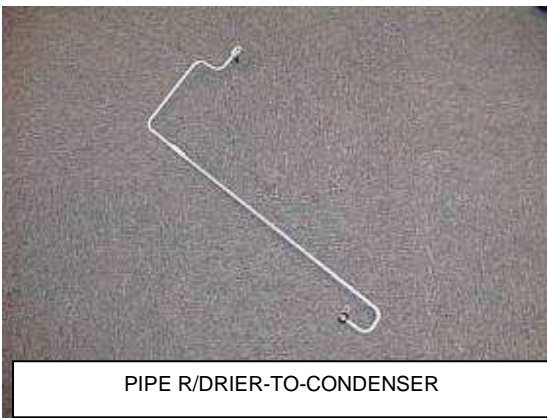


AIR CONDITIONING KIT

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Torque Values

Torque wrenches should be regularly checked for accuracy to ensure that all fixings are tightened to

HOSE COMPRESSOR-TO-CONDENSER

HARNESS A/C ENGINE BAY

Torque values below are for all screws and bolts used, except for those that are specified otherwise.

Metric Nm

M5	6
M6	9
M8	25
M10	45

Imperial Nm

Union No6	16-20
Union No8	19-24
Union No10	22-30

AIR CONDITIONING KIT

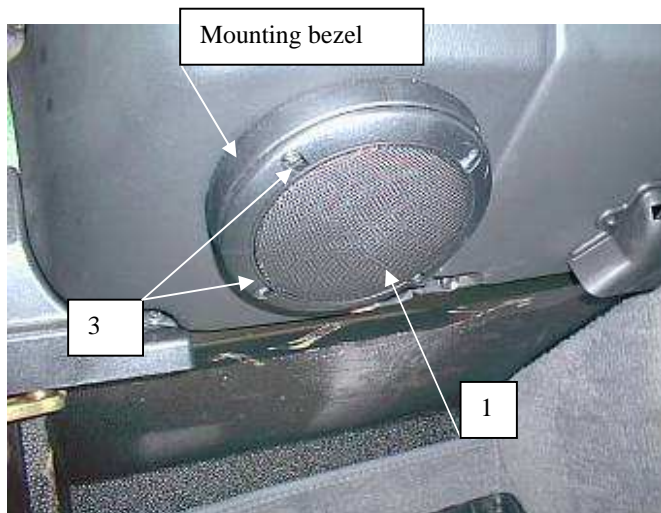
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VEHICLE PREPERATION

1. Disconnect battery negative cable; if vehicle is fitted with a factory fit alarm refer to owner's handbook for correct procedure.
2. Remove and retain vehicle front grill 8 screws and washers.
3. Remove and retain grill surround 2xM8 bolts at bottom 4xM8 bolts at top
4. Remove and discard front a-frame assemble, Discard lower fixings, refit bonnet latch to slam panel.

INTERIOR PREPERATION

1. Remove speakers from vehicle facia, discard mounting bezels retain fixings.



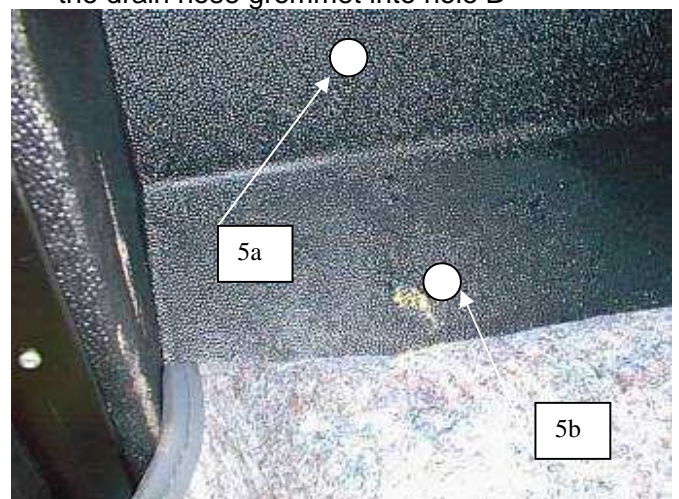
2. Remove and retain centre fuse box cover, Locate the brown seven way connector clipped to the fuse carrier bracket. Remove the connector from the carrier and split discard the empty half of the connector.
3. Drill the two outer speaker fixing holes on each side of the dash to 6.5mm



4. Fit the two 90 degree brackets and weld nut bracket to the drilled out speaker holes on the dash using four M5x30 screws (supplied in kit)
5. Remove the material from the passenger footwell mat to expose the two grommets in the bulkhead.

- a Pipe Header
- b Drain tube

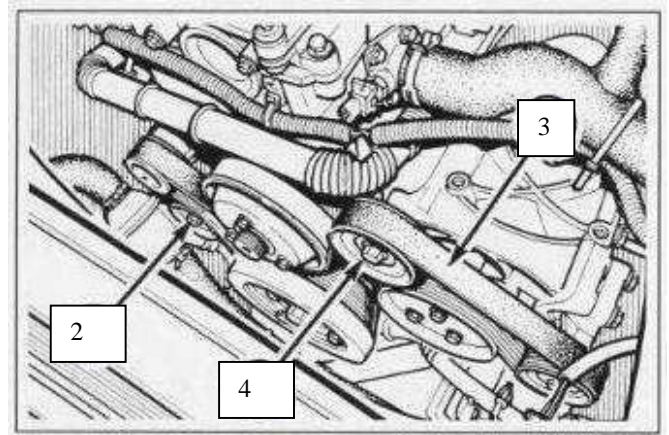
Locate and fit the pipe grommet into hole A and the drain hose grommet into hole B



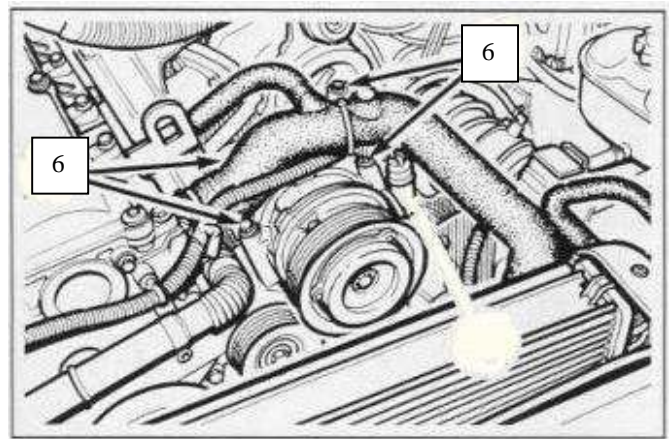
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2. Release tension on the drive belt by disengaging the tensioner pulley turn anti clockwise



3. Remove and discard belt
4. Remove top idler pulley and discard
5. Insert two dowels (supplied in kit) to the front compressor mounts in the engine bay.
6. Position the compressor onto its mounts and secure with four M8x95 flange bolts (supplied in kit). Torque to 25Nm.



EVAPORATOR INSTALLATION

1. Lift fascia into position so the pipe block fits into the bulkhead grommet. Push fascia up onto the lower side of the dash pad so the brackets are on the inside of the fascia moulding.
2. Using a 3mm drill bit drill two holes either end of the moulding through the metal brackets and secure with two self-tappers each end.



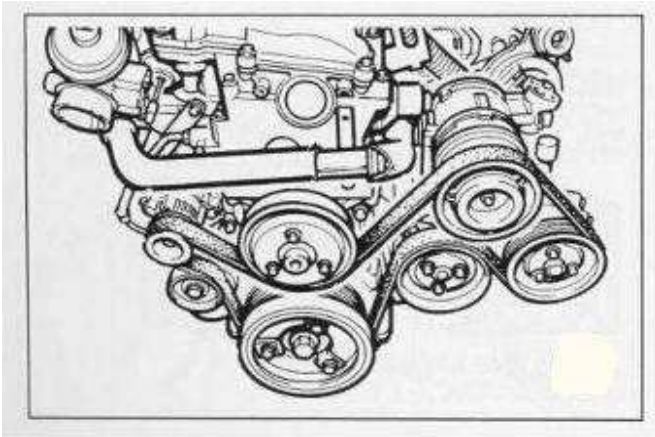
3. Using a long series 5.5mm drill bit drill the centre fixing and secure with the long self-tapper (supplied in kit)
4. Refit speakers to a/c fascia using original fixing screws.
5. Connect the brown 7-way on the fascia harness to the mating half in the fuse box area.
6. Refit fuse box cover, ensure wires do not become trapped

ENGINE DRESS.

1. Remove and retain the plastic cover from above the radiator four plastic screws.

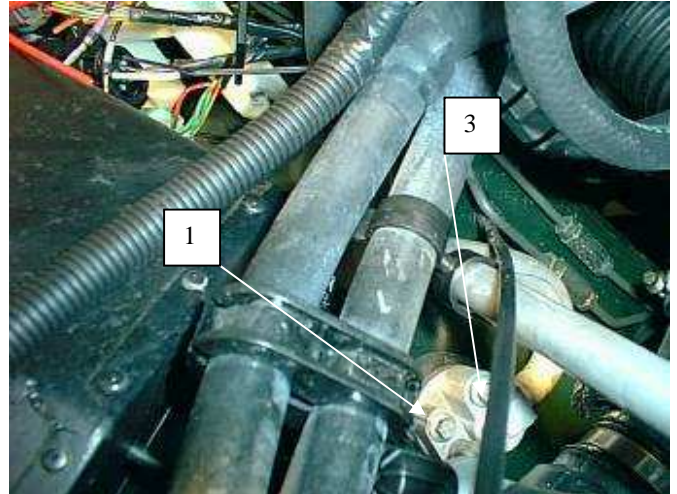
AIR CONDITIONING KIT

7. Fit new drive belt (supplied in kit) and release belt tensioner.

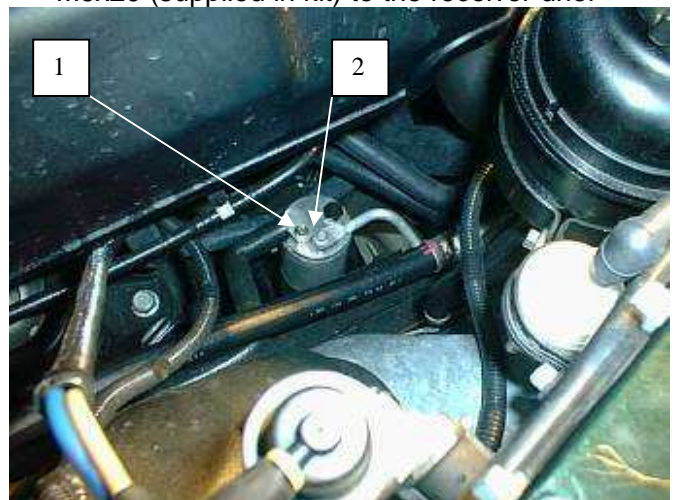


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M6x30 (supplied in kit) into the evaporator pipe block.



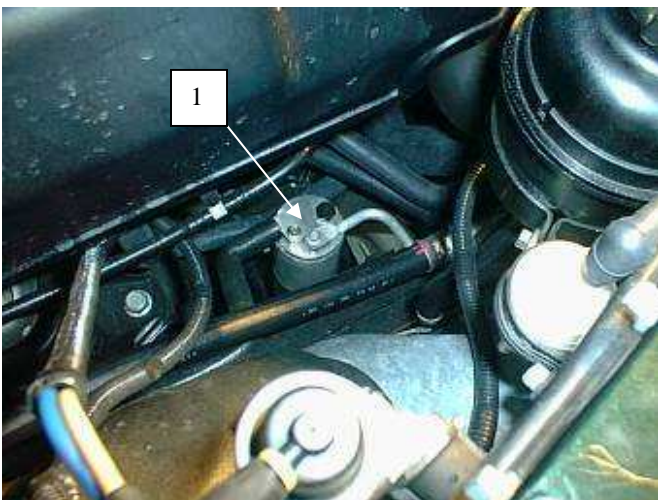
2. Remove dust cap lubricate o-ring and fit the receiver-drier to condenser pipe using one M6x20 (supplied in kit) to the receiver drier



3. Remove dust cap lubricate o-ring and fit the evaporator to union hose onto the bulkhead pipe block using one M6x30 (supplied in kit)
4. Feed the suction hose union-to-compressor hose between the radiator and inner wing up to the compressor remove dust caps lubricate o-ring and connect to the compressor using one M6x30 (supplied in kit)
5. Remove dust caps lubricate o-ring and connect the union-to-compressor pipe to the evaporator -to -union.

RECEIVER DRIER FITMENT

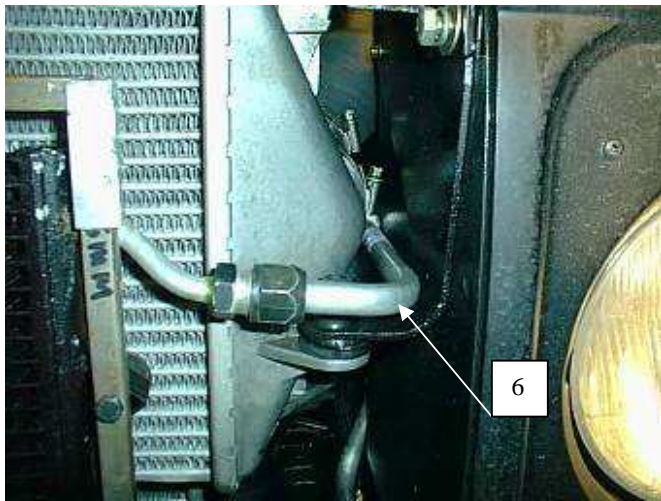
1. Locate and fit the receiver-drier to the front right hand chassis using two M10x90 bolts (supplied in kit).



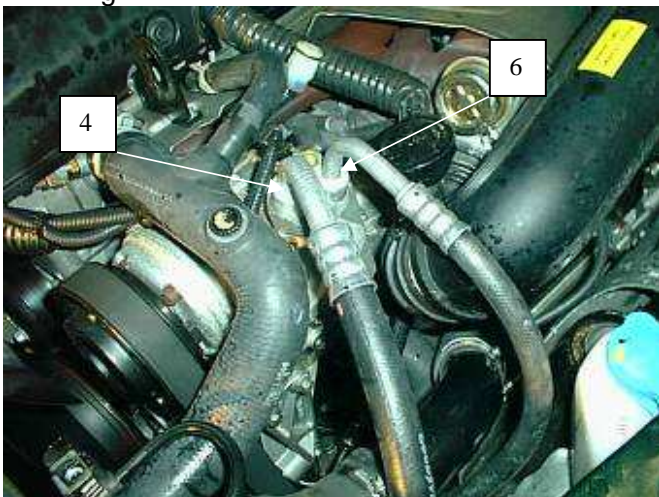
PIPES AND HOSES

1. Remove dust caps lubricate o-rings and fit the receiver drier to evap pipe using one M6x20 (supplied in kit) into the receiver-drier and one

AIR CONDITIONING KIT



6. Feed the compressor discharge hose between the radiator and inner wing up to the compressor. Remove dust caps lubricate o-ring and connect to the compressor using original fixing.



CONDENSER INSTALLATION

1. Fit condenser to the front lower mounts on the chassis rails using two retained A-frame fixings. **Do not tighten at this stage.**

NOTE Ensure condenser frame is mounted in front of the original a-frame fixing points.

2. Remove dust cap and connect the liquid line union to the condenser lower port. **Do not tighten at this stage**
3. Remove dust cap lubricate o-ring and connect compressor discharge hose union to the

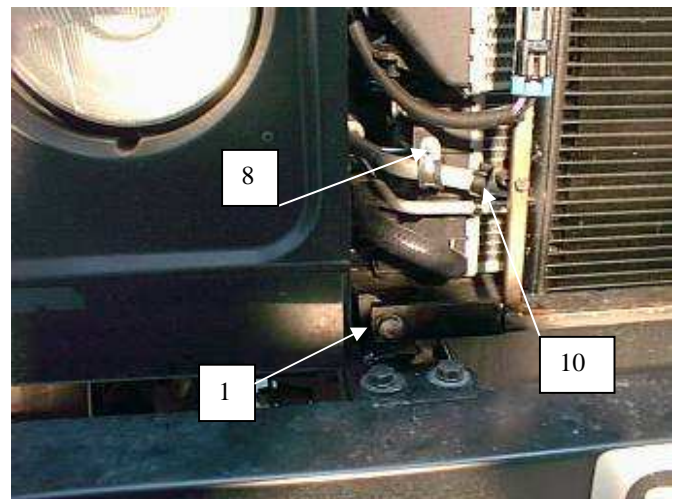
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condenser top port. **Do not tighten at this stage**

4. Remove the bonnet latch anti-tamper bracket from the slam panel by carefully drilling out the four rivets.
5. Refit the bonnet latch anti-tamper bracket to the slam panel along with the condenser upper mounting brackets using four rivets (supplied in kit)

NOTE Ensure the upper mounting brackets are behind the condenser mounting frame

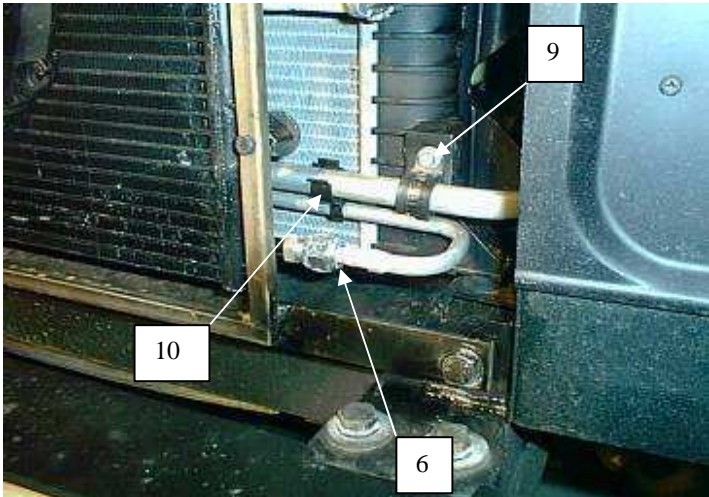
6. Tighten the upper and lower condenser unions using a backing spanner to prevent distortion.
7. Tighten the two lower fixings on the condenser frame.
8. Using an 18mm p-clip secure the suction line to the radiator bottom right hand side using hexagon head self tapper (supplied in kit)



9. Secure the suction line with an 18mm p-clip and one M6x30 flange screw (supplied in kit)

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10. Secure the liquid line to the suction line using the two 15mm / 8mm plastic pipe clips (supplied in kit)



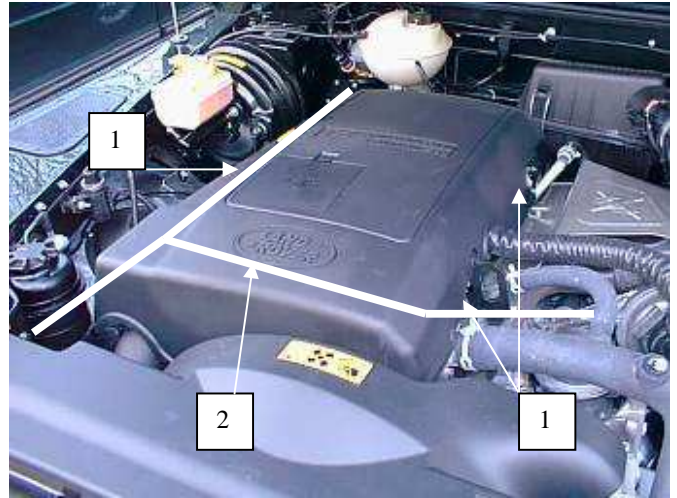
11. Fit an 18mm / 18mm plastic pipe clip to the heater pipe and the evaporator to union pipe.



HARNESS INSTALLATION

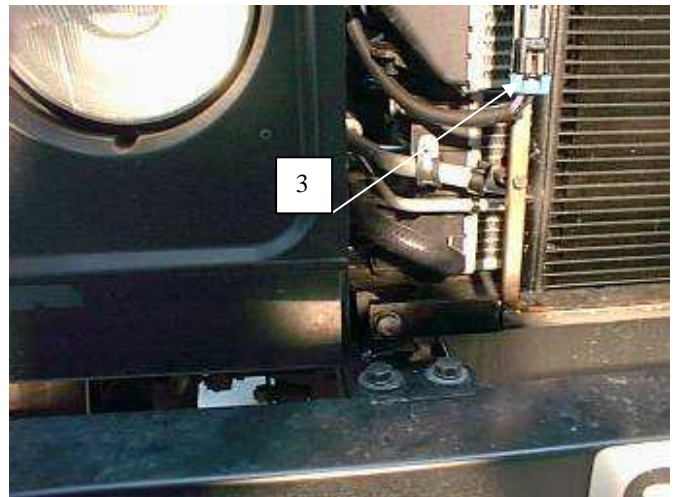
1. Remove and retain engine acoustic cover three fixings

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NOTE, White line shows routing of harness around the engine bay.

2. Lie the new a/c harness in the engine bay routing from the passenger side bulkhead along the engine to the front of the vehicle.
3. Route the black 2-way to the front of the vehicle and connect to the mating half on the condenser fan.

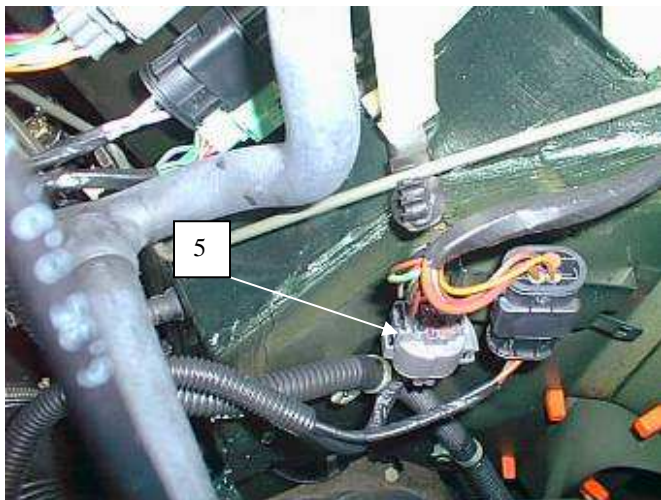


4. Route the 2-way grey connector along the front of the engine and connect to the mating half on the compressor.

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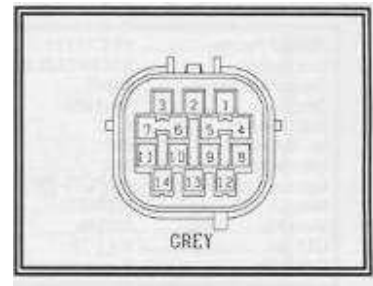


5. Locate the grey 14-way connector on the passenger side inner tunnel wall, Remove the connector and separate the two halves.



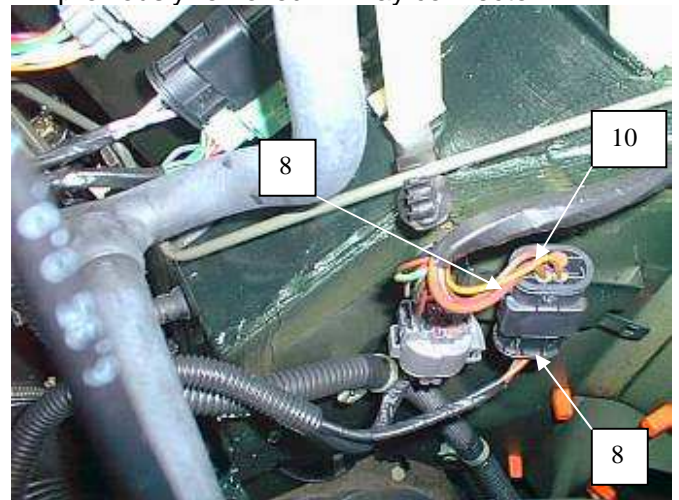
6. Remove the anti-back out from the male half of the connector and insert the following wires black/slate into cavity 8 and the black/purple into cavity 9

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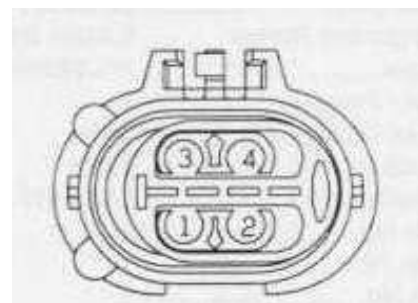


MATING FACE SHOWN

7. Reassemble connector and refit to bracket
8. Locate the 4-way connector next to the previously removed 14-way connector

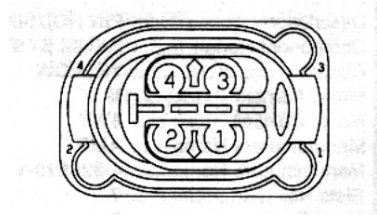


9. Separate the connector and remove the anti-back out from the male half. Insert the red wire into cavity 3 refit the anti-back out

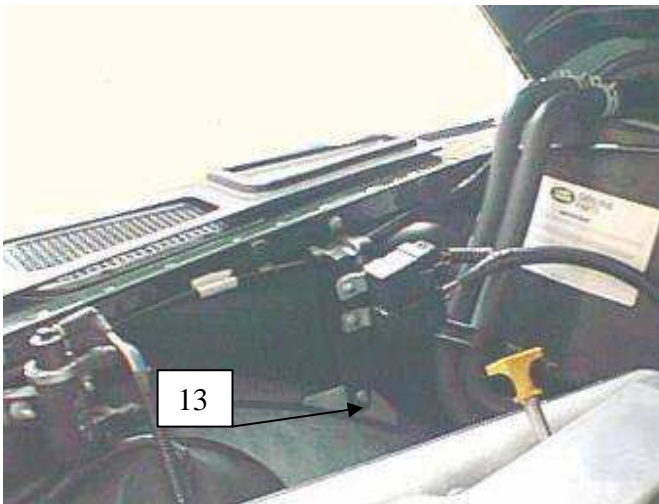


MATING FACE SHOWN MALE HALF

AIR CONDITIONING KIT



10. Cut and strip the brown wire in cavity 2 of the 4-way connector (male Half) 20mm back from the connector. Splice the ends together with the on the A/C harness using a yellow duraseal (supplied in kit) seal connector using a hot air gun.
11. Remove earth header nut from bulkhead fit M6 earth ring on a/c harness to stud and refit nut.
12. Cable tie harness away from all moving parts and heat sources (supplied in kit)



13. Remove M6 screw from wing support arm, Fit relay mounting bracket (supplied in kit) to the support arm using original fixing.
14. Fit relays to mounting bracket using M5 nuts supplied in kit

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GRILL SURROUND



1. Locate the template (supplied in kit) onto the grill surround remove material following template outline.
2. Cover all bare metal

REFIT

1. Refit front grill surround using original fixings
2. Refit front grill using original fixings
3. Refit engine top acoustic cover
4. Fit A/C charge label to slam panel

AIR CONDITIONING KIT

GENERAL PRECAUTIONS

The refrigerant used in the air conditioning system is HFC (Hydrofluorocarbon) R134a.

WARNING:

R134a is a hazardous liquid and when handled incorrectly can cause serious injury. Suitable protective clothing must be worn when carrying out servicing operations on the air conditioning system.

WARNING:

R134a is odourless and colourless. Do not handle or discharge in an enclosed area, or in any area where the vapour or liquid can come in contact with naked flame or hot metal. R134a is not flammable but can form a highly toxic gas.

WARNING:

Do not smoke or weld in areas where R134a is in use. Inhalation of concentrations of the vapour can cause dizziness, disorientation, un-coordination, narcosis, nausea or vomiting.

WARNING:

Do not allow fluids other than R134a or compressor lubricant to enter the air conditioning system. Spontaneous combustion may occur.

WARNING:

R134a splashed on any part of the body will cause immediate freezing of that area. Also refrigerant Cylinders and replenishment trolleys when discharging will freeze skin to them if contact is made.

WARNING:

The refrigerant used in an air conditioning system must be reclaimed in accordance with the recommendations given with a Refrigerant Recovery Recycling Recharging Station.

NOTE:

Suitable protective clothing comprises: wrap around safety glasses or helmet, heat

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proof gloves, rubber apron or waterproof overalls and rubber boots.

REMEDIAL ACTIONS

- 1 If liquid R134a strikes the eye, do not rub it. Gently run large quantities of eyewash over the eye to raise the temperature. If eyewash is not available cool, clean water may be used. Cover the eye with clean pad and seek immediate medical attention.
- 2 If liquid R134a is splashed on the skin run large quantities of water over the area as soon as possible to raise the skin temperature. Carry out the same actions if the skin comes into contact with discharging cylinders. Wrap affected parts in blankets or similar material and seek immediate medical attention.
- 3 If suspected of being overcome by inhalation of R134a vapour seek fresh air. If unconscious remove to fresh air. Apply artificial respiration and/or oxygen and seek immediate medical attention.

NOTE:

Due to its low evaporating temperature of -30 C, R134a should be handled with care.

WARNING:

Do not allow a refrigerant container to be heated by a direct flame or to be placed near any heating appliance. A refrigerant container must not be heated above 50 C.

WARNING:

Do not leave container of refrigerant without its cap fitted. Do not transport a container of refrigerant that is unrestrained, especially in the boot of a car.

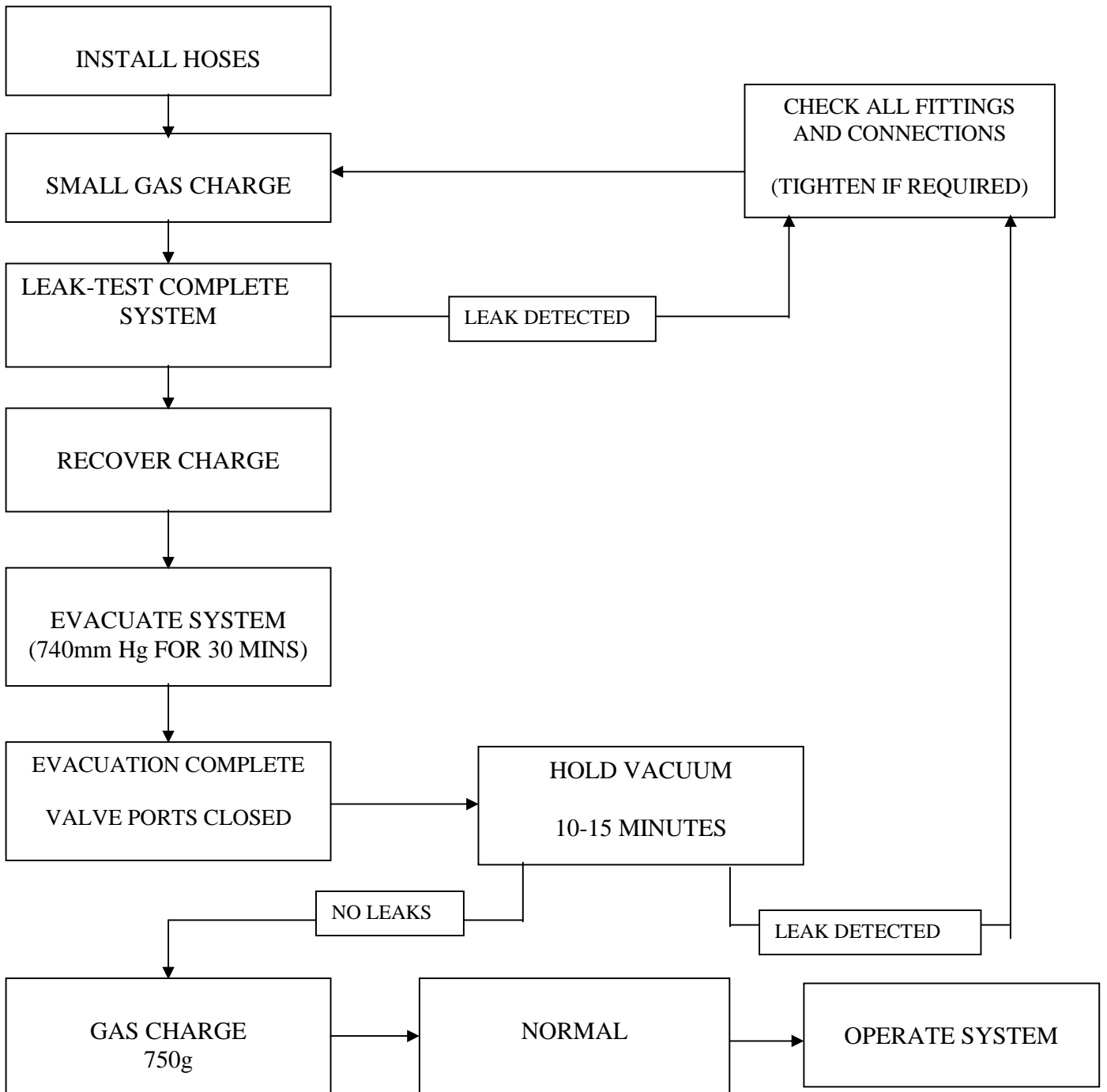
SERVICING EQUIPMENT

The following equipment is required for full servicing of the air conditioning system. Recovery, recycling and recharging station. Leak detector.

Thermometer +20 C to -60 C
Safety goggles and gloves.

EVACUATION AND CHARGING

Prepare vehicle for starting, Follow procedure below using refrigerant 134a only



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