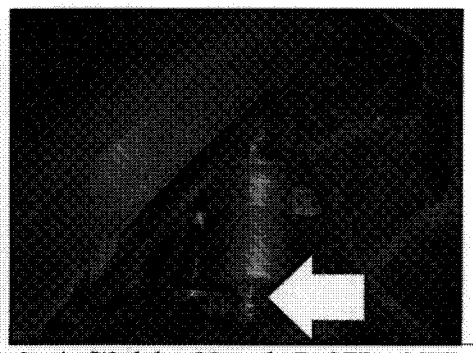
The fuel filter is located on the underside of the wheel arch.



Service/Workshop Manual - Fuel Filter MKII

4

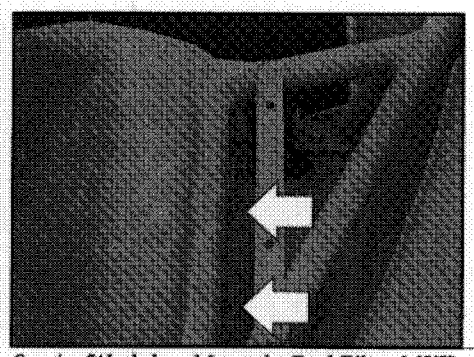
Carefully unbolt the top banjo bolt. This will de-pressurise the fuel filter and will result in some fuel spraying out.



Service/Workshop Manual - Fuel Filter MKII

5

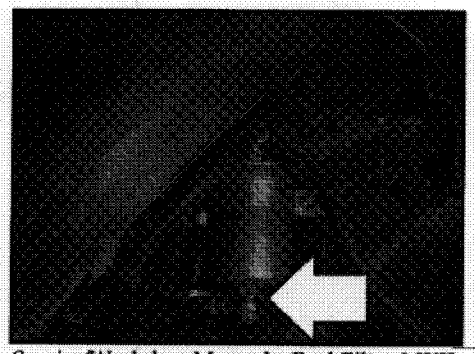
Next undo the bottom banjo bolt.



Service/Workshop Manual - Fuel Filter MKII

6

Finally to remove the filter bracket a second person will need to remove the egg panel behind the rear seats and hold the bracket nuts, as the first person removes the bolts from the other side.



Service/Workshop Manual - Fuel Filter MKII

7

To replace reverse the outlined procedure remembering to fit new cooper washers.