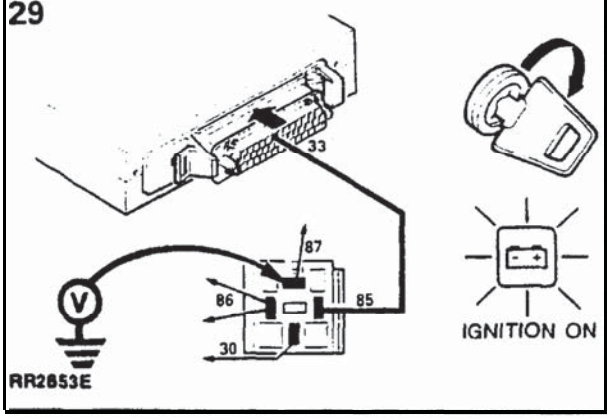
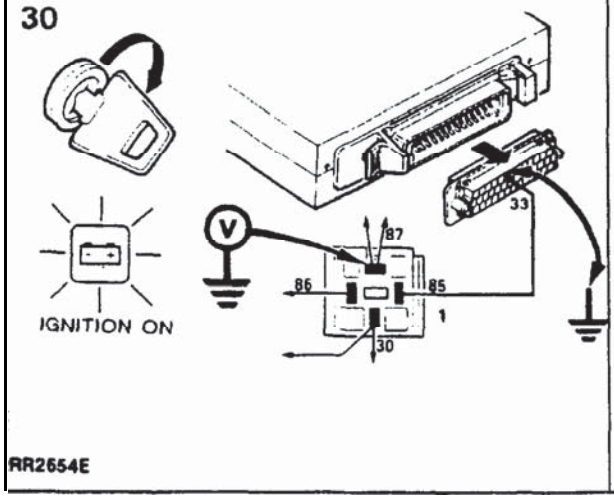
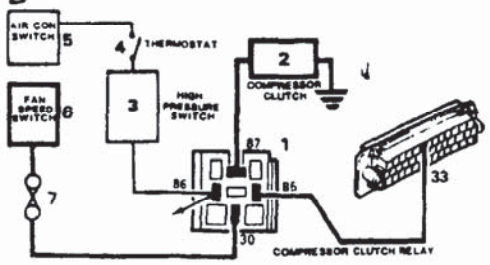
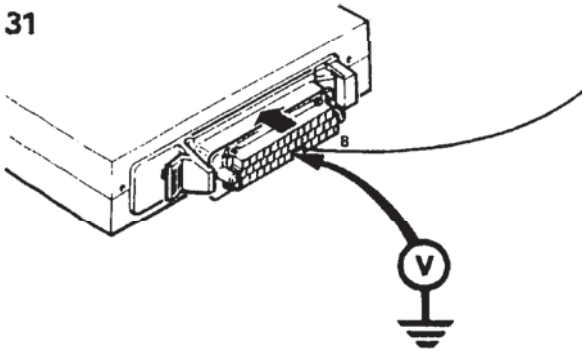
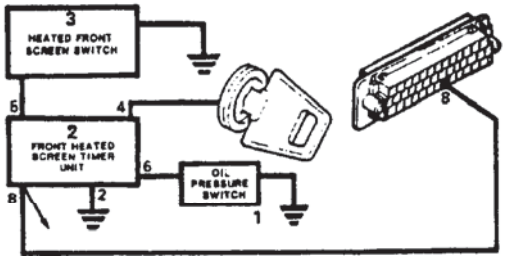
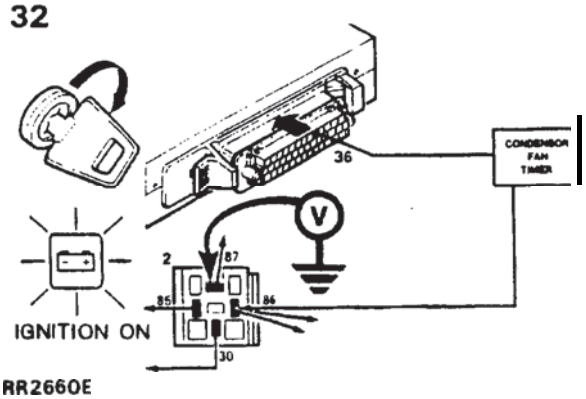
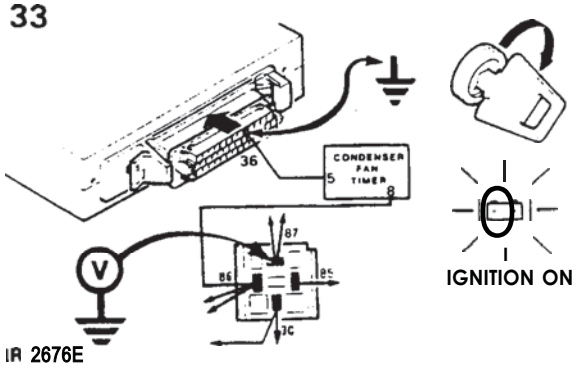
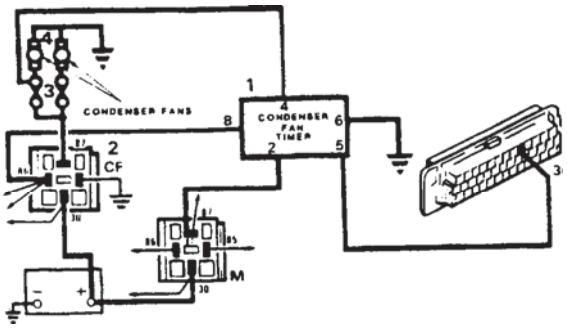
TEST PROCEDURE	RESULTS - Check cables and units shown in bold
29. **Check operation of compressor clutch relay** **NOTE: Select air conditioning position, thermostat cold, and tan speed I, II, or III**	Voltmeter reading of 12 volts - Proceed to Test 31 Incorrect reading of zero volts Proceed to Test 30
29  RR2853E	

TEST PROCEDURE	RESULTS - Check cables and units shown in bold
30. **Fault diagnosis - compressor clutch relay** **NOTE: Select air conditioning position, thermostat cold, and tan speed I, II or III** **KEY:** **1. Compressor clutch relay** **2. Compressor clutch** **3. High pressure switch** 4. **Thermostat** 5. Air conditioning switch 6. Fan speed switch 7. Fuse A3	Voltmeter reading of 12 volts - Check A Voltmeter reading of zero volts Check B
30  RR2654E	A  B 

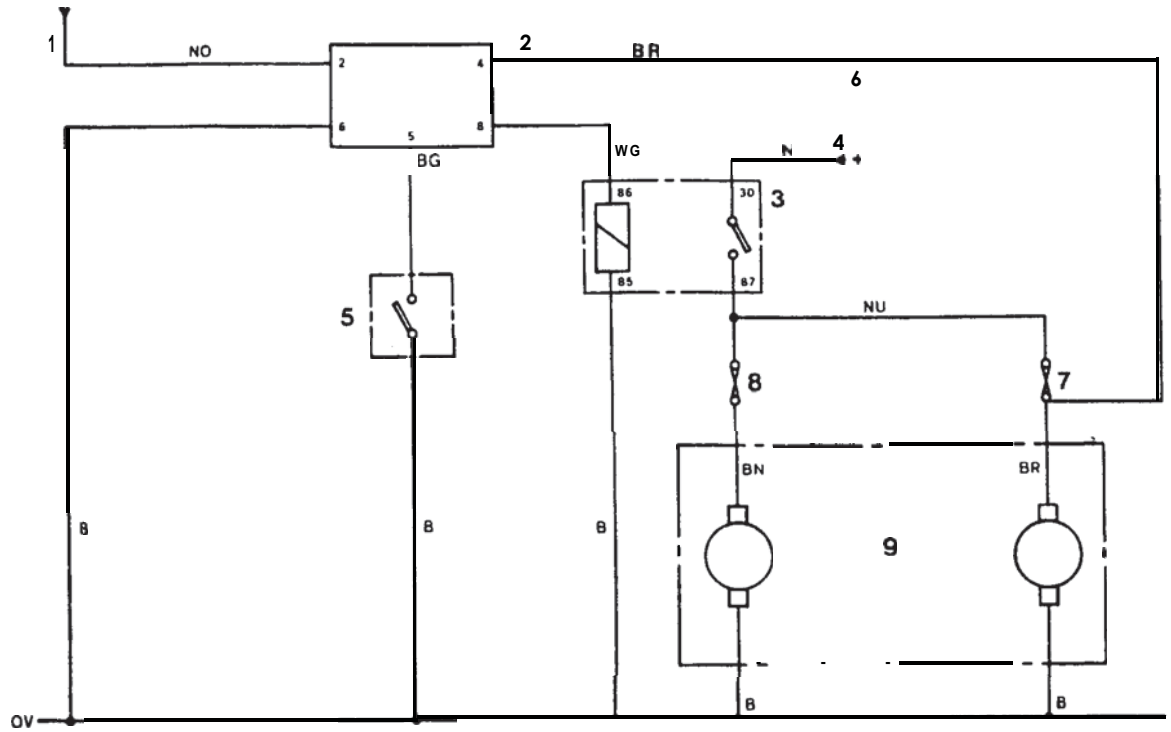
Continued

TEST PROCEDURE	RESULTS - Check cables and units shown in bold
31. Check heated front screen input NOTE: Engine running, heated front screen switched 'ON' KEY: 1. Oil pressure switch 2. Front screen timer unit 3. Front screen switch	Voltmeter reading of 12 volts - Proceed to Test 32 Incorrect reading of zero volts Check:
31  RR2655E	

TEST PROCEDURE	RESULTS - Check cables and units shown in bold
32. Check operation of condenser fan output Disconnect coolant temperature sensor and fuel temperature sensor and bridge plug connectors NOTE: Switch ignition 'ON' for 5 seconds, switch ignition 'OFF' The fan timer will operate the fans for approximately 10 minutes unless it is disconnected KEY: 1. Condenser fan timer 2. Condenser fan relay	Voltmeter reading of 12 volts - end of tests Voltmeter reading of zero volts Proceed to Test 33
32  RR2660E	

'EST PROCEDURE	RESULTS - Check cables and units shown in bold
13. Fault diagnosis - condenser fan output KEY: 1. Condenser fan timer 2. Condenser fan relay 3. Fuses Al and A2 4. Condenser fans	Voltmeter reading of 12 volts - Suspect ECU Incorrect reading Check:
33  IR 2676E	

After completing the tests with either the 'Diagnostic' equipment or multi-meter, re-test the vehicle to ensure the faults have been rectified. If faults still persist, recheck using the Lucas diagnostic equipment.



RR2610E

Condenser fan circuit diagram RR2610E

1. 12V from EFI main relay.
2. Condenser fan timer unit.
3. Fan relay.
4. 12V battery feed.
5. Trigger, from ECU.
6. 12V from fan relay.
7. Fuse Al-20 amp.
8. Fuse A2-20 amp.
9. Fan motors

Condenser fans/Condenser fan timer

Check operation

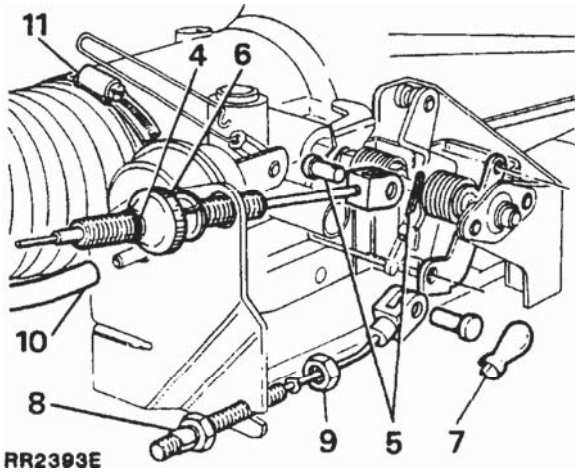
1. Start engine.
2. Move air con/heater control to air conditioning position.
3. Check condenser fans, if working the condenser fan relay and wiring to the fans is functioning.
4. If not working check fuses Al and A2, and the voltage between connections 86 on fan relay and earth. If 12 volts is not present, check wiring back to air con switch.
5. If 12 volts is present, but fans NOT working, short out connections 30 and 87 on fan relay. If fans work fit new relay. If fans NOT working, check supply to fan relay from main harness.
6. Apply a 12 volt supply for at least two seconds to connection 5 on fan timer within SIX SECONDS of switching engine off. The condenser fans should run for 9.5 minutes ± 0.5 minutes, and switch off.
7. If the fans do not work after applying voltage to timer, short out connections 4 and 8 on fan timer, if fans work fit new fan timer. If fans do not work, check wiring.

OVERHAUL THROTTLE LEVERS AND THROTTLE VALVE - 3.9 V8 Model

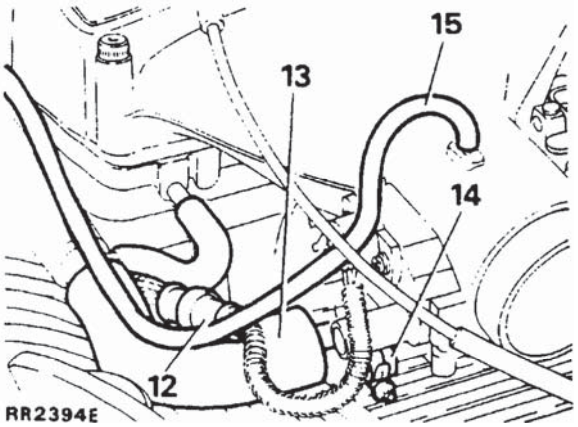
Preparation, remove, overhaul and refit

Preparation

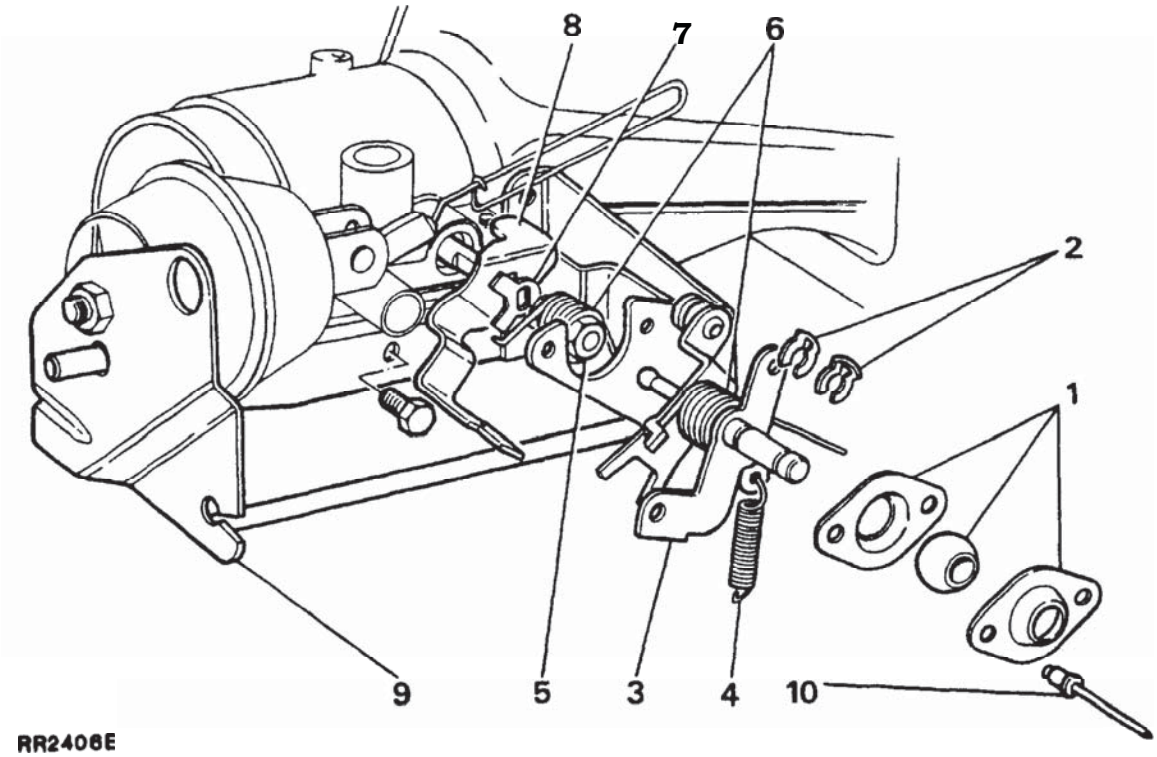
1. Disconnect the battery negative terminal.
2. Disconnect the electrical multi-plug from the bypass air valve (stepper motor).
3. Disconnect the small vacuum hose at the rear of the plenum chamber, located below the bypass air valve.
4. To assist re-assembly mark an identification line on the throttle cable outer covering directly behind the adjustment thumb wheel before disconnecting the throttle cable from the throttle lever.
5. Remove the cotter pin and clevis pin securing the throttle cable to the lever.
6. Carefully pry the adjustment thumb wheel from the throttle bracket. Lay the cable aside.
7. Release the retaining clip from the kick down cable and remove the clevis pin.
8. To assist re-assembly apply adhesive tape behind the rear adjustment nut on the kick down cable outer sleeve to prevent the nut moving out of position.
9. Release the front lock nut and remove it from the outer sleeve to enable the cable to be removed from the throttle bracket. Lay the cable aside.
10. Remove the vacuum hose from the cruise control actuator.



11. Remove the large hose from the neck of the plenum chamber.
12. Disconnect the multi-plug to the throttle potentiometer.
13. Remove the PCV breather hose.
14. Disconnect the two coolant hoses in turn and immediately plug the end of each hose to prevent excessive loss of coolant. Identify each hose for re-assembly.
15. Remove the distributor vacuum hose.



16. Release the two screws and remove the potentiometer.



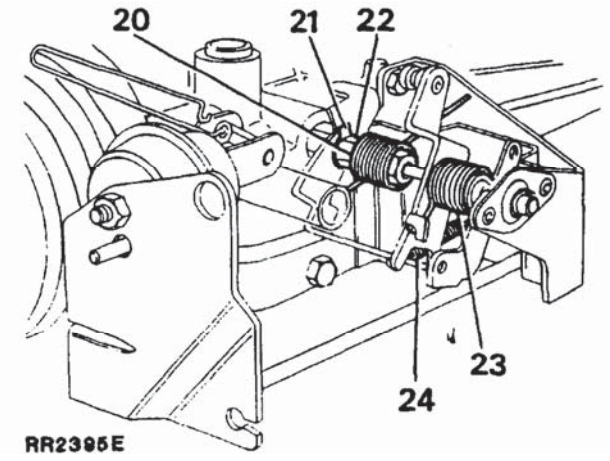
RR2406E

KEY

1. Spherical bearing
2. Retaining clips (2)
3. Countershaft assembly
4. Overtravel spring
5. Throttle spindle nut
6. Throttle return spring (2)
7. Tab washer
8. Throttle stop lever
9. Throttle bracket assembly
10. Pop rivets (2)

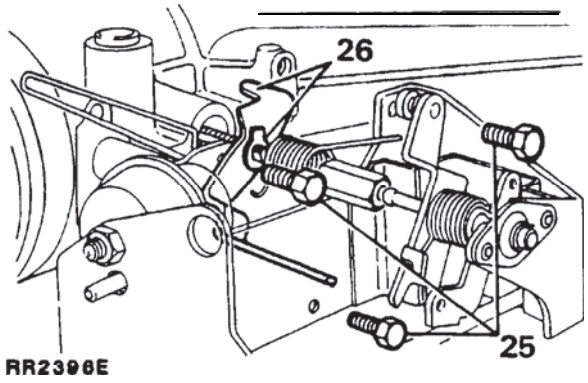
Remove throttle lever assembly

17. Remove the six screws securing the plenum chamber to the ram housing. Lift off the plenum chamber.
18. Remove the hose from the air bypass valve housing and plenum chamber air inlet pipe.
19. Unclip the cruise control actuator link. While holding the throttle valve fully open release the link from the countershaft assembly. Carefully return the lever assembly to the closed throttle position.
20. Release the tension on the inboard throttle return spring and slide the spring along the countershaft assembly to give access to the throttle shaft nut.
21. Bend back the the tabs of the lock washer.
22. While holding the throttle stop lever in the closed position, release the nut until it is free of the throttle valve shaft.
23. Release the tension on the outboard throttle return spring.
24. Unhook and remove the over-travel spring.



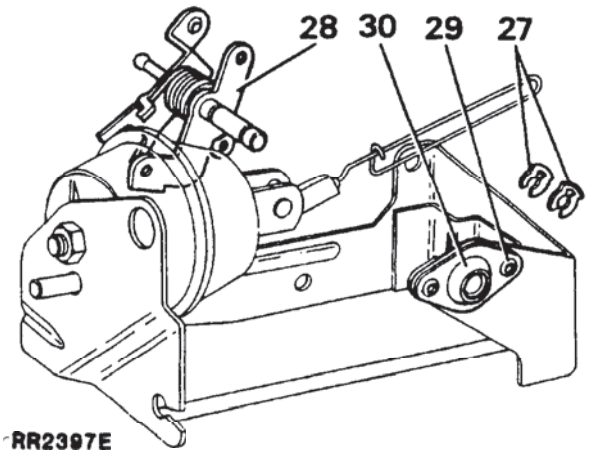
RR2395E

25. Remove the three bolts securing the throttle bracket to the plenum chamber and withdraw the bracket assembly.
26. Remove the tab washer and throttle stop lever from the throttle valve shaft.

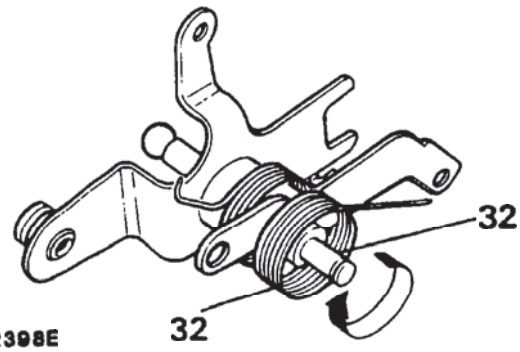


Inspect and overhaul throttle lever assembly

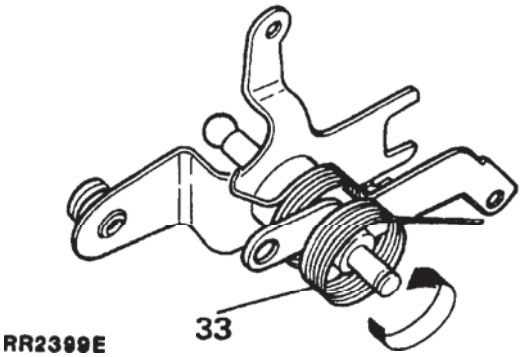
27. Remove the two retaining clips from either side of the spherical bearing.
28. Remove the countershaft assembly from the bearing.
29. If the spherical bush appears to be worn, dismantle as follows. Using a 4,7 mm (3/16 in) diameter drill, drill out the two pop rivets securing the spherical bearing to the throttle bracket assembly.
30. Split the bearing assembly and discard the bearing bush.



31. Pre-grease a new bush with Admax L3 or Energrease LS3 assemble the bush into the bearing retaining plates and pop-rivet the assembly to the throttle bracket with two 4.7 mm (3/16 in) diameter domed head rivets 9 mm (0.361 in) long.
32. Examine the bearing surface of the countershaft assembly. If worn fit a new assembly, otherwise wind the throttle return spring off the levers.



33. Wind a new spring onto the countershaft assembly noting that the small hooked end of the spring is wound on first.

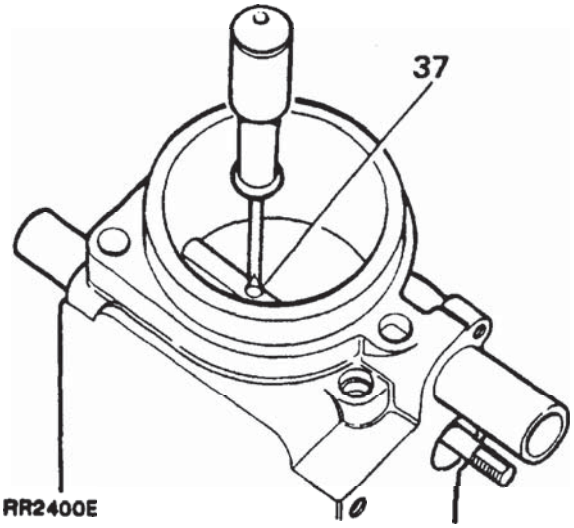


34. Pre-grease the shaft with Admax L3 or Energrease LS3 and fit the countershaft assembly to the spherical bearing and secure with the two clips.
35. Examine the throttle stop lever for wear, fit a new lever if necessary.

Continued

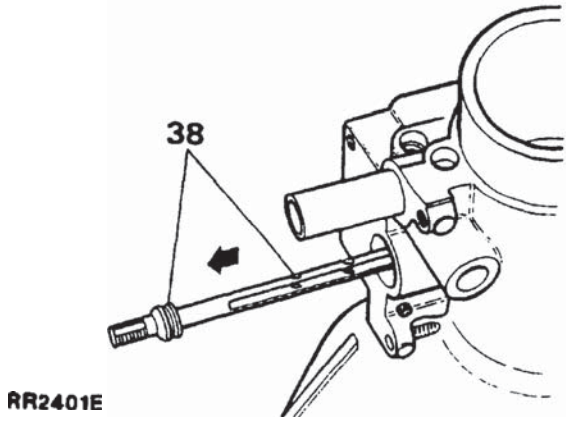
Inspect and overhaul throttle valve

36. Examine the throttle valve shaft for excessive wear between the bearing bushes in the plenum chamber and the shaft. A small amount of clearance is permissible. If excessive wear is evident fit new shaft and bushes as follows.
37. Remove the two split screws securing the throttle valve disc and withdraw the disc, taking care not to damage the shaft.



RR2400E

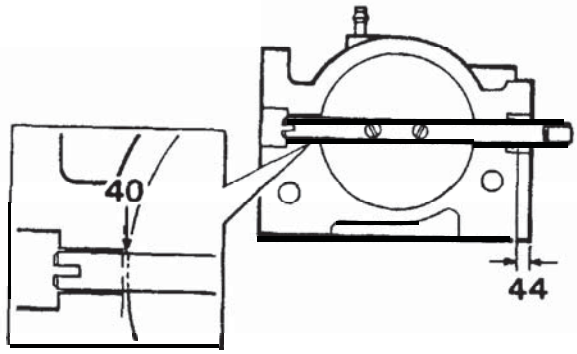
38. Remove the shaft and air seal from the plenum chamber.



RR2401E

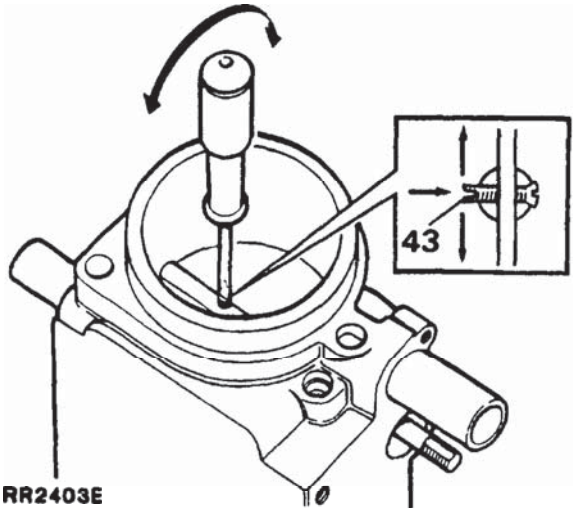
39. Using a suitable drift, drive out the bushes taking care not damage the bores in the plenum chamber.
40. Press in new bushes until they are flush with the throttle valve bore.

CAUTION: Ensure that the bushes do not protrude into the bore as they will interfere with the movement of the throttle valve disc.



RR2402E

41. Fit the throttle valve shaft and disc, secure in position with the two split screws. Do not fully tighten the screws at this stage.
42. Rotate the throttle shaft 360" once or twice to centralise the disc in the bore. Tighten the two screws.
43. Rotate the shaft until the split end of the screws are accessible. Using the blade of a screw driver spread the split to secure the screws in the shaft.

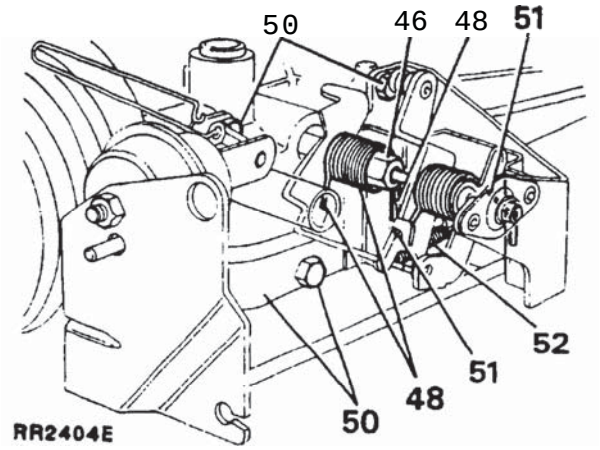


RR2403E

44. Pre-grease a new air seal with Admax L3 or Energrease LS3. Fit the seal pushing it down the shaft and into the counterbore until the seal is 6.0 mm (0.236 in) below the face of the plenum chamber.

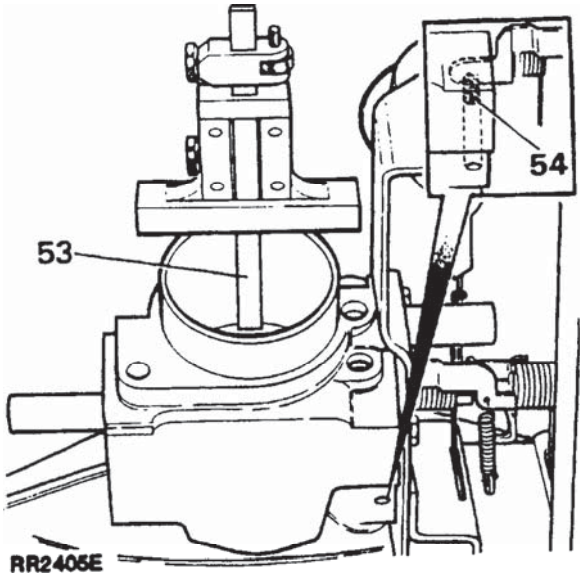
Assemble throttle levers and bracket

45. Fit the stop lever to the throttle valve shaft followed by a new tab washer and secure with the interconnecting nut.
46. Holding the stop lever on its stop, tighten the interconnecting nut securely and bend over the tabs of the tab washer to lock the nut in position.
47. Fit the inboard throttle return spring noting that the small hooked end of the spring is nearest the plenum chamber.
40. Locate the hooked end of the inboard spring on the stop lever and wind up the straight end one full turn and anchor it in the appropriate slot.
49. Fit the countershaft to the interconnecting nut of the throttle valve shaft.
50. Fit the throttle bracket assembly and secure with the three retaining bolts.
51. Ensuring that the hooked end of the outboard spring is anchored by the lever, wind the spring up one full turn and locate the free end in its appropriate slot.
52 Fit the over-travel spring.
Lightly grease the throttle return and over-travel springs with Admax L3 or Energrease LS3.



NOTE: If new throttle levers have been fitted the minimum throttle setting of the disc must be checked to ensure that it is SO" to the bore.

53. Using a depth vernier or depth micrometer from the mouth of the bore check the top and bottom of the valve disc. The disc must be within 0.5 mm (0.019 in) total indicator reading across the full diameter of the disc.
54. If the throttle disc is out of limits adjust the small set screw below the stop lever. Access to the screw is gained from the bottom of the plenum chamber neck adjacent to the throttle levers support bracket.



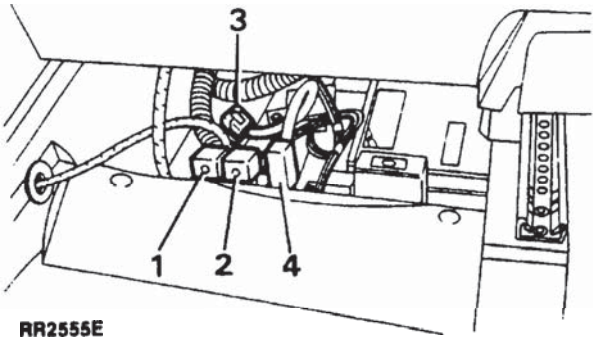
Refitting

55. Reconnect and adjust the cruise control actuator link. (See cruise control-actuator link setting)
56. Clean any previous sealant from the joint face of the plenum chamber and ram housing. Apply 'Hylomar' sealant to the faces and refit the plenum chamber. Tighten the bolts to the correct torque value-see section 06.
57. Reverse the remaining preparation instructions.

ELECTRONIC FUEL INJECTION-RELAYS

Incorporated in the fuel injection electrical system are two relays which are located beneath the front right hand seat adjacent to the cruise control relay and emission maintenance reminder. Access to the relays is gained through the opening at the bottom of the seat when the seat is in its fully forward position on the seat slides.

1. Fuel pump relay (mounted on a blue terminal block).
2. Main relay (mounted on a black terminal block).
3. Diagnostic plug.
4. Condenser fan timer unit.



RR2555E

Remove and refit

Removing

1. Disconnect the battery negative terminal.
2. Pull the relay(s) from the terminal block(s).

Refitting

3. Reverse the removal procedure.

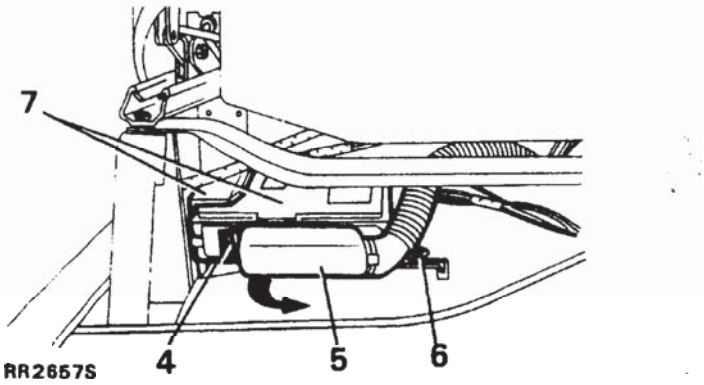
ELECTRONIC CONTROL UNIT (ECU)-14 CU

NOTE: The ECU is not a serviceable item. In the event of a unit failure the ECU must be replaced.

Remove and refit

Removing

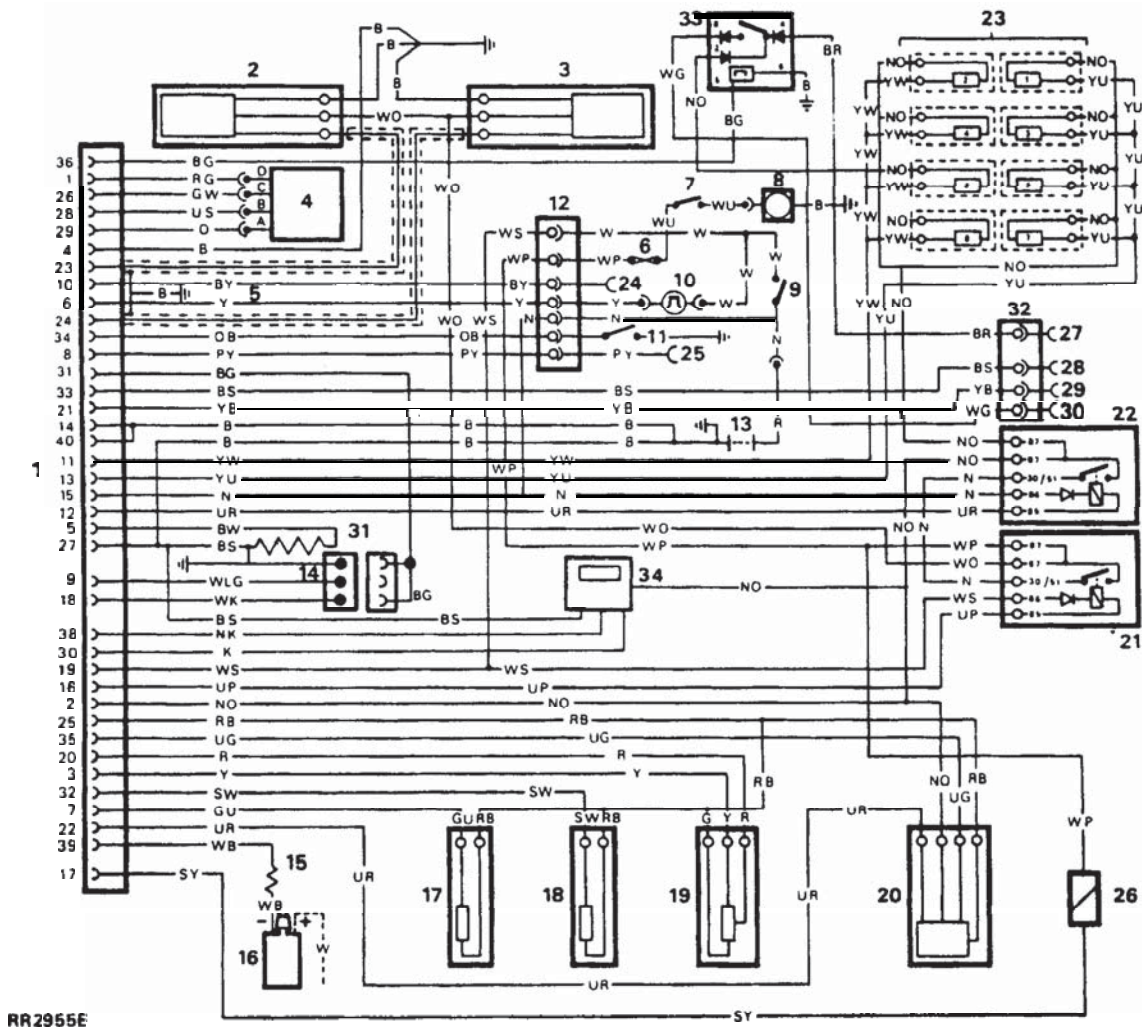
1. Remove the front and side seat base trim of the front right hand seat.
2. Adjust the seat to its most rearward position and raise the seat cushion height to allow access to the ECU fixings.
3. Disconnect the battery negative terminal.
4. Release the ECU plug retaining clip.
5. Maneuver the front of the plug (in the direction of the bold arrow) and detach the other end of the plug from the retaining peg.
6. Release the two screws securing the ECU to the mounting bracket.
7. Withdraw the ECU from the spring clip and remove it from the vehicle.



RR2657S

Refitting

8. Refit the ECU securely in the spring clip and fit and tighten the two screws.
9. Reconnect the ECU harness plug. Ensure that the plug is pushed firmly into its location and that the retaining clip secures the plug in position.
10. Remove remaining removal procedure.



FUEL INJECTION - Circuit Diagram - 1990/91 model year

1. 40 way connector to Electronic Control Unit (ECU).
2. Lambda sensor (left side - bank A).
3. Lambda sensor (right side - bank B).
4. By-pass air valve (stepper motor) (fast idle).
5. Lambda sensor screened ground.
6. Fuse C4 - main fuse panel.
7. Inertia switch.
8. Fuel pump.
9. Ignition switch.
10. Speed transducer (road speed input).
11. Neutral switch (automatic gearbox) (load input).
12. Main cable connector.
13. Battery.
14. Diagnostic plug.
15. In-line resistor.
16. Coil/-ve (engine RPM input).
17. Coolant temperature thermistor (sensor) (input).
18. Fuel temperature thermistor (sensor) (input).
19. Throttle potentiometer.
20. Air flow sensor.
21. Fuel pump relay.
22. Main relay.
23. Injectors-1 to 8.
24. Pick-up point E.F.I. warning symbol (instrument binnacle).
25. Heated front screen sense.
26. Purge control valve.
27. 12V from fan relay.
28. Air conditioning output control.
29. Air conditioning load input.
30. Fan relay feed.
31. Tune resistor (early vehicles).
32. Heater/air con. cable connector.
33. Condenser fan timer control.
34. Fault display input.

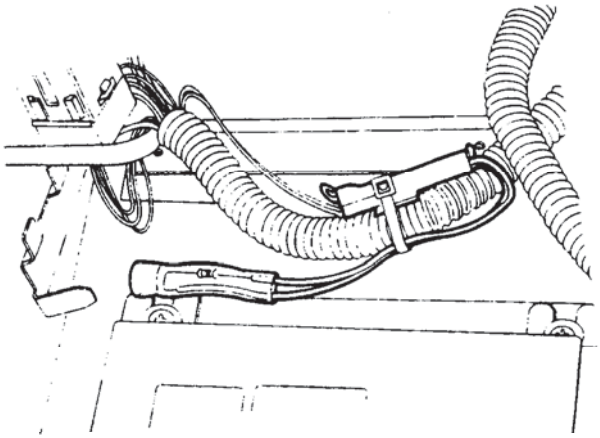
= = = Denotes screened ground.

NOTE: Reference to left and right side is made when viewing the vehicle from the rear.

ELECTRONIC FUEL INJECTION -LUCAS 14CUX SYSTEM

1990 model year vehicles have an enhanced fuel injection system, using a Lucas 14CUX electronic control unit, The system is a development of the 14CU sytem introduced on 3.9 litre vehicles.
The system works in the same way, new components being a tune select resistor and a fault code display unit.

TUNE SELECT RESISTOR - RR281 1M

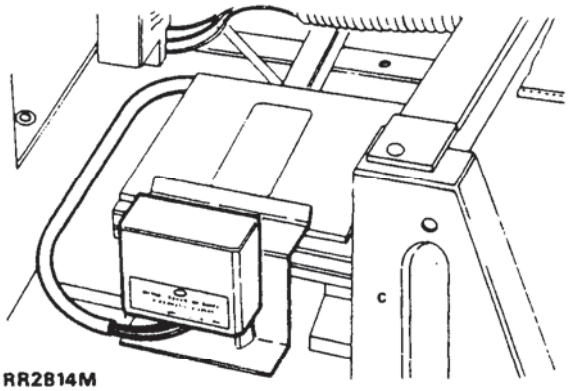

RR2811M

The 14CUX system is used in various markets, but a common ECU is used. To suit individual market requirements a tune select resistor is connected across pins 5 and 27 of the ECU.
It is located adjacent to the ECU, and strapped to the EFI cable assembly. The value of the resistor is dependent on the market application.

NOTE: For USA market models the resistor value is 3900 Ohms, wire colour, white.

NOTE: Vehicles after VIN No 451518 are fitted with a new ECU, Part No. PRC 8747 to replace PRC 7081. This ECU no longer requires the tune select resistor, which is therefore deleted. Fault code 21 is no longer stored by the ECU.

17EM FAULT CODE DISPLAY UNIT - RR2814M


RR2814M

1990 model year vehicles have a fault code display unit which is located underneath the right hand front seat, adjacent to the EFI ECU. The unit will display the relevant fault code, in addition to the EFI warning light being illuminated.

NOTE: Fault code 59 will NOT be indicated by the EFI warning light.

Recommended equipment

The diagnostic equipment for checking out the 14CUX system is the same as that used for 14CU, with the addition of two new memory cards for Hand Held Tester.

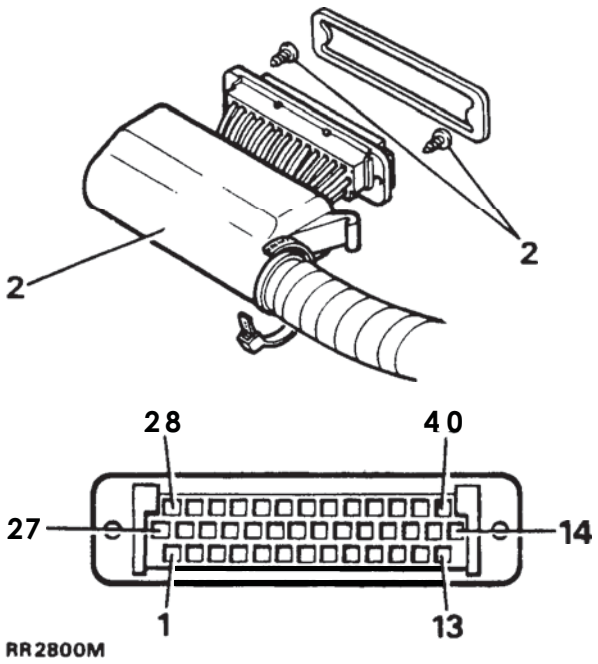
14CUX Memory cards, Lucas Part Number:
- 606 01 379.

CONTINUITY TEST PROCEDURE

NOTE: The continuity test procedure for 14CUX systems is similar to that for 14CU. Note the addition of the tune select resistor test and the deletion of Test 28, which does not apply to 14CUX systems.

TESTING

1. Release the ECU plug retaining clip and remove the plug from the ECU. Access is gained by removing the front seat base trim of the right hand front seat.
2. Remove the plug shroud and manoeuver it along the harness until there is enough clearance to enable meter probes to be inserted into the back of the plug.
3. There are six pin numbers 1, 13, 14, 27, 28 and 40 moulded onto the rear of the plug as shown in the illustration below, for clarity the electrical leads have been omitted.



Pins 1 to 13 bottom row.
Pins 14 to 27 centre row.
Pins 28 to 40 top row.

CONNECTIONS TO 40 WAY CONNECTOR

PIN Nos. CABLE COLOUR

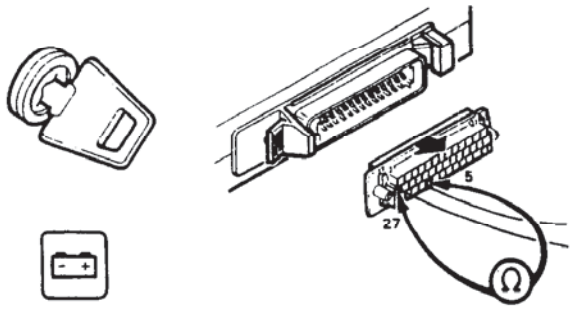
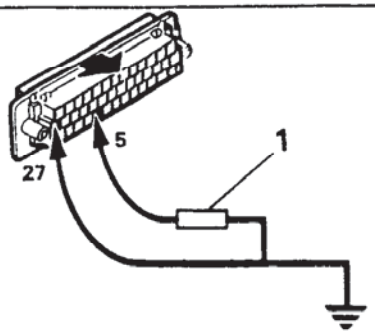
1. Red/green
2. Brown/orange
3. Yellow
4. Blak
5. Grey/Black
6. Yellow
7. Green/blue
8. Purple/yellow
9. White/light green
10. Black/yellow
11. Yellow/white
12. Blue/red
13. Yellow/blue
14. Black
15. Brown
16. Blue/purple
17. Grey/yellow
18. White/pink
79. White/grey
20. Red
21. Yellow/black
22. Blue/red
23. Blue
24. Blue
25. Red/black
26. Green/white
27. Black/grey
28. Blue/grey
29. Orange
30. Pink
31. Black/green
32. Grey/white
33. Black/grey
34. Orange/black
35. Blue/green
36. Black/green
37. Not used
38. Brown/pink
39. White/black
40. Black

The last colour denotes the wire tracer colour

Tune select resistor test

It is recommended that this test is carried out before Test 1. of Continuity Test Procedure, Section 19, page 44.

NOTE: This test is not required on vehicles after VIN No 451518, which are no longer fitted with a tune select resistor.

TEST PROCEDURE	RESULTS - check cables and units shown in bold
TUNE SELECT RESISTOR TEST KEY 1) Tune select resistor	CORRECT READING: 3700-4100 OHMS Resistor wire colour: White INCORRECT OHMETER READING CHECK:
 RR2812M	 RR2813M

Description of fault codes

The fault codes are listed in order of priority. Where more than one fault exists, clearing the first fault code will permit the next code to be displayed.

NOTE: Fault code 02 will show if the ECU has just been reconnected. Switch on ignition to clear the display.

Clearing fault code display

It is necessary to clear the code displayed when the fault has been rectified, and to access any further fault codes that may exist. Clear the fault code displayed using the following procedure:

1. Switch On ignition.
2. Disconnect serial link mating plug, wait 5 seconds, reconnect.
3. Switch OFF ignition, wait for main relay to drop out.
4. Switch ON ignition. The display should now reset. If no other faults exist, and the original fault has been rectified, the display will be blank.
5. If multiple faults exist repeat Steps 1. to 4. as each fault is cleared the code will change, until all faults are cleared. The display will now be blank.

Code 29 - ECU MEMORY CHECK - If this fault is detected, all other faults are unreliable and must therefore be ignored.

Proceed as follows:

1. Leave battery connected
2. Switch ignition off
3. Wait for approximately 5 seconds
4. Disconnect ECU plug
5. Re-connect ECU plug
6. Switch ignition on and check display unit.

NOTE: If fault code 29 is detected again, substitute ECU and restart test sequence.

Code 44 - LAMBDA SENSOR A - left bank
Code 45 - LAMBDA SENSOR B - right bank

If one of these fault codes is displayed check the wiring to that particular lambda sensor.

If both codes are displayed, the voltage supply to the heater coils of the sensors must be checked. Refer to Test 26, continuity test procedure.

Code 25 - IGNITION MISFIRE - This code indicates that an ignition system misfire has been detected. Codes 40 or 50 indicate on which bank the misfire has occured.

Code 40 - MISFIRE BANK A - left bank
Code 50 - MISFIRE BANK B - right bank

If both fault codes are displayed check the following components commom to both banks:

Distributor cap
Rotor arm
Coil
Electrical connections
Pick-up (air gap)
Amplifier
Injectors - if code 34 or 36 displayed.

If either fault code 40 or 50 is displayed check components applicable to the particular bank that the misfire has occured on:

Spark plugs
HT leads
Distributor cap
Injectors - if code 34 bank A or 36 bank B displayed.

Code 12 - AIRFLOW METER - Refer to Test 19, continuity test procedure.

Code 21 - FUEL TUNE SELECT - Identifies that the tune select resistor is open circuit - Refer to tune select resistor test.

Code 34 - INJECTOR BANK A - The display will indicate if the injector/s are causing the engine to run rich or lean.

If the bank is running rich, check for:-
- faulty injector wiring and connectors
- stuck open injectors

If the bank is running lean, check for:-
- faulty injector wiring and connectors
- blocked injectors

Code 36 - INJECTOR BANK B - As code 34 except relevant to bank A injectors.

Code 14 - COOLANT THERMISTOR - Refer to Test 14, continuity test procedure.

Code 17 - THROTTLE POTENTIOMETER - Refer to Test 17, continuity test procedure.

Code 18 - THROTTLE POTENTIOMETER input high/AIRFLOW METER - low. - Refer to Tests 17, 18 and 19 of the continuity test procedure

Code 19 - THROTTLE POTENTIOMETER input low/ AIRFLOW METER - high. - Refer to Tests 17, 18 and 19 of the continuity test procedure

Code 88 - PURGE VALVE LEAK - Refer to Test 9 and 10 of the continuity test procedure.

Code 28 - AIR LEAK - Check for air leaks in the following areas.
Hose, air flow meter to plenum
Breather system hoses to plenum
Brake servo hose
Vacuum reservoir hose (fresh air solenoid)
Distributor vacuum advance
Hose, purge valve to plenum
Injector seals
Joint - By pass air valve to plenum
- Plenum chamber to ram housing
- Ram housing to inlet manifold
- Inlet manifold to cylinder head

By pass air valve hose

Code 23 - FUEL SUPPLY - Check fuel system pressure, Test 20 of the continuity test procedure.

Code 48 - STEPPER MOTOR - Check base idle speed - see setting procedure. - Refer to Tests 15 and 16 of the continuity test procedure. Check road speed sensor - Refer to Test 25 of the continuity test procedure.

Code 68 - ROAD SPEED SENSOR - Refer to Test 25 of the continuity test procedure.

Code 69 - GEARSWITCH - Refer to Test 24 of the continuity test procedure.

Code 59 - GROUP FAULTS 23/28 - This indicates that a fault has been registered that is caused by the fuel supply or an air leak but the exact fault cannot be identified. Check all items outlined under code 23 and 28.

Code 15 - FUEL THERMISTOR - Refer to Test 13 of the continuity test procedure.

BASE IDLE SPEED SETTING

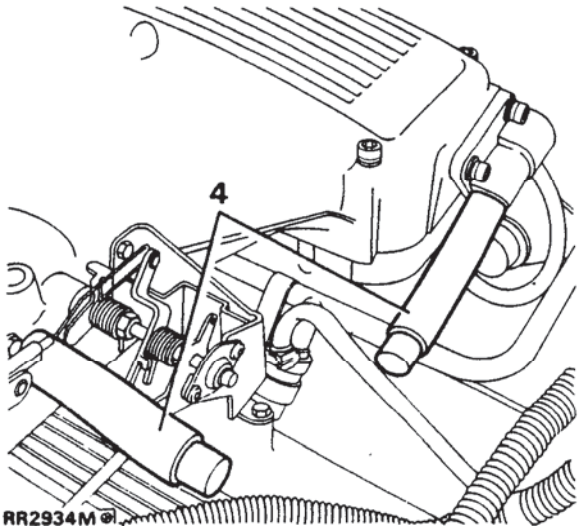
NOTE: the base idle speed is set at the factory. It should not require further adjustment unless the plenum chamber is changed. The adjustment screw is sealed with a plug to prevent unauthorised alteration. Check the ignition timing before attempting the following procedure, since this will affect the idle speed.

Equipment required

Two blanking hoses. It is recommended that these are manufactured using a new air by-pass valve hose - Part No.ETC7874. Cut two equal pieces 90mm (3 1/2 inches) long from the hose and seal one end of each, using 13mm (1/2 inch) diameter bar. A suitable clamp can be used to ensure an air tight seal

Checking procedure

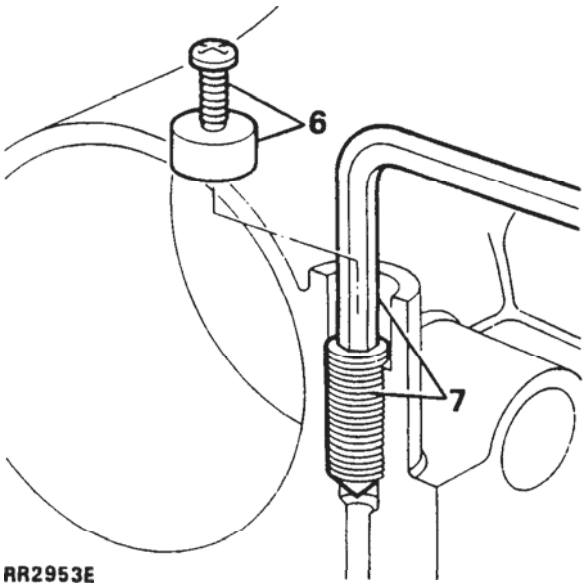
1. Drive the vehicle for at least two miles until the engine and transmission are hot. Switch off the engine.
2. Check that all electrical loads are off including airconditioning.
3. Remove the air by-pass valve hose.
4. Fit the blanking hoses to both the plenum chamber and the air by-pass valve. Ensure the hoses are securely fitted to prevent air leaks. Note that the throttle cable and cruise control actuator have been omitted from the illustration for clarity.



5. Start the engine and check that the idle speed is within the limits specified in Section 05 - Engine Tuning Data.

Adjusting base idle speed

6. Remove the tamper proof plug that protects the idle speed screw. Drill the plug and insert a self tapping screw to enable the plug to extracted.



7. Start the engine, and using a suitable Allen key, adjust the idle screw clockwise to decrease or counter-clockwise to increae the idle speed.
8. Check fault code display, and clear the memory - see 'Clearing fault code display' - section 19, page 74.

FUEL SYSTEM 1991 MODEL YEAR

A revised fuel sytem is fitted to 1991 model year vehicles. The major change is the fitting of a plastic fuel tank with improved breather system. The remote expansion tank is now deleted.
A further improvement is the fitting of a combined fuel pump and sender unit. A panel in the floor of the vehicle permits access to the fuel pump/sender unit

FUEL PUMP/SENDER UNIT

WARNING: Ensure that the Fuel Handling Precautions given in Section 01 - Introduction regarding fuel handling are strictly adhered to when carrying out the following instructions.

CAUTION: Before disconnecting any part of the fuel system, it is imperative that all dust, dirt and debris is removed from around the components to prevent ingress of foreign matter into the fuel system.

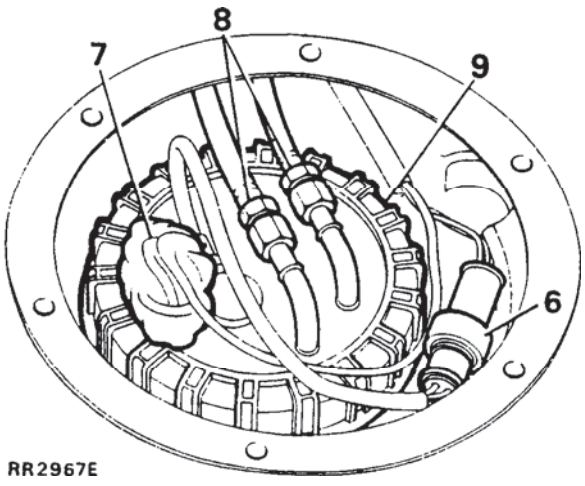
Special Tool - LST131, wrench - pump retaining ring

- LST 144 -'Speedfit' disconnector

Remove and refit

Removing

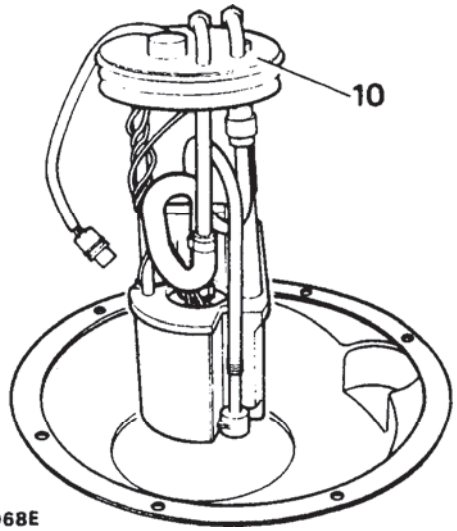
1. Depressurise the fuel system.
2. Disconnect battery negative lead.
3. Syphon at least 9 litres (2 gallons) of fuel from the fuel tank using a suitable container that can be sealed afterwards.
4. Remove carpet from loadspace floor and tailgate.
5. Fold back the sound insulation to reveal the access panel.



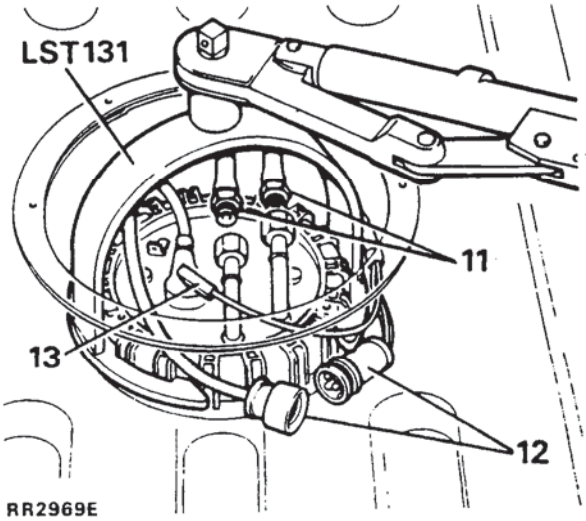
RR2967E

6. Remove the securing screws and detach the access panel from the floor.
7. Disconnect the electrical connections at the multi-plug.
8. Remove the insulation sealant from around the ground lead, and disconnect the ground lead.
9. Disconnect the two fuel line unions from the fuel pump.
10. Using Special Tool No. LST131, remove pump assembly retaining ring and withdraw the pump from the fuel tank.

WARNING: A quantity of fuel will be retained in the body of the unit, care must be taken to prevent fuel spillage when the unit is removed.



RR2968E



RR2969E

Refitting

11. Insert the fuel pump into the tank. Fit the retaining ring and tighten to a torque of 45-50 Nm (34-37 lbf ft).
12. Connect the fuel lines to the pump.
13. Connect the electrical leads at the multi-plug.
14. Connect the ground lead to the pump and insulate with suitable sealant.
15. When the fuel system has been reassembled check all fuel pipes, sealing rings and hose connections are secure.
16. Run the engine to check for fuel leaks before final assembly.
17. Inspect the access panel seal, fit a new seal if necessary.
18. Fit the access panel and secure to the floor with the screws.
19. Reverse operations 4 - 5 to refit the sound insulation and carpet.

FUEL TANK

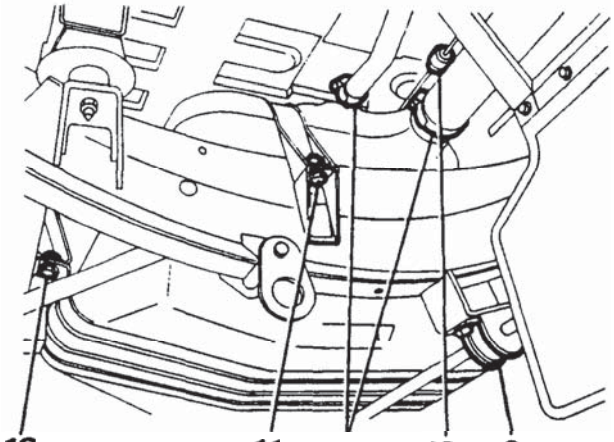
WARNING: Ensure that the Fuel Handling Precautions given in Section 01 - Introduction regarding fuel handling are strictly adhered to when carrying out the following instructions.

CAUTION: Before disconnecting any part of the fuel system, it is imperative that all dust, dirt and debris is removed from around the components to prevent ingress of foreign matter into the fuel system.

Remove and refit

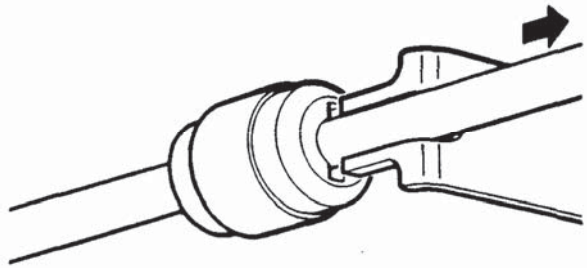
Removing

1. Depressurise fuel system. Disconnect battery negative lead.
2. Syphon the fuel tank into a suitable container that can be sealed afterwards.
   ENSURE THAT THE TANK IS DRAINED COMPLETELY. (refer to Warning concerning fuel vapor and spillage at start of this procedure).
3. Remove carpet from loadspace floor and tailgate.
4. Fold back the sound insulation to reveal the access panel.
5. Remove the securing screws and detach the access panel from the floor.
6. Disconnect the electrical connections at the multi-plug.
7. Remove the insulation sealant from around the ground lead, and disconnect the ground lead.
8. Disconnect the two fuel line unions from the fuel pump.
9. Working underneath the vehicle, remove the rear anti-roil bar straps, and allow the bar to swing down clear of the tank.

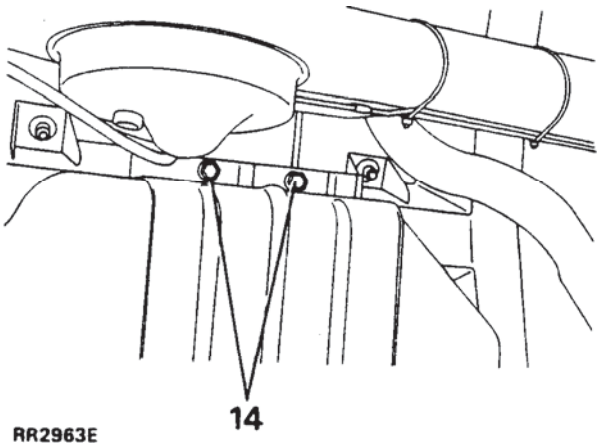


RR2962E

10. Remove the tank filler and vent hoses at the fuel tank.
11. Remove the nut and bolt securing the right hand side of the fuel tank strap.
12. Disconnect the evaporative control pipe at the green end of the 'speedfit' connector.


ST2877M

NOTE: To disconnect the 'speedfit' connector, forked end into the two slots of the connector as shown in the illustation above. Press down on the collet and simultaneously pull the pipe from the connector. Special tool LST 144 is available for this operation.



RR2963E

13. Remove the back two bolts and nut plates securing the fuel tank cradle.
14. Remove the front nuts, bolts and washers, and remove the fuel tank cradle.
15. With the aid of an assistant, tilt the right hand side of the tank upwards and manouver the tank through the chassis to remove.

Refitting

16. Reverse the removal procedure, ensuring that the sealing ring, fuel pipe and hose connections are secure.
17. Run the engine and recheck all connections to ensure no fuel leaks exist. Reverse the remaining removal procedure.

FUEL FILTER

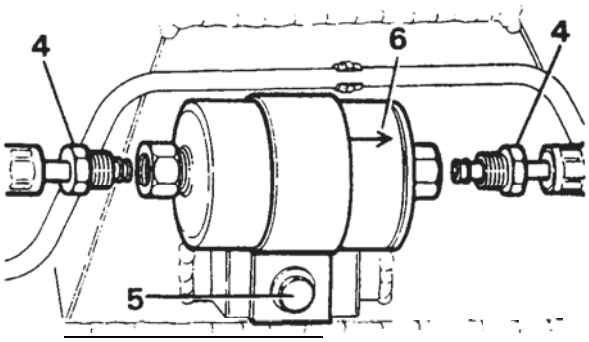
Remove and refit

WARNING: ENSURE THAT THE FUEL HANDLING PRECAUTIONS GIVEN IN SECTION 01 - INTRODUCTION REGARDING FUEL HANDLING ARE STRICTLY ADHERED TO WHEN CARRYING OUT THE FOLLOWING INSTRUCTIONS.

WARNING: THE SPILLING OF FUEL IS UNAVOIDABLE DURING THIS OPERATION. ENSURE THAT ALL NECESSARY PRECAUTIONS ARE TAKEN TO PREVENT FIRE AND EXPLOSION.

Removing

1. Depressurise the fuel system.
2. The fuel filter is located on the right-hand chassis side member forward of the fuel tank filler neck. Access to the filter is gained through the right-hand rear wheel arch.
3. Clamp the inlet and outlet hoses to prevent the minimum of fuel spillage when disconnecting the hoses.
4. Loosen the two fuel line unions and remove the hoses from the filter canister.
5. Release the single nut and bolt securing the filter and clamp and remove the filter.



RR2966E

Refitting

6. Fit a new filter observing the direction of flow arrow on the canister.
7. Tighten the single nut and bolt.
8. Fit the inlet and outlet hoses. Tighten the unions to a torque of 20-25 ft lb(27-34Nm).
9. Refit the fuel pump relay, reconnect the battery. Recode the radio.
10. Start the engine and inspect for fuel leaks around the hose connections.

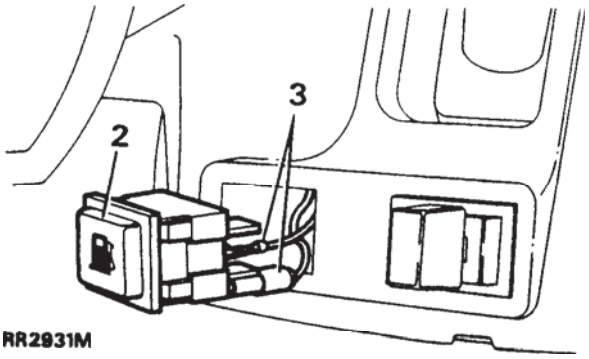
FUEL FILLER FLAP RELEASE BUTTON

The fuel filler flap is no longer part of the central locking system on 1991 model year vehicles. The filler flap is permanently locked. To release the flap press the button situated on the steering column shroud. On closing, the filler flap will be locked automatically. Note that the release button will only work with ignition switched OFF.

Remove and refit

Removing

1. Disconnect the battery negative lead.
2. Carefully pry the release button from the steering column shroud.



RR2931M

3. Remove the release button from the shroud and disconnect the two wiring connectors. Ensure that the wires protrude through the shroud to facilitate reassembly.

Refitting

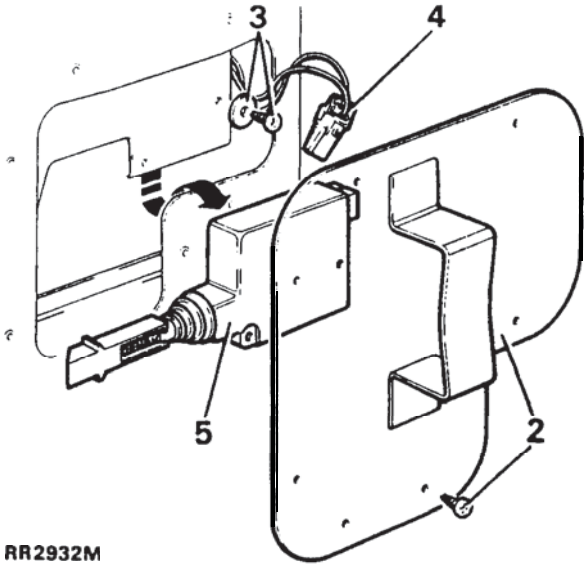
4. Reverse the removal procedure. Recode the radio.

FUEL FILLER FLAP RELEASE ACTUATOR

Remove and refit

Removing

1. Ensure that the fuel filler flap is released. Disconnect the battery negative lead.
2. Remove eight screws, and withdraw the closure panel, situated in the right hand side of the load space.
3. Release two screws and maneuver the actuator clear of its mounting.
4. Disconnect the wiring plug.
5. Withdraw the actuator.



RR2932M

Refitting

6. Reverse the removal procedure. Recode the radio.