

**EMISSIONS**

**EMISSION AND EVAPORATIVE CONTROL**

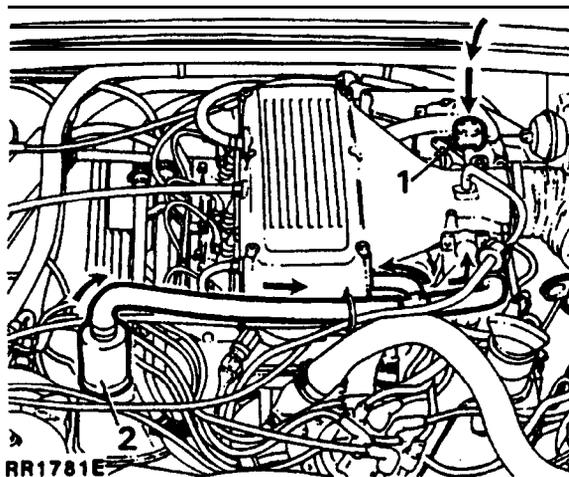
Range Rovers are fitted during manufacture with various items of emission and evaporative control equipment to ensure that they meet stringent exhaust emission regulations.

Unauthorised replacement or modification of the emission or evaporative control equipment will invalidate the Emission Warranties and render the user and/or repairer liable to legal penalties.

**CRANKCASE CONTROL SYSTEM**

Clean air is drawn into the crankcase via an intake filter located at the rear of the left hand rocker cover.

Crankcase emissions and clean air are drawn through a breather filter located at the front of the right hand rocker cover into the plenum chamber and then burnt in the engine.



**KEY TO DIAGRAM**

- 1. PCV intake filter
- 2. PCV breather filter

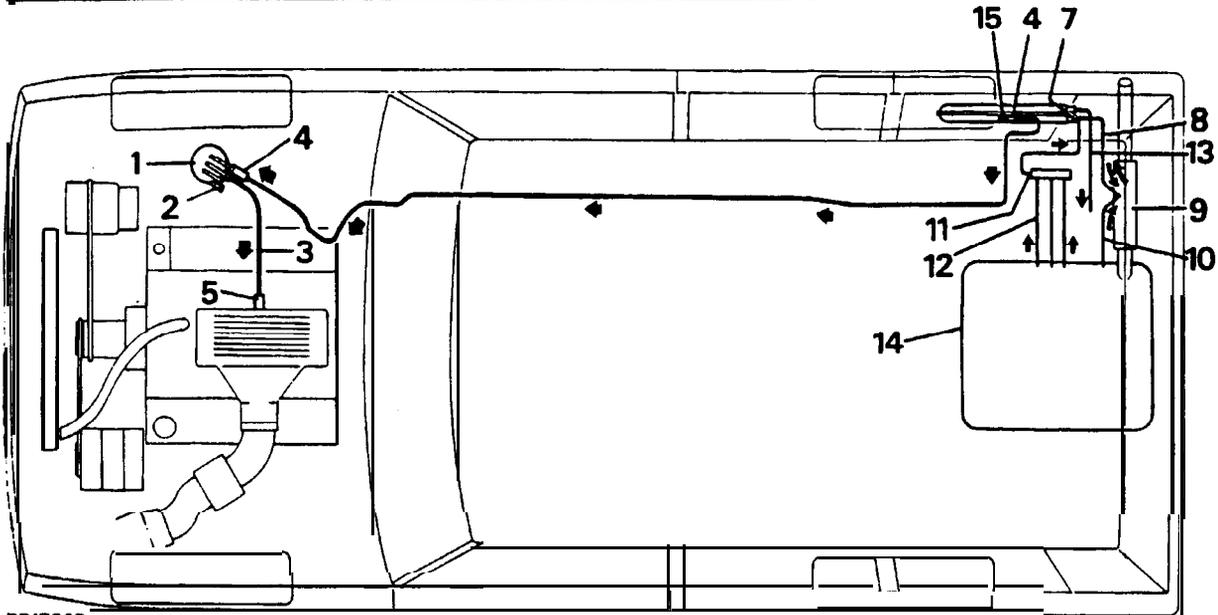
**EVAPORATIVE EMISSION CONTROL SYSTEM**

This system prevents fuel vapour from reaching the atmosphere. The system consists of a fuel expansion tank located between the inner right hand body side and rear right hand fender, and an adsorption canister located in the engine compartment attached to the front right hand valance.

When the fuel expands in the fuel tank due to temperature increase it is vented into the bottom of the expansion tank, any liquid fuel can be siphoned back into the main tank. Fuel vapour is directed as the fuel cools through the outlet pipe at the top of the expansion tank to the adsorption (charcoal) canister by means of a pipe running along the underside of the vehicle.

A restrictor located in the purge line at the plenum chamber controls purge line flow.

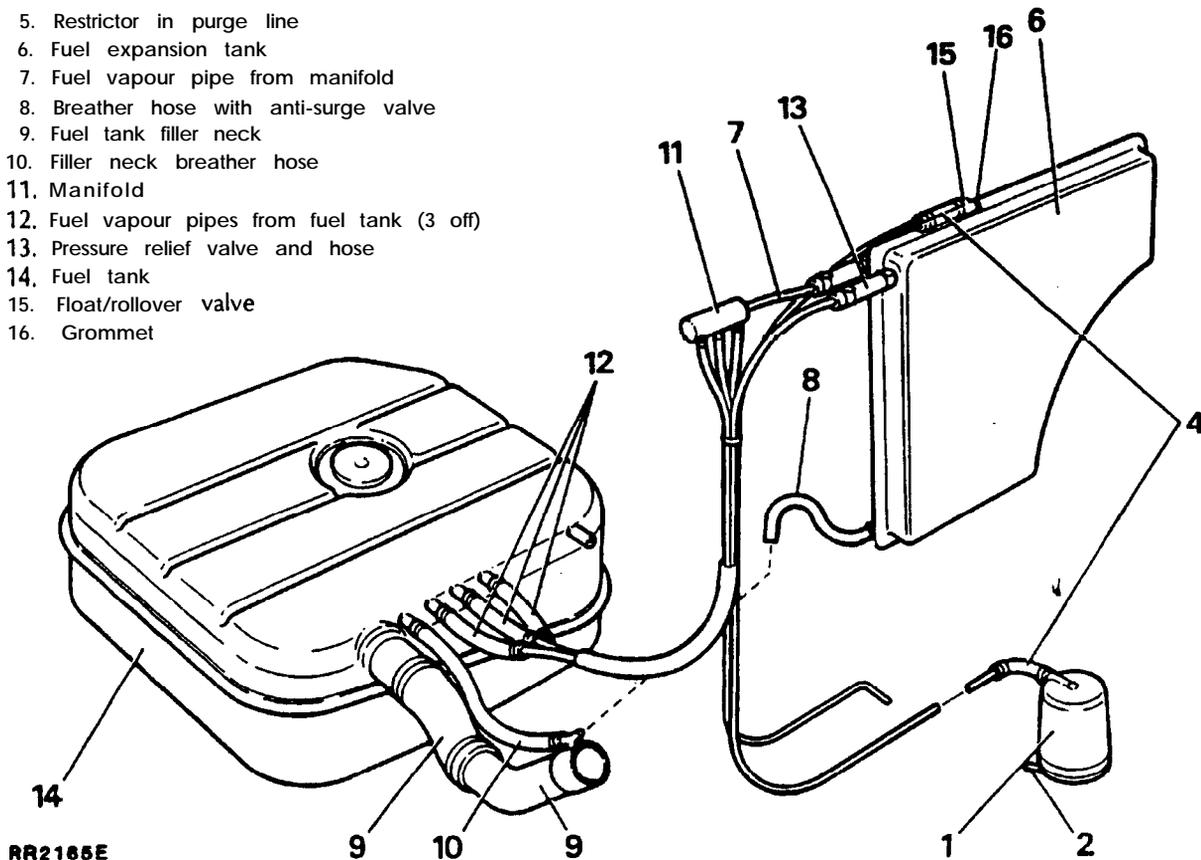
The adsorption canister containing activated charcoal is used to store fuel vapour from the fuel tank. Filter pads are fitted above and below the charcoal to prevent ingress of foreign matter of charcoal into the purge line. Emissions from the fuel tank enter the top of the canister and the purging air enters at the bottom. The canister is purged of its vapours by the vacuum generated within the plenum chamber, the vapour being drawn into the plenum chamber and burnt with the in-going mixture.



RR1766E

KEY TO DIAGRAM

- 1. Charcoal canister
- 2. Air inlet to canister
- 3. Purge line to plenum chamber
- 4. Connector hoses with restrictors
- 5. Restrictor in purge line
- 6. Fuel expansion tank
- 7. Fuel vapour pipe from manifold
- 8. Breather hose with anti-surge valve
- 9. Fuel tank filler neck
- 10. Filler neck breather hose
- 11. Manifold
- 12. Fuel vapour pipes from fuel tank (3 off)
- 13. Pressure relief valve and hose
- 14. Fuel tank
- 15. Float/rollover valve
- 16. Grommet



RR2165E

### CATALYTIC CONVERTORS

Three catalytic convertors are fitted into the exhaust system to reduce carbon monoxide, oxides of nitrogen and hydrocarbon emissions. The two down pipes from the exhaust manifolds each house an oxygen sensor located forward of the catalytic convertors.

The active constituents of the catalytic device are platinum and rhodium. In order for the device to function correctly, it is necessary to control very closely the oxygen concentration in the exhaust gas entering the catalyst. This is achieved by the use of a fuel control system which continuously monitors the oxygen content of the exhaust gas by means of the oxygen sensor and adjusts the mixture level to obtain the required oxygen content.

Unleaded fuel must be used on catalyst equipped vehicles, and labels to indicate this are displayed on the instrument panel and inside the fuel filler flap. The filler neck is designed to accommodate unleaded fuel pump nozzles only.

The emission control system fitted to this engine is designed to keep emissions within legislated limits, providing the engine is correctly maintained and is in sound mechanical condition.

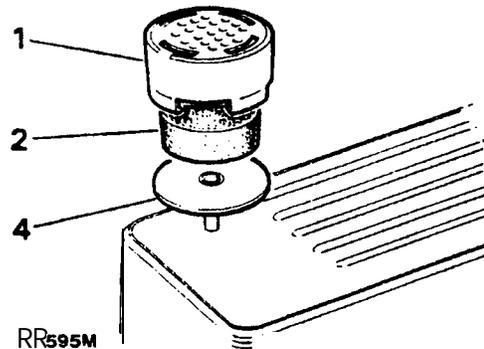
### POSITIVE CRANKCASE VENTILATION AIR INTAKE FILTER

The PCV air intake filter is located at the rear of the left hand rocker cover, beneath the throttle linkage bracket.

#### Remove and Refit

##### Removing

1. Pry the filter outer cover upwards to release it from its mounting.
2. Remove the sponge filter from the cover and discard the sponge.



##### Refitting

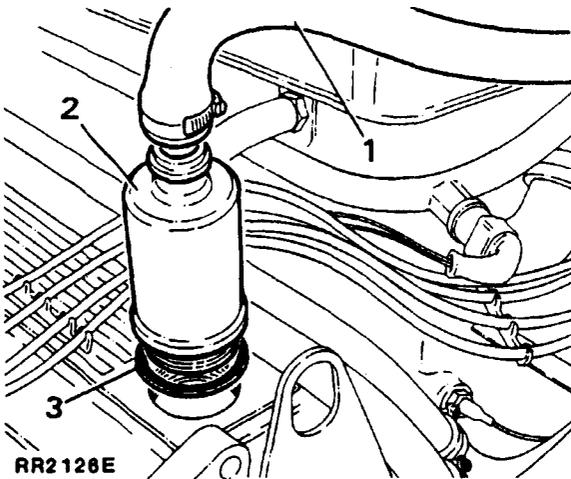
3. Insert a new filter into the filter cover.
4. Press the filter onto its mounting until it clips firmly into position.

**POSITIVE CRANKCASE VENTILATION BREATHER FILTER**

**Remove and Refit**

**Removing**

1. Release the hose clamp and pull the hose off the canister.
2. Unscrew the canister and remove it from the rocker cover.
3. Remove the large rubber 'O' ring and inspect for deterioration.



**RR2128E**

4. Visually inspect the condition of the wire screen within the canister, if in poor condition, replace the whole assembly, if the filter unit is in an acceptable condition, clean as follows.
5. Immerse the canister in a small amount of solvent (mineral spirits) and allow time for the solvent to dissolve or loosen any debris.
6. Remove the canister from the solvent bath and allow to dry in still air.

**WARNING: DO NOT USE A COMPRESSED AIR LINE TO DRY; CLEAN OR REMOVE ANY REMAINING PARTICLES OF DEBRIS WITHIN THE CANISTER AS THIS COULD CAUSE FIRE OR PERSONAL INJURY.**

**Refitting**

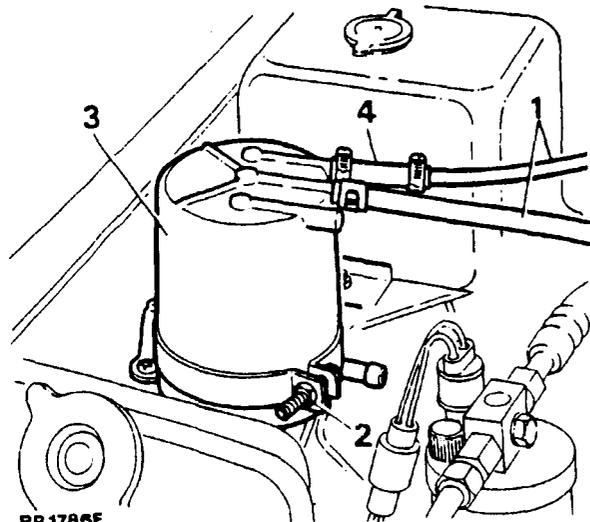
7. If the original canister is being refitted, fit a new 'O' ring.
8. Screw the canister into the rocker cover securely • hand tight only.
9. Refit the hose and tighten the hose clamp securely.

**ADSORPTION (CHARCOAL) CANISTER**

**Remove and Refit**

**Removing**

1. Disconnect from the canister:-
  - (i) Canister line to expansion tank
  - (ii) Canister purge line
2. Loosen the clamp nut screw.
3. Remove the canister.
4. Remove the short hose from the inlet vapour pipe and check that the restrictor is free from blockages.



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**Refitting**

5. Secure the canister in the clamp.
6. Reverse instructions 1 and 2 above.

**WARNING: The use of compressed air to clean an adsorption canister or clear a blockage in the evaporative system is very dangerous. An explosive gas present in a fully saturated canister may be ignited by the heat generated when compressed air passes through the canister.**

**FUEL EXPANSION TANK**

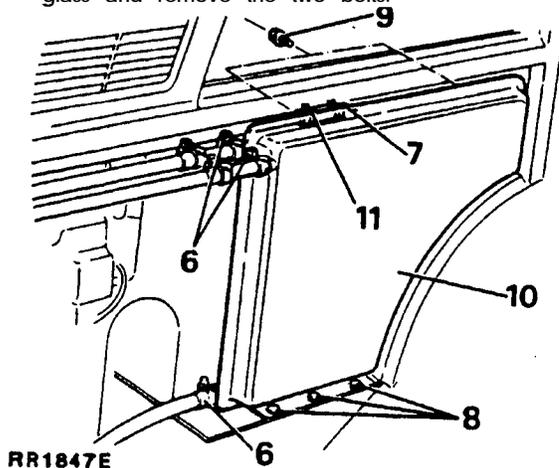
**Remove and Refit**

The fuel expansion tank is located between the right hand rear fender and inner body side assembly, access to the tank is gained by removing the rear fender and body corner panel. See Section 76 Body, for the removal and refit of the rear fender assembly.

**WARNING: Ensure all necessary precautions are taken against the spillage of fuel when disconnecting the expansion tank hoses.**

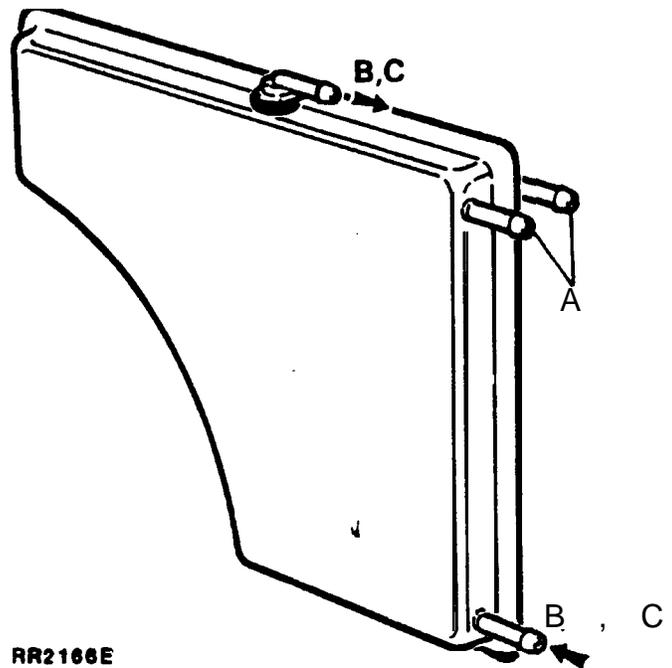
**Removing**

1. Depressurize the fuel system. (see Depressurizing procedure in Fuel Injection System-section 19 page 34)
2. Disconnect negative battery terminal.
3. Remove the rear lamp cluster.
4. Remove the wrap around bumper end cap.
5. Remove the rear fender and corner panel assembly.
6. Release the three hose clamps and remove the three hoses from the expansion tank.
7. Release the hose clamp and remove the hose from the float valve located on top of the expansion tank.
8. Remove the three bolts retaining the bottom of the expansion tank.
9. Lift the trim covering the vehicle tool kit at the right hand side of the rear stowage area to gain access to the two expansion tank securing bolts located below the rear side glass and remove the two bolts.



10. Remove the tank from the vehicle.
11. Remove the short hose connection from the top vapour hose and check that the restrictor in the hose is free from blockages.
12. While the tank is still removed from the vehicle check the operation of the float/rollover valve as follows:
  - A. Seal the top two outlet pipes.
  - B. Apply air pressure at 2 p.s.i to the bottom pipe. With the tank in its upright position air flow will pass through the valve. Rotate the tank 90° onto its side air flow should not pass through the valve.
  - C. Disconnect the air supply to the tank. With the bottom pipe sealed fill the tank with mineral spirit, hold the tank in its upright position, the float valve should shut off and prevent fluid passing through the valve.
  - D. If the valve does not operate accordingly with the above instructions; replace the float valve.

**NOTE: DO NOT remove the float valve unless faulty. if a new valve is fitted ,always fit a new grommet.**



Continued

13. Before refitting the tank remove the breather hose attached to the top of the filler neck, identify filler neck to breather hose end to aid reassembly. Vigourously shake the hose and listen for valve ball movement; no sound from the valve-replace the hose assembly.

**Refitting**

14. Refit the expansion tank ensuring that all hose and pipe connections are secure and that all hose clamps are securely tightened.

**VACUUM DELAY VALVE**

The coloured side of the vacuum delay valve should always be fitted to the hose from the distributor.

**Test: Check Valve Air Flow**

1. Attach a 10.00 ± .250 cu.inch vacuum tank to the coloured side of the valve.
2. Expose the black side to atmospheric pressure.
3. Expected result: The time required for the vacuum to drop from minus 20 inch Hg to minus 2 inch Hg will be 0.5 seconds maximum.
4. Vacuum recovery air flow: Attach a 22.75 ± .5 cu.inch vacuum tank to the black side of the valve.
5. Expose the coloured side to atmospheric pressure.
6. Expected result: The time required for the vacuum to drop from 16 inch Hg to 8 inch Hg will be 240 to 360 seconds.

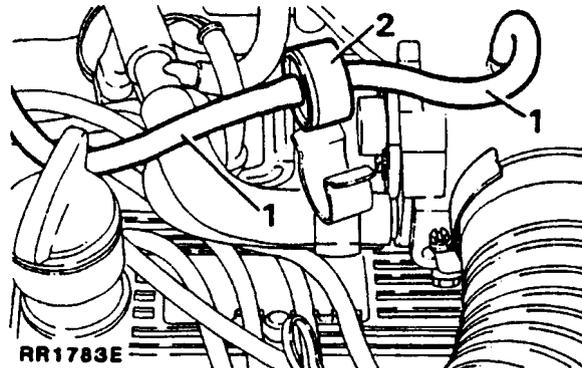
**Test: External leakage Check**

1. Seal the coloured side of the valve and attach a short flexible pipe to the other end.
2. Submerge the valve in water and orally blow through the valve.
3. If any external leakage is noticeable, fit a new valve.  
If the delay valve does not comply with any of the test results, replace the unit.

**Remove and Refit**

**Removing**

1. Pull the two flexible hoses from the delay unit.
2. Remove the unit from its retaining clip and withdraw it from the engine compartment.



**Refitting**

3. Reverse the removal instructions ensuring that the coloured side of the valve is fitted to the longer hose from the distributor.

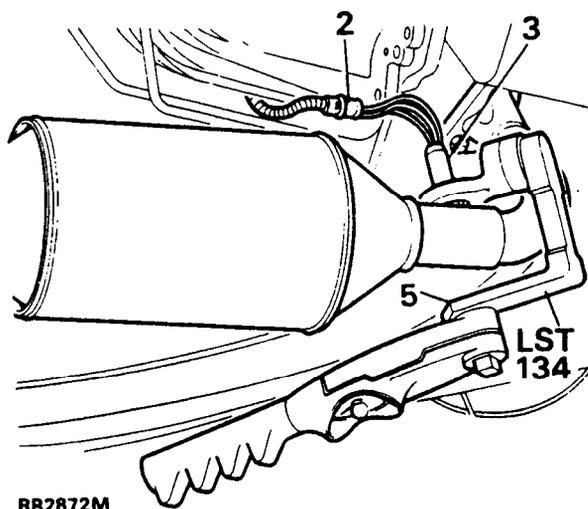
**LAMBDA (OXYGEN) SENSOR**

**Remove and Refit**

The removal of the sensors from the exhaust system must only be carried out when the engine is cold.

**Removing**

1. Disconnect the battery negative lead.
2. Disconnect the electrical plugs from the sensors.
3. Unscrew and remove the sensors from the two exhaust downpipes.



**Refitting**

4. Coat the threads of the sensor with anti-seize compound.

**CAUTION:** To ensure that the efficiency of the sensor is not impaired. DO NOT allow anti-seize compound to come into contact with sensor nose.

5. Screw in the sensor and tighten to the correct torque using special tool LST134.
6. Connect the electrical plugs and battery lead.

## EMISSION LABEL

A vehicle Emission Control information label is attached to the hood locking platform located above the right hand headlamp assembly. The label gives Engine Tune Details to ensure that correct Emissions Levels are achieved. The label is fitted to comply with U.S Federal and State of California Regulations and should not be removed from its location within the vehicle.

## Example of Label • 1987 Model Year

 LAND ROVER U.K. LTD. 		<u>IDLE MIXTURE ADJUSTMENT</u> NO MEANS OF ADJUSTMENT - CLOSED LOOP CONTROL.	
<b>VEHICLE EMISSION CONTROL INFORMATION.</b>		<u>IDLE SPEED ADJUSTMENT</u> ENGINE HAS IDLE SPEED CONTROL- NO ADJUSTMENT NORMALLY REQUIRED.	
ENGINE FAMILY :HLR3.5T5FRR7 DISPLACEMENT :215.3 CU INS EVAP FAMILY :RAFI EX.EM.CONTROL SYSTEM :EFI:TWC/EGS(2)		REFER TO WORKSHOP MANUAL.	
MWC2384	IGNITION TIMING 6° B.T.D.C AT BELOW 800 r.p.m WITH DISTRIBUTOR VACUUM UNIT DISCONNECTED		
	IDLE SPEED 665-735 r.p.m SPARK PLUG GAP 0.033-0.038in		
THIS VEHICLE CONFORMS TO U.S. E.P.A. AND STATE OF CALIFORNIA REGULATIONS APPLICABLE TO 1987 MODEL YEAR NEW LIGHT DUTY TRUCKS.			

RR1896E

## Example of Label • 1988 Model Year

 LAND ROVER U.K. LTD 		<u>IDLE MIXTURE ADJUSTMENT.</u> NO MEANS OF ADJUSTMENT - CLOSED LOOP CONTROL.	
<b>VEHICLE EMISSION CONTROL INFORMATION.</b>		<u>IDLE SPEED ADJUSTMENT</u> ENGINE HAS IDLE SPEED CONTROL- NO ADJUSTMENT NORMALLY REQUIRED	
ENGINE FAMILY :JLR3.5T5FRRO DISPLACEMENT :215.3 CU INS. EVAP FAMILY :RAFI EX.EM.CONTROL SYSTEM :EFI:TWC/EGS(2)		REFER TO WORKSHOP MANUAL.	
MWC8568	IGNITION TIMING 6° B.T.D.C AT BELOW 800 r.p.m WITH DISTRIBUTOR VACUUM UNIT DISCONNECTED		
	IDLE SPEED 665-735 r.p.m SPARK PLUG GAP 0.033-0.038in		
THIS VEHICLE CONFORMS TO U.S. EPA AND STATE OF CALIFORNIA REGULATIONS APPLICABLE TO 1988 MODEL YEAR NEW LIGHT DUTY TRUCKS.			

RR2287E

Example of Label • 1989 Model Year

<div style="display: flex; justify-content: space-between; align-items: center;"> <span>LAND ROVER LTD.</span> </div> <p style="text-align: center;"><b>VEHICLE EMISSION CONTROL INFORMATION.</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">ENGINE FAMILY</td> <td>:KLR3.9T5FSS4</td> </tr> <tr> <td>DISPLACEMENT</td> <td>:240 CU HS.</td> </tr> <tr> <td>EVAP FAMILY</td> <td>:RAFI</td> </tr> <tr> <td>EX.EM.CONTROL SYSTEM</td> <td>:FI:2-TWC/2-HOS</td> </tr> </table>	ENGINE FAMILY	:KLR3.9T5FSS4	DISPLACEMENT	:240 CU HS.	EVAP FAMILY	:RAFI	EX.EM.CONTROL SYSTEM	:FI:2-TWC/2-HOS	<p style="text-align: center;"><u>IDLE MIXTURE ADJUSTMENT.</u></p> <p style="text-align: center;">NO MEANS OF ADJUSTMENT • CLOSED LOOP CONTROL</p> <p style="text-align: center;"><u>IDLE SPEED ADJUSTMENT.</u></p> <p style="text-align: center;">ENGINE HAS IDLE SPEED CONTROL- NO ADJUSTMENT NORMALLY REQUIRED.</p> <p style="text-align: center;">REFER TO WORKSHOP MANUAL.</p> <p style="text-align: center;">OBD EXEMPT</p>
ENGINE FAMILY	:KLR3.9T5FSS4								
DISPLACEMENT	:240 CU HS.								
EVAP FAMILY	:RAFI								
EX.EM.CONTROL SYSTEM	:FI:2-TWC/2-HOS								
<div style="display: flex;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 5px;">MWC9365</div> <div> <p>IGNITION TIMING 6° B.T.D.C AT BELOW 800 r.p.m. WITH DISTRIBUTOR VACUUM UNIT DISCONNECTED</p> <p>IDLE SPEED 665-735 r.p.m.</p> <p>SPARK PLUG GAP 0.033-0.038in</p> </div> </div>									
<p>THIS VEHICLE CONFORMS TO U.S. EPA AND STATE OF CALIFORNIA REGULATIONS APPLICABLE TO 1989 MODEL YEAR NEW LIGHT DUTY TRUCKS.</p>									

RR2311E

Example of Label • 1990 Model Year

<div style="display: flex; justify-content: space-between; align-items: center;"> <span>LAND ROVER LTD.</span> </div> <p style="text-align: center;"><b>IMPORTANT VEHICLE INFORMATION</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">ENGINE FAMILY</td> <td>:LLR3.9T5FSS5</td> </tr> <tr> <td>DISPLACEMENT</td> <td>:241 CU INS</td> </tr> <tr> <td>EVAP. FAMILY</td> <td>:RAF 1</td> </tr> <tr> <td>EX.EM.CONTROL SYSTEM</td> <td>:MP1:2-TWC/2 HO2S</td> </tr> </table>	ENGINE FAMILY	:LLR3.9T5FSS5	DISPLACEMENT	:241 CU INS	EVAP. FAMILY	:RAF 1	EX.EM.CONTROL SYSTEM	:MP1:2-TWC/2 HO2S	<p style="text-align: center;"><u>IDLE SPEED ADJUSTMENT</u></p> <p style="text-align: center;">ENGINE HAS IDLE SPEED CONTROL NO ADJUSTMENT NORMALLY REQUIRED.</p> <p style="text-align: center;">REFER TO WORKSHOP MANUAL.</p> <p style="text-align: center;">NO OTHER ADJUSTMENTS NEEDED.</p>
ENGINE FAMILY	:LLR3.9T5FSS5								
DISPLACEMENT	:241 CU INS								
EVAP. FAMILY	:RAF 1								
EX.EM.CONTROL SYSTEM	:MP1:2-TWC/2 HO2S								
<div style="display: flex;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 5px;">MWC9365</div> <div> <p>IGNITION TIMING 6° + 1° 6 T.D.C AT BELOW 600 r.p.m. WITH DISTRIBUTOR VACUUM UNIT DISCONNECTED</p> <p>IDLE SPEED 665. 735 r.p.m.</p> <p>SPARK PLUG GAP 0.033-0.038in</p> </div> </div>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div> <p style="text-align: center; font-weight: bold; margin-top: 10px;">3T39T5FSSA</p>								
<p>THIS VEHICLE CONFORMS TO U.S. EPA AND STATE OF CALIFORNIA REGULATIONS APPLICABLE TO 1990 MODEL YEAR NEW LIGHT DUTY TRUCKS.</p>									

RR2698E

Example of Label • 1991 Model Year

<h2 style="margin: 0;">ROVER GROUP LIMITED</h2>									
<p><b>IMPORTANT VEHICLE INFORMATION • RANGE ROVER</b></p>									
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">ENGINE FAMILY</td> <td>:MLR3.9T5FSS6</td> </tr> <tr> <td>DISPLACEMENT</td> <td>:241 CU INS / 3.9 LITERS</td> </tr> <tr> <td>EVAP.FAMILY</td> <td>:RBF1</td> </tr> <tr> <td>EXHAUST EMISSION CONTROL SYSTEM</td> <td>:MP1:2-TWC/2-H02S</td> </tr> </table> <p style="text-align: center; font-weight: bold; margin-top: 10px;">39T5FSSA</p>	ENGINE FAMILY	:MLR3.9T5FSS6	DISPLACEMENT	:241 CU INS / 3.9 LITERS	EVAP.FAMILY	:RBF1	EXHAUST EMISSION CONTROL SYSTEM	:MP1:2-TWC/2-H02S	<p style="text-align: center;"><b>TUNE UP SPECIFICATIONS</b></p> <p style="text-align: center; font-size: 1.2em; font-weight: bold;">CATALYST</p> <p>TUNE UP CONDITIONS :- ENGINE AT NORMAL OPERATING TEMPERATURE TRANSMISSION IN PARK IDLE SPEED , 665-735 rpm ENGINE HAS IDLE SPEED CONTROL NO ADJUSTMENT NORMALLY REQUIRED SPARK PLUG GAP . 0.033-0.038 inch IGNITION TIMING , 6° : 1° BTDC AT BELOW 600 rpm WITH DISTRIBUTOR VACUUM UNIT DISCONNECTED NO OTHER ADJUSTMENTS NEEDED</p>
ENGINE FAMILY	:MLR3.9T5FSS6								
DISPLACEMENT	:241 CU INS / 3.9 LITERS								
EVAP.FAMILY	:RBF1								
EXHAUST EMISSION CONTROL SYSTEM	:MP1:2-TWC/2-H02S								
<p>THIS VEHICLE CONFORMS TO U.S. EPA AND STATE OF CALIFORNIA REGULATIONS APPLICABLE TO 1991 MODEL YEAR NEW LIGHT DUTY TRUCKS.</p>									

RR 2935E

**EMISSION CONTROL**

1989 model year vehicles incorporate evaporative emission control by a new charcoal canister with solenoid operated purge valve.

The charcoal canister adsorbs and stores the fuel vapor that is emitted from the fuel tank when the engine is not running. The vapor is purged from the canister by outside air drawn through an orifice at the bottom of the canister by the application of manifold vacuum to the top.

A solenoid operated valve controls purging of the canister. The valve is controlled by the fuel injection ECU to ensure that purge normally takes place at engine speeds above idle and when the vehicle is in motion. The rate of purge will depend on engine speed, road speed and throttle position.

Purge valve fault diagnosis is included in Engine Fault Diagnosis • Section 12.

Testing purge valve operation is included in Fuel Injection Test Procedure • Section 19, Tests 9 and 70.

**NOTE:** If crimped hoses are removed it is essential that they are recrimped on reassembly to ensure a leak free joint.

**Vacuum delay valve**

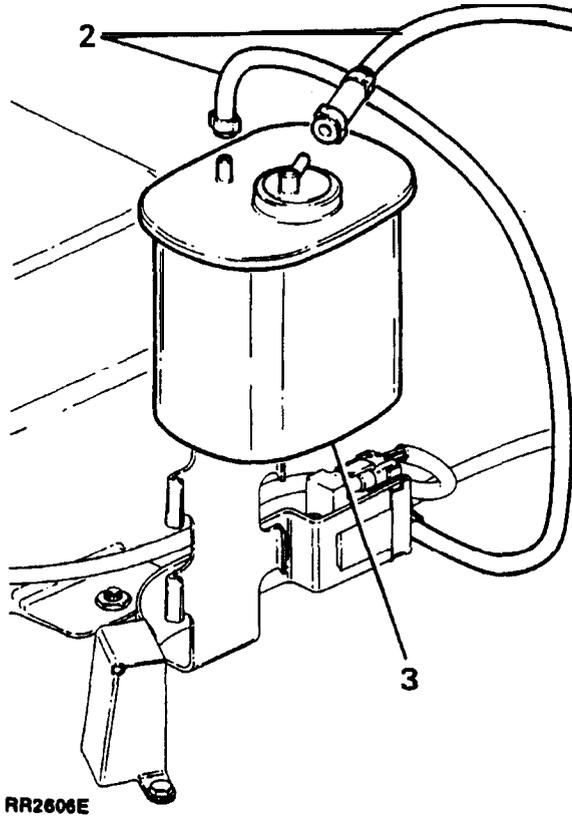
The vacuum delay valve is not fitted to 3.9 litre models.

Charcoal canister

Remove and refit

Removing

1. Disconnect battery negative lead.
2. Disconnect both purge lines.
3. Release canister from its mounting brackets.



Refitting

4. Reverse the removal procedure, ensuring that the canister is securely located in its mounting bracket and both purge lines are fitted correctly to the canister.

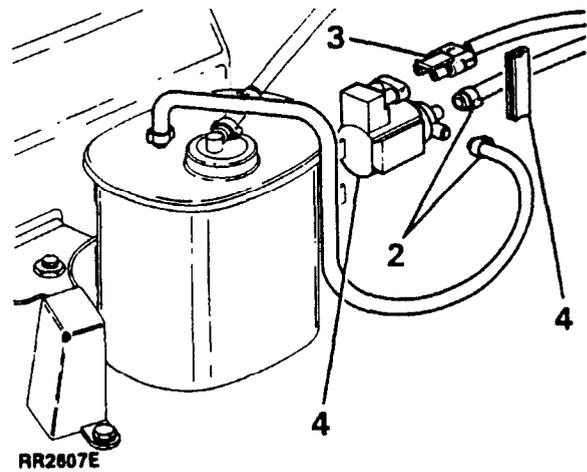
Charcoal canister

Purge valve

Remove and refit

Removing

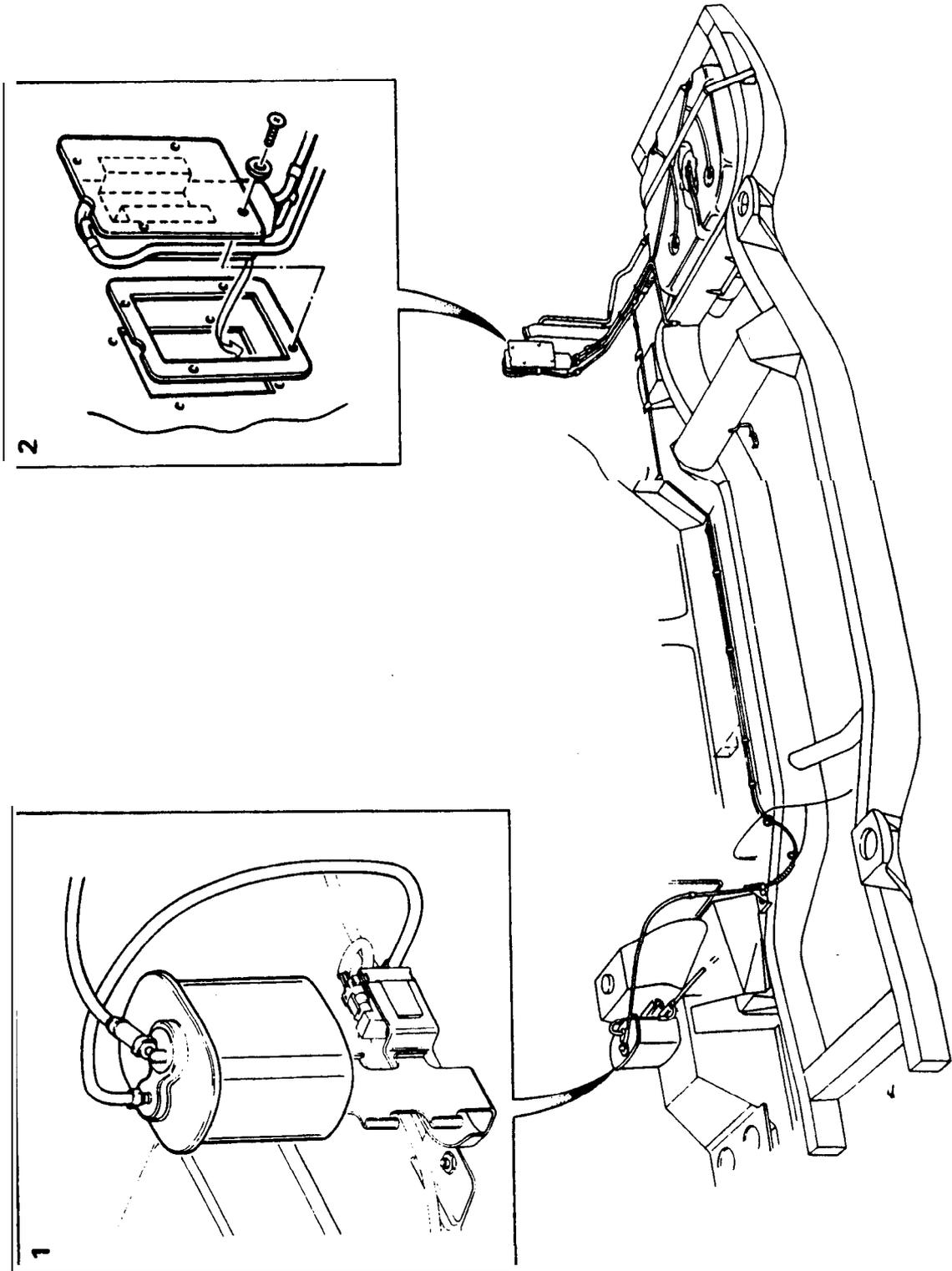
1. Disconnect the battery negative lead.
2. Remove the crimped connectors from the two purge valve pipes.
3. Disconnect the electrical connection.
4. Remove the edge clip retaining the purge valve and withdraw the purge valve.



Refitting

5. Reverse the removal procedure ensuring the pipes are securely crimped.

EVAPORATIVE CONTROL SYSTEM • 1991 model year

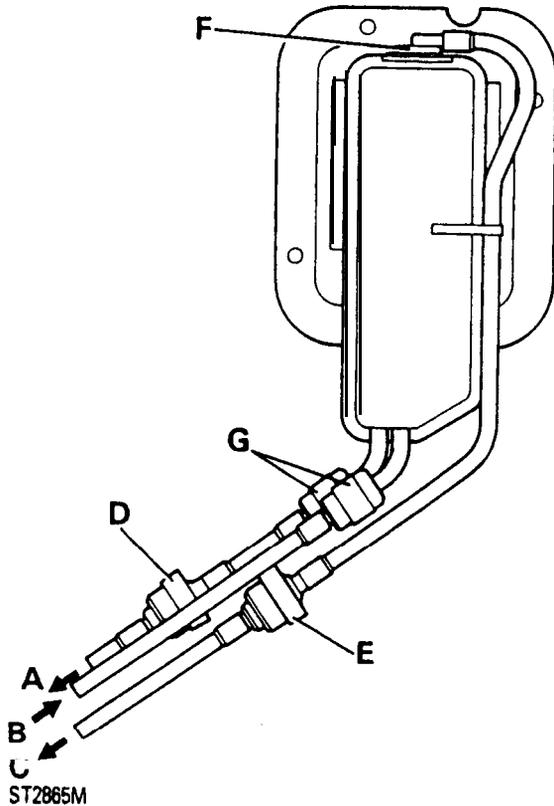


- 1. Adsorption canister and purge valve.
- 2. Location of Vapor Separator and pipes.

ST2814M

Evaporative emission control system • 1991 model year

The system is designed to prevent harmful fuel vapor from escaping to the atmosphere. The system consists of a new vapor separator tank connected to the fuel tank, and located between the body inner and outer panels on the right hand side of the vehicle near the rear wheel arch. An adsorption canister, containing activated charcoal, is positioned in the engine compartment attached to the front right hand fender valance. The two components are connected by a pipe running the length of the chassis.



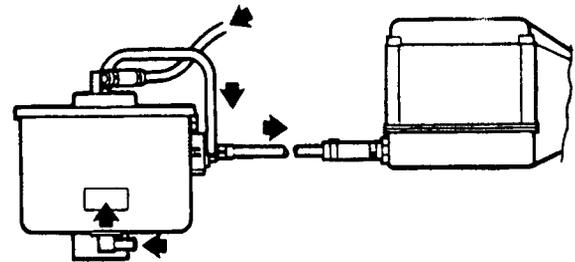
- A Pressure relief to atmosphere.
- B From fuel tank to separator.
- C To adsorption canister.
- D Pressure relief valve.
- E Pressure relief valve.
- F Shut-off valve.
- G "Speed Fit" connectors.

A pressure relief valve is fitted in the hose open to atmosphere, which would act as a safety valve should a build-up of pressure occur in the system, for example if a hose became blocked or kinked. The volume of vapor emitted, in such an instance, would be acceptable.

A pressure relief valve is also fitted in the hose to the adsorption canister and releases vapor to the canister when the pressure in the separator reaches between .75 and 1.0 psi.

In the top of the separator a shut-off valve is incorporated in the vapor exit port to prevent the possible presence of any liquid fuel being transmitted to the adsorption canister should the vehicle roll over.

The adsorption canister, which is connected by hose to the plenum chamber, adsorbs and stores the fuel vapor from the fuel tank while the engine is not running. The vapor is purged from the canister by air drawn through an orifice in the base of the canister and by the influence of vacuum at the top. The vapor drawn into the plenum chamber through a solenoid operated purge valve is finally burnt in the combustion chambers.



ST2866M

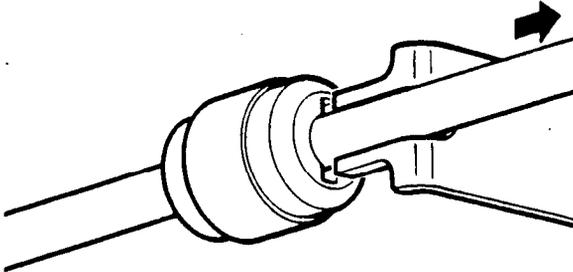
The purge valve, which is attached to the adsorption canister support bracket, is controlled by the fuel injection E.C.U. which determines the most emission acceptable time at which purging should take place. This will normally be at engine speeds above idle and when the vehicle is in motion. A signal from the E.C.U. to the purge valve operates the solenoid and opens the valve to purge the canister of fuel vapor.

## VAPOR SEPARATOR

Remove

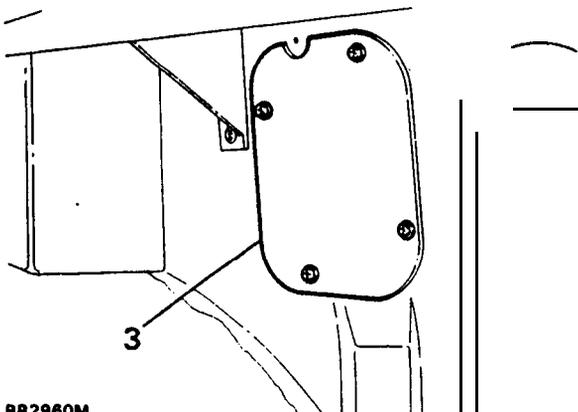
**WARNING:** Ensure that all necessary precautions are taken against fuel spillage and fuel vapor to prevent fire or explosion.

1. Disconnect the battery negative terminal.
2. Working from beneath the vehicle, disconnect the evaporative control pipes from the green end of the "speedfit" connectors. To achieve this, manufacture a suitable tool with a forked end to fit into the two slots in the end of the connector as shown in the illustration below. Press down on the collet and while depressed pull the pipe from the connector.



ST2877M

3. Remove the four screws securing the vapor separator support plate to the body panel situated in the right hand side of the load space.
4. Withdraw the separator and pressure relief valves from the vehicle.



RR2960M

**NOTE:** While the pressure relief valves are renewable, the shut-off valve in the top of the separator is only available complete with a new separator assembly.

## Fitting vapor separator.

5. Fit the separator and pipes into the vehicle side panel, if necessary using a new seal. Fit the self adhesive side to the separator. Secure with the four screws.
6. From beneath the vehicle, fit the pipes from the separator to the connectors. Push each pipe into the corresponding connector as far as it will go so that it is locked by the collet. Check that the pipes are free and not trapped or kinked. Secure the pipes to the under body clips.



