



Electrical Library

Elektrotechnische Bibliothek

Librairie électrique

Handbuch Elektrik

Libreria Impianto Elettrico

Biblioteca Eléctrica

Livraria Eléctrica

Defender





DEFENDER 1999 MY

Electrical Library

This manual should be used in conjunction with the following publications:

KDR 100250	Workshop Manual
YVB 101670	Electrical Circuit Diagrams

Publication Part No. VDL 100170
Published by Rover Technical Communication

© 1998 Rover Group Limited

1. INTRODUCTION

ELECTRICAL PRECAUTIONS	1.3
ABBREVIATIONS.....	1.6
HOW TO USE THIS DOCUMENT	1.7
WIRE COLOUR CODES	1.10

2. FUSE DETAILS

INTRODUCTION	2.1
Engine compartment fuse box	2.1
Engine compartment fuse box - fusible links	2.2
Engine compartment fuse box - fuses	2.2
Passenger compartment fuse box	2.3

3. EARTH POINTS AND HEADER JOINTS

Earth points	3.1
Earth header	3.1

Continued.....

1. INTRODUCTION

ELECTRICAL PRECAUTIONS	1.3
ABBREVIATIONS.....	1.6
HOW TO USE THIS DOCUMENT	1.7
WIRE COLOUR CODES	1.10

1. INTRODUCTION

ELECTRICAL PRECAUTIONS	1.3
ABBREVIATIONS.....	1.6
HOW TO USE THIS DOCUMENT	1.7
WIRE COLOUR CODES	1.10

2. FUSE DETAILS

INTRODUCTION	2.1
Engine compartment fuse box	2.1
Engine compartment fuse box - fusible links	2.2
Engine compartment fuse box - fuses	2.2
Passenger compartment fuse box	2.3

3. EARTH POINTS AND HEADER JOINTS

Earth points	3.1
Earth header	3.1

Continued.....

CONTENTS

4. DESCRIPTION AND OPERATION

ANTI-THEFT ALARM	4.1
ENGINE IMMOBILISATION - Td5	4.5
DIAGNOSTIC SOCKET	4.7
STARTING AND CHARGING - Td5	4.8
ENGINE MANAGEMENT - Td5	4.11
FUEL PUMP - Td5	4.12
ANTI-LOCK BRAKING SYSTEM (ABS) - Td5	4.13
AIR CONDITIONING - Td5	4.17
HEATER	4.20
HEATED REAR WINDOW (HRW)	4.21
WIPERS AND WASHERS	4.22
EXTERIOR LAMPS - Brake and Reverse Lamps	4.26
EXTERIOR LAMPS - Head, Side and Number Plate Lamps	4.27
EXTERIOR LAMPS - Headlamp Levelling	4.30
EXTERIOR LAMPS - Rear Fog Lamps	4.32
EXTERIOR LAMPS - Indicators / Hazard Warning Lamps	4.34
INTERIOR LAMPS	4.37
INTERIOR ILLUMINATION	4.39
INSTRUMENTS	4.40
HORNS	4.43
CLOCK	4.44
CIGAR LIGHTER	4.45
IN-CAR ENTERTAINMENT	4.46

This document is intended to assist in diagnosing electrical faults, and should be used in conjunction with the Electrical Circuit Diagrams. The document is divided into the following sections:

1. **INTRODUCTION** - includes Electrical Precautions, a list of Abbreviations and general information on how to use the document.
2. **FUSE DETAILS** - provides details of location, rating in Amps, wire colour and circuit(s) protected.
3. **EARTH POINTS AND HEADER JOINTS** - provides details of earth points and earth header joints, including a plan view of the vehicle to aid location.
4. **DESCRIPTION AND OPERATION** - provides an explanation of how each of the systems operate.
5. **CONNECTOR** - details of connectors including a location photograph, face view and pin-out table.



NOTE: Before starting electrical checks on the vehicle, ensure that the relevant mechanical functions operate satisfactorily.

References

References to the LH or RH side given in this document are made when viewing the vehicle from the rear.

Operations covered in this document do not include reference to testing the vehicle after repair. It is essential that work is inspected and tested after completion and, if necessary, a road test of the vehicle undertaken, particularly where safety related items are concerned.



CAUTION: Before undertaking any electrical work on a vehicle ALWAYS read the ELECTRICAL PRECAUTIONS detailed on page 1.3.

INTRODUCTION

Battery voltage

Before commencing diagnosis of electrical problems verify the condition of the battery is acceptable by using the open circuit voltage test.

Open circuit voltage test

1. Switch off all electrical loads on the vehicle.
2. Adjust digital multimeter to read dc volts on the appropriate scale.
3. Connect test probes across battery terminals ensuring that polarity is correct and record the voltage displayed.

A reading of 12.3V or more is acceptable; any battery which reads less than this will need charging.



NOTE: If the vehicle has been used within a period of 8 hours prior to the test, surface charge must be removed from the battery by switching the headlamps on for approximately 30 seconds. Wait a further 60 seconds before checking the open circuit voltage.

Battery voltage is used as a known reference for ascertaining whether or not circuits are receiving sufficiently high voltage for components to function correctly. This reference is only a guide since most electronic circuits are designed to function over a wide range of voltages. In addition, consideration must be given to readings affected by voltage drop across certain components and fluctuations due to cable lengths.

ELECTRICAL PRECAUTIONS

General

The following guidelines are intended to ensure the safety of the operator whilst preventing damage to the electrical and electronic components fitted to the vehicle. Where necessary, specific precautions are detailed in the relevant sections of this document, reference to which should be made prior to commencing repair operations.

Equipment - Prior to commencing any test procedure on the vehicle ensure that the relevant test equipment is working correctly and any harness or connectors are in good condition. This particularly applies to mains lead and connections.



WARNING: Before commencing work on an ignition system all high tension terminals, adapters and diagnostic equipment for testing should be inspected to ensure that they are adequately insulated and shielded to prevent accidental personal contact and to minimize the risk of shock. Wearers of surgically implanted pacemaker devices should not work in close proximity to ignition circuits or diagnostic equipment.

Polarity - Never reverse connect the vehicle battery and always observe the correct polarity when connecting test equipment.

High Voltage Circuits - Whenever disconnecting live ht circuits always use insulated pliers and never allow the open end of the ht lead to come into contact with other components particularly ECUs. Since high voltage spikes can occur on the terminals of the coil while the engine is running, exercise caution when measuring the voltage at these points.

INTRODUCTION

Connectors and Harnesses - The engine compartment of a vehicle is a particularly hostile environment for electrical components and connectors. Always ensure these items are dry and oil free before disconnecting and connecting test equipment. Never force connectors apart either by using tools or by pulling on the wiring harness. Always ensure locking tabs are disengaged before removal and note orientation to enable correct reconnection. Ensure that any protective covers and substances are replaced if disturbed.

Before removing a faulty component, refer to the Workshop Manual for removal procedures. Ensure the starter switch is turned to the "OFF" position, the battery is disconnected (see Battery disconnecting) and any disconnected harnesses are supported to avoid any undue strain at terminals. When replacing the component keep oily hands away from electrical connection areas and push connectors home until any locking tabs fully engage.

Battery disconnecting

Before disconnecting the battery, switch off all electrical equipment. If the radio is to be serviced, ensure the security code has been deactivated.



CAUTION: To prevent damage to electrical components ALWAYS disconnect the battery when working on the vehicle electrical system. The earth lead must be disconnected first and reconnected last. Always ensure that battery leads are routed correctly and are not close to any potential chafing points.

Battery charging

Recharge the battery out of the vehicle and keep the top well ventilated. While being charged or discharged, and for approximately fifteen minutes afterwards, batteries emit hydrogen gas. This gas is inflammable.

Always ensure any battery charging area is well ventilated and that every precautions is taken to avoid naked flames and sparks.

Disciplines

Switch off ignition prior to making any connection or disconnection in the system as electrical surge caused by disconnecting 'live' connections can damage electronic components.

Ensure hands and work surfaces are clean and free of grease, swarf, etc. as grease collects dirt which can cause tracking or high-resistance contacts.

When handling printed circuit boards, treat them as you would a brake disc - hold by the edges only; note that some electronic components are susceptible to body static.

Connectors should never be subjected to forced removal or refit, especially inter-board connectors, damaged contacts will cause short-circuit and open-circuit conditions.

Prior to commencing test, and periodically during test, touch a good earth, i.e. cigar lighter socket, to discharge body static as some electronic components are vulnerable to static electricity.

Grease for electrical connectors

All under bonnet and under body connectors are protected against corrosion by the application of a special grease on production. Should connectors be disturbed in service or repaired or replaced, a grease of this type, available under Part No. BAU 5811, should again be applied.



NOTE: The use of other greases must be avoided as they can migrate into relays, switches etc. contaminating the contacts and leading to intermittent operation or failure.

INTRODUCTION

ABBREVIATIONS

A	- Amps
ABS	- Anti-lock braking system
ac	- Alternating current
A/C or Aircon	- Air conditioning
BBUS	- Battery backed up sounder
Cav	- Cavity
Cct	- Model or feature applicability
Col	- Colour
dc	- Direct current
ECU	- Electronic control unit
ECM	- Engine control module
EGR	- Exhaust gas recirculation
EKA	- Emergency key access
HRW	- Heated rear window
IACV	- Idle air control valve
ICE	- In-car entertainment
LED	- Light emitting diode
LH	- Left hand
LHD	- Left hand drive
Link	- Fusible link
MFi	- Multiport fuel injection
MY	- Model year
No.	- Number
RF	- Radio frequency
RH	- Right hand
RHD	- Right hand drive
RWW	- Rear wash wipe
SFi	- Sequential fuel injection
TP	- Throttle position sensor
V	- Volts

HOW TO USE THIS DOCUMENT

Fuse details

Contains information on fuse functions and values and should be used together with the power distribution circuit diagrams to establish which systems share a common power supply and to ensure that correct value fuses are fitted.

Earth points and headers joints

Shows a plan view of the vehicle including location of all earth points. Supporting photographs and connector detail information appear in the Connector section.

Description and operation

Presented in the same order as the circuit diagrams are displayed in the Electrical Circuit Diagram folder, each of the descriptions contains a brief overview of the main system functions and includes operating parameters for sensors and switches and reference to the appropriate wire colours. Always read this section before starting work on a system so that a good understanding of system functionality is obtained.

Connector

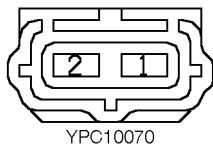
This section is effectively an index of every electrical connector on the vehicle, including header joints and eyelets. A page is dedicated to each connector, with the information presented in a standard format including display of the connector number on each page header to ease reference. Some derivatives within the model range may have connectors which have been allocated identical numbers to those already used, but are located in a different position on the vehicle. Where possible these connectors are displayed on adjacent pages together with an alternative location statement, a qualifying statement and an accompanying photograph.

Connector information comprises:

- **Connector number** - The assigned number, prefixed "C".
- **Connector name** - Usually derived from the component to which the connection is made.
- **Male/Female** - If applicable, identifies the gender of the connector pins (NOT the housing) as Male or Female. Generally, connectors mating directly to a component have Female pins.

INTRODUCTION

- **Colour** - If applicable, the colour of the connector housing is shown. NATURAL is used to describe connectors with a clear/translucent plastic finish.
- **Location statement** - Used in conjunction with the photograph to determine the location of the connector.
- **Photograph** - Shows the location of the subject connector. In most cases, the photograph will indicate the amount of trim removal necessary to reveal the connector. For convenience some photographs identify more than one connector.
- **Derivatives** - Unless specified otherwise, location statements and photographs relate to all models.
- **Face view** - An outline of the connector housing, viewed from the front, showing pin numbers (if applicable).



YPC10070

- **Pin-out table** - A three column table, detailing the colour and position of each wire in the connector:

Cav	Col	CCT
1	GR	ALL
2	B	ALL

1. **Cav:**The connector pin (cavity) number.
2. **Col:**The colour of wire populating the connector pin.
3. **Cct:**Identifies the model or feature which uses the wire. ALL means applicable to all vehicles in the range.

The 1999 MY Defender model range features a number of different derivatives. To identify which vehicle a specific feature applies to, the following CCT's are used in the connector section of this Electrical Reference Library.

Cct	Model or feature
1	Air Conditioning
2	No Air Conditioning
3	RHD
4	LHD
7	90"
8	110"
9	130"
10	ABS - RHD
11	ABS - LHD
12	ABS
13	Non ABS - RHD
14	Non ABS - LHD
15	Anti-theft Alarm
16	Anti-theft Alarm - LHD
17	Anti-theft Alarm - RHD
18	No Anti-theft Alarm - LHD
19	No Anti-theft Alarm - RHD
21	Td5 Engine
22	Non Td5 Engine
23	M52 Engine
24	TDi Engine
25	Dim Dip
26	No Dim Dip
27	Headlamp Levelling
28	Petrol Engine
29	110 Station Wagon
30	90 Station Wagon
31	90/110 Hard Top
32	90/110 Station Wagon

INTRODUCTION

WIRE COLOUR CODES

The following list contains the wire colour codes used on the vehicle harnesses and is intended to give an indication of the function or feature for which a particular colour of wire is normally used. These guidelines do not always apply to the wiring between components and the main harness.

Code	Colour	Function
B	Black	Earth wire from a component to an earth tag.
G	Green	Ignition fused supply from passenger compartment fuse box: clock, instrument, indicators, electric mirrors.
K	Pink	Fused supply: central door locking.
LG	Light Green	Ignition auxiliary fused supply from passenger compartment fuse box: reverse lamps, brake lamps.
N	Brown	Battery supply to ignition switch from fusible links 3 and 5.
O	Orange	Fused supply: central locking.
P	Purple	Fused permanent supply: interior lamps, radio cassette, clock, anti-theft alarm, electric aerial.
R	Red	Fused supply: side lamps.
S	Slate (grey)	Fused supply: electric windows.
U	Blue	Fused supply: headlamps, cooling fans.
W	White	Ignition switched supply to passenger compartment fuse box.
Y	Yellow	Ignition switched supply to passenger compartment fuse box.

Fault diagnosis

When diagnosing an electrical fault follow the steps below:

1. Read the circuit description and study the circuit diagram appropriate to the reported fault to ensure a good understanding of circuit operation.
2. Study the power distribution, fuse details and earth distribution diagrams and identify other circuits which share fuses and/or earth points. Check whether these circuits operate correctly.
3. Using the photographs contained in the Connector section, locate a point on the circuit (approximately half way between supply and earth) which is easily accessible.
4. Check that the pin out details of the connector are correct and that the correct signals exist at the correct terminals.
5. Using the marker pen supplied (or other suitable non-permanent marker pen), mark the parts of the circuit you have verified.
6. Continue to the next point on the circuit which is easiest to access and repeat the above.
7. Continue this approach until a fault is found, rectify the fault and then verify that the circuit operates correctly.

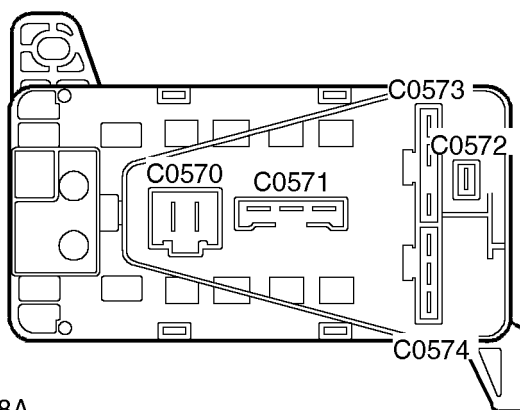
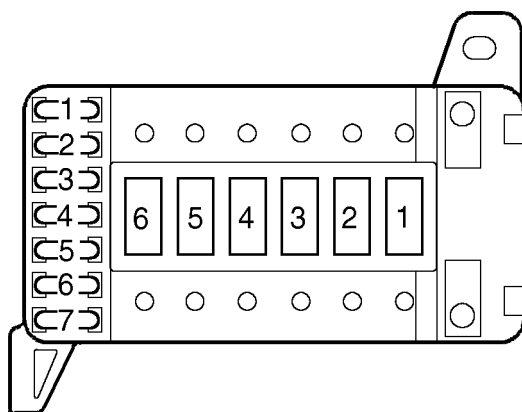
INTRODUCTION

The following tables give details of power supply through the engine and passenger compartment fuse boxes.



NOTE: Some fuse numbers may be followed by a letter, either an 'E' or a 'P'. 'E' denotes a fuse located in the engine compartment fuse box, and 'P' a fuse located in the passenger compartment fuse box.

Engine compartment fuse box



86M4448A

FUSE DETAILS

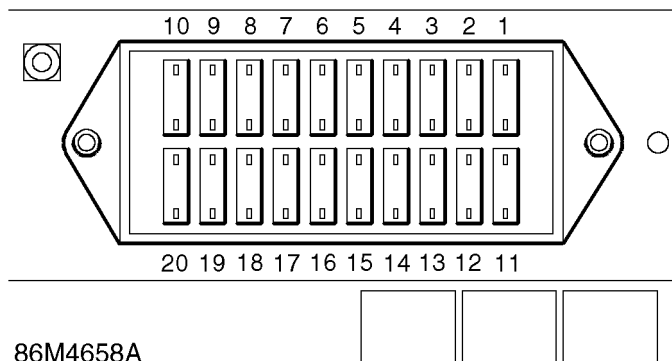
Engine compartment fuse box - fusible links

Link	Rating	Wire colour	Function
1	100 Amp	N	Link 2, link 3, link 4, fuse 1 (E), fuse 2 (E), fuse 3 (E).
2	60 Amp	N	Glow plug relay, fuse 9 (P), fuse 10 (P).
3	60 Amp	N	Not used.
4	30 Amp	N	ABS return pump relay.
5	60 Amp	N	Ignition switch, starter relay, fuse 8 (P), BBUS, dimmer dip resistor.
6	30 Amp	N	Lighting switch, alarm relay, alarm LED.

Engine compartment fuse box - fuses

Fuse	Rating	Wire colour	Function
1	30 Amp	N	Rear interior lamp, accessory socket, trailer pick-up.
2	20 Amp	N	ABS ECU.
3	30 Amp	N	Column switch, HRW relay.
4	20 Amp	N	Fuel pump relay.
5	30 Amp	N	Main relay, inertia switch.
6	15 Amp	N	Alarm ECU.
7	20 Amp	N	Radio/Cassette player, interior lamps, hazard warning switch, clock, speedometer.

Passenger compartment fuse box



Fuse	Rating	Wire colour	Function
1	10 Amp	WG	Alarm ECU, BBUS.
2	15 Amp	WG	Windscreen wiper switch, windscreen wiper motor, windscreen wiper delay ECU.
3	10 Amp	WG	Hazard warning switch, rear window wash/wipe switch, rear window wiper motor, instrument pack, coolant temperature gauge, fuel gauge, blower relay, aircon unit.
4	10 Amp	GO	ABS ECU.
5	10 Amp	WG	ECU.
6	10 Amp	GY	Brake pedal switch, reverse lamp switch, speed transducer, alternator/generator.
7	10 Amp	WG	Dim-Dip relay, headlamp relay, HRW relay, instrument pack.
8	5 Amp	P	Diagnostic socket.
9	30 Amp	NP	Blower relay.
10	20 Amp	NS	Aircon compressor clutch relay, cooling fan relay.

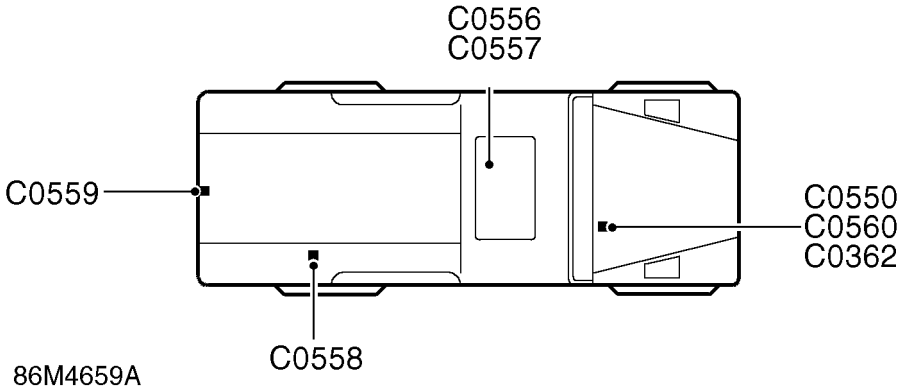
FUSE DETAILS

Fuse	Rating	Wire colour	Function
11	10 Amp	RB/R	Lighting switch, LH front side lamp, LH tail lamp, trailer pick-up.
12	10 Amp	RO	Lighting switch, RH front side lamp, RH tail lamp, cigar lighter, dim-dip relay, headlamp levelling switch, coolant temperature gauge sensor, fuel gauge, LH heater control illumination, RH heater control illumination, clock illumination, instrument pack, blower motor switch, RH headlamp levelling motor, LH headlamp levelling motor, aircon switch pack.
13	20 Amp	PG	Cigar lighter, blower motor.
14	5 Amp	WO	Radio/Cassette player.
15	10 Amp	UB/UR	Dim-Dip relay, RH headlamp.
16	10 Amp	UK/UR	Dim-Dip relay, LH headlamp.
17	10 Amp	UO/U-W	RH headlamp, instrument pack, column switch.
18	10 Amp	US/UW	LH headlamp, instrument pack, column switch.
19	10 Amp	U/UP	Rear fog lamp ECU, column switch, headlamp relay, dim-dip relay.
20	10 Amp	OR/PB	Alarm sounder relay, horn switch, LH horn, RH horn.

EARTH POINTS AND HEADER JOINTS

Earth points

The following illustration indicates the general position of the major earth points and the earth header on 1999 MY Defender.



Connector No.	Title	Location
C362	Earth eyelet	Centre of engine compartment bulkhead.
C556	Earth eyelet	LH side of transfer box.
C557	Earth eyelet	LH side of transfer box.
C558	Earth eyelet	Beneath RH rear wheel arch.
C559	Earth eyelet	Adjacent rear screen wiper motor.
C560	Earth eyelet	Centre of engine compartment bulkhead.

Earth header

Connector No.	Title	Location
C550	Earth header	Centre of engine compartment bulkhead.

DESCRIPTION AND OPERATION

ANTI-THEFT ALARM

DESCRIPTION

Although a key is used in the normal way to lock and unlock the vehicle, this will not arm the alarm system. The system is armed with an RF handset, which transmits a rolling code. This code is received by the alarm ECU, which is mounted behind the instrument pack.

The alarm system fitted to 1999 MY Defenders has two methods of protecting the vehicle; perimeteric protection, and volumetric protection.

Perimeteric protection monitors the hinged panels of the vehicle; the bonnet, the tail door, the drivers door, and all passenger doors. If any of these panels are opened without the alarm ECU receiving the correct signal from the RF handset, the alarm will be triggered.

Volumetric protection monitors the interior space within the passenger compartment. When the alarm is armed, the volumetric sensor (mounted in the headlining above the RH 'B' post) will sense any movement and trigger the alarm.

The alarm ECU also interacts with the Engine Control Module (ECM), causing the engine to be immobilised whenever the alarm is armed. ***See Engine Immobilisation.***

DESCRIPTION AND OPERATION

OPERATION

The battery positive terminal provides a feed to the engine compartment fuse box (C0632-1) on a brown wire. Fuse 6, fuse 7, fusible link 5 and fusible link 6 are all connected in parallel and provide a direct battery feed to the following;

- Fuse 6 (C0574-2) provides two feeds to the alarm ECU on purple/brown wires. The first (C0061-25) is used as a power signal. The second (C0057-8) is used to power the indicator lamp circuits (C0057-1 & C0057-6) on green/white (RH indicators) and green/red (LH indicators) wires respectively.
- Fuse 7 (C0574-1) provides a feed to the front interior lamp (C0355-3) on a purple/brown then purple wire.
- Fusible link 5 (C0570-2) provides a feed to the BBUS (C0666-2) on a brown then black wire, and the ignition switch (C0028-1) on a brown/white wire.
- Fusible link 6 (C0571-3) provides feeds to the alarm relay (C0731-6 & C0731-8) on brown/blue wires, and the alarm LED (C1060-6) also on a brown/blue wire.

The alarm ECU receives arm and disarm commands from the RF handset via an aerial. The aerial (C1136-1) is connected to the alarm ECU (C0061-26) by a orange/slate wire. When the alarm ECU is disarmed and the ignition switch is set to the crank position, it provides an earth path (C0057-10) for the starter relay (C0151-6) on a black/orange wire. This will enable the engine to be started. ***See Charging and Starting.***

The Alarm ECU (C0061-14) also communicates with the ECM (C0658-34). It sends a pulsed voltage signal along a light green/slate wire to control engine immobilisation. The alarm ECU (C0057-12) also sends a constant battery feed to the passive coil (C0049-2) on an orange/purple wire. A second pulsed voltage signal is sent by the alarm ECU (C0057-7) to the passive coil (C0049-1) on an orange/green wire. ***See Engine Immobilisation.***

DESCRIPTION AND OPERATION

The alarm ECU is connected to all the door switches (including the tail door) and the bonnet switch. When the perimetric alarm system is armed, the ECU monitors the switch circuits and detects open or grounded circuit. By monitoring the circuits in this way, the alarm ECU can tell if any of the hinged panels are open or closed. The alarm ECU is connected to the following switches;

- The alarm ECU (C0061-5) to the RH front door switch (C0054-1) on a slate/white wire.
- The alarm ECU (C0061-16) to the LH front door switch (C0033-1) and the tail door switch (C0615-1) on purple/blue wires.
- The alarm ECU (C0061-16) to the RH rear door switch (C0111-1) on a purple/blue wire.
- The alarm ECU (C0061-16) to the LH rear door switch (C0112-1) on a purple/blue wire.
- The alarm ECU (C0061-9) to the bonnet switch (C0007-2) on a orange/blue wire.

When the doors and bonnet are closed, the switches are open. If any door is opened, the respective switch closes to earth through the fixings. If the bonnet is opened the switch (C0007-1) is earthed on a black wire.

For volumetric protection, when the alarm is armed, the alarm ECU (C0061-20) provides a feed to the volumetric sensor (C0719-1) on a black/brown wire. The sensor (C0719-2) is earthed on a black wire via the earth header (C0550-1). When the alarm system is armed, the volumetric sensor (C0719-3) sends a constant voltage signal back to the alarm ECU (C0061-3) on a white/black wire. If the volumetric sensor is triggered, this changes to a pulsed signal. The alarm ECU, recognising this fluctuation in voltage, triggers the alarm.

When the alarm is activated, the alarm ECU (C0057-5) provides an earth for the alarm relay (C0731-4) on an orange/white wire. Current flows across the relay switch (C0731-6 & C0731-2) and onto the alarm sounder (C0520-2) on a orange/black wire. The alarm sounder (C0520-1) is earthed on a black wire.

DESCRIPTION AND OPERATION

The energised alarm relay (C0731-5) also provides a feed to fuse 20 of the passenger compartment fuse box (C0581-20) on an orange/red wire. Fuse 20 (C0581-19) then supplies a feed to the LH (C0003-2) and RH horns (C0004-2) on purple/black wire.

By switching the earth path on and off, the alarm ECU can control the operation of the sounder and the horns.

The alarm ECU (C0057-4) supplies a feed to the anti-theft alarm LED (C1060-3) on a pink wire. Because the potential difference across the LED is 0 volts, the LED fails to illuminate.

To illuminate the LED, the alarm ECU (C0057-4) withdraws the feed on the pink wire, and provides a path to earth. Current can now flow and illuminate the LED. The alarm ECU can control the flashing sequence of the LED by switching the feed/earth on the pink wire.

Depending on market, some vehicles are also fitted with a BBUS. The BBUS has its own internal power supply. Should the vehicle battery or the sounder be disconnected, the BBUS will sound for approximately 4½ minutes. To disconnect the vehicle battery without sounding the alarm ***See Repair Manual, Maintenance, Battery Condition.***

The BBUS (C0666-2) is supplied constant battery voltage from fusible link 5 (C0570-2). The BBUS (C0666-4) is earthed via earth header 550. A battery voltage signal is also supplied to the BBUS (C0666-3) from the alarm ECU (C0057-5). When the alarm is triggered, the alarm ECU withdraws this feed, and the BBUS sounds.

The BBUS (C0666-1) also receives an ignition feed from fuse 1 of the passenger compartment fuse box (C0580-2) on a white/green then black wire. All connections to and from the BBUS are on black wires.

The alarm ECU also controls the operation of the interior lamps. ***See Interior Lamps.***

DESCRIPTION AND OPERATION

ENGINE IMMOBILISATION - Td5

DESCRIPTION

The engine immobilisation system fitted to 1999 MY Defender works in conjunction with the Alarm system. The alarm ECU sends a coded signal to the Engine Control Module (ECM). If the signal does not match the one expected by the ECM, the ECM will immobilise the engine.

Passive immobilisation is also fitted, with a passive coil fitted around the ignition barrel. This will activate 30 seconds after the ignition is turned off and the drivers door is opened. Alternatively, passive immobilisation will occur 5 minutes after the vehicle is unlocked, or the ignition is turned off. When attempting to restart the vehicle, passive immobilisation can be switched off using either the RF handset or EKA code.

OPERATION

Feed from the battery positive terminal is connected to fusible link 5 and fuse 6 of the engine compartment fuse box (C0632-1) by a brown wire. Fusible link 5 and fuse 6 are connected in parallel. Fuse 6 (C0574-2) supplies a constant battery feed to the alarm ECU (C0061-25) on a purple/brown wire. Fusible link 5 (C0570-2) supplies a feed to the ignition switch (C0028-1) on a brown/white wire.

When the ignition switch is turned to position 'II', current flows across the switch (C0094-1) to fuse 1 of the passenger compartment fuse box (C0580-1) on a white wire. Fuse 1 (C0580-2) supplies an ignition feed to the alarm ECU (C0061-10) on a white/green wire. The alarm ECU (C0057-11) is earthed on a black wire.

When an ignition feed is received by the alarm ECU, it sends a coded signal (C0061-14) to the ECM (C0658-34) on a light green/slate wire. If the signal does not match the one expected by the ECM, the ECM will immobilise the engine.

DESCRIPTION AND OPERATION

When the ignition switch is turned to the crank position, current flows across the switch (C0090-1) to the starter relay (C0151-4) on a white/red wire. With the alarm ECU in the armed state, it also provides a feed (C0057-10) to the starter relay (C0151-6) on the black/orange wire. As the potential difference across the relay is 0 volts, the relay is not energized. When the alarm is de-activated, the alarm ECU (C0057-10) withdraws the feed on the black/orange wire, and provides an earth path (C0057-11) on a black wire. The starter relay will now be energized, enabling the engine to be cranked.

The alarm ECU (C0057-9) also controls the flashing sequence of the engine immobilisation warning lamp (C0233-5) by providing it with a pulsed signal on an orange wire. The lamp (C0230-8) is earthed on a black wire.

In addition to features directly controlled by the alarm ECU, a passive coil is fitted around the ignition barrel. This is a user friendly way of re-mobilizing the engine. The passive coil (C0049-1) receives a pulsed voltage signal from the alarm ECU (C0057-7) on an orange/green wire. The passive coil (C0049-2) also receives a constant feed from the alarm ECU (C0057-12) on an orange/purple wire.

The passive coil is only energized when the ignition switch is in position 'II' and the engine is in an immobilised state. The coil creates a magnetic field that excites a coil in the RF handset. This causes the handset to transmit a code to the alarm ECU to re-mobilise the engine.

The alarm ECU can be interrogated via the diagnostic socket using TestBook. The socket (C0040-8) is connected to the alarm ECU (C0061-17) by an orange/light green wire.

DESCRIPTION AND OPERATION

DIAGNOSTIC SOCKET

DESCRIPTION

The diagnostic socket is located under the cubby box. The socket is constructed to ISO standard and allows attachment of TestBook or any other ISO standard scantool. The diagnostic socket allows diagnostic information from the Anti-lock Braking System (ABS) ECU, the alarm ECU, or the Engine Control Module (ECM) to be retrieved.

OPERATION

Feed from the battery positive terminal is connected to fusible link 5 of the engine compartment fuse box (C0632-1) by a brown wire. Fusible link 5 (C0570-2) is connected to fuse 8 of the passenger compartment fuse box (C0580-15) by a brown/white wire. Fuse 8 of the passenger compartment fuse box (C0580-16) then provides a battery feed to the diagnostic socket (C0040-16) on a purple wire. Two earth paths are provided for the socket (C0040-4 & C0040-5), both on black wires.

To allow TestBook to retrieve diagnostic information from the various control units on Defender 1999 MY, the diagnostic socket is connected in the following way;

- The diagnostic socket (C0040-7) to the ABS ECU (C0504-5) on a pink wire.
- The diagnostic socket (C0040-7) to the ECM (C0658-18) on a pink wire.
- The diagnostic socket (C0040-8) to the alarm ECU (C0061-17) on an orange/light green wire.

DESCRIPTION AND OPERATION

STARTING AND CHARGING - Td5

DESCRIPTION

The charging system consists of an alternator containing a rectifier pack and regulator to maintain a constant direct (dc) voltage in the system. The alternator is belt driven from the crankshaft and is cooled by a fan mounted behind the pulley. The alternator has a fixed coil wound stator in which a field coil rotor rotates. Slip rings conduct current to and from the field coils via 2 carbon brushes. The regulator senses output voltage and controls this to approximately 14 volts.

OPERATION - STARTING

With the ignition switch in position 'II' (C0094-1), the Engine Control Module (C0158-29) provides a feed to the glow plug relay coil (C0215-4) on a green/blue wire. This feed energises the glow plug relay, and enables a battery feed from fusible link 1 (C0622-1) to flow across the relay switch (C0215-1 & C0215-3). The glow plug relay can now supply a feed to all four glow plugs on a yellow/black wire.



NOTE: The Td5 engine only has glow plugs in cylinders 1, 2, 3, and 4.

Glow plug pre-heat and post-heat times are determined by engine coolant temperature. ***See Engine Management.***

When the ignition switch is turned to the 'crank' position, (C0090-1), current flows from the switch to the starter relay coil (C0151-4) on a white/red wire. The earth path for the relay (C0151-6) is controlled by the alarm ECU (C0057-10) on a black/orange wire. ***See Anti-theft Alarm.***

With the starter relay energised, a battery feed from fusible link 5 of the passenger compartment fuse box (C0570-2) can flow across the relay switch (C0151-2 & C0151-8) to the starter motor (C0179-1) on a brown/red wire. This feed energises the starter solenoid, and allows a feed from the positive battery terminal to power the start motor (C0178-1). The starter motor is earthed via its fixings.

DESCRIPTION AND OPERATION

OPERATION - CHARGING

The battery positive terminal provides a feed to fusible link 1 and fusible link 5 of the engine compartment fuse box (C0632-1) on a brown wire. Both are connected in parallel.

Fusible link 5 (C0570-2) provides a feed to both the starter relay (C0151-2) and the ignition switch (C0028-1) on brown/white wires. With the ignition switch in position 'II' (C0094-1), current flows to fuse 6 and fuse 7 of the passenger compartment fuse box (C0580-9) on a white wire. Fuse 6 (C0580-12) supplies an ignition feed to the alternator (C0226-2) on a green/yellow wire. This feed protects the alternator should a wiring fault occur.

Fuse 7 (C0580-14) supplies an ignition feed to the ignition/no charge warning lamp (C0233-16) on a white/green wire via header 285. The ignition/no charge warning lamp (C0233-17) is also connected to the alternator (C0226-1) on a yellow/brown then brown/yellow wire. This feed passes to earth via the brushes and regulator within the alternator, completing the ignition/no charge warning lamp circuit. The warning lamp will now illuminate.

When the engine is started, the magnetized rotor turns within the stator windings, generating a 3 phase alternating current (ac), and a voltage that rises rapidly with rotor speed. The field diodes in the rectifier pack convert the ac current into dc current, flowing through the field windings. This causes an increase in the magnetic influence of the rotor, resulting in self-excitation of the alternator. The field current increases with rotor speed and thus increases the generated current and voltage until the alternator is fully excited.

DESCRIPTION AND OPERATION

When the voltage applied by the alternator to the ignition/no charge warning lamp equals that provided by fuse 7 of the passenger compartment fuse box the warning lamp is extinguished. This shows the alternator is producing battery charging current.

When the battery is at a low state of charge or the current draw from the electrical functions of the vehicle causes a voltage drop, the alternator automatically charges at its maximum rate (dependant on rotor speed) until 14 volts is achieved. When demand drops, the current output is reduced.

Battery charging is achieved on a brown wire from the alternator (C0183-1). This feed passes across the starter motor (C0178-1 & C0631-1) and back to the battery positive terminal (C0192-1) on a red wire.

DESCRIPTION AND OPERATION

ENGINE MANAGEMENT - Td5

Refer to Workshop Manual for description and operation.

DESCRIPTION AND OPERATION

FUEL PUMP - Td5

DESCRIPTION

The fuel pump is located above the fuel tank, and is controlled by the Engine Control Module (ECM). **See *ENGINE MANAGEMENT - Td5*.**

OPERATION

Feed from the battery positive terminal is connected to fuse 4 and fusible link 5 of the engine compartment fuse box (C0632-1) by a brown wire. Fusible link 5 (C0570-2) is connected to the ignition switch (C0028-1) by a brown/white wire.

With the ignition switch in position 'II' (C0094-1) current flows across the switch to fuse 5 of the passenger compartment fuse box (C0580-9) on a white wire. Fuse 5 (C0580-10) supplies an ignition feed to the ECM (C0658-33) on a white/green wire.

The ECM provides a 12 volt signal to both sides of the fuel pump relay coil on brown/orange (C0730-4) and blue/purple (C0730-6) wires. As the potential difference across the relay coil is 0 volts, the relay remains de-energised. When the ECM receives the correct signal from the alarm ECU, it withdraws the feed on the blue/purple wire. The fuel pump relay is now energised.

The energised fuel pump relay now allows a battery feed from fuse 4 of the engine compartment fuse box (C0573-1) on a purple/white wire to flow across the relay (C0730-8 & C0730-2). The relay can now supply a feed to the fuel pump (C0114-1) on a purple/white then white/purple wire. The pump is earthed (C0114-4) on a black wire.

DESCRIPTION AND OPERATION

ANTI-LOCK BRAKING SYSTEM (ABS) - Td5

DESCRIPTION

The Anti-lock Braking System (ABS) is controlled by the ABS ECU, located under the RH front seat. The system comprises of the ECU, ABS wheel speed sensors on each wheel, and an ABS modulator.

OPERATION

Feed from the battery positive terminal is connected to fusible link 1 and fusible link 5 of the engine compartment fuse box (C0632-1) on a brown wire. Fusible link 1 is wired in series with fuse 2, which supplies a continuous battery feed (C0573-3) to the ABS ECU (C00504-1) on a brown/white wire.

Wired in parallel with fuse 2 is fusible link 4. Fusible link 4 (C0571-2) supplies a continuous battery feed to the ABS return pump relay (C0508-3) on a brown/white wire. At this stage, the relay is de-energised.

A continuous battery feed is also supplied to the ignition switch. Fusible link 5 (0570-2) is connected to the ignition switch (C0028-1) by a brown/white wire. With the ignition switch in position 'II', current flows across the switch (C0094-1) to fuse 4 of the passenger compartment fuse box (C0580-1) on a white wire. Fuse 4 (C0580-8) supplies an ignition feed to the ABS ECU (C0504-2) on a green/orange wire.

The ABS ECU is earthed (C0504-12) on a black wire.

DESCRIPTION AND OPERATION

ABS modulator and ECU

The ABS ECU provides outputs to, and receives inputs from the ABS modulator as follows;

- Output from ABS ECU (C0506-1) to ABS modulator (C0501-1) to drive LH front outlet valve on a slate/white wire.
- Output from ABS ECU (C0506-2) to ABS modulator (C0501-2) to drive LH front inlet valve on a slate/red wire.
- Earth monitoring signal from ABS modulator (C09501-8) to ABS ECU (C0506-3) on a black wire.
- Output from ABS ECU (C0506-4) to ABS modulator (C0501-10) to drive RH front outlet valve on a slate/green wire.
- Output from ABS ECU (C0506-5) to ABS modulator (C0501-11) to drive RH front inlet valve on a slate/blue wire.
- Brake pedal input from ABS modulator (C0501-9) to ABS ECU (C0506-6) on a red/black wire.
- Output from ABS ECU (C0506-7) to ABS modulator (C0501-13) to drive LH rear outlet valve on a slate/yellow wire.
- Output from ABS ECU (C0506-8) to ABS modulator (C0501-12) to drive LH rear inlet valve on a slate/brown wire.
- Output from ABS ECU (C0506-10) to ABS modulator (C0501-5) to drive RH rear outlet valve on a slate/purple wire.
- Output from ABS ECU (C0506-11) to ABS modulator (C0501-4) to drive RH rear inlet valve on a slate/pink wire.

The ABS ECU also interacts with the Engine Control Module (ECM). The ECM (C0658-32) provides the ABS ECU (C0504-10) with a throttle position signal on a slate/purple wire. The ECM (C0658-19) also provides the ABS ECU (C0504-11) with an engine speed signal on a yellow/pink wire.

The ABS ECU can be interrogated using TestBook via the diagnostic connector. The diagnostic connector (C0040-7) is connected to the ABS ECU (C0504-5) by a pink wire. In the event of a failure, the ABS ECU (C0504-9) sends a feed to the brake fluid level warning lamp (C0230-14) on a black/white wire.

Wheel speed sensors

The ABS ECU also receives variable inputs from the four wheel speed sensors as follows;

- The LH front wheel speed sensor (C0516-1 & C0516-2) to the ABS ECU (C0505-1 & C0505-2 respectively) on a pair of white wires.
- The RH front wheel speed sensor (C0517-1 & C0517-2) to the ABS ECU (C0505-4 & C0505-5 respectively) on a pair of green wires.
- The LH rear wheel speed sensor (C0502-1 & C0502-2) to the ABS ECU (C0505-7 & C0505-8 respectively) on a pair of white wires.
- The RH rear wheel speed sensor (C0503-1 & C0503-2) to the ABS ECU (C0505-3 & C0505-6 respectively) on a pair of green wires.

ABS return pump

When the ABS functions operate, the ABS ECU (C0506-15) provides a feed to the ABS return pump relay (C0508-2) on a white/orange wire. The relay (C0508-4) is earthed on a black wire. This feed from the ABS ECU energises the relay, allowing the ignition feed to flow across the relay.

The ABS return pump relay (C0508-1) provides a feed to the ABS return pump (C0507-1) on a brown/red wire. The pump (C0507-2) is earthed on a black wire. The ABS return pump relay also provides a feed to the ABS ECU (C0504-8) on a brown/red wire. The ECU uses this signal to monitor the operation of the ABS return pump.

DESCRIPTION AND OPERATION

Instrument pack

The ABS ECU will inform the driver of any faults within the ABS or traction control systems (if fitted). The ABS ECU (C0504-9) supplies a feed to the brake fluid warning lamp (C0230-14) on a black/white wire if the level of fluid in the brake fluid reservoir reaches the minimum mark. The warning lamp (C0230-8) is earthed on a black wire.

If the ABS ECU detects a fault within the ABS system, it supplies a feed (C0504-18) to the ABS warning lamp (C0230-7) on a red/slate wire. The warning lamp (C0230-8) is earthed on a black wire.

If traction control is fitted, the ABS ECU (C0504-17) will illuminate the traction control warning lamp (C0230-16) by providing a feed on a yellow/slate wire if a fault is detected. The warning lamp (C0230-8) is earthed on a black wire.

DESCRIPTION AND OPERATION

AIR CONDITIONING - Td5

DESCRIPTION

The air conditioning (aircon) system fitted to Defender 1999 MY operates independently of the standard heating and ventilation system. Controlled by 2 switches, the aircon system will only operate when the engine is running and the blower control switch is in at least position 'I'.

Both the blower control and temperature control are 3 position switches. The cooled and dehumidified air produced by the aircon system is directed through vents located in the lower fascia bezel.

The air conditioning system can be used in conjunction with the standard heating and ventilation system. By combining the two separate systems, the required temperature can be maintained over a wide range of ambient temperatures.

OPERATION

Feed from the battery positive terminal supplies a feed to fusible link 1 and fusible link 5 of the engine compartment fuse box (C0632-1) on a brown wire. Fusible link 5 (C0570-2) supplies a feed to the ignition switch (C0028-1) on a brown/white wire.

Fusible link 1 is wired in series with fusible link 2 of the engine compartment fuse box. Fusible link 2 (C0570-1) in turn, supplies a battery feed to fuses 9 and 10 of the passenger compartment fuse box (C0580-17) on a brown/pink wire. Fuse 9 (C0580-18) is connected to the blower relay (C0153-1) by a brown/purple then brown wire. Fuse 10 (C0580-20) supplies a feed to both the compressor clutch relay (C1268-30) and the cooling fan relay (C0019-30) on brown/slate wires.

When the ignition switch is turned to position 'II', current flows to fuse 5 (C0580-9) and fuse 3 (C0580-1) of the passenger compartment fuse box on a white wire. Fuse 5 (C0580-10) supplies a feed to the ECM (C0658-33) on a white/green wire.

DESCRIPTION AND OPERATION

Fuse 3 of the passenger compartment fuse box (C0580-6) provides a feed to the blower relay (C0153-3) and the air conditioning unit (C1273-11) on white/green wires. The blower relay (C0153-2) is earthed on a blue/black wire and is energised whenever the ignition switch is in position 'II'. This allows a feed from fuse 9 of the passenger compartment fuse box (C0580-18) to flow across the relay (C0153-1 & C0153-4) to the blower motor (C0023-1) on a blue/white wire.

The blower motor (C0023-2) is connected to the blower motor resistor (C0068-2) and the blower motor switch (C1494-5) by blue wires. The blower motor switch (C1494-3) is earthed on a blue/black wire.

With the ignition switch in position 'II', the main relay (C0063-87) in the engine bay fuse box is energised and provides a feed to both the compressor clutch relay (C1268-85) and the cooling fan relay (C0019-85) on brown/orange wires. The earth path for the compressor clutch relay (C1268-86) is controlled by the ECM (C0658-29) on a black/slate wire. The earth path for the cooling fan relay (C0019-86) is also controlled by the ECM (C0658-4), this time on a black/purple wire.

The ECM receives 2 inputs from the air conditioning system. The trinary switch (C0279-3) provides an input to the ECM (C0658-9) on a black/slate then yellow/slate wire. This input is the aircon clutch request. If granted the ECM provides an earth for the compressor clutch relay. Current can now flow from fuse 10 of the passenger compartment fuse box, across the energised compressor clutch relay (C1268-30 & C1268-87) and supply a feed to the compressor clutch (C0182-1) on a black/green wire. The compressor clutch is earthed (C0182-2) on a black wire.

DESCRIPTION AND OPERATION

The second input to the ECM (C0658-23) is the fan request from the air conditioning unit (C1273-1) on a white/black then purple/black wire. This causes the ECM (C0658-4) to earth the cooling fan relay (C0019-86) on a black/purple wire. Current can now flow from fuse 10 of the passenger compartment fuse box, across the energised cooling fan relay (C0019-30 & C0019-87) and supply a feed to the condenser fan (C0280-1) on a black/brown wire. The fan is earthed (C0280-2) on a black wire.

DESCRIPTION AND OPERATION

HEATER

DESCRIPTION

The heater is operated by three sliding controls attached to the instrument binnacle. Two of the controls mechanically regulate the temperature and air flow distribution. The third control is a switch that operates the two speed heater blower. The heater blower operates with the ignition switch in position 'I' or 'II', and is completely independent of the air conditioning system.

OPERATION

Feed from the battery positive terminal is connected to fusible link 5 (C0632-1) of the engine compartment fuse box on a brown wire. Fusible link 5 (C0570-2) then supplies a feed to the ignition switch (C0028-1) on a brown/white wire.

When the ignition switch is in position 'I' or 'II', power flows across the switch (C0099-1) to fuse 13 of the passenger compartment fuse box (C0581-5) on a white/orange wire. Fuse 13 (C0581-6) then supplies a feed to the blower motor (C0056-3) on a purple/green wire. When the blower switch is in the 'Off' position, the blower motor has no route to earth and does not run.

Moving the blower switch to position 'I', connects the blower motor (C0056-2) to the blower switch (C0058-2) on a green/yellow wire. Power flows through the motor and the in-line resistor to the switch, which is earthed (C0058-3) on a black wire. The motor will now operate at slow speed.

Moving the blower switch to position 'II', connects the blower motor (C0056-1) directly to the blower switch (C0058-1) on a green/slate wire. Again, the switch is earthed (C0058-3) on a black wire. The blower motor now operates at high speed.

DESCRIPTION AND OPERATION

HEATED REAR WINDOW (HRW)

DESCRIPTION

The heated rear window (HRW) is operated by a latching switch mounted on the dash panel. When the switch is set to the 'On' position, the instrument panel warning lamp will illuminate to indicate the HRW is operating. The HRW only operates when the ignition switch is turned to position 'II'.

OPERATION

Feed from the battery positive terminal is connected to fusible link 1 and fusible link 5 of the engine compartment fuse box (C0632-1) by a brown wire. Fusible link 1 is connected in series with fuse 3 of the engine compartment fuse box, which supplies a feed (C0572-1) to the HRW relay (C0044-8) on a brown/purple wire.

Fusible link 5 (C0570-2) is connected to the ignition switch (C0028-1) by a brown/white wire. When the ignition switch is turned to position 'II', current flows across the switch (C0094-1) to fuse 7 of the passenger compartment fuse box (C0580-9) on a white wire. Fuse 7 (C0580-14) then supplies a feed to the HRW switch (C0381-2) on a white/green wire. When the switch is depressed, current is allowed to flow across the switch (C0381-4) and energise the HRW relay (C0044-4) on a white green wire. The relay (C0044-6) is earthed on a black wire.

The energised HRW relay (C0044-2) now allows current to flow to both the HRW (C0382-1) and the instrument pack warning lamp (C0233-8) on white/black wires. The instrument pack (C0230-8) is earthed on a black wire.

DESCRIPTION AND OPERATION

WIPERS AND WASHERS

DESCRIPTION

The front windscreen wipers are controlled from the column switch and operate when the ignition switch is in position 'II'. The wipers have 2 speed settings, along with a flick wipe and single wipe facility. An intermittent wipe function and programmed wash wipe facility is controlled by the windscreen wiper delay ECU.

Moving the wiper switch down from the off position initiates the intermittent wipe function. Moving the wiper switch up one position from the off position, operates the wipers at slow speed. Moving the wiper switch up two positions from the off position, operates the wipers at fast speed. Pushing the wiper switch up from the off position, not allowing it to latch, and then releasing it causes the wipers to perform a single wipe cycle at slow speed. Pushing and holding the wiper switch up from the off position, not allowing it to latch, causes the wipers to operate at slow speed until the wiper switch is released.

Pressing the end of the wiper switch, initiates the programmed wash wipe sequence. The windscreen washers operate while the switch is pressed and the wipers continue to operate for a number of cycles after the switch is released.

The rear screen wiper and wash facilities are controlled by a switch mounted on the dash panel. Pressing the switch causes the rear washer to operate until the switch is released. The rear wiper does not operate automatically with the rear washer. Turning the switch clockwise causes the rear wiper to operate until the switch is turned back to the off position.

DESCRIPTION AND OPERATION

OPERATION

Feed from the positive battery terminal is connected to fusible link 5 of the engine compartment fuse box (C0632-1) by a brown wire. Current passes across fusible link 5 (C0570-2) which is connected to the ignition switch (C0028-1) by a brown/white wire.

With the ignition switch in position 'II', current flows across the switch (C0094-1) to fuses 2 and 3 of the passenger compartment fuse box (C0580-1) on a white wire. Fuse 3 (C0580-6) supplies power to the rear wash/wipe circuit, while fuse 2 (C0580-4) supplies power to the front wash/wipe circuit.

Front Wipers and Washers

Fuse 2 of the passenger compartment fuse box (C0580-4) supplies a feed to the windscreen wiper delay ECU (C0303-8) on a white/green wire.

Slow and Fast Speeds

Fuse 2 also provides a feed to the wash/wipe switch (C0278-6) on a white/green wire. Moving the switch to the slow speed position allows power to flow across the switch (C0278-1) to the wiper motor (C0030-3) on a blue/light green wire. This feed into the wiper motor also has to pass through an internal resistor. This extra resistance causes the motor to operate at slow speed. The wiper motor is earthed (C0030-1) on a black wire.

Moving the wiper switch to the fast speed position allows power to flow through the switch (C0278-5) to the wiper motor (C0030-5) on a red/light green wire. This time the feed from the switch flows direct to the wiper motor, causing it to operate at fast speed. Again, the motor is earthed (C0030-1) on a black wire.

Operating the flick wipe function outputs a feed from the wash/wipe switch (C0278-1) to the wiper motor (C0030-3) on the red/light green wire for as long as the switch is held against spring pressure. The wipers operate at slow speed.

DESCRIPTION AND OPERATION

Park Circuit

Positioning the wash/wipe switch back to the 'Off' position cuts power to the wiper motor on the blue/light green or red/light green wire (depending on the operational speed of the wiper motor). The park circuit operates to return the wipers to their park position. The park switch (C0030-4) is integral to the wiper motor, and receives a feed on a white/green wire from fuse 2 of the passenger compartment fuse box (C0580-4). The park switch is closed with the wipers in any position other than their park position.

With the park switch closed, power flows across the switch (C0030-2) to the windscreen wiper delay ECU (C0303-5) on a brown/light green wire. The windscreen wiper delay ECU (C0303-2) is connected to the wash/wipe switch (C0278-4) by a yellow/light green wire. Power flows through the wash/wipe switch (C0278-1) to the wiper motor (C0030-3) on a blue/light green wire. The wiper motor (C0030-1) is earthed on a black wire. The wipers operate until their park position is reached. The park switch then opens, cutting the power supply to the wiper motor.

Intermittent Wipe

Moving the wash/wipe switch to the intermittent wipe position allows power to flow across the switch (C0278-3) to the windscreen wiper delay ECU (C0303-1) on a white/green wire. When this signal is received by the ECU, it switches the path to earth (C0303-4) on and off approximately every 5 seconds on a black wire. An intermittent feed is then supplied from the ECU (C0303-2) to the wash/wipe switch (C0278-4) on a yellow/light green wire. Power flows through the switch (C0278-1) and supplies the wiper motor (C0030-3) on a blue/light green wire. The wipers operate at slow speed.

Programmed Wash Wipe

Depressing the end of the wash/wipe switch operates the programmed wash/wipe function. When the switch is closed, power flows across the switch (C0278-2) to the windscreen wiper delay ECU (C0303-6) and the windscreen washer pump (C0008-2). Both are supplied a feed on light green/black wires. The washer pump (C0008-1) is earthed on a black wire.

DESCRIPTION AND OPERATION

When the windscreen wiper delay ECU (C0303-6) receives a feed from the wash/wipe switch (C0278-2), it supplies a feed (C0303-2) back to the wash/wipe switch (C0278-4) on a yellow/light green wire. Power flows across the wash/wipe switch (C0278-1) and onto the wiper motor (C0030-3), which operates at slow speed. When the washer switch is released, the ECU will operate the wipers for a further 3 cycles. Once this has been completed, the feed to the wash/wipe switch is cut by the ECU and the park circuit is initiated.

Rear Wiper

The rear wiper switch (C1197-1) is supplied a feed by fuse 3 of the passenger compartment fuse box (C0580-6) on a white/green wire. When the switch is in the 'On' position (C1194-1), power is fed to the rear screen wiper motor (C0388-2) on a red/light green wire. The wiper motor (C0388-1) is earthed on a black wire.

Rear Park Circuit

Positioning the rear wiper switch to the 'Off' position cuts power to the rear wiper motor on the red/light green wire. The park circuit operates to return the wiper to its park position. The park switch (C1105-2) is integral with the wiper motor. It receives a feed from fuse 3 (C0580-6) of the passenger compartment fuse box on a white/green then green wire. The park switch is closed with the wiper in any position except its park position.

With the park switch closed, power flows across the switch (C1105-1) to the rear wiper switch (C1195-1) on a brown/light green wire. Power flows across the wiper switch (C1194-1) back to the wiper motor (C0388-2) on a red/light green wire. The wiper motor (C0388-1) is earthed on a black wire. The wiper operates until the park position is reached, when the park switch opens, cutting the power supply to the motor.

Rear Wash

The rear washer switch (C1197-1) is supplied a feed by fuse 3 of the passenger compartment fuse box (C0580-6) on a white/green wire. When the switch is depressed, power is supplied (C1196-1) to the rear screen washer pump (C0021-2) on a black/light green wire. The washer pump (C0021-1) is earthed on a black wire.

DESCRIPTION AND OPERATION

EXTERIOR LAMPS - Brake and Reverse Lamps

DESCRIPTION

The brake lamps illuminate when the ignition switch is in position 'II' and the brake pedal is depressed. The reverse lamps illuminate when the ignition switch is in position 'II' and the gear selector lever is in the reverse position.

OPERATION

Feed from the battery positive terminal is connected to fusible link 5 of the engine compartment fuse box (C0632-1) by a brown wire. Current passes through fusible link 5 (C0570-2) which supplies a feed to the ignition switch (C0028-1) on a brown/white wire. When the ignition switch is in position 'II' (C0094-1), current flow across the switch to fuse 6 of the passenger compartment fuse box (C0580-9) on a white wire.

Fuse 6 (C0580-12) supplies a feed to both the brake pedal switch (C0075-1) and the reverse lamp switch (C0167-1) on green/yellow wires.

Brake Lamps

When the brake pedal is depressed, the brake pedal switch closes and current flows across the switch. The brake pedal switch (C0029-1) supplies a feed on a green/purple wire to;

- The centre high mounted stop lamp (CHMSL) (C0832-1).
- The trailer pick-up (C0499-6).
- The LH tail lamp (C121-2).
- The RH tail lamp (C125-2).
- On Td5 engined vehicles, the ECM (C0638-16), to help control fuelling.

The lamps and the trailer pick-up are earthed on black wires.

Reverse Lamps

When reverse gear is selected, the reverse lamp switch is closed. Current flows across the switch (C0167-2) to the LH reverse lamp (C0472-2) and the RH reverse lamp (C0455-2) on green/brown wires. The LH reverse (C0472-1) and the RH reverse lamp (C0455-1) are earthed on black wires.

DESCRIPTION AND OPERATION

EXTERIOR LAMPS - Head, Side and Number Plate Lamps

DESCRIPTION

The lights are operated from the lighting switch located on the steering column. The lighting switch has two positions. Position 'I' switches on the tail lamps, the number plate lamps, and the front side lamps. Position 'II' additionally switches on the front headlamps. When the headlamps are on, the column switch can be used to switch between main beam and dipped beam.

The headlamps can be flashed with the lights on or off, by pulling the column switch towards the driver.

OPERATION

Feed from the battery positive terminal is connected to the engine compartment fuse box (C0632-1) by a brown wire. Current passes through fusible link 1, fusible link 5, and fusible link 6, which are connected in parallel.

Side Lamps

Fusible link 6 (C0571-3) is connected to the lighting switch (C0041-1) by a brown/blue wire. With the lighting switch in position 'I', current flows across the switch (C0041-2) to fuses 11 and 12 (C0581-1) of the passenger compartment fuse box on a red wire. Fuse 11 (C0581-2) supplies the LH side of the vehicle, while fuse 12 (C0581-4) supplies the RH side of the vehicle.

Current flows from fuse 11 (C0581-2) to the LH front side lamp (C0538-2) on a red/black wire. The lamp (C0538-1) is earthed on a black wire. Connected in parallel with the LH side lamp are the LH tail lamp (C0121-3) and the rear number plate lamp (C0139-1). Both are supplied a feed on red/black wires, and earthed (C0121-1 & C0139-2 respectively) on black wires.

DESCRIPTION AND OPERATION

The RH side of the vehicle operates in much the same way. Fuse 12 (C0581-4) supplies a feed to the RH side lamp (C0537-2) on a red/orange wire. The lamp (C0537-1) is earthed on a black wire. Connected in parallel with the RH side lamp is the RH tail lamp (C0125-3). The tail lamp is supplied a feed on a red/orange wire, and earthed (C0125-1) on a black wire.

Fuse 12 also supplies a feed to the side lamp warning lamp in the instrument pack (C0233-20) and the dim-dip relay (C0048-7). Both are supplied a feed on red/orange wires, and earthed (C0230-8 & C0048-6 respectively) on black wires.

Headlamps

With the lighting switch in position 'II', current flows across the switch (C0041-4) to the headlamp relay (C0282-2) on a blue wire. Current cannot flow across the headlamp relay, as the relay is only energised when the ignition switch is in position 'II'.

Dipped Beam

The ignition switch (C0028-1) is supplied a feed from fusible link 5 of the engine bay fuse box (C0570-2) on a brown/white wire. With the ignition switch in position 'II', current flows across the switch (C0094-1) to fuse 7 of the passenger compartment fuse box (C0580-9) on a white wire. Fuse 7 (C0580-14) supplies a feed to the dim-dip relay (C0048-1) and the headlamp relay (C0282-4) on white/green wires. The headlamp relay (C0282-6) is earthed on a black wire. This allows current to flow across the relay switch (C0282-2 & C0282-8) to the column switch (C0036-1) and the dim-dip relay (C0048-5) on blue wires.

With the column switch in the dipped beam position, current flows from the switch (C0036-6) to the dim-dip relay (C0048-8) on a blue/red wire. The dim-dip relay supplies a feed (C0048-2) to fuse 15 and fuse 16 of the passenger compartment fuse box (C0581-9) on a blue/red wire. Fuse 15 (C0581-10) supplies a feed to the RH headlamp dipped beam bulb (C0011-2) on a blue/black wire. The bulb (C0011-3) is earthed on a black wire.

Fuse 16 (C0581-12) supplies a feed to the LH headlamp dipped beam bulb (C0009-2) on a blue/pink wire. The bulb (C0009-3) is earthed on a black wire.

DESCRIPTION AND OPERATION

Main Beam

When the column switch is moved to the main beam position, current flows across the switch (C0036-5) to fuse 17 and fuse 18 in the passenger compartment fuse box (C0581-13) on a blue/white wire. Fuse 17 (C0581-14) supplies a feed to the RH headlamp main beam bulb (C0011-1) on a blue/orange wire. The bulb (C0011-3) is earthed on a black wire. Fuse 18 (C0581-16) supplies a feed to the LH headlamp main beam bulb (C0009-1) on a blue/slate wire. The bulb (C0009-3) is earthed on a black wire.

The column switch also provides a feed to the main beam warning lamp in the instrument pack (C0233-1) on a blue/white wire. The warning lamp (C0230-8) is earthed on a black wire.

Headlamp Flash

Fuse 3 of the engine compartment fuse box (C0572-1) supplies a constant battery feed to the column switch (C0036-7) on a brown/purple wire. When the column switch is pulled back to the flash position, it allows current to flow along the main beam circuit as described in the 'Main Beam' operation.

DESCRIPTION AND OPERATION

EXTERIOR LAMPS - Headlamp Levelling

DESCRIPTION

To prevent dazzling oncoming drivers, the headlamps can be adjusted to compensate for the effect of different loads on headlamp vertical alignment. Headlamp levelling is controlled by a four position switch mounted in the centre of the fascia, which operates a levelling motor on each headlamp. Nominal vehicle loads for each switch position are as follows:

- 0 - Driver or driver and front passenger only; no luggage.
- 1 - All seats occupied; no luggage.
- 2 - All seats occupied; full luggage compartment.
- 3 - Driver only; full luggage compartment.

Headlamp levelling operates while the side lamps or headlamps are on.

OPERATION

Feed from the battery positive terminal is connected to fusible link 6 of the engine compartment fuse box (C0632-1) by a brown wire. Fusible link 6 (C0571-3) is connected to the lighting switch (C0041-1) by a brown/blue wire.

With the lighting switch in either the side or main beam positions, current flows from the switch (C0041-2) to fuse 12 of the passenger compartment fuse box (C0581-1) on a red wire. Fuse 12 (C0581-4) supplies a feed to the LH headlamp levelling motor (C0071-3) and the RH headlamp levelling motor (C0070-3) on red/orange wires.

Fuse 12 (C0581-4) also supplies two feeds to the headlamp levelling switch on red/orange wires. One feed (C0093-5) is used to power the switch illumination bulb, which is earthed (C0093-3) on a black wire. The second feed (C0093-4) supplies current to the switch itself.

DESCRIPTION AND OPERATION

At each of the four switch positions, the contacts in the headlamp levelling switch connect to a different resistance value to provide one of four different output voltages. The output voltage (C0093-2) is supplied to the LH (C0071-1) and RH (C0070-1) levelling motors on blue/yellow wires. The LH (C0071-2) and RH (C0070-2) headlamp levelling motors are earthed on black wires. The difference between the voltage from the headlamp levelling switch and battery voltage is then used by electronics in the headlamp levelling motors to set the headlamps to a position corresponding to the switch position.

DESCRIPTION AND OPERATION

EXTERIOR LAMPS - Rear Fog Lamps

DESCRIPTION

The rear fog lamps only operate when the headlamps are illuminated and the ignition switch is in position "II". The non-latching switch is positioned adjacent to the HRW switch on the dash panel. When the rear fog lamps are switched on, the instrument pack warning lamp also illuminates. The fog lamps are automatically switched off every time the ignition is turned off.

OPERATION

Feed from the battery positive terminal is connected to the engine compartment fuse box (C0632-1) by a brown wire. Current flows through fusible link 5 and fusible link 6, which are connected in parallel.

Fusible link 6 (C0571-3) supplies a feed to the lighting switch (C0041-1) on a brown/blue wire. With the lighting switch in either the side or main beam position, current flows across the switch (C0041-4) to the headlamp relay (C0282-2) on a blue wire. As the relay is not energised, the relay switch is open, thus preventing current flow.

Fusible link 5 (C0570-2) supplies a feed to the ignition switch (C0028-1) on a brown/white wire. With the ignition switch in position 'II' (C0094-1) current flows across the switch to fuse 7 of the passenger compartment fuse box (C0580-9) on a white wire. Fuse 7 (C0580-14) supplies a feed to the headlamp relay (C0282-4) on a white/green wire. The relay (C0282-6) is earthed on a black wire.

With the relay energised the relay switch closes. This allows current to flow across the relay (C0282-2 & C0282-8) to fuse 19 of the passenger compartment fuse box (C0581-17) on a blue wire. Fuse 19 (C0581-18) is connected to the rear fog guard lamp ECU (C0543-2) by a blue/purple wire. The ECU (C0543-1) is earthed on a black wire.

DESCRIPTION AND OPERATION

The rear fog guard lamp ECU (C543-4) is connected to the rear fog guard lamp (C0064-2) on a black/slate wire. When the rear fog guard lamp switch is depressed, it creates a momentary earth path back through the rear fog guard lamp ECU. When the rear fog guard ECU registers this second earth, it supplies a feed (C0543-3) to the following components on red/yellow wires.

- The rear fog guard warning lamp in the instrument pack (C0233-4).
- The RH rear fog guard lamp (C0512-2).
- The LH rear fog guard lamp (C0515-2).
- The trailer pick-up (C0499-2).

All of these are earthed on black wires.

DESCRIPTION AND OPERATION

EXTERIOR LAMPS - Indicators / Hazard Warning Lamps

DESCRIPTION

The indicators are controlled from the steering column switch and operate when the ignition switch is in position 'II'.

The hazard lamp switch is located adjacent the steering column. Hazard operation is not dependent on the position of the ignition switch. When the hazard switch is depressed, the left and right hand indicator lamps, the hazard warning switch itself, and the hazard warning lamp in the instrument pack will all flash.

OPERATION

Feed from the battery positive terminal is connected to the engine compartment fuse box (C0632-1) by a brown wire. Current flows across fusible link 5 and fuse 7, which are connected in parallel. Fusible link 5 (C0570-2) supplies a feed to the ignition switch (C0028-1) on a brown/white wire. Fuse 7 (C0574-1) provides a permanent battery feed to the hazard warning switch (C0096-7) on a purple/brown wire.

Indicators

With the ignition switch in position 'II', current flows across the switch (C0094-1) to fuse 3 of the passenger compartment fuse box (C0580-1) on a white wire. Fuse 3 (C0580-6) is connected to the hazard warning switch (C0096-8) by a white/green wire. With the hazard warning switch in the off position, power flows through the switch (C0096-5) to the hazard warning relay (C0547-6) on a light green wire.

This feed energises the hazard warning relay, which is earthed (C0547-4) on a black wire. Current can now flow across the energised hazard warning relay (C0547-8) to the column switch (C0036-3) on a light green/brown wire.

DESCRIPTION AND OPERATION

The hazard warning relay (C0547-2) also supplies a feed to the trailer warning lamp in the instrument pack (C0233-10) on a light green/purple wire. The trailer warning lamp (C0230-8) is earthed on a black wire. When a left or right turn is selected (see below) the trailer warning lamp will flash once then extinguish.

Left Turn

Moving the column switch to the left turn position, allows power to flow across the switch (C0036-4) to:

- The LH indicator connection in the trailer pick-up (C0499-1).
- The LH rear indicator lamp (C0928-2).
- The LH front indicator lamp (C0001-2).
- The LH side repeater (C0013-1).
- The LH indicator instrument pack warning lamp (C0233-18).

All are supplied a feed on green/red wires, and earthed on black wires.

Right Turn

Moving the column switch to the right turn position, allows power to flow across the switch (C0036-2) to:

- The RH indicator connection in the trailer pick-up (C0499-4).
- The RH rear indicator lamp (C0837-2).
- The RH front indicator lamp (C0002-2).
- The RH side repeater (C0012-1).
- The RH indicator instrument pack warning lamp (C0233-2).

All are supplied a feed on green/white wires and earthed on black wires.

DESCRIPTION AND OPERATION

Hazard Warning

Pressing the hazard warning switch to the 'on' position allows the permanent battery feed from fuse 7 of the engine compartment fuse box (C0574-1) to flow across the switch (C0096-7 & C0096-5) to the hazard warning relay (C0547-6) on a light green wire. The energised relay (C0547-8) is now able to provide a feed for both the LH and RH indicator circuits on a light green/brown wire. The relay is connected to the following via the hazard warning switch:

- The hazard warning switch (C0096-3) to the LH front indicator lamp (C0001-2) on a green/red wire.
- The hazard warning switch (C0096-3) to the LH side repeater (C0013-1) on a green/red wire.
- The hazard warning switch (C0096-3) to the LH rear indicator lamp (C0928-2) on a green/red wire.
- The hazard warning switch (C0096-3) to the LH indicator connection in the trailer pick-up (C0499-1) on a green/red wire.
- The hazard warning switch (C0096-4) to the RH front indicator lamp (C0002-2) on a green/white wire.
- The hazard warning switch (C0096-4) to the RH side repeater (C0012-1) on a green/white wire.
- The hazard warning switch (C0096-4) to the RH rear indicator lamp (C0837-2) on a green/white wire.
- The hazard warning switch (C0096-4) to the RH indicator connection in the trailer pick-up (C0499-4) on a green/white wire.

The hazard warning switch also provides a feed for the following instrument pack warning lamps:

- The hazard warning lamp in the instrument pack (C0233-9) on a brown/red wire.
- The hazard warning switch illumination bulb (C1037-1) on a black/red wire.
- The LH indicator lamp (C0233-18) on a green/red wire.
- The RH indicator lamp (C0233-2) on a green/white wire.

With the hazard warning relay energised, the circuit is repeatedly opened and closed, causing all indicators and warning lamps to flash.

DESCRIPTION AND OPERATION

INTERIOR LAMPS

DESCRIPTION

Defender 1999 MY vehicle are fitted with an interior lamp in the front of the vehicle. 110 Station wagon vehicles are also fitted with a rear interior lamp. Both lamps can be switched on manually using their integral switches. If any door, including the tail door are opened, the lamps will illuminate.

The lamps are controlled by the alarm ECU. The ECU contains a time out feature which switches off the interior lamps after eight minutes if any door is left open, thus preventing unnecessary battery drain.

OPERATION

90/110 Hard Top and 90 Station Wagon

Feed from the battery positive terminal is connected to fuse 6 and fuse 7 of the engine compartment fuse box (C0632-1) by a brown wire. Fuse 6 (C0574-2) supplies a feed to the alarm ECU (C0057-8) on a purple/brown wire. Fuse 7 (C0574-1) supplies a feed to the front interior lamp (C0355-3) on a purple/brown then purple wire.

The interior lamp has an integral switch. With this switch in the normal (central) position, the lamp is earthed (C0355-1) via the alarm ECU (C0061-1) on a purple/white wire. The alarm ECU will only supply the lamp with an earth path is either of the front doors, or the tail door, are opened.

The alarm ECU (C0061-5) is connected to the drivers door switch (C0054-1) by a slate/white wire. The passenger door switch (C0033-1) and the tail door switch (C0615-1) are wired in parallel and are connected to the alarm ECU (C0061-16) by purple/blue wires.

If the internal switch is moved to the forward 'ON' position, the feed from fuse 7 flows across the interior lamp (C0355-3 & C1210-1) directly to earth on a black wire. Moving the switch to the rear 'OFF' position, breaks the circuit to prevent the lamp from illuminating when any of the doors are opened.

DESCRIPTION AND OPERATION

110 Station Wagon

Feed from the battery positive terminal is connected to fuse 6 and fuse 7 of the engine compartment fuse box (C0632-1) by a brown wire. Fuse 6 (C0574-2) supplies a feed to the alarm ECU (C0057-8) on a purple/brown wire. Fuse 7 (C0574-1) supplies a feed to the front (C0355-3) and rear (C0356-3) interior lamps on a purple/brown then purple wires.

The front interior lamp has an integral switch. With this switch in the normal (central) position, the lamp is earthed (C0355-1) via the alarm ECU (C0061-1) on a purple/white wire. The alarm ECU will only supply the lamp with an earth path if any of the doors, or the tail door are opened.

The Alarm ECU (C0061-5) is connected to the drivers door switch (C0054-1) by a slate/white wire. The front passenger door switch (C0033-1), the LH rear door switch (C0112-1), the RH rear door switch (C0111-1) and the tail door switch (C0615-1) are wired in parallel and are connected to the alarm ECU (C0061-16) by purple/blue wires.

If the internal switch is moved to the forward 'ON' position, the feed from fuse 7 flows across the interior lamp (C0355-3 & C1210-1) directly to earth on a black wire. Moving the switch to the rear 'OFF' position, breaks the circuit to prevent the lamp from illuminating when any of the doors are opened.

The rear interior lamp is wired in parallel with the front interior lamp and works on exactly the same principal.

DESCRIPTION AND OPERATION

INTERIOR ILLUMINATION

DESCRIPTION

With the lighting switch in either the side lamp or headlamp position, the interior controls and gauges are illuminated so they can be easily located during night driving. Interior illumination is not controlled by the ignition switch.

OPERATION

Feed from the battery positive terminal is connected to fusible link 6 of the engine compartment fuse box (C0632-1) by a brown wire. Current flows across fusible link 6 (C0571-3) to the lighting switch (C0041-1) on a brown/blue wire. With the lighting switch in either the side lamp or headlamp position (C0041-2), current will flow to fuse 12 of the passenger compartment fuse box (C0581-1) on a red wire. Fuse 12 (C0581-4) supplies a feed to the following switches and gauges on red/orange wires:

- The cigar lighter (C0074-1).
- The fuel gauge (C1055-1).
- The engine coolant temperature gauge (C1053-1).
- The clock (C0232-1)
- The LH heater control (C1199-1).
- The RH heater control (C1200-1).
- The speedometer (C1060-4).

All the above are earthed on black wires.

DESCRIPTION AND OPERATION

INSTRUMENTS

DESCRIPTION

The vehicle relays information to the driver via the instrument pack. The instrument pack contains lamps and analogue gauges. The colour of the lamp denotes the severity of the information. Warning lamps are red, caution lamps are orange, green and blue lamps indicate a system is operating.

The analogue gauges relay information to the driver such as engine speed, and engine temperature.

OPERATION

Feed from the battery positive terminal is connected to fusible link 5 of the engine compartment fuse box (C0632-1) by a brown wire. Fusible link 5 (C0570-2) supplies a feed to the ignition switch (C0028-1) on a brown/white wire. With the ignition switch in position 'II', current flows across the switch (C0094-1) to fuse 3 of the passenger compartment fuse box (C0580-1) on a white wire.

Fuse 3 (C0580-6) supplies a feed to the instrument pack on white green wires to the following gauges;

- The speedometer (C1060-10), which is also fed a signal (C1060-2) from the speed transducer (C0195-1) on a black/red wire. The speedometer (C1060-7) is earthed on a black wire.
- The engine coolant temperature gauge (C1052-3), which is also fed a signal (C1052-2) from the engine coolant temperature sensor via the ECM (C0658-7) on a green/blue then light green/blue wire. The engine coolant temperature sensor is earthed (C1052-1) on a black wire.
- The fuel gauge (C1054-3), which is also fed a signal (C1054-2) from the fuel tank unit (C0114-2) on a green/black then light green/black wire. The fuel gauge earthed (C1054-1) on a black wire.

DESCRIPTION AND OPERATION

Also contained within the instrument pack are the warning lamps, which are supplied with the following feeds;

- The water filter warning lamp (C0230-4), which is provided a feed from the water filter sensor (C0735-1) on an orange/green wire.
- The transmission oil warning lamp (C0230-5), which is provided a feed from the oil temperature switch (C0219-1) on a slate/red wire.
- The heated rear window warning lamp (C0233-8), which is provided a feed from the heated rear window relay via header 286 (C0286-15) on a white/black wire. **See HEATED REAR WINDOW (HRW).**
- The handbrake warning/low brake fluid warning lamp (C0230-14) which is provided a feed from the brake fluid level switch (C0026-1) and the ABS ECU (C0540-9) on a black/white wire via header 288.
- The main beam warning lamp (C0233-1), which is provided a feed from the column switch (C0036-5) via header 288 on a blue/white wire. **See EXTERIOR LAMPS - Head, Side and Number Plate Lamps.**
- The RH direction indicator warning lamp (C0233-2), which is provided a feed from the column switch (C0036-2) on a green/white wire via header 292. **See EXTERIOR LAMPS - Indicators / Hazard Warning Lamps.**
- The LH direction indicator warning lamp (C0233-18), which is provided a feed from the column switch (C0036-4) on a green/red wire via header 292. **See EXTERIOR LAMPS - Indicators / Hazard Warning Lamps.**
- The side lamp warning lamp (C0233-20), which is provided a feed from the dim-dip relay (C0048-7) via header 290 on a red/orange wire. **See EXTERIOR LAMPS - Head, Side and Number Plate Lamps.**
- The trailer warning lamp (C0233-10), which is provided a feed by the hazard warning relay (C0547-2) on a light green/purple wire.
- The hazard warning lamp (C0233-9), which is provided a feed by the hazard warning switch (C0096-1) on a black/red wire. **See EXTERIOR LAMPS - Indicators / Hazard Warning Lamps.**

DESCRIPTION AND OPERATION

- The rear fog guard lamp (C0233-4), which is provided a feed by the rear fog guard lamp ECU (C0543-3) on a red/yellow wire. **See EXTERIOR LAMPS - Rear Fog Lamps.**
- The engine management warning lamp (C0233-11), which is provided a feed by the Engine Control Module (ECM) (C0658-6) on a red/slate wire. **See ENGINE MANAGEMENT - Td5.**
- The glow plug warning lamp (C0233-12), which is provided a feed by the ECM (C0658-30) on a black/yellow wire. **See ENGINE MANAGEMENT - Td5.**
- The engine immobilisation warning lamp (C0233-5), which is provided a feed by the alarm ECU (C0057-9) on an orange wire. **See ENGINE IMMOBILISATION - Td5.**
- The differential lock warning lamp (C0233-7), which is provided a feed by the differential lock unit (C0306-1) on a black/blue wire.
- The traction control warning lamp (C0230-16), which is provided a feed by the ABS ECU (C0504-17) on a yellow/slate wire.
- The ABS warning lamp (C0230-7), which is provided a feed by the ABS ECU (C0504-18) on a red/slate wire. **See ANTI-LOCK BRAKING SYSTEMS (ABS) - Td5.**
- The oil pressure warning lamp (C0233-13), which is provided a feed by the oil pressure switch (C0187-1) on a white/brown wire.
- The ignition/no charge warning lamp (C0233-17), which is provided a feed by the alternator (C0226-1) on a brown/yellow, then yellow/brown wire. **See STARTING AND CHARGING - Td5.**

All the warning lamps (C0230-8) are earthed on a black wire.

DESCRIPTION AND OPERATION

HORNS

DESCRIPTION

Defender 1999 MY vehicles are fitted with one or two horns (dependent on market configuration), one mounted behind each headlamp. The horn(s) are operated by depressing the end of the direction indicator switch, and are not dependent on ignition switch position.

OPERATION

Feed from the battery positive terminal is connected to fusible link 1 and fuse 3 of the engine compartment fuse box (C0632-1) by a brown wire. Fusible link 1 and fuse 3 are connected in series.

Fuse 3 (C0570-2) supplies a constant battery feed to the horn switch (C0036-7) on a brown/purple wire. If the switch is depressed the switch closes, allowing current to flow across the switch (C0036-8) to header 285 (C0285-7) on a purple/black wire. The RH (C0004-2) and LH (C0003-2) horns are wired in parallel, and connected to header 285 (C0285-10 & C285-9 respectively) by purple/black wires.

Both horns are earthed on black wires.

DESCRIPTION AND OPERATION

CLOCK

DESCRIPTION

The analogue clock is located within the instrument pack. The clock is illuminated when the side lamps or headlamps are switched on.

OPERATION

Feed from the battery positive terminal connected to fuse 7 and fusible link 6 of the engine compartment fuse box (C0632-1) by a brown wire. Fuse 7 supplies a constant battery feed to the clock (C0232-3) on a purple/brown wire. The clock (C0232-2) is earthed on a black wire.

Fusible link 6 of the engine compartment fuse box (C0571-3) is connected to the lighting switch (C0041-1) by a brown/blue wire. When the lighting switch is in the side lamp or headlamp position, current flows across the switch (C0041-2) to fuse 12 of the passenger compartment fuse box (C0581-1) on a red wire. Fuse 12 (C0581-4) supplies a feed to the clock illumination bulb (C0232-1) on a red/orange wire via header 290. The clock illumination bulb (C0232-2) is earthed on a black wire.

DESCRIPTION AND OPERATION

CIGAR LIGHTER

DESCRIPTION

The cigar lighter is located towards the centre of the dash panel. Pressing the centre of the cigar lighter latches the heater element into the holder. With the ignition in position 'I', power flows through the heating element of the cigar lighter, causing it to heat up. When the heating element reaches a sufficient temperature, the holder automatically releases the cigar lighter which can then be removed for use.

The cigar lighter holder is illuminated when the side lamps or headlamps are switched on.

OPERATION

Feed from the battery positive terminal is connected to fusible link 5 and fusible link 6 of the engine compartment fuse box (C0632-1) on a brown wire. Fusible link 6 (C0571-3) supplies a constant battery feed to the lighting switch (C0041-1) on a brown/blue wire. When the lighting switch is in the side lamp or headlamp position, current flows across the switch (C0041-2) to fuse 12 of the passenger compartment fuse box (C0581-1) on a red wire. Fuse 12 (C0581-4) is connected to the cigar lighter illumination bulb (C0074-1) by a red/orange wire. The bulb (C0089-1) is earthed on a black wire.

Fusible link 5 of the engine compartment fuse box (C0570-2) is connected to the ignition switch (C0028-1) by a brown/white wire. When the ignition switch is in position 'II', current flows across the switch (C0099-1) to fuse 13 of the passenger compartment fuse box (C0581-5) on a white/orange wire. When the cigar lighter is depressed, it completes the circuit, allowing current flow to earth (C0089-1) on a black wire.

DESCRIPTION AND OPERATION

IN-CAR ENTERTAINMENT

OPERATION

The radio/cassette player operates when the ignition switch is in position 'I' or 'II'. Signal output from the radio/cassette player is relayed to two speakers mounted in the lower fascia. The radio/cassette display is illuminated when the unit is switched on.

OPERATION

Feed from the battery positive terminal is connected to fuse 7 and fusible link 5 of the engine compartment fuse box (C0632-1) by a brown wire. Fuse 7 (C0574-1) supplies a constant battery feed to the radio/cassette player (C0098-4) via header 287 on a purple/brown wire. This feed powers the units memory, allowing the radio to retain pre-set radio stations.

Fusible link 5 (C0570-2) is connected to the ignition switch (C0028-1) by a brown/white wire. When the ignition switch is turned to position 'I' (C0099-1) or 'II' (C0094-1) current flows across the switch to fuse 14 of the passenger compartment fuse box (C0581-5) on a white/orange wire.

Fuse 14 (C0581-8) supplies the radio/cassette player (C0098-7) with an ignition feed on a white/orange wire. The radio/cassette player is earthed (C0098-8) on a black wire.

The radio/cassette player is connected to the speakers as follows;

- From the radio/cassette player (C0092-5 & C0092-6) to the RH speaker on black/red (C0092-4) and black/pink (C0092-3) wires respectively.
- From the radio/cassette player (C0092-3 & C0092-4) to the LH speaker on black/orange (C0092-6) and black/yellow (C0092-5) wires respectively.

CONNECTOR

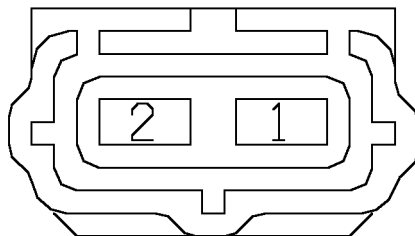
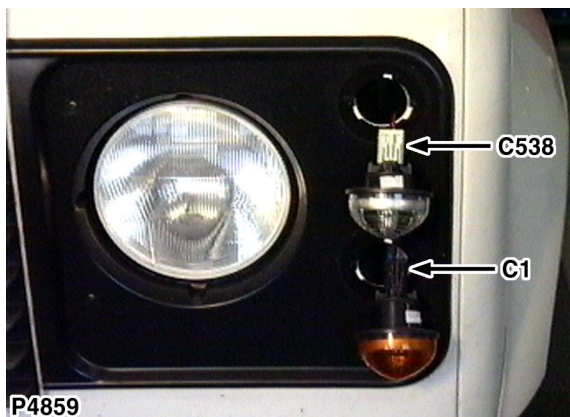
C0001



Lamp - Direction indicator /
hazard warning - Front - LH

Female
BLACK

Behind LH front indicator
lamp



YPC10070

Cav	Col	CCT
1	B	ALL
2	GR	ALL

C0002

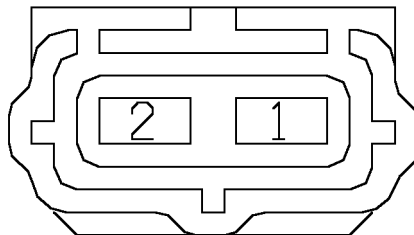
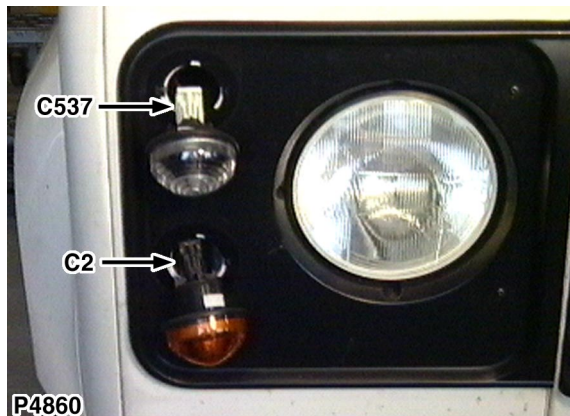
CONNECTOR



Lamp - Direction indicator /
hazard warning - Front - RH

Female
BLACK

Behind RH front indicator
lamp



YPC10070

Cav	Col	CCT
1	B	ALL
2	GW	ALL

CONNECTOR

C0003

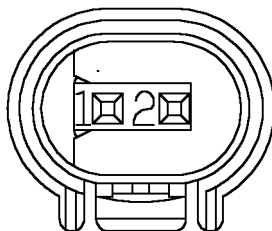
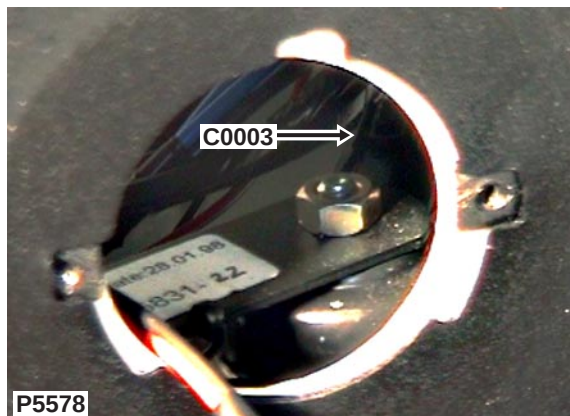


Horn - LH

Female

BLUE

Behind LH headlamp



YPC110600

Cav	Col	CCT
1	B	ALL
2	PB	ALL

C0004

CONNECTOR

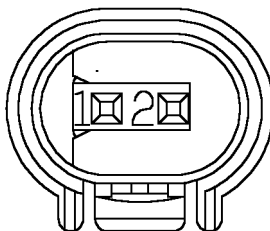
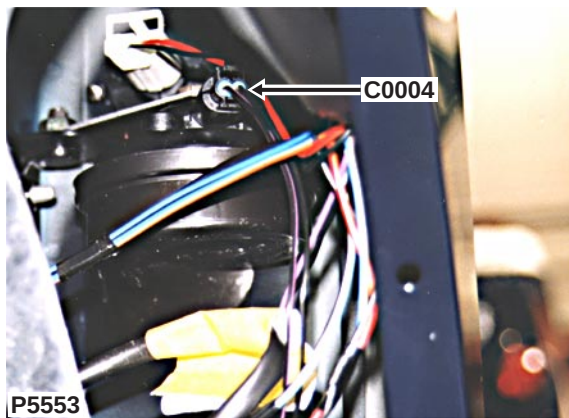


Horn - RH

Female

BLUE

Behind RH headlamp



YPC110600

Cav	Col	CCT
1	B	ALL
2	PB	ALL

CONNECTOR

C0007

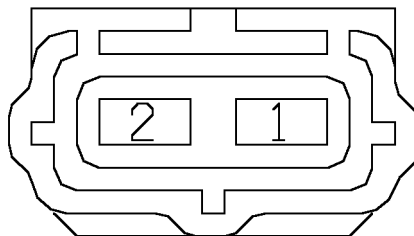
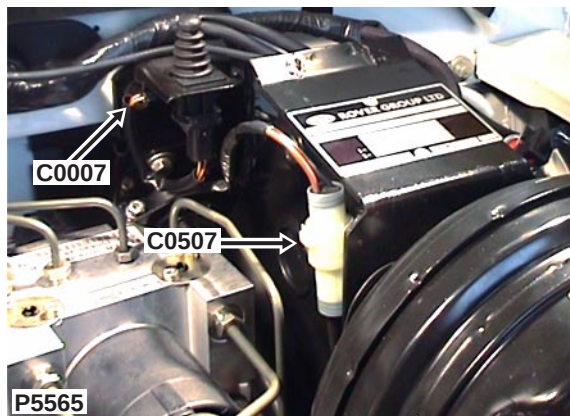


Switch - Bonnet

Female

BLACK

Adjacent pedal box



YPC10070

Cav	Col	CCT
1	B	ALL
2	OU	ALL

C0008

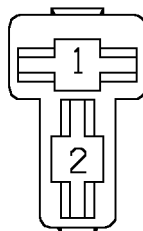
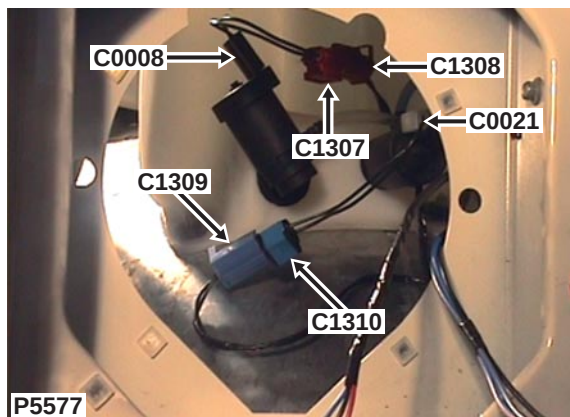
CONNECTOR

GB

Pump - Washer -
Windscreen

Female
BLACK

Behind LH headlamp



ACU3172

Cav	Col	CCT
1	B	ALL
2	LGB	ALL

CONNECTOR

C0009

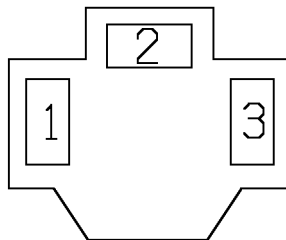
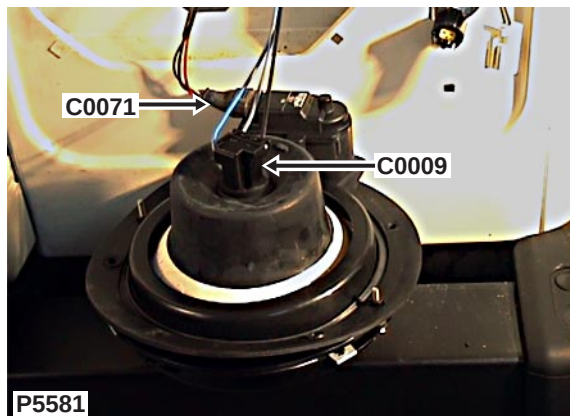


Headlamp - LH

Female

BLACK

Behind LH headlamp



AFU3113

Cav	Col	CCT
1	US	ALL
2	UK	ALL
3	B	ALL

C0011

CONNECTOR

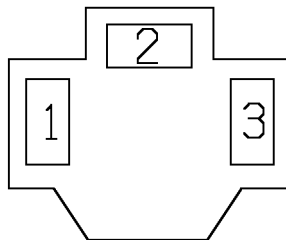
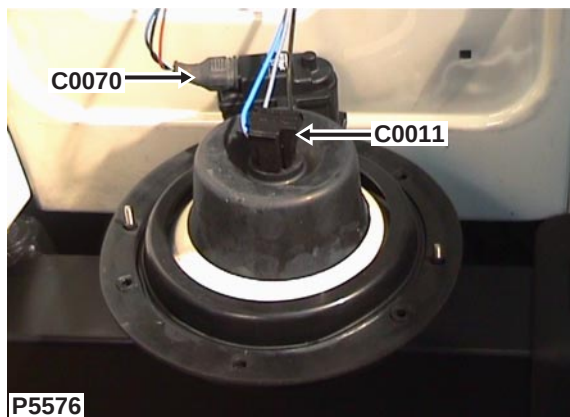


Headlamp - RH

Female

BLACK

Behind RH headlamp



AFU3113

Cav	Col	CCT
1	UO	ALL
2	UB	ALL
3	B	ALL

CONNECTOR

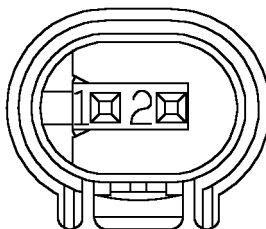
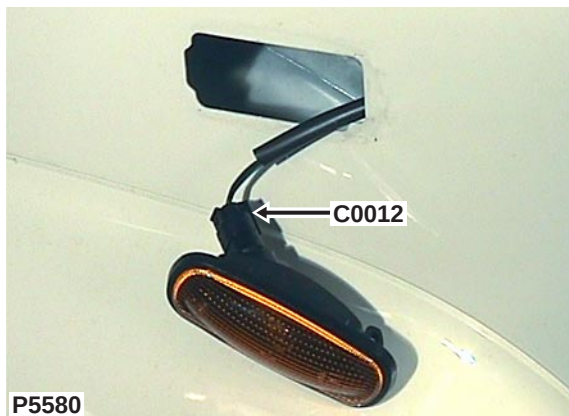
C0012

GB

Lamp - Side repeater - Front
- RH

Female
GREY

Behind RH side repeater
lamp



YPC110580

Cav	Col	CCT
1	GW	ALL
2	B	ALL

C0013

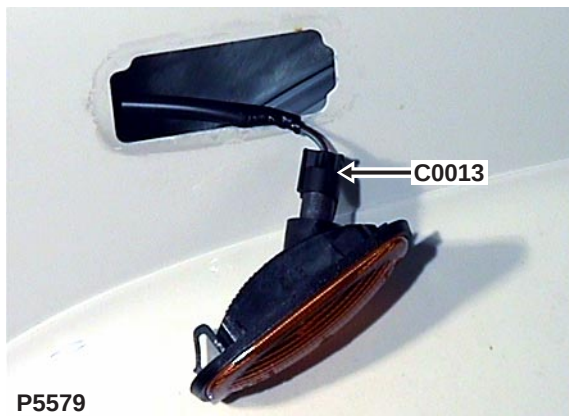
CONNECTOR

GB

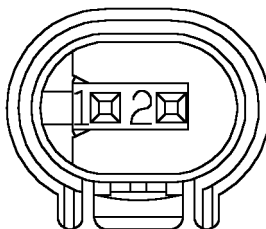
Lamp - Side repeater - Front
- LH

Female
GREY

Behind LH side repeater
lamp



P5579



YPC110580

Cav	Col	CCT
1	GR	ALL
2	B	ALL

CONNECTOR

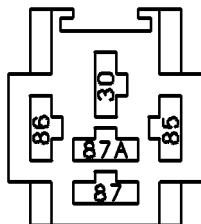
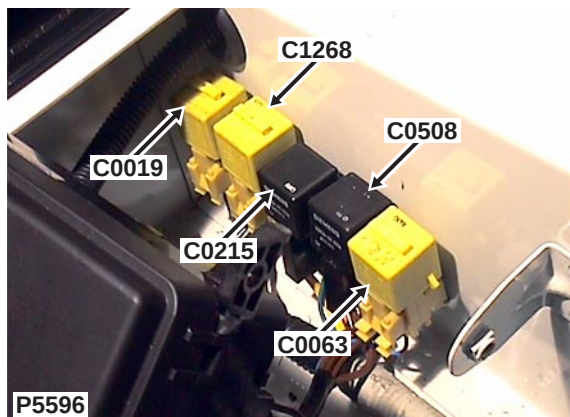
C0019

GB

Relay - Cooling fan - Td5

Female
YELLOW

Beneath RH seat



AFU3271

Cav	Col	CCT
30	NS	1
85	WG	1
85	NO	1
86	BP	1
87	BN	1

C0021

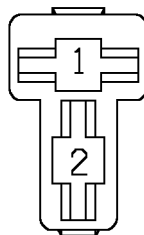
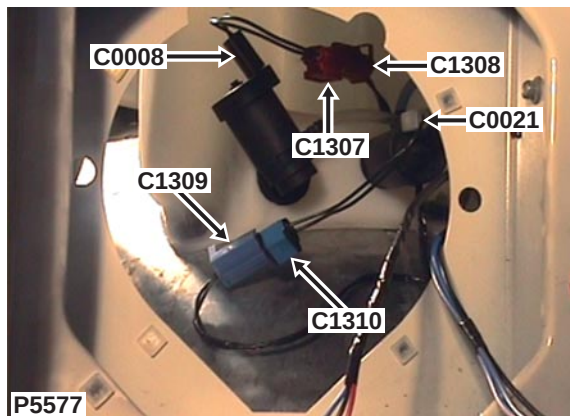
CONNECTOR

GB

Pump - Washer - Rear
screen

Female
NATURAL

Behind LH headlamp



AAU1939

Cav	Col	CCT
1	B	ALL
2	BLG	ALL

CONNECTOR

C0023

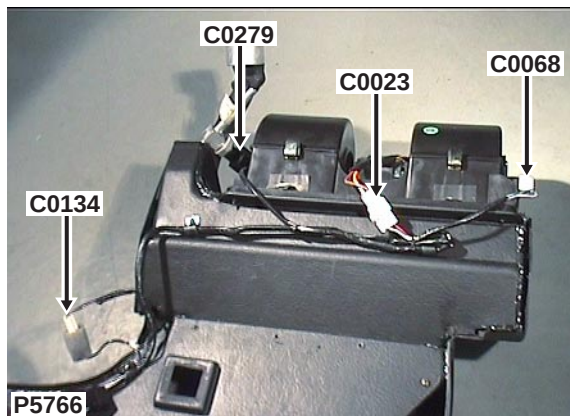


Motor - Blower - Front

Female

WHITE

Behind RH side of fascia



NO CONNECTOR FACE

Cav	Col	CCT
1	WR	1
2	RB	1

C0026

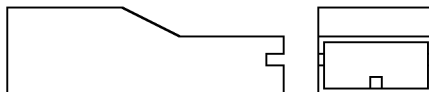
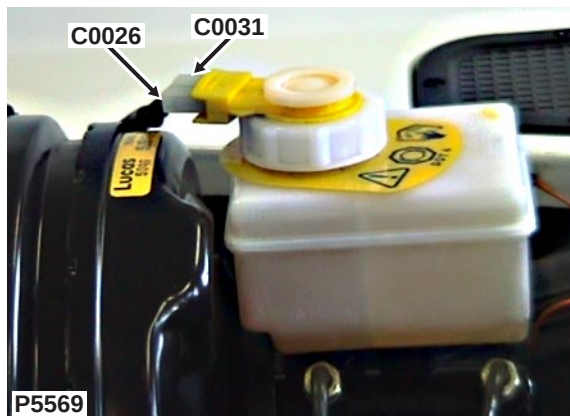
CONNECTOR



Switch - Brake fluid level

Female
NATURAL

Adjacent pedal box



ADU8339

Cav	Col	CCT
1	BW	3
1	B	4

CONNECTOR

C0028

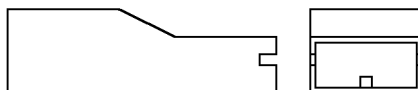
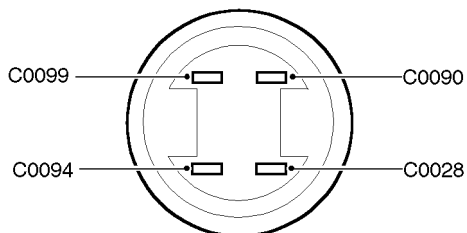


Switch - Ignition

Female

BLACK

Behind instrument pack



AAU1010

Cav	Col	CCT
1	NW	ALL

C0029

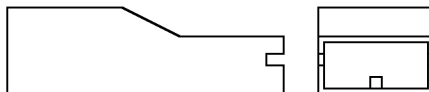
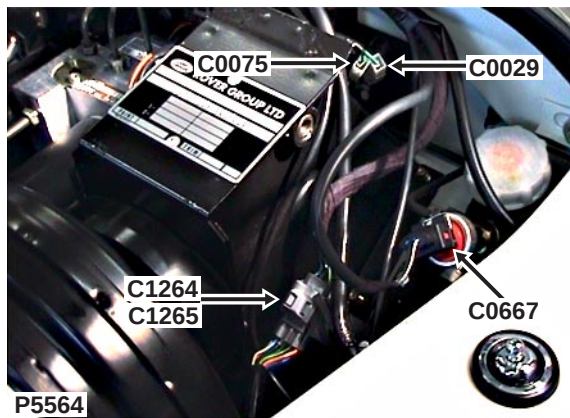
CONNECTOR



Switch - Brake pedal

Female
NATURAL

Adjacent pedal box



ADU8339

Cav	Col	CCT
1	GP	ALL

CONNECTOR

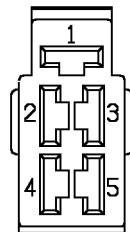
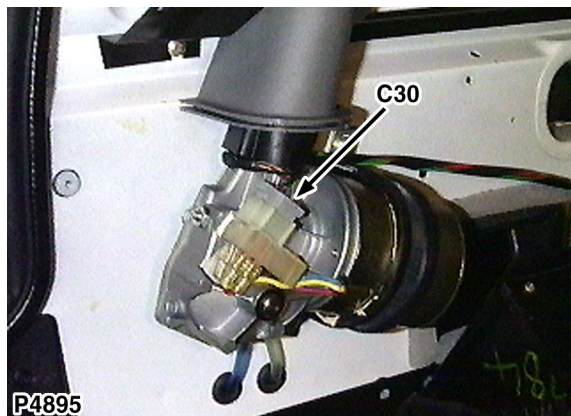
C0030



Motor - Wiper - Windscreen

Female
LIGHT GREY

Behind LH side of fascia



13H4576

Cav	Col	CCT
1	B	ALL
2	NLG	ALL
3	ULG	ALL
4	WG	ALL
5	RLG	ALL

C0031

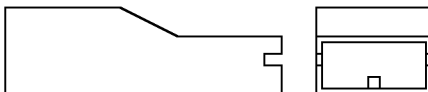
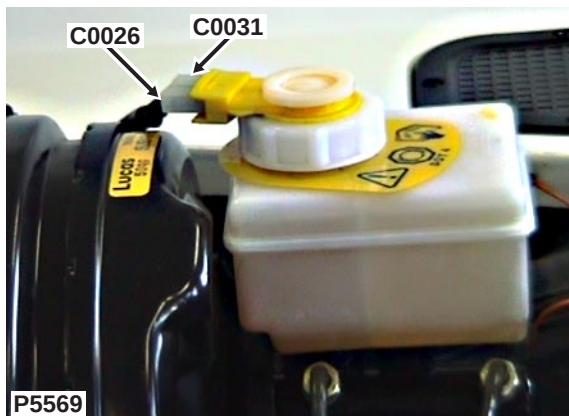
CONNECTOR



Switch - Brake fluid level

Female
NATURAL

Adjacent pedal box



ADU8339

Cav	Col	CCT
1	B	3
1	BW	4

CONNECTOR

C0033

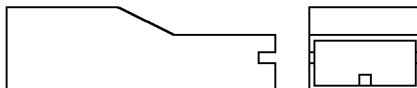
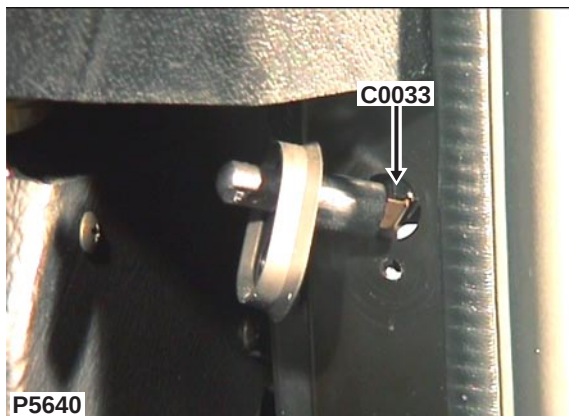


Switch - Door - RH

Female

BLACK

RH 'A' post



AAU1010

Cav	Col	CCT
1	SW	16
1	PU	17
1	PU	19

C0036

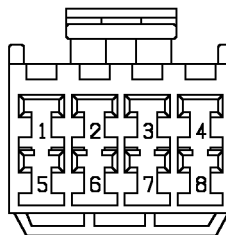
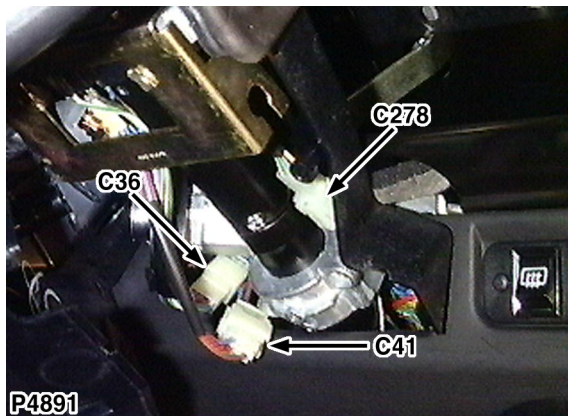
CONNECTOR



Switch - Direction indicator

Female
NATURAL

Behind steering column
cowl LH side



AFU3574

Cav	Col	CCT
1	U	ALL
2	GW	ALL
3	LGN	ALL
4	GR	ALL
5	UW	ALL
6	UR	ALL
7	NP	ALL
8	PB	ALL

CONNECTOR

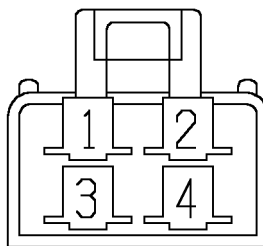
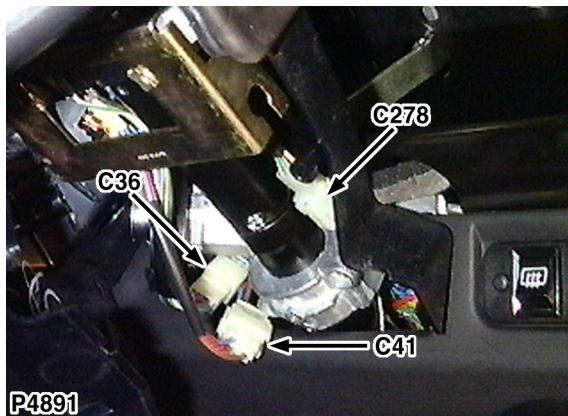
C0041



Switch - Lighting

Female
NATURAL

Behind steering column
cowl LH side



AFU3855

Cav	Col	CCT
1	NU	ALL
2	R	ALL
4	U	ALL

C0044

CONNECTOR

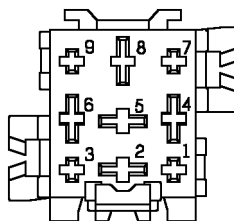
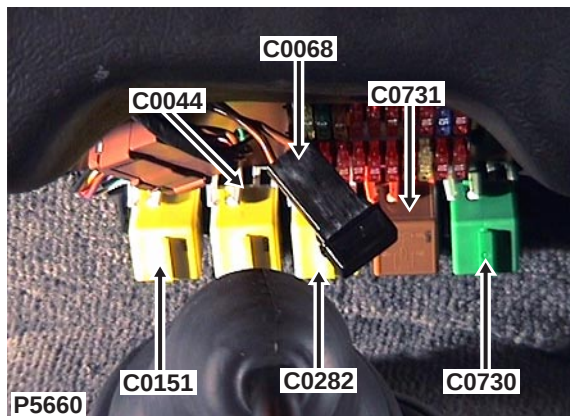


Relay - Heated rear screen

Female

BLACK

Behind centre of fascia



YPP100200

Cav	Col	CCT
2	WB	ALL
4	WG	ALL
6	B	ALL
8	NP	ALL

CONNECTOR

C0049

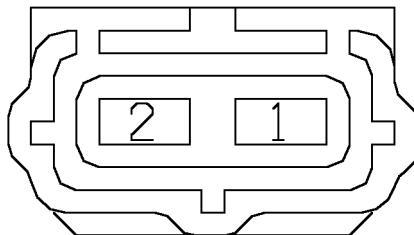
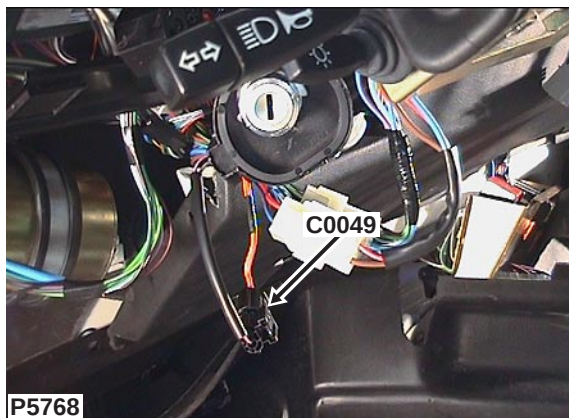


Passive coil

Female

BLACK

Behind steering column
cowl LH side



YPC10069

Cav	Col	CCT
1	OG	ALL
2	OP	ALL

C0052

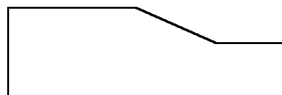
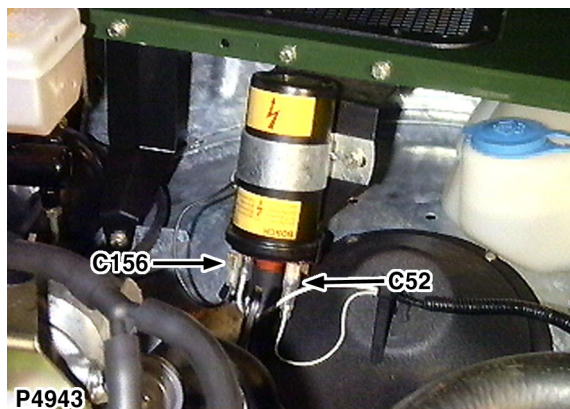
CONNECTOR



Ignition coil - V8

Male
NATURAL

LH side of engine
compartment



BMK1886

Cav	Col	CCT
1	WB	ALL

CONNECTOR

C0054

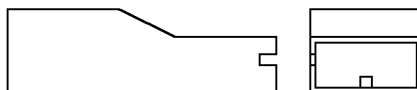
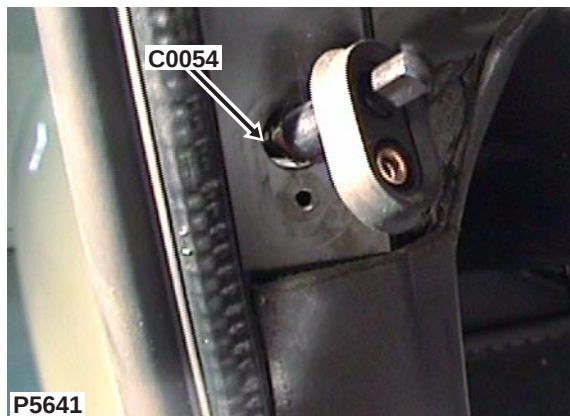


Switch - Door - LH

Female

BLACK

LH 'A' post



AAU1010

Cav	Col	CCT
1	PU	16
1	SW	17
1	PU	19

C0056

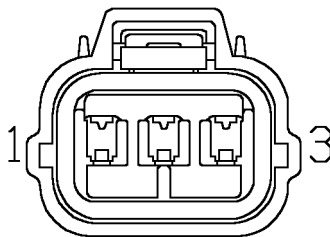
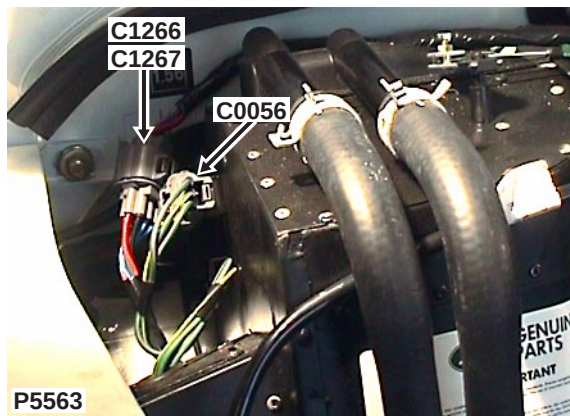
CONNECTOR



Motor - Blower - Front

Female
LIGHT GREY

Adjacent heater assembly



YPC10181

Cav	Col	CCT
1	GS	ALL
2	GY	ALL
3	PG	ALL

CONNECTOR

C0057

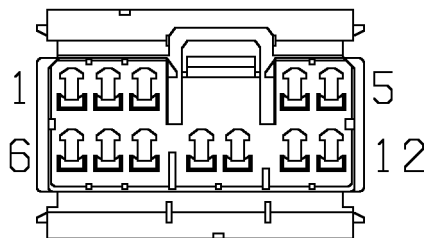
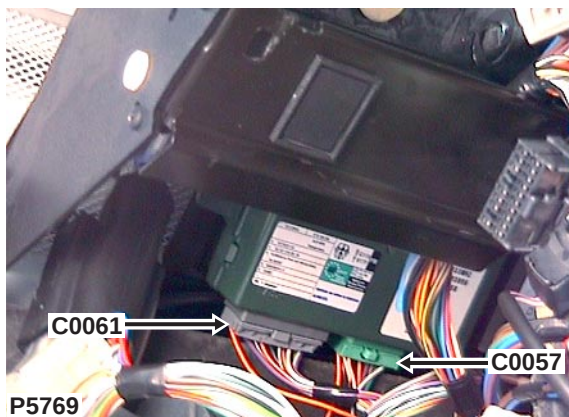


ECU - Alarm

Female

GREEN

Behind instrument pack



YPC10531

Cav	Col	CCT
1	GW	ALL
4	K	ALL
5	OW	ALL
6	GR	ALL
7	OG	ALL
8	PN	ALL
9	O	ALL
10	BO	ALL
11	B	ALL
12	OP	ALL

C0058

CONNECTOR

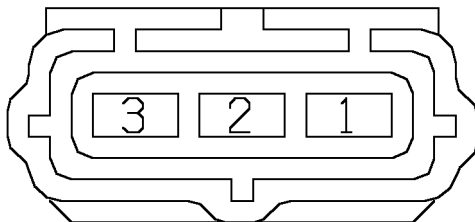
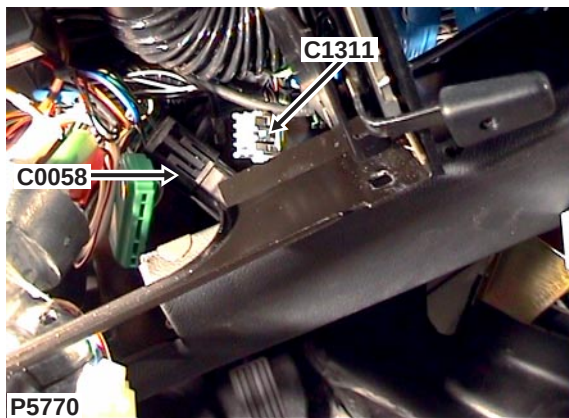
GB

Switch - Blower motor

Female

BLACK

Behind instrument pack



YPC10067

Cav	Col	CCT
1	GS	ALL
2	GY	ALL
3	B	ALL

CONNECTOR

C0061

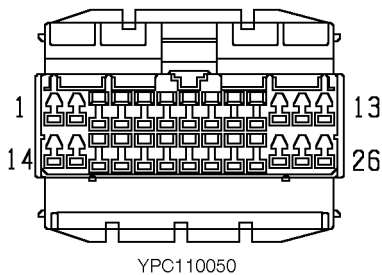
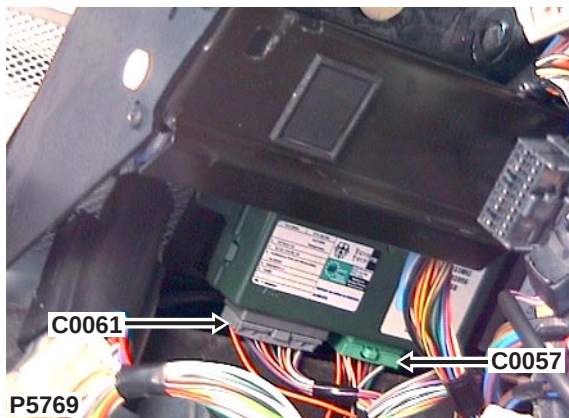


ECU - Alarm

Female

GREY

Behind instrument pack



Cav	Col	CCT
1	PW	ALL
3	WB	ALL
5	SW	ALL
9	OU	ALL
10	WG	ALL
14	LGS	21
16	PU	ALL
17	OLG	ALL
20	BN	ALL
25	PN	ALL
26	OS	ALL

C0063

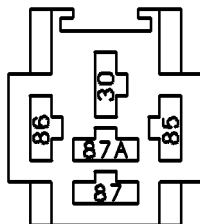
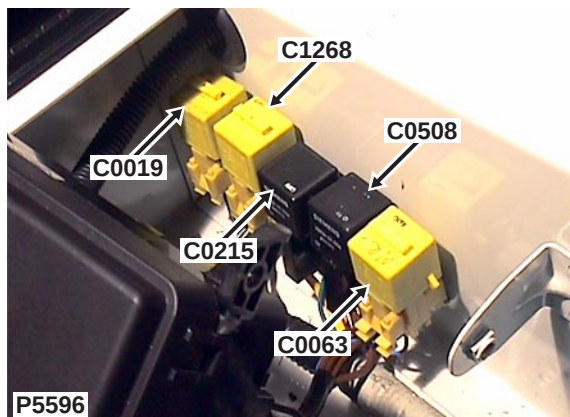
CONNECTOR



Relay - main

Female
YELLOW

Beneath RH seat



AFU3271

Cav	Col	CCT
30	NLG	21
85	N	21
86	UR	21
87	NO	21

CONNECTOR

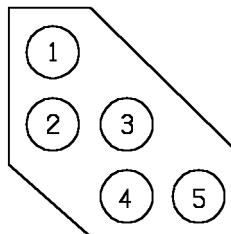
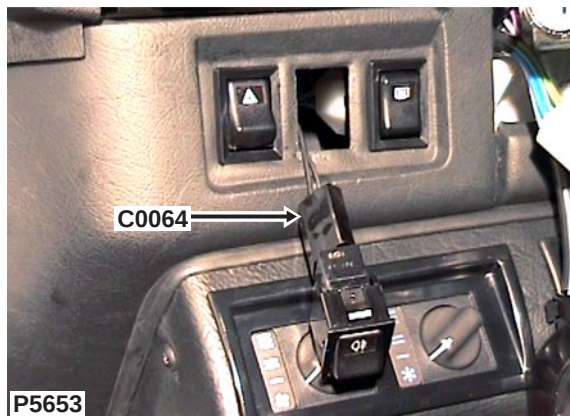
C0064

GB

Switch - Fog guard lamp -
Rear

Female
BLACK

Adjacent steering column



YPC107950

Cav	Col	CCT
2	BS	ALL
3	B	ALL

C0068

CONNECTOR

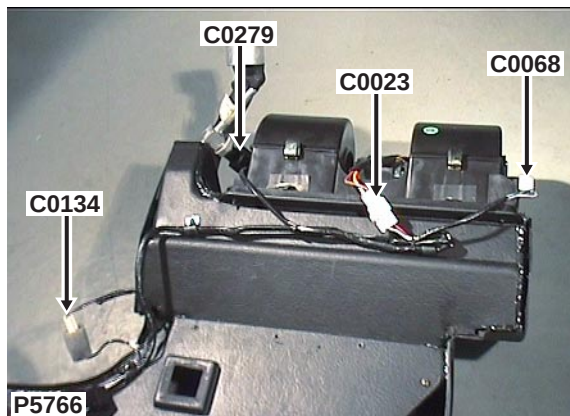


Resistor - Blower motor

Female

WHITE

Behind RH side of fascia



NO CONNECTOR FACE

Cav	Col	CCT
1	YB	1
2	U	1
4	WB	1

CONNECTOR

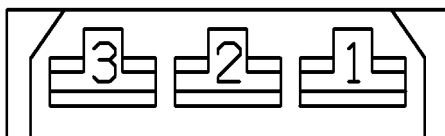
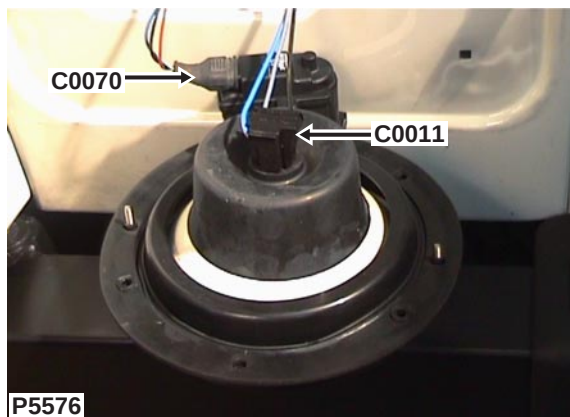
C0070

GB

Motor - Headlamp levelling -
RH

Female
NATURAL

Behind RH headlamp



YPC10426

Cav	Col	CCT
1	UY	27
2	B	27
3	RO	27

C0071

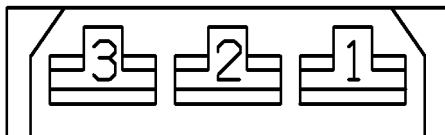
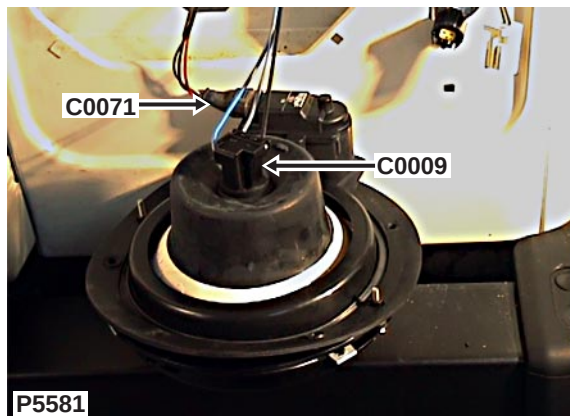
CONNECTOR



Motor - Headlamp levelling -
LH

Female
NATURAL

Behind LH headlamp



YPC10426

Cav	Col	CCT
1	UY	27
2	B	27
3	RO	27

CONNECTOR

C0074

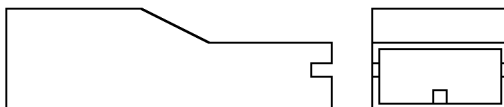
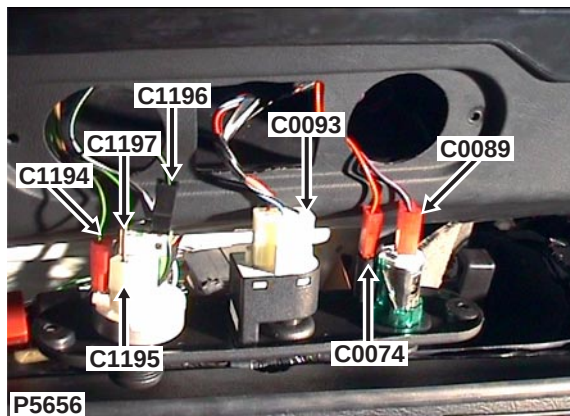
GB

Cigar lighter illumination

Female

RED

Adjacent steering column



YPC10245

Cav	Col	CCT
1	RO	ALL

C0075

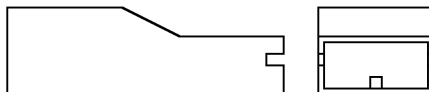
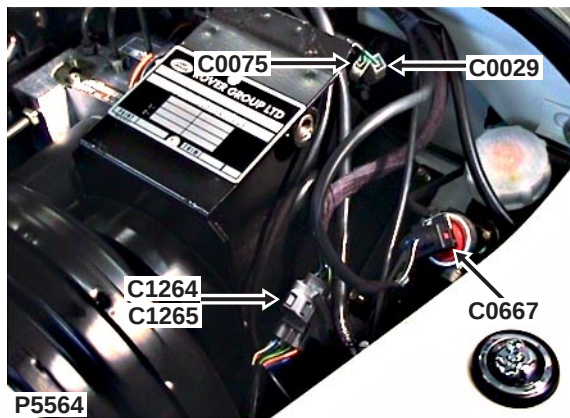
CONNECTOR



Switch - Brake pedal

Female
NATURAL

Adjacent pedal box



ADU8339

Cav	Col	CCT
1	GY	ALL

CONNECTOR

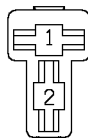
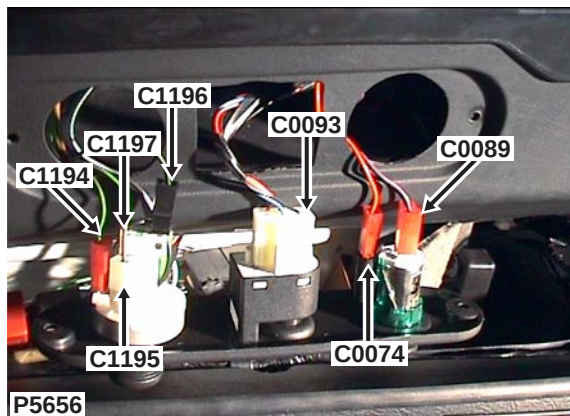
C0089



Cigar lighter

Female
RED

Adjacent steering column



YPC109020

Cav	Col	CCT
1	B	ALL
2	PG	ALL

C0090

CONNECTOR

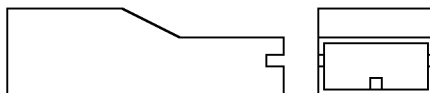
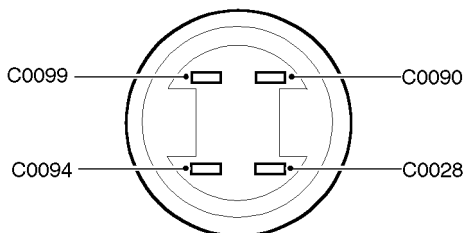


Switch - Ignition

Female

RED

Behind instrument pack



ADU8339

Cav	Col	CCT
1	WR	ALL

CONNECTOR

C0091

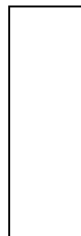
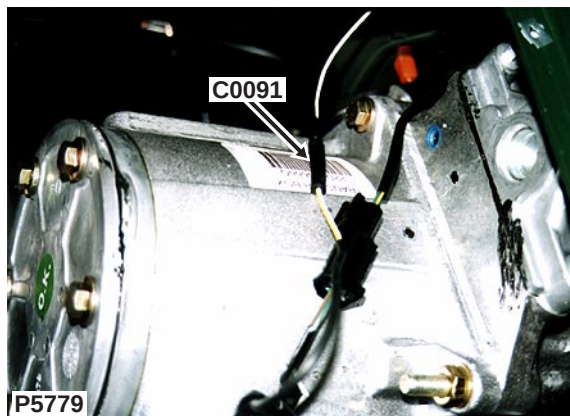


Switch - Handbrake

Female

BLACK

Base of handbrake lever



13H5155

Cav	Col	CCT
3	WY	ALL

C0092

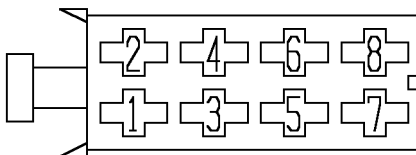
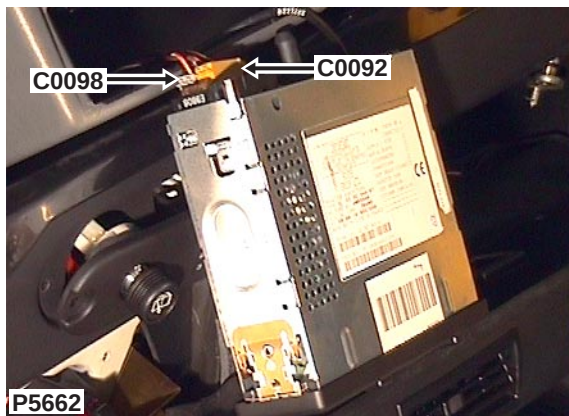
CONNECTOR



Radio / cassette player

Female
BROWN

Behind centre of fascia



YPC10191

Cav	Col	CCT
3	BK	ALL
4	BR	ALL
5	BY	ALL
6	BO	ALL

CONNECTOR

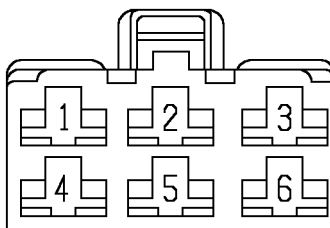
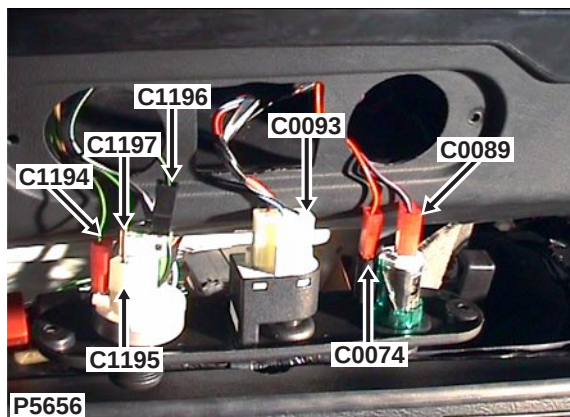
C0093

GB

Switch - Headlamp levelling

Female
NATURAL

Behind centre of fascia



YPC10004

Cav	Col	CCT
2	UY	27
3	B	27
4	RO	27
5	RO	27

C0094

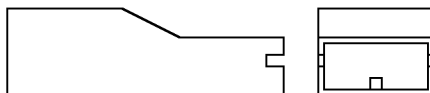
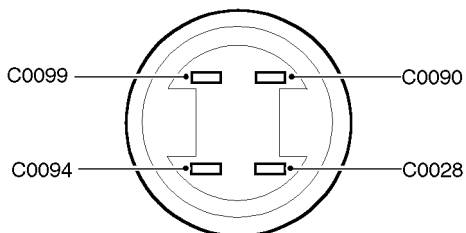
CONNECTOR



Switch - Ignition

Female
NATURAL

Behind instrument pack



ADU8339

Cav	Col	CCT
1	W	ALL

CONNECTOR

C0096

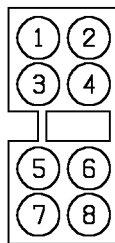
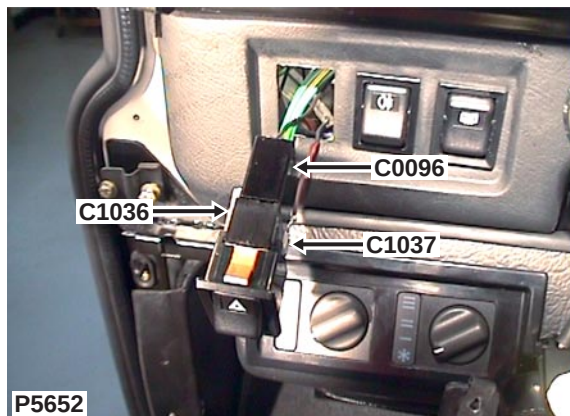
GB

Switch - Hazard warning

Female

BLACK

Adjacent steering column



13H9237

Cav	Col	CCT
1	BR	ALL
2	LGN	ALL
3	GR	ALL
4	GW	ALL
5	LG	ALL
7	PN	ALL
8	WG	ALL

C0098

CONNECTOR

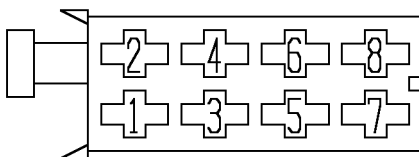
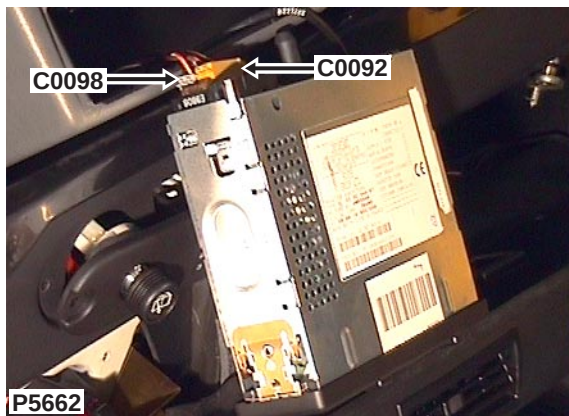


Radio / cassette player

Female

GREY

Behind centre of fascia



YPC10190

Cav	Col	CCT
4	PN	ALL
7	WO	ALL
8	B	ALL

CONNECTOR

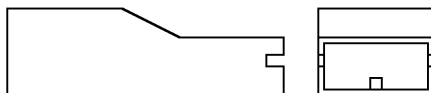
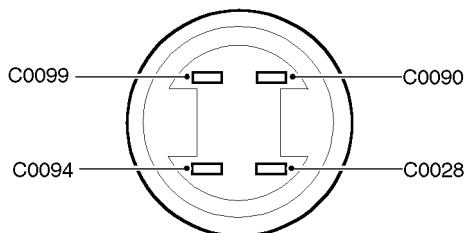
C0099



Switch - Ignition

Female
GREEN

Behind instrument pack



ADU8339

Cav	Col	CCT
1	WO	ALL

C0111

CONNECTOR

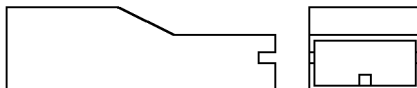


Switch - Door - Rear - RH

Female

BLACK

RH 'B' post



AAU1010

Cav	Col	CCT
1	PU	ALL

CONNECTOR

C0112

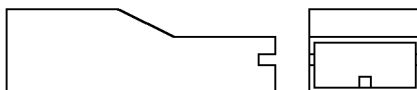


Switch - Door - Rear - LH

Female

BLACK

LH 'B' post



AAU1010

Cav	Col	CCT
1	PU	ALL

C0113

CONNECTOR

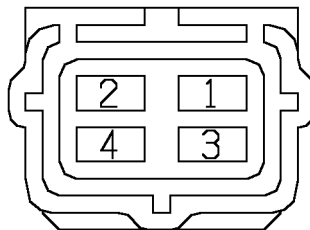
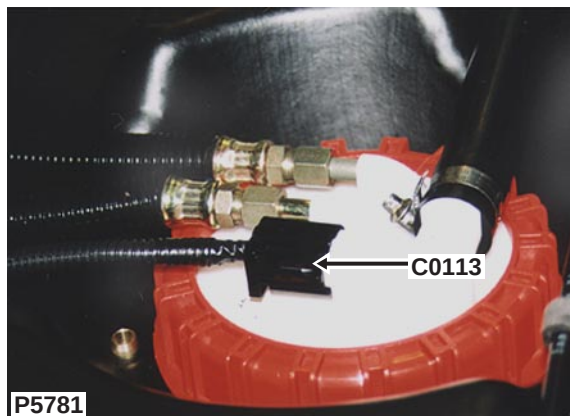


Fuel tank - Non Td5

Female

BLACK

Above fuel tank



YPC10066

Cav	Col	CCT
1	GB	22
2	SB	22
3	B	22
4	WP	22

CONNECTOR

C0114

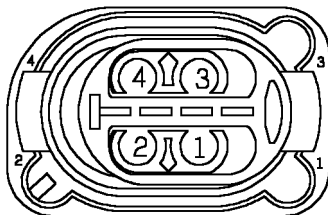
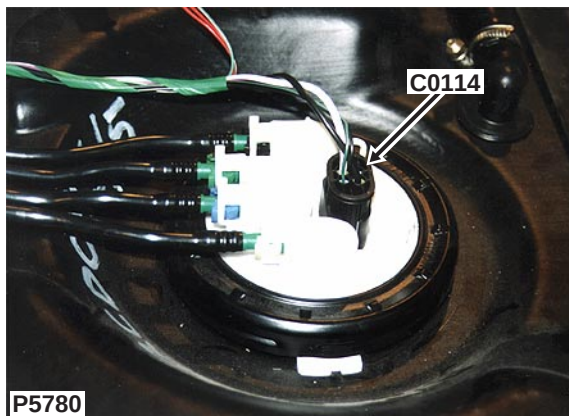


Fuel tank - Td5

Female

BLACK

Above fuel tank



YPC110200

Cav	Col	CCT
1	WP	7
1	WP	8
2	GB	7
2	GB	8
3	SB	7
3	SB	8
4	B	7
4	B	8

C0116

CONNECTOR

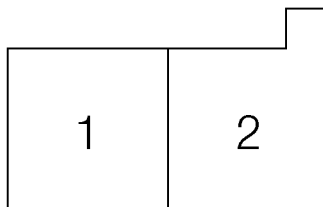
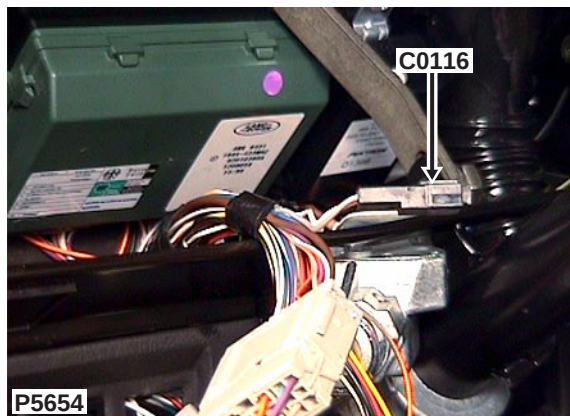


Diode

Female

BLACK

Behind instrument pack



YPC106660

Cav	Col	CCT
1	SR	ALL
2	WY	ALL

CONNECTOR

C0121

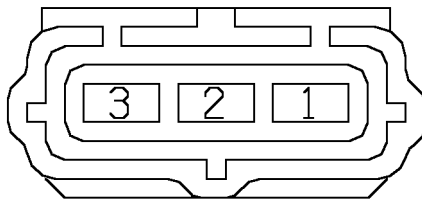
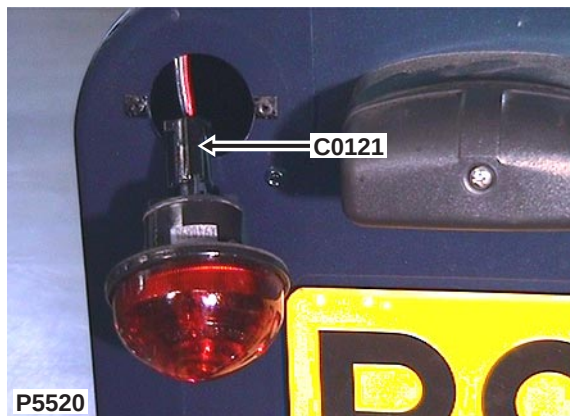
GB

Lamp - Tail - LH

Female

BLACK

LH rear of vehicle



YPC10068

Cav	Col	CCT
1	B	ALL
2	GP	ALL
3	RB	ALL

C0123

CONNECTOR

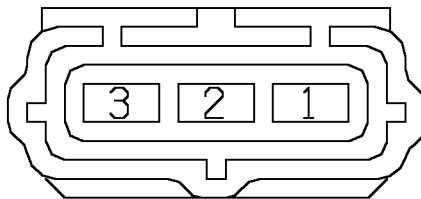


Switch - Inertia

Female

BLACK

Top of bulkhead - centre



YPC10068

Cav	Col	CCT
1	NLG	21
3	N	21

CONNECTOR

C0125

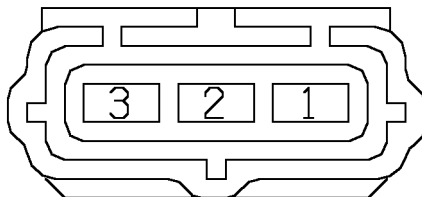
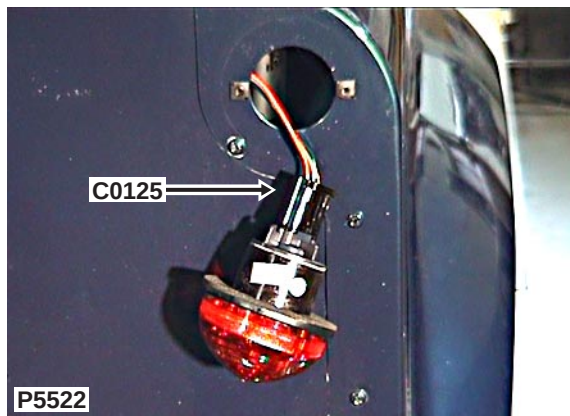


Lamp - Tail - RH

Female

BLACK

RH rear of vehicle



YPC10068

Cav	Col	CCT
1	B	ALL
2	GP	ALL
3	RO	ALL

C0134

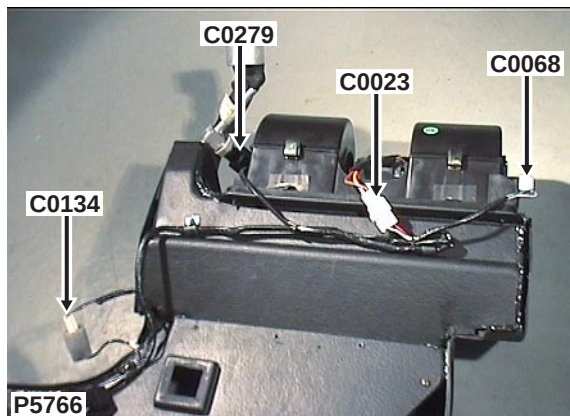
CONNECTOR



Sensor - Temperature - Air conditioning (A/C)

Female
WHITE

Behind RH side of fascia



NO CONNECTOR FACE

Cav	Col	CCT
1	P	1
2	BW	1

CONNECTOR

C0139

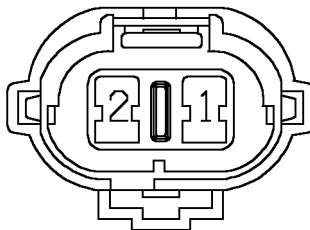
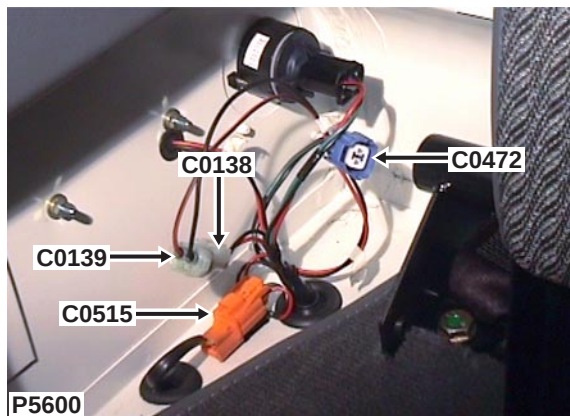
GB

Lamp - Number plate

Male

NATURAL

Behind LH rear trim panel



AFU3584

Cav	Col	CCT
1	RB	7
1	RB	8
1	B	9
2	B	ALL

C0149

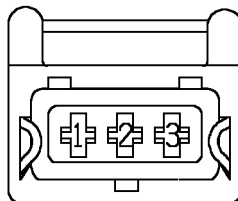
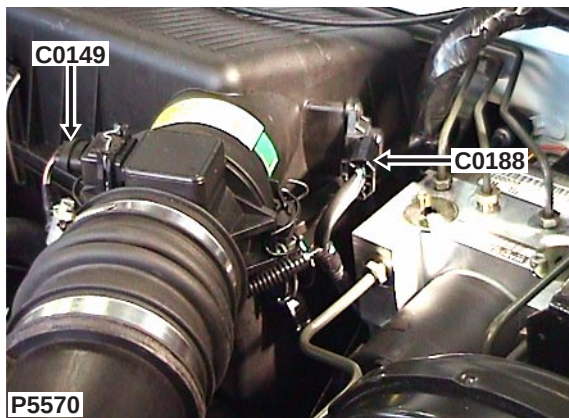
CONNECTOR

GB

Sensor - Mass air flow
(MAF) - Td5

Female
BLACK

Top of engine - RH side



YPC114930

Cav	Col	CCT
1	KB	ALL
2	SLG	ALL
3	NO	ALL

CONNECTOR

C0151

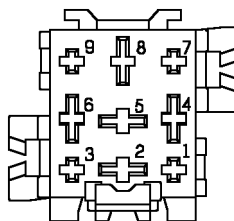
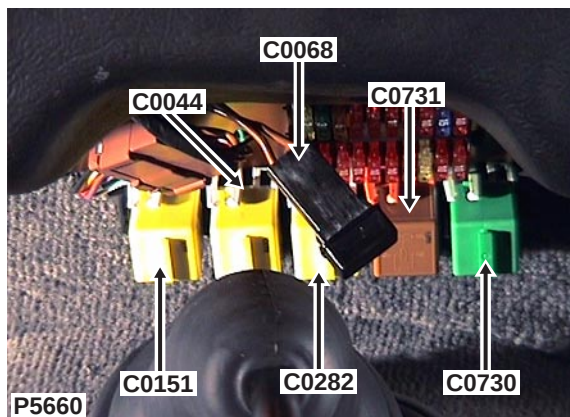


Relay - Starter

Female

BLACK

Beneath centre console



YPP100200

Cav	Col	CCT
2	NW	ALL
4	WR	ALL
6	BO	16
6	BO	17
6	B	19
8	NR	ALL

C0153

CONNECTOR

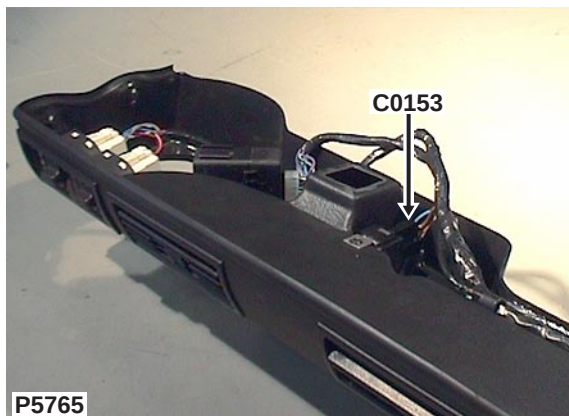


Relay - Blower

Female

BLACK

Behind LH side of fascia



NO CONNECTOR FACE

Cav	Col	CCT
1	N	1
2	UB	1
3	GW	1
4	WR	1

CONNECTOR

C0156

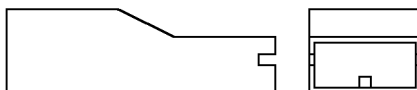
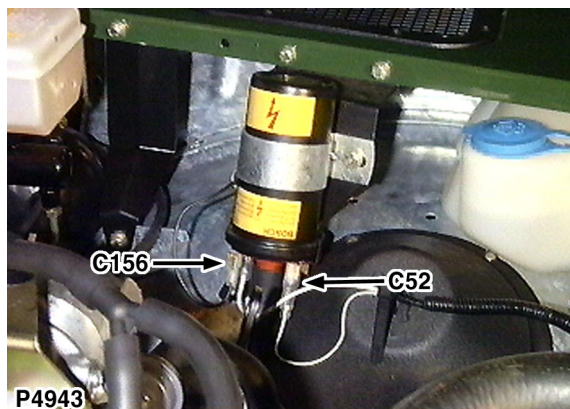


Ignition coil - V8

Female

BLACK

LH side of engine
compartment



AAU1010

Cav	Col	CCT
1	WG	ALL

C0158

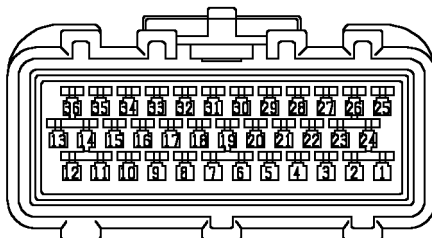
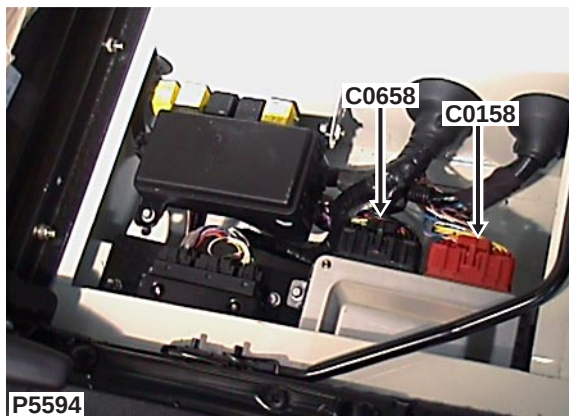
CONNECTOR



Engine control module
(ECM) - Td5

Female
RED

Beneath RH seat



YPC10530

Cav	Col	CCT
1	YP	ALL
3	U	ALL
5	KB	ALL
6	WY	ALL
7	KG	ALL
8	KP	ALL
10	WY	ALL
11	SLG	ALL
13	KB	ALL
16	SCR	ALL
17	KB	ALL
18	KB	ALL
19	YW	ALL

Cav	Col	CCT
20	KB	ALL
22	NK	ALL
23	NO	ALL
24	YR	ALL
25	Y	ALL
26	YN	ALL
27	YU	ALL
29	GU	ALL
30	KB	ALL
33	WB	ALL
34	GB	ALL
36	WU	ALL

CONNECTOR

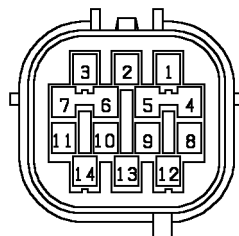
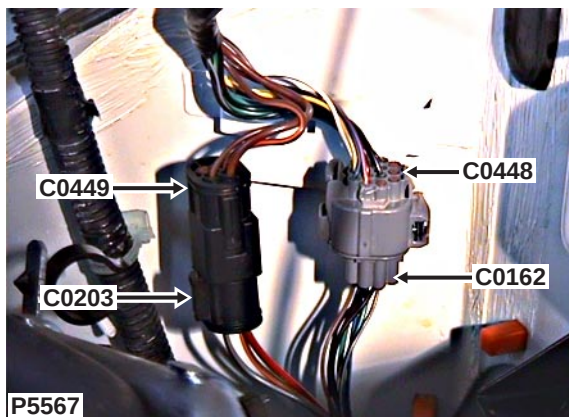
C0162

GB

Main harness to engine
harness - Td5

Male
GREY

Lower RH rear of engine
compartment



YPC10469

Cav	Col	CCT
1	WN	ALL
2	NY	ALL
3	BU	ALL
4	GN	ALL
5	GY	ALL
6	B	ALL
8	BS	1
9	BP	1
10	BR	ALL
13	WG	ALL
14	GU	ALL

C0167

CONNECTOR

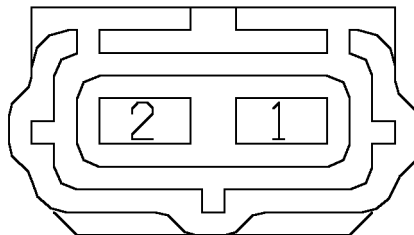
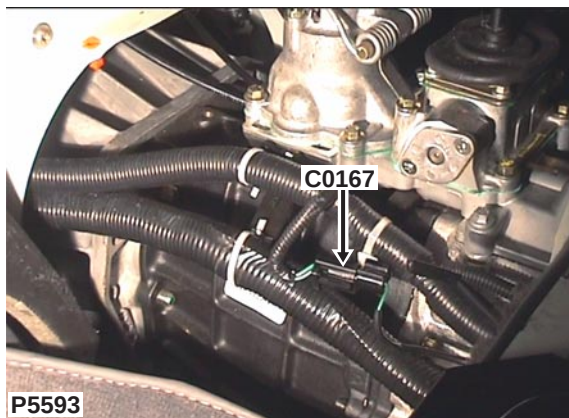


Switch - Reverse lamp - Td5

Female

BLACK

LH side of gearbox



YPC10070

Cav	Col	CCT
1	GN	ALL
2	GY	ALL

CONNECTOR

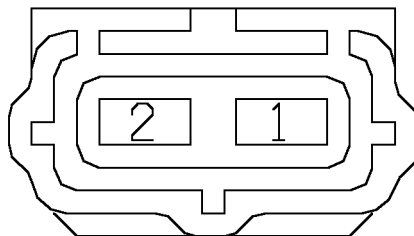
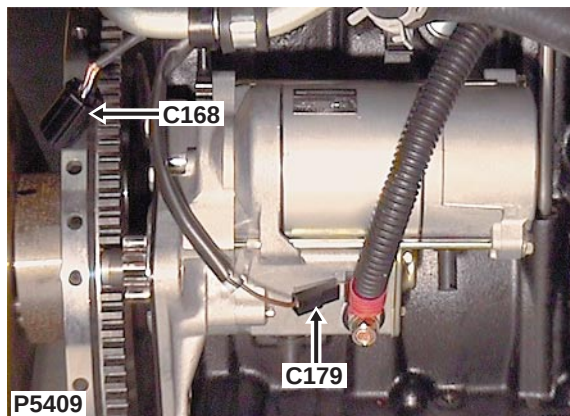
C0168

GB

Sensor - Crankshaft position
(CKP) - Td5

Female
BLACK

Lower RH rear of engine
compartment



YPC10070

Cav	Col	CCT
1	KB	ALL
2	WU	ALL

C0169

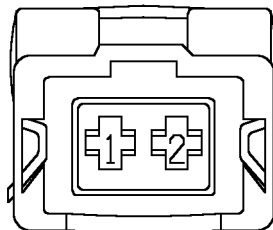
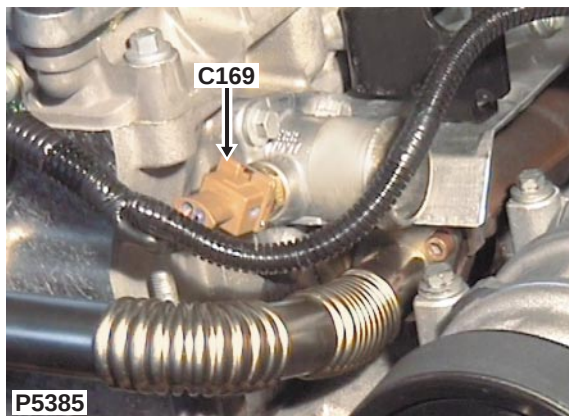
CONNECTOR



Sensor - Engine coolant
temperature (ECT) - Td5

Female
BROWN

Front RH side of engine



YPC107780

Cav	Col	CCT
1	GU	ALL
1	KB	ALL
2	KG	ALL

CONNECTOR

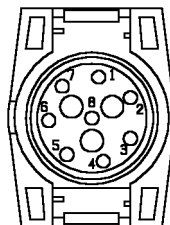
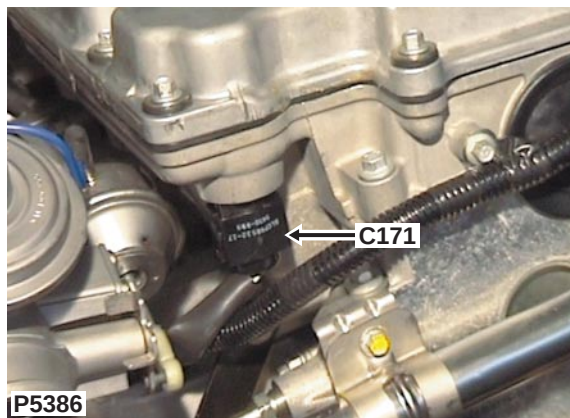
C0171



Engine harness to injector
harness - Td5

Female
BLACK

Front LH side of engine



YYC10324

Cav	Col	CCT
1	Y	ALL
2	YN	ALL
4	YR	ALL
5	YP	ALL
6	YU	ALL
7	NO	ALL
8	NK	ALL

C0178

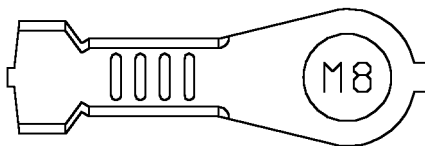
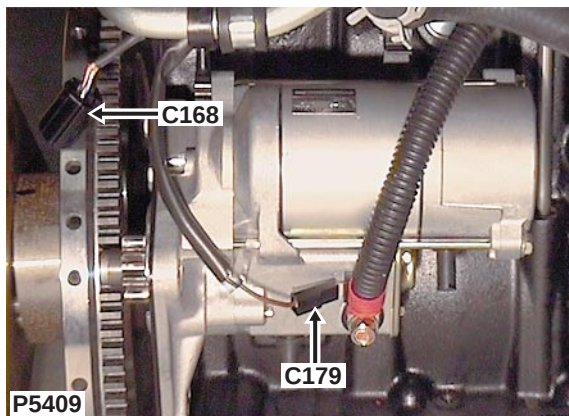
CONNECTOR



Starter motor - Td5

Eyelet
TIN PLATE

Lower rear of engine - RH
side



YPG10018

Cav	Col	CCT
1	N	ALL

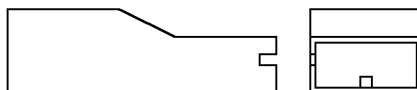
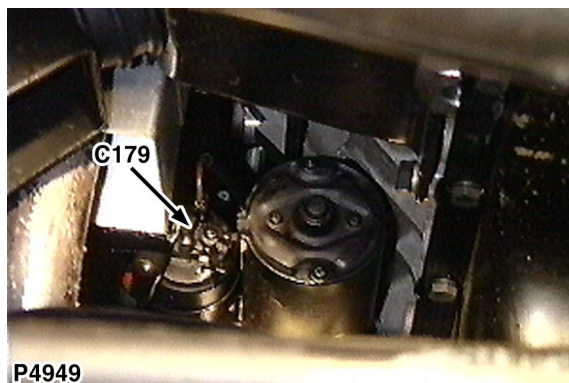
CONNECTOR

C0179

Solenoid - Starter motor -
V8

Female
BLACK

Lower rear of engine - RH
side



AAU1010

Cav	Col	CCT
1	NR	ALL

C0179

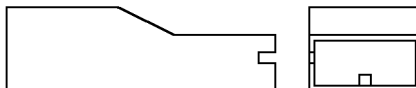
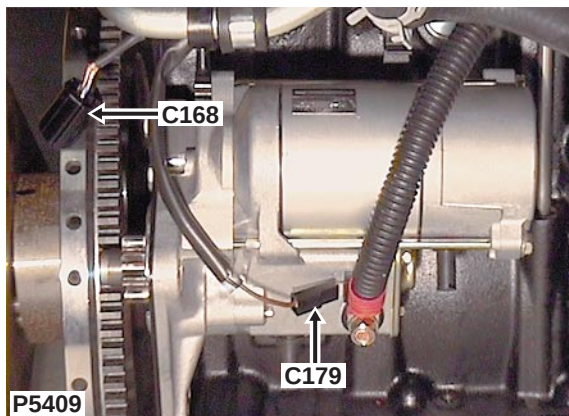
CONNECTOR



Solenoid - Starter motor -
Td5

Female
BLACK

Lower rear of engine - RH
side



AAU1010

Cav	Col	CCT
1	NR	ALL

CONNECTOR

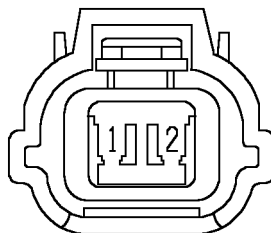
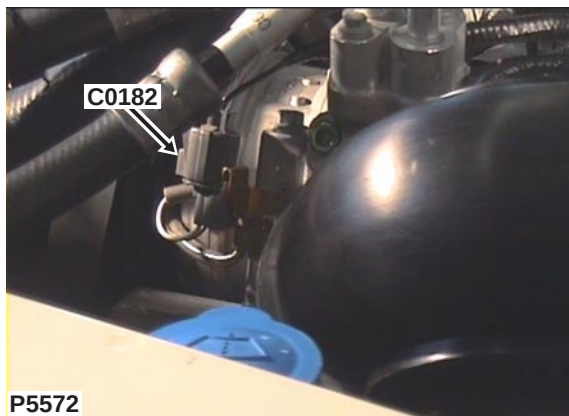
C0182

GB

Clutch - Compressor - Air conditioning (A/C) - Td5

Female
GREY

Front RH side of engine



YPC10180

Cav	Col	CCT
1	BG	1
2	B	1

C0183

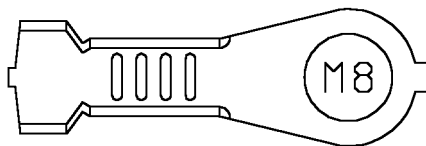
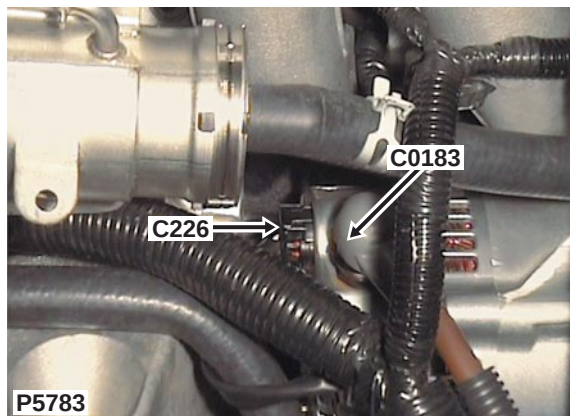
CONNECTOR



Power - Alternator - Td5

Eyelet
BRASS

Front RH side of engine



YPG10018

Cav	Col	CCT
1	N	ALL

CONNECTOR

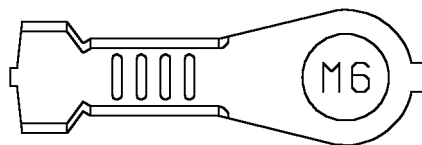
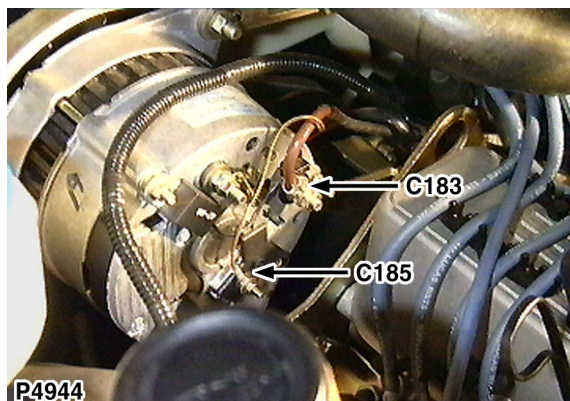
C0183



Power - Alternator - V8

Eyelet
BRASS

Front LH side of engine



YPG100740

Cav	Col	CCT
1	N	ALL

C0184

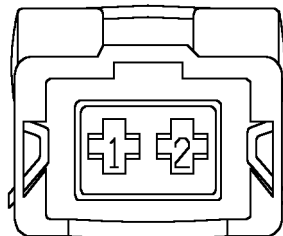
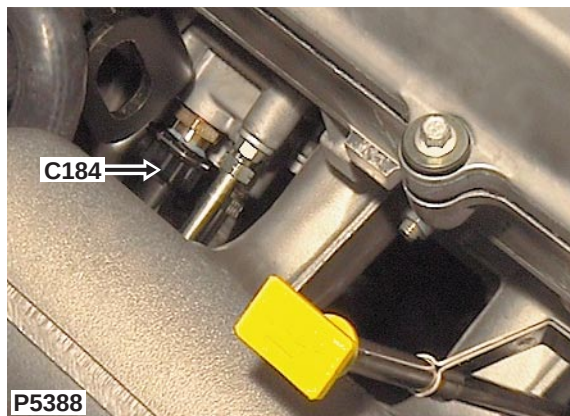
CONNECTOR



Sensor - Temperature - Fuel
rail - Td5

Female
BLACK

Top of engine - RH side



YPC107790

Cav	Col	CCT
1	KB	ALL
2	YW	ALL

CONNECTOR

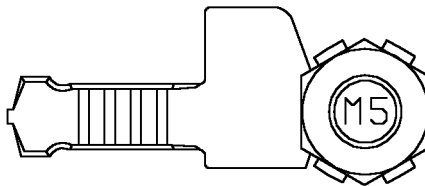
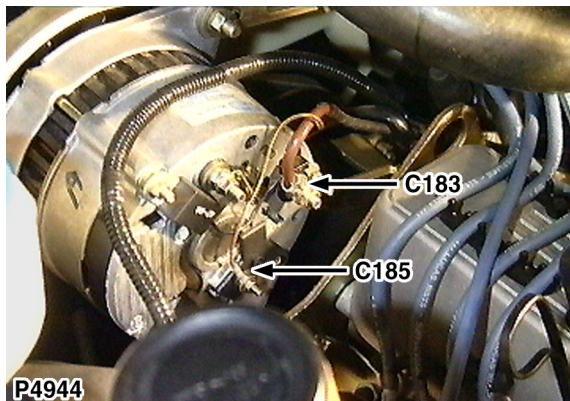
C0185



Warning lamp - Ignition / no charge - V8

Eyelet
BRASS

Front of engine - centre



YPG10044

Cav	Col	CCT
1	YN	ALL

C0187

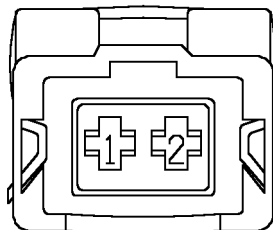
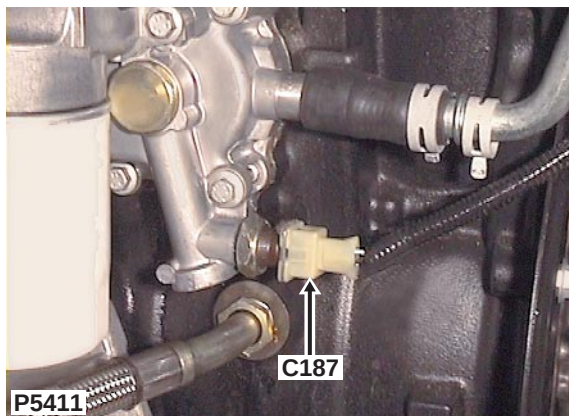
CONNECTOR



Switch - Oil pressure - Td5

Female
NATURAL

Lower rear of engine - RH
side



YPC107830

Cav	Col	CCT
1	WN	ALL
2	B	ALL

CONNECTOR

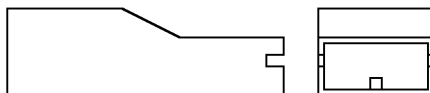
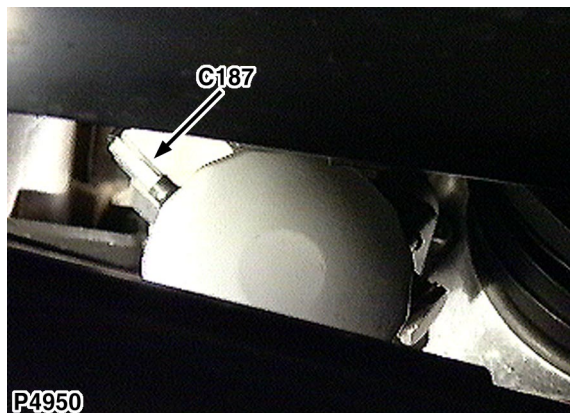
C0187



Switch - Oil pressure - V8

Female
NATURAL

RH side of engine



ADU8339

Cav	Col	CCT
1	WN	ALL

C0188

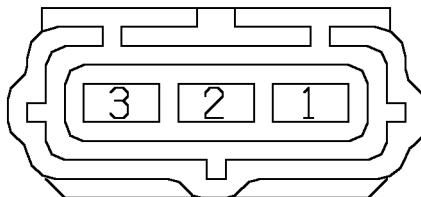
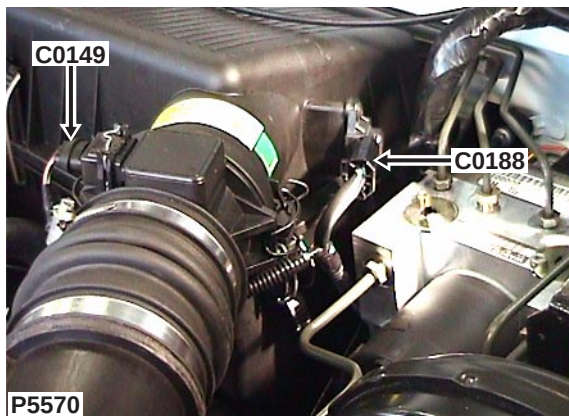
CONNECTOR

GB

Sensor - Ambient Air
Pressure (AAP) - Td5

Female
BLACK

Rear LH side of engine
compartment



YPC10068

Cav	Col	CCT
1	KB	ALL
2	WY	ALL
3	KP	ALL

CONNECTOR

C0191

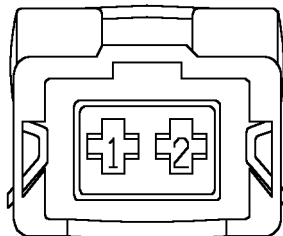
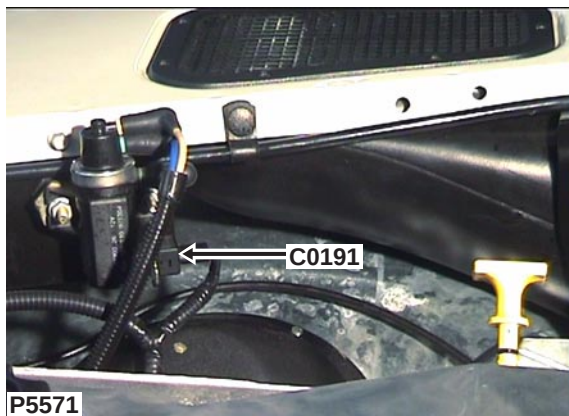


Solenoid - EGR - Td5

Female

BLACK

Front RH side of engine compartment



YPC107790

Cav	Col	CCT
1	NO	ALL
2	U	ALL

C0195

CONNECTOR

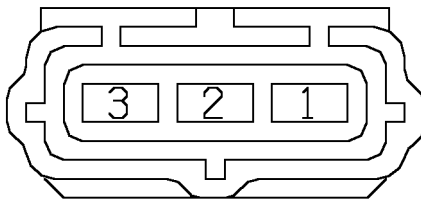
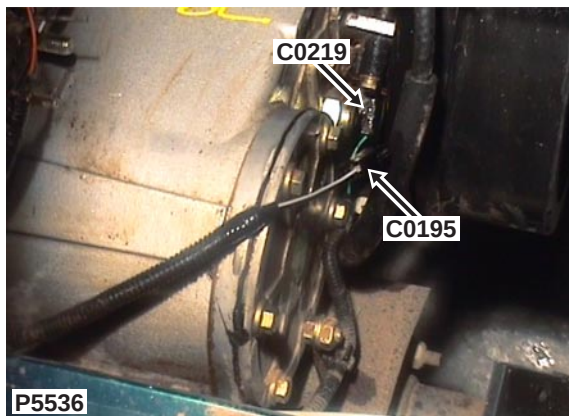


Speed transducer - Td5

Female

BLACK

RH side of gearbox



YPC10068

Cav	Col	CCT
1	GY	ALL
2	B	ALL
3	BR	ALL

CONNECTOR

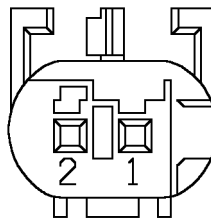
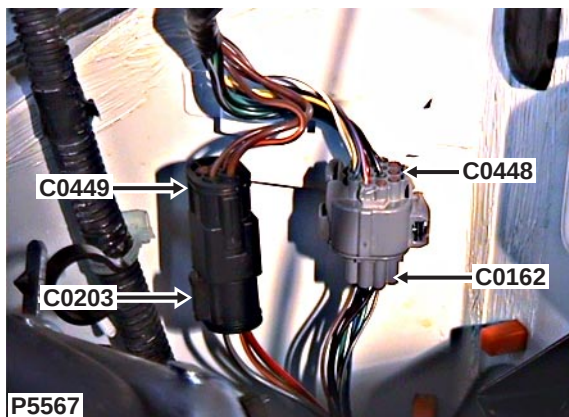
C0203

GB

Engine harness to main
harness - Td5

Male
BLACK

Lower RH rear of engine
compartment



YPC110170

Cav	Col	CCT
1	NR	ALL
2	WG	1
2	NO	ALL
3	NS	1

C0215

CONNECTOR

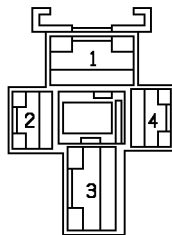
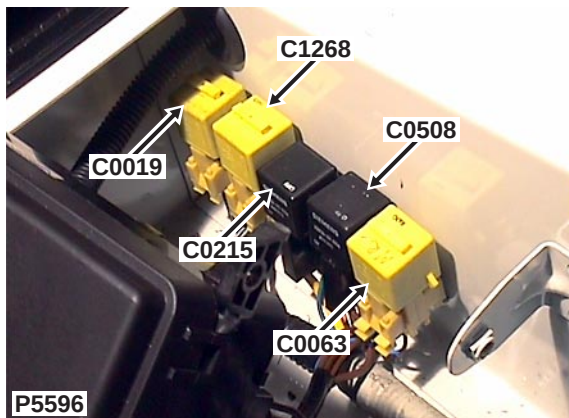
GB

Relay - Glow plug - Td5

Female

BLACK

Beneath RH seat



YPP10005

Cav	Col	CCT
1	N	ALL
2	NO	ALL
3	YB	ALL
4	GU	ALL

CONNECTOR

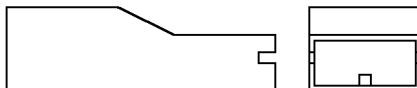
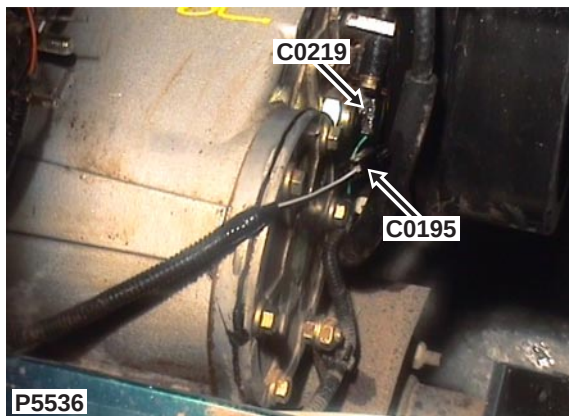
C0219

GB

Switch - Oil temperature -
V8

Female
BLACK

Above gearbox



AAU1010

Cav	Col	CCT
1	SR	ALL

C0226

CONNECTOR

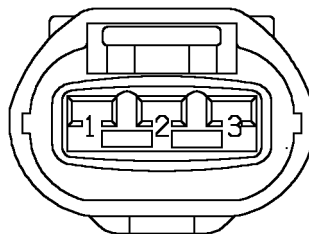
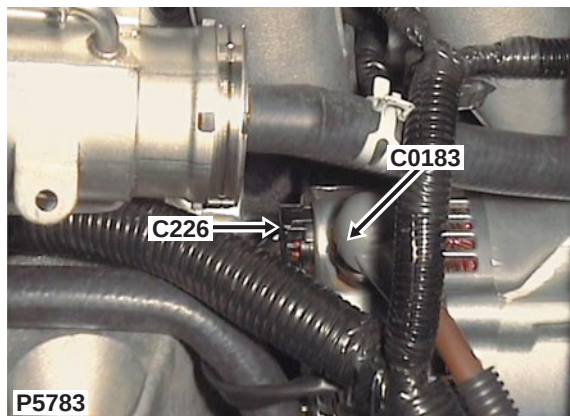


Alternator / generator - Td5

Female

BLACK

Front RH side of engine



YPC10604

Cav	Col	CCT
1	NY	ALL
2	GY	ALL

CONNECTOR

C0230

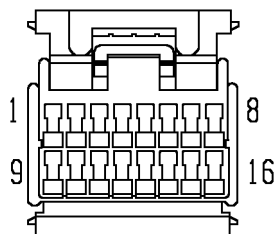
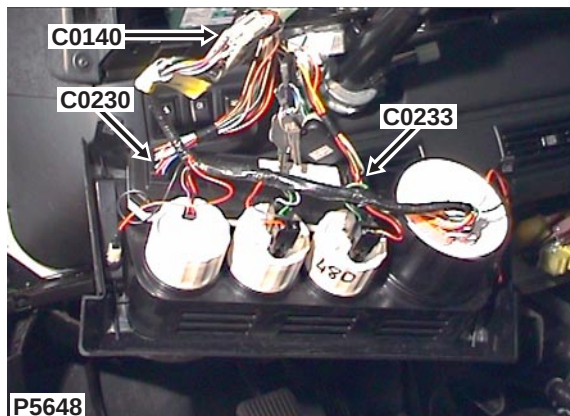


Instrument Pack

Female

BLACK

Behind instrument pack



YPC10174

Cav	Col	CCT
1	WG	ALL
2	YB	28
4	OG	21
5	SR	ALL
6	RS	ALL
7	RS	ALL
8	B	ALL
9	BW	ALL
10	RS	ALL
13	BW	ALL
14	BW	ALL
16	YS	ALL

C0232

CONNECTOR

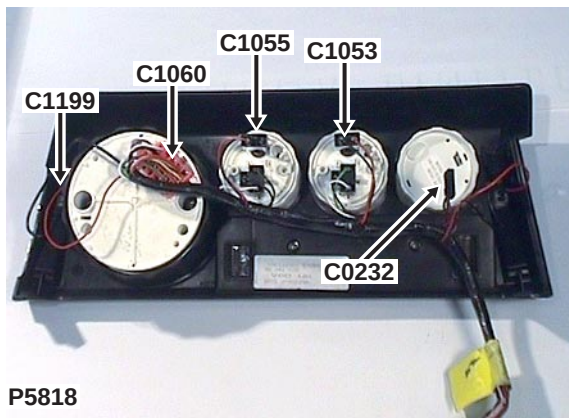


Clock - Analogue

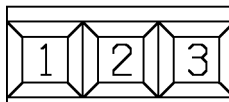
Female

BLACK

Behind instrument pack



P5818



YPC109010

Cav	Col	CCT
1	RO	ALL
2	B	ALL
3	PN	ALL

CONNECTOR

C0233

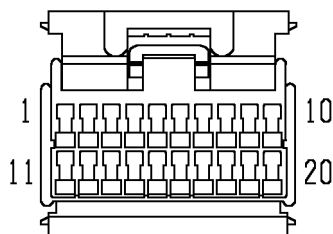
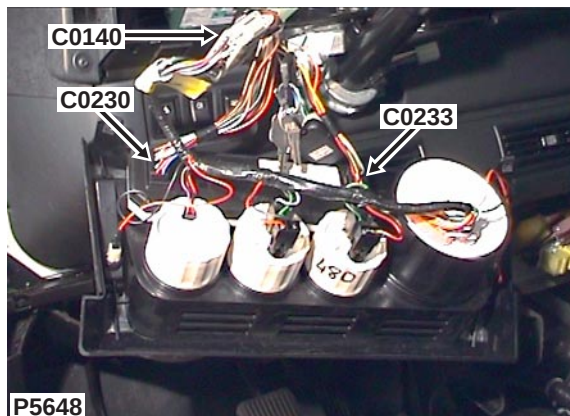


Instrument Pack

Female

BLACK

Behind instrument pack



YPC10175

Cav	Col	CCT
1	UW	3
2	GW	ALL
3	WO	ALL
4	RY	ALL
5	O	ALL
6	BK	4
7	BU	ALL
8	WB	ALL
9	BR	ALL

Cav	Col	CCT
10	LGP	ALL
11	UW	4
11	RS	21
12	BY	ALL
13	WN	ALL
16	WG	ALL
17	YN	ALL
18	GR	ALL
20	RO	ALL

C0275

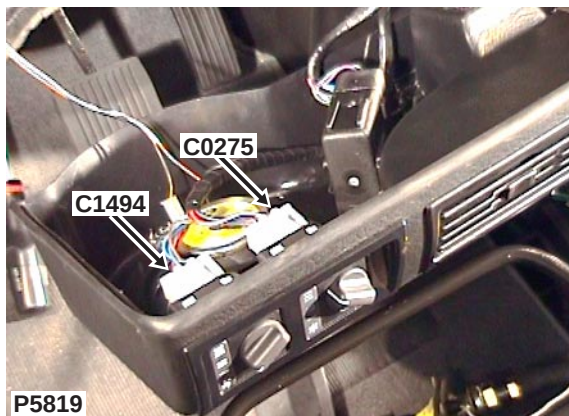
CONNECTOR

GB

Switch - Temperature
control

Female
WHITE

Behind LH side of fascia



NO CONNECTOR FACE

Cav	Col	CCT
2	RW	1
3	BU	1
4	RB	1
5	B	1
6	UN	1

CONNECTOR

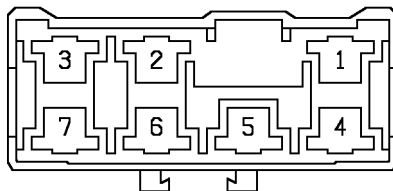
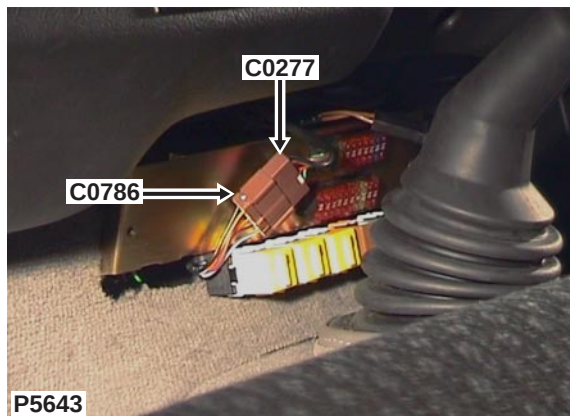
C0277

GB

Main harness to air conditioning (A/C) harness

Male
BROWN

Beneath centre console



YPC10479

Cav	Col	CCT
1	GW	1
3	SR	1
4	BW	1
5	RB	1
6	N	1
7	BU	1

C0278

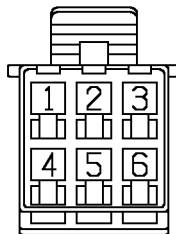
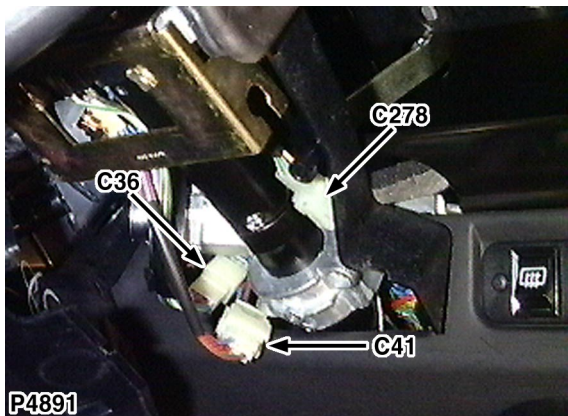
CONNECTOR

GB

Switch - Wash / wipe -
Windscreen

Female
NATURAL

Behind steering column
cowl - RH side



YPC10038

Cav	Col	CCT
1	ULG	ALL
2	LGB	ALL
3	WG	ALL
4	YLG	ALL
5	RLG	ALL
6	WG	ALL

CONNECTOR

C0279



Switch - Trinary

Female

BLACK

Behind RH side of fascia



NO CONNECTOR FACE

Cav	Col	CCT
1	NG	1
2	UB	1
3	O	1
4	SR	1

C0280

CONNECTOR

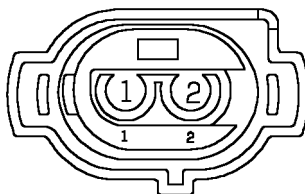
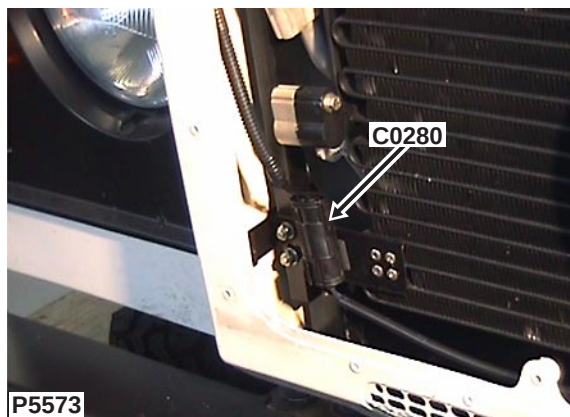


Fan - Condenser - Td5

Female

BLACK

In front of radiator



YPC110300

Cav	Col	CCT
1	BN	1
2	B	1

CONNECTOR

C0282

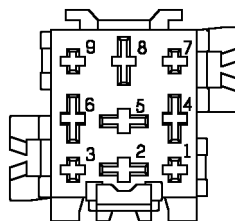
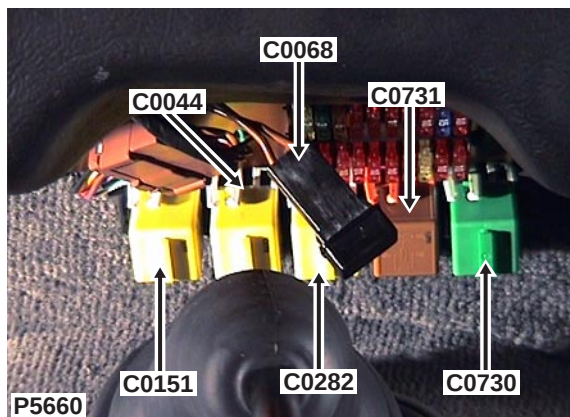


Relay - Headlamp

Female

BLACK

Behind centre of fascia



YPP100200

Cav	Col	CCT
2	U	ALL
4	WG	ALL
6	B	ALL
8	U	ALL

C0285

CONNECTOR

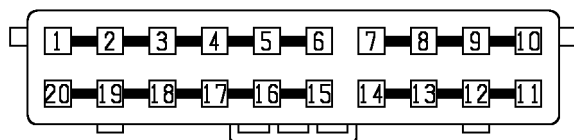
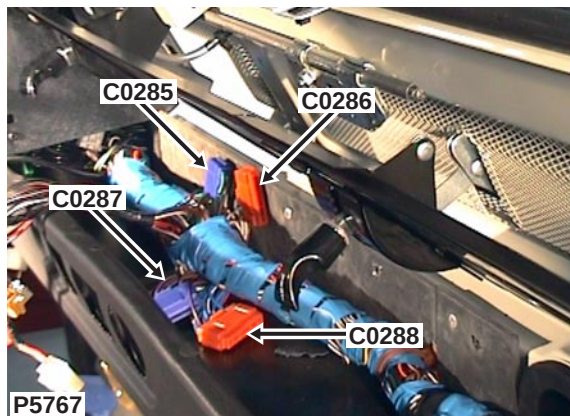


Header

Female

BLUE

Behind centre of fascia



YQC10005

Cav	Col	CCT
1	WG	ALL
2	WG	ALL
3	WG	ALL
4	WG	ALL
5	WG	ALL
6	WG	1
7	PB	ALL
8	PB	15
9	PB	ALL
10	PB	ALL

Cav	Col	CCT
11	WG	4
12	WG	ALL
13	WG	ALL
14	WG	ALL
15	WG	ALL
16	WG	ALL
17	WG	ALL
18	WG	22
19	WG	ALL
20	WG	ALL

CONNECTOR

C0286

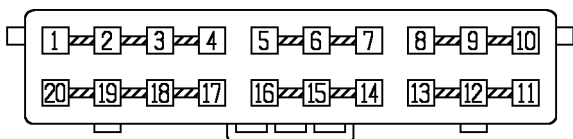
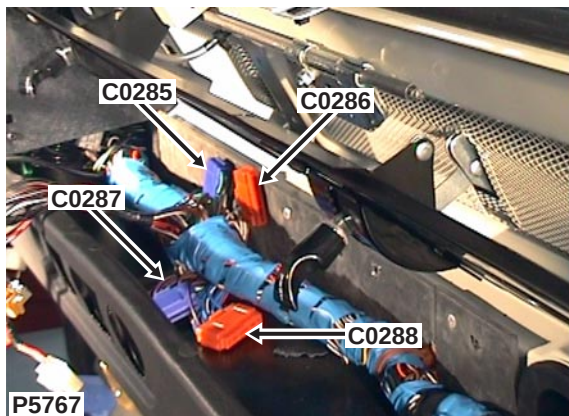


Header

Female

ORANGE

Behind centre of fascia



YQC10003

Cav	Col	CCT
1	WG	ALL
2	WG	15
3	B	15
5	WY	ALL
6	WY	ALL
7	WY	ALL
8	GP	ALL
9	GP	ALL
10	GP	21
11	SR	ALL

Cav	Col	CCT
12	SR	ALL
13	SR	ALL
14	WB	ALL
15	WB	ALL
16	WB	ALL
17	B	ALL
18	B	ALL
19	B	ALL
20	B	21

C0287

CONNECTOR

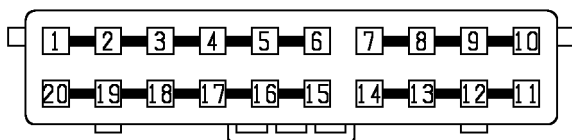
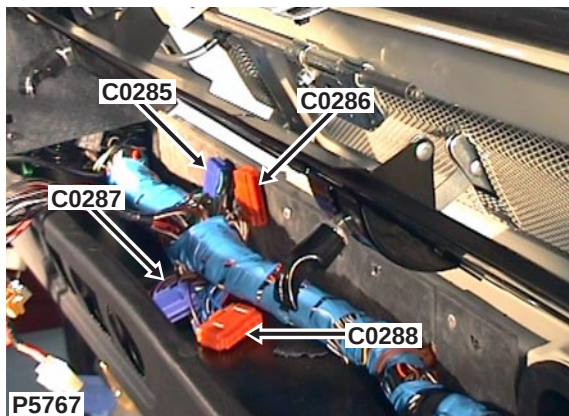


Header

Female

BLUE

Behind centre of fascia



YQC10005

Cav	Col	CCT
1	B	ALL
2	B	ALL
3	B	ALL
4	B	ALL
5	B	ALL
6	B	27
7	LGB	ALL
8	LGB	ALL
9	LGB	ALL
11	PN	16
11	PN	17

Cav	Col	CCT
11	P	18
11	P	19
12	PN	ALL
13	PN	ALL
14	PN	ALL
15	NU	ALL
16	NU	ALL
17	NU	15
18	NU	15
19	NU	ALL

CONNECTOR

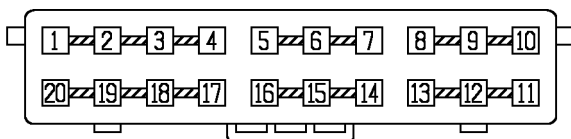
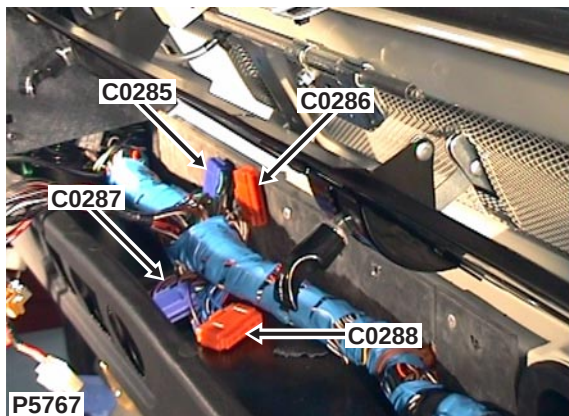
C0288



Header

Female
ORANGE

Behind centre of fascia



YQC10003

Cav	Col	CCT
1	BW	ALL
2	BW	ALL
3	BW	ALL
4	BW	12
5	RB	ALL
6	RB	ALL
7	RB	ALL
8	UY	27
9	UY	27
10	UY	27

Cav	Col	CCT
11	K	12
12	K	21
13	K	21
14	UW	ALL
15	UW	ALL
16	UW	ALL
17	U	ALL
18	U	ALL
19	U	ALL
20	U	25

C0289

CONNECTOR

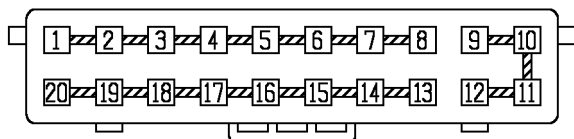
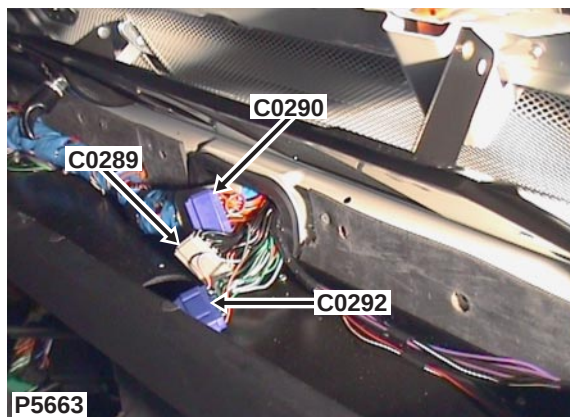


Header

Female

GREY

Behind centre of fascia



YQC10002

Cav	Col	CCT
1	B	4
2	B	ALL
3	B	25
4	B	12
6	B	ALL
7	B	ALL
8	B	28
9	OW	ALL
10	OW	15

Cav	Col	CCT
11	B	15
13	B	ALL
14	B	ALL
15	B	ALL
16	B	ALL
17	B	ALL
18	B	ALL
19	B	ALL
20	B	ALL

CONNECTOR

C0290

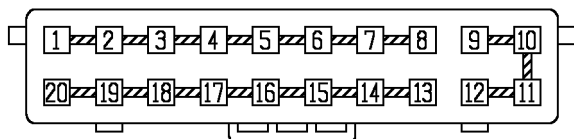
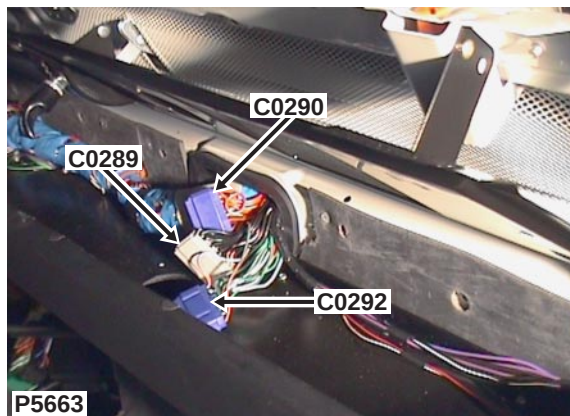


Header

Female

GREY

Behind centre of fascia



YQC10002

Cav	Col	CCT
1	RO	ALL
2	RO	ALL
3	RO	ALL
4	RO	ALL
5	RO	25
6	RO	27
7	RO	27
8	RO	ALL
9	B	ALL

Cav	Col	CCT
10	B	ALL
11	B	ALL
12	B	ALL
13	RO	ALL
14	RO	ALL
15	RO	ALL
16	RO	1
17	RO	27
18	RO	27

C0292

CONNECTOR

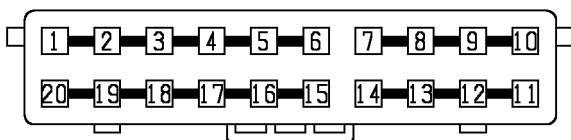
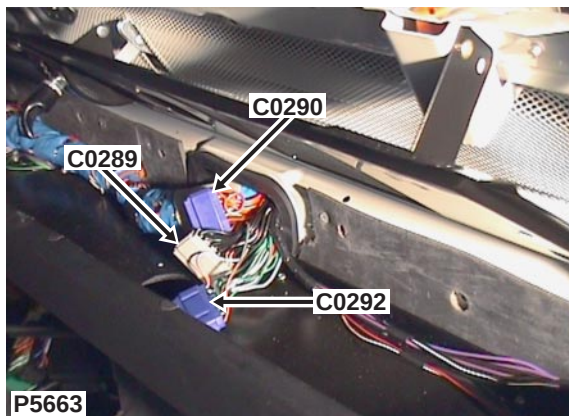


Header

Female

BLUE

Behind centre of fascia



YQC10005

Cav	Col	CCT
1	GR	ALL
2	GR	ALL
3	GR	ALL
4	GR	ALL
5	GR	ALL
6	GR	ALL
7	GY	ALL
8	GY	ALL
9	GY	ALL
11	B	ALL

Cav	Col	CCT
12	B	1
13	B	ALL
14	B	ALL
15	GW	ALL
16	GW	ALL
17	GW	ALL
18	GW	ALL
19	GW	ALL
20	GW	ALL

CONNECTOR

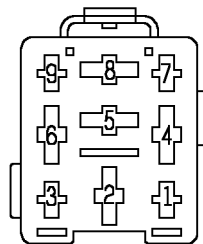
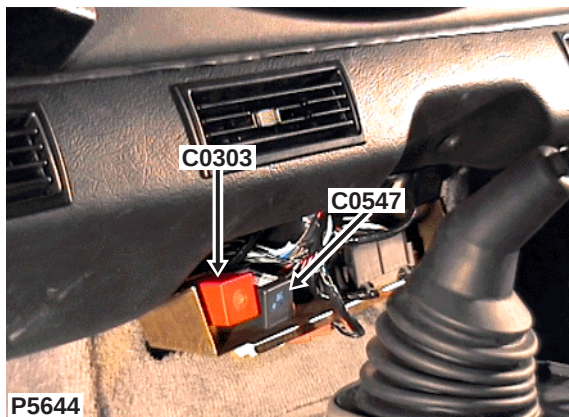
C0303

GB

ECU - Delay - Windscreen wiper

Female
BLACK

Beneath centre console



YPP10001

Cav	Col	CCT
1	WG	ALL
2	YLG	ALL
4	B	ALL
5	NLG	ALL
6	LGB	ALL
8	WG	ALL

C0306

CONNECTOR

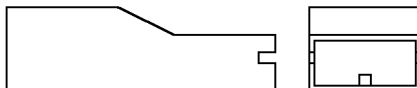
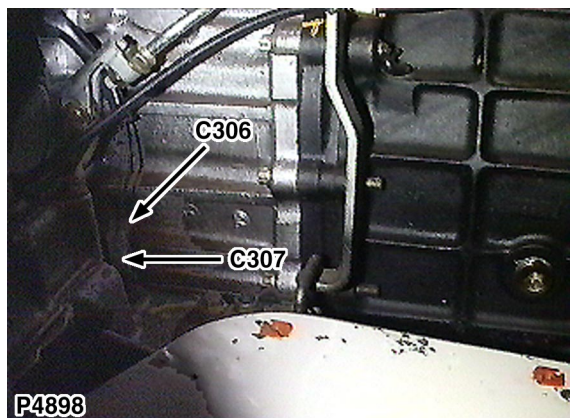


Differential lock unit

Female

BLACK

LH side of gearbox



AAU1010

Cav	Col	CCT
1	BU	ALL

CONNECTOR

C0307

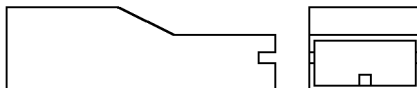
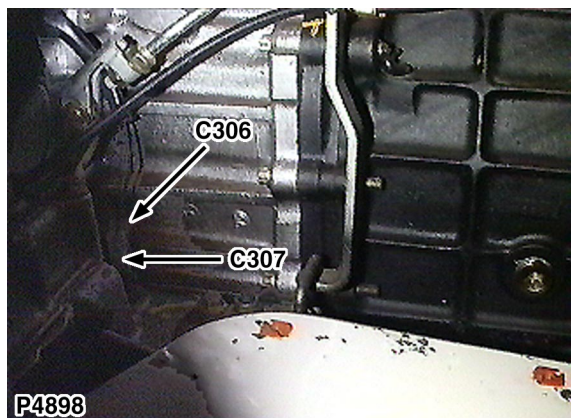


Differential lock unit

Female

BLACK

LH side of gearbox



AAU1010

Cav	Col	CCT
1	B	ALL

C0308

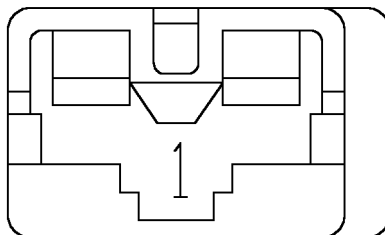
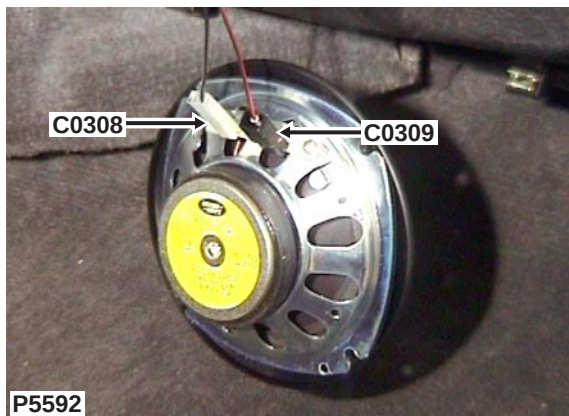
CONNECTOR



Speaker - Front - RH

Female
NATURAL

Under RH side of fascia



AFU4521

Cav	Col	CCT
1	BK	ALL

CONNECTOR

C0309

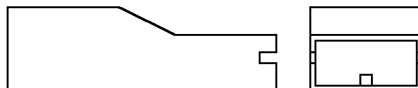
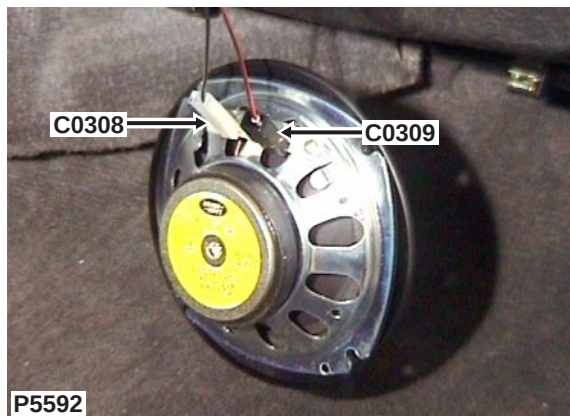


Speaker - Front - RH

Female

BLACK

Under RH side of fascia



AAU1010

Cav	Col	CCT
1	BR	ALL

C0310

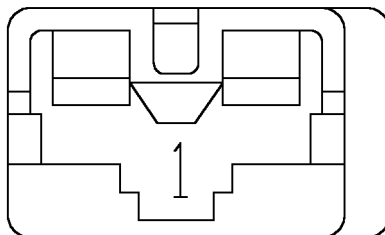
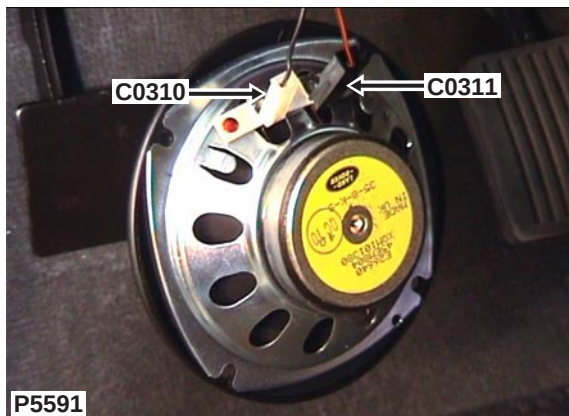
CONNECTOR



Speaker - Front - LH

Female
NATURAL

Under LH side of fascia



AFU4521

Cav	Col	CCT
1	BY	ALL

CONNECTOR

C0311

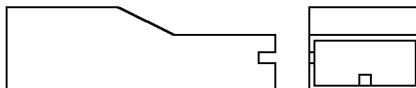
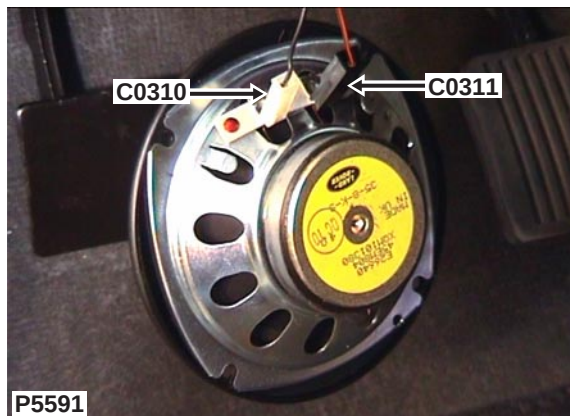


Speaker - Front - LH

Female

BLACK

Under LH side of fascia



AAU1010

Cav	Col	CCT
1	BO	ALL

C0350

CONNECTOR

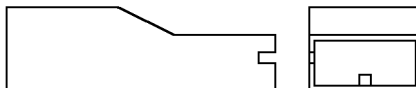
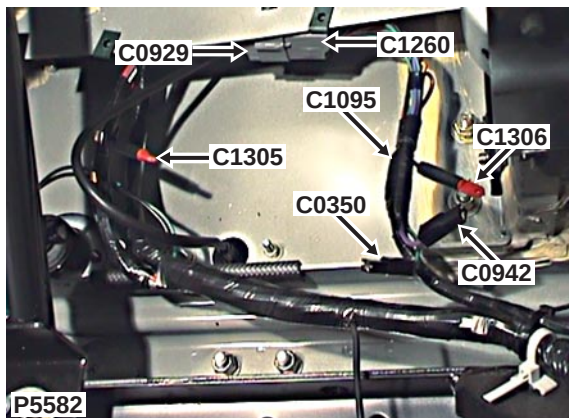


Socket - Accessory

Female

BLACK

Below RH rear wheelarch



AAU1010

Cav	Col	CCT
1	P	ALL

CONNECTOR

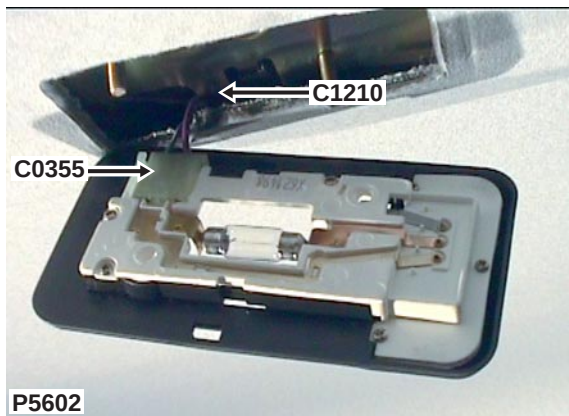
C0355

GB

Lamp - Interior - Front

Female
NATURAL

Front of headlining in the
centre



YPC10026

Cav	Col	CCT
1	PW	29
1	PW	30
1	B	31
2	PW	31
3	P	29
3	P	30
3	P	31

C0362

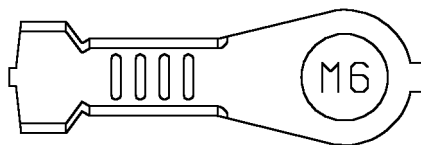
CONNECTOR

GB

Earth - ABS

Eyelet
BRASS

Top of bulkhead - centre



YPG10013

Cav	Col	CCT
1	B	12

CONNECTOR

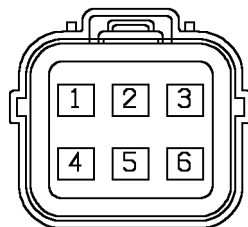
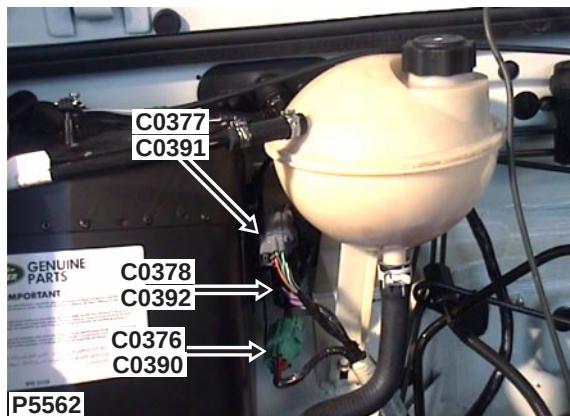
C0376

GB

Main harness to chassis
harness

Female
GREEN

Rear of engine
compartment



YPC10471

Cav	Col	CCT
1	RO	ALL
2	RB	ALL
3	RY	ALL
4	GR	ALL
5	GW	ALL
6	GP	ALL

C0377

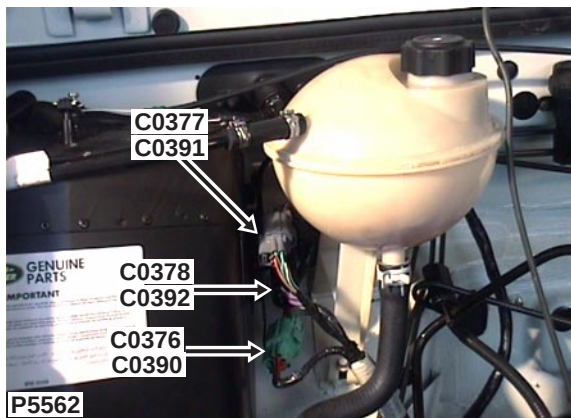
CONNECTOR



Main harness to chassis
harness

Female
GREY

Rear of engine
compartment



YPC10542

Cav	Col	CCT
1	GN	ALL
2	WB	ALL
3	WG	ALL
4	NLG	ALL
5	RLG	ALL
6	OG	21

CONNECTOR

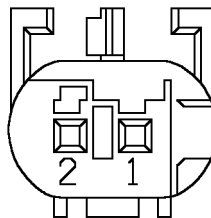
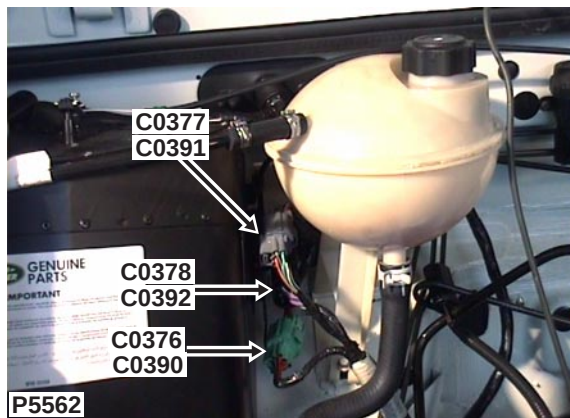
C0378



Main harness to chassis
harness

Male
BLACK

Rear of engine
compartment



YPC110170

Cav	Col	CCT
1	P	ALL
2	SB	ALL
3	GB	ALL
4	PW	21
4	WP	28

C0381

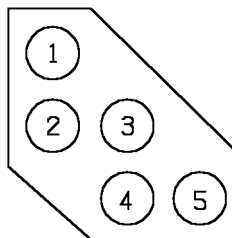
CONNECTOR



Switch - Heated rear screen

Female
NATURAL

Adjacent steering column



13H9236

Cav	Col	CCT
2	WG	ALL
4	WG	ALL

CONNECTOR

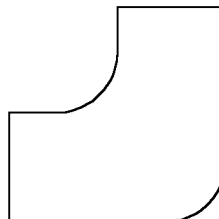
C0382

GB

Heater element - Rear
screen

Female
TIN-PLATE

LH side of tail door



ADU3052

Cav	Col	CCT
1	WB	ALL

C0388

CONNECTOR

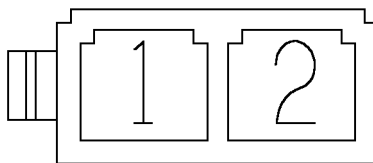


Motor - Wiper - Rear screen

Female

BLACK

Behind rear door trim panel



YPC106820

Cav	Col	CCT
1	B	ALL
2	RLG	ALL

CONNECTOR

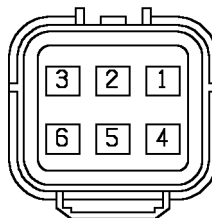
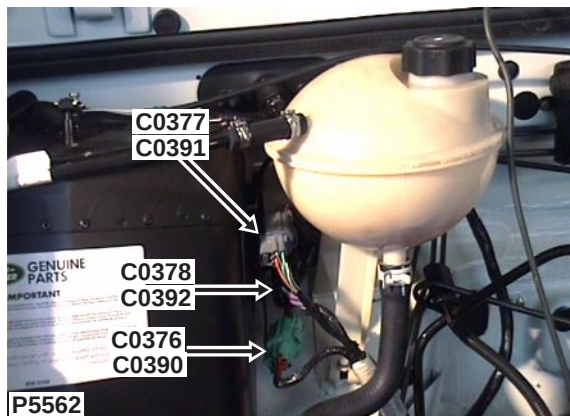
C0390

GB

Chassis harness to main harness

Male
GREEN

Rear of engine compartment



YPC116930

Cav	Col	CCT
1	RO	ALL
2	RB	ALL
3	RY	ALL
4	GR	ALL
5	GW	ALL
6	GP	ALL

C0391

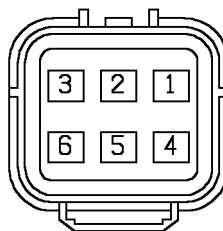
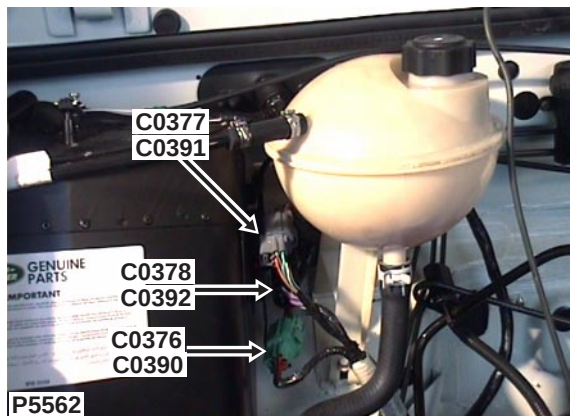
CONNECTOR

GB

Chassis harness to main harness

Male
GREY

Rear of engine compartment



YPC106620

Cav	Col	CCT
1	GN	ALL
2	WB	ALL
3	WG	ALL
4	NLG	ALL
5	RLG	ALL
6	OG	21

CONNECTOR

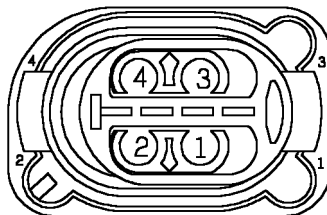
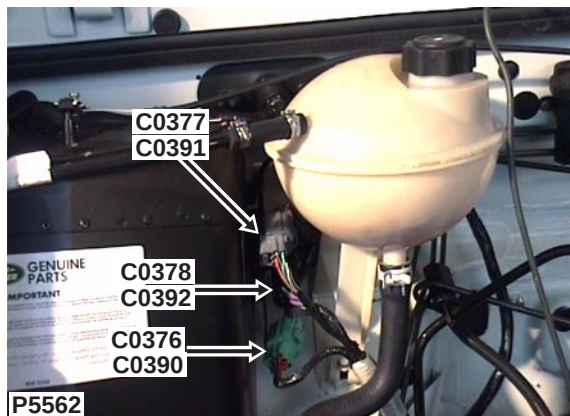
C0392

GB

Chassis harness to main harness

Female
BLACK

Rear of engine compartment



YPC110200

Cav	Col	CCT
1	P	ALL
2	SB	ALL
3	GB	ALL
4	WP	ALL

C0448

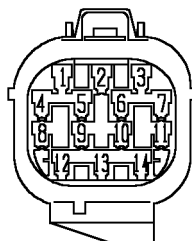
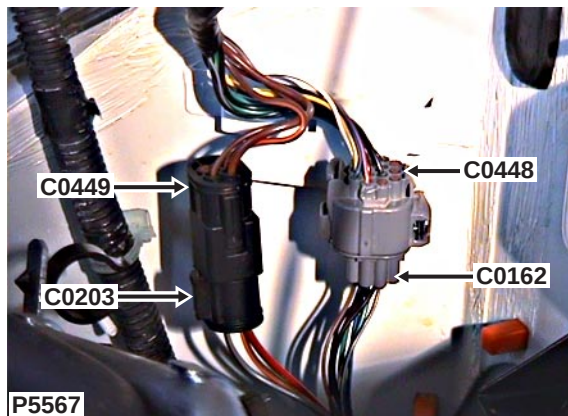
CONNECTOR

GB

Main harness to engine harness

Female
GREY

Lower RH rear of engine compartment



YPC10549

Cav	Col	CCT
1	WN	ALL
2	YN	ALL
3	BU	ALL
4	GN	ALL
5	GY	ALL
6	B	ALL
7	SR	ALL
8	BS	ALL
9	BP	ALL
10	BR	ALL
11	BY	24
13	WG	22
14	GU	ALL

CONNECTOR

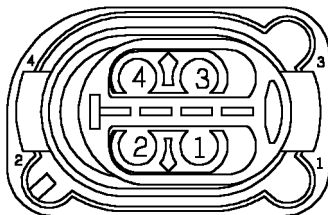
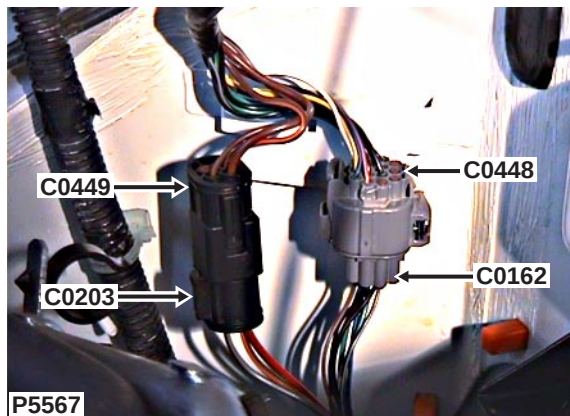
C0449

GB

Main harness to engine harness

Female
BLACK

Lower RH rear of engine compartment



YPC110200

Cav	Col	CCT
1	NR	ALL
2	NO	21
2	WG	22
3	NS	1

C0455

CONNECTOR

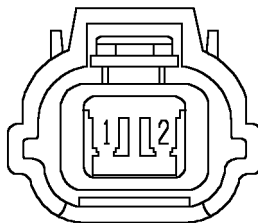
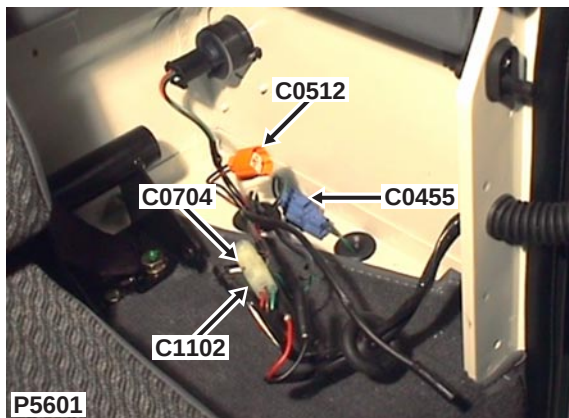


Lamp - Reverse - RH

Female

GREY

LH side of taildoor



YPC116180

Cav	Col	CCT
1	B	ALL
2	GN	ALL

CONNECTOR

C0472

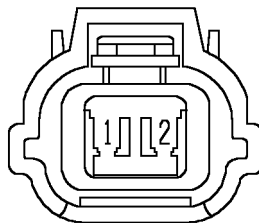
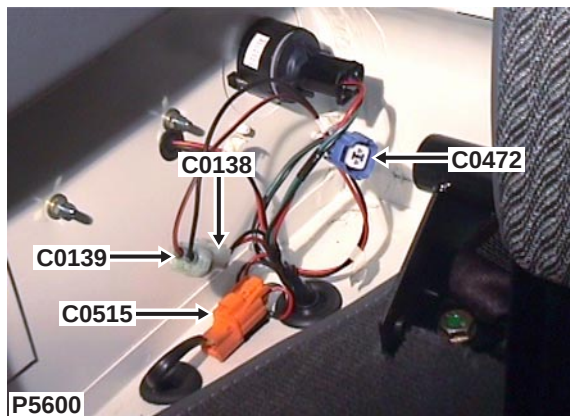
GB

Lamp - Reverse - LH

Female

GREY

LH rear of vehicle



YPC116180

Cav	Col	CCT
1	B	ALL
2	GN	ALL

C0476

CONNECTOR

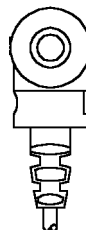
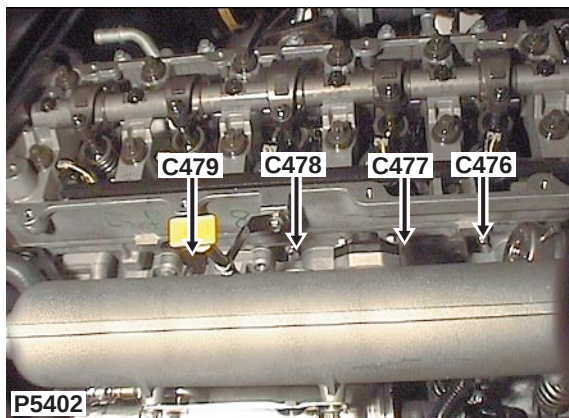


Glow plug - Td5

Female

BLACK

Top of engine - RH side



YPC107890

Cav	Col	CCT
1	B	ALL

CONNECTOR

C0477

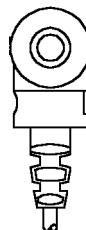
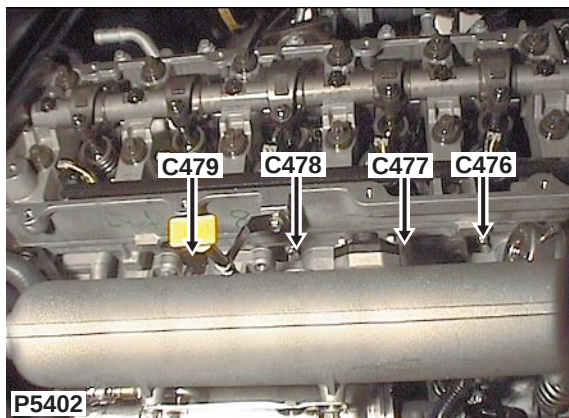


Glow plug - Td5

Female

BLACK

Top of engine - RH side



YPC107890

Cav	Col	CCT
1	B	ALL

C0478

CONNECTOR

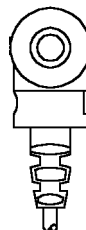
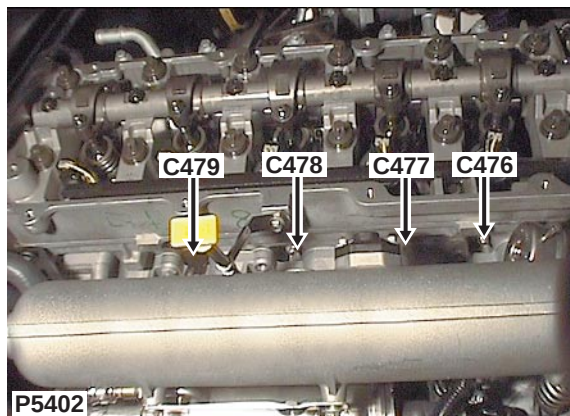


Glow plug - Td5

Female

BLACK

Top of engine - RH side



YPC107890

Cav	Col	CCT
1	B	ALL

CONNECTOR

C0479

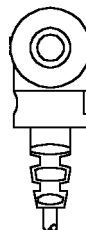
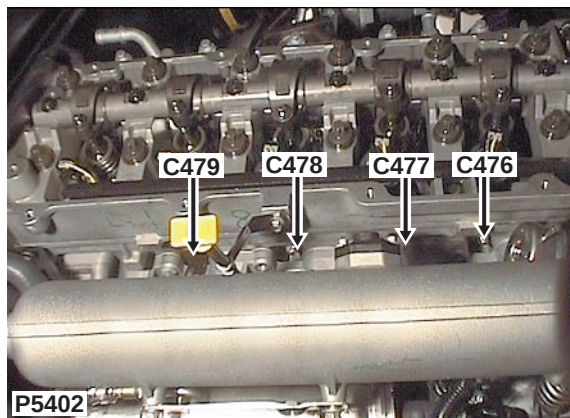


Glow plug - Td5

Female

BLACK

Top of engine - RH side



YPC107890

Cav	Col	CCT
1	B	ALL

C0488

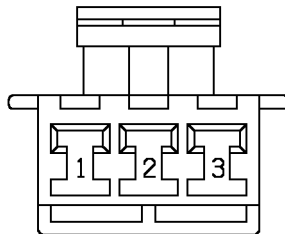
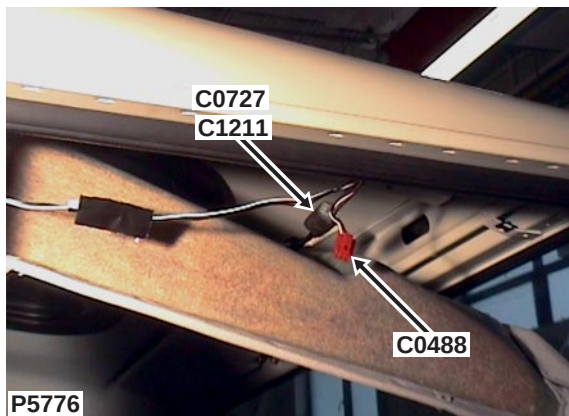
CONNECTOR



Main harness to interior
lamp harness

Female
RED

Headlining - Front RH side



YPC10414

Cav	Col	CCT
1	WB	17
1	WB	16
2	BN	17
2	BN	16
3	B	ALL

CONNECTOR

C0499

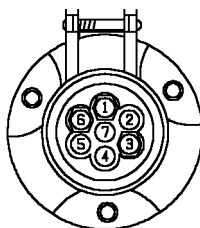
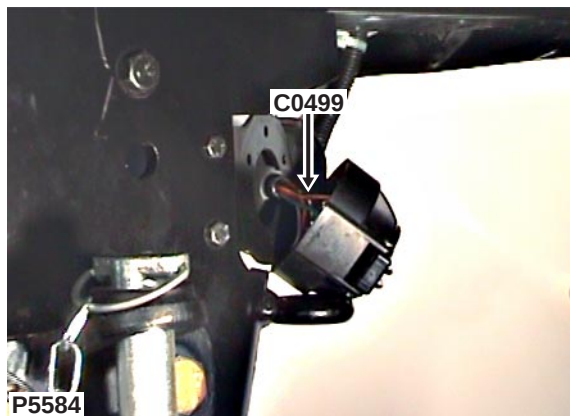
GB

Socket - Auxilliary - Trailer

Female

BLACK

Behind centre of rear
bumper



PC113030

Cav	Col	CCT
1	GR	ALL
2	RY	ALL
3	B	ALL
4	GW	ALL
5	RO	ALL
6	GP	ALL
7	RB	ALL

C0500

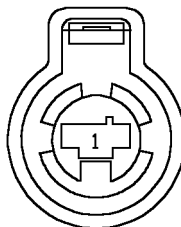
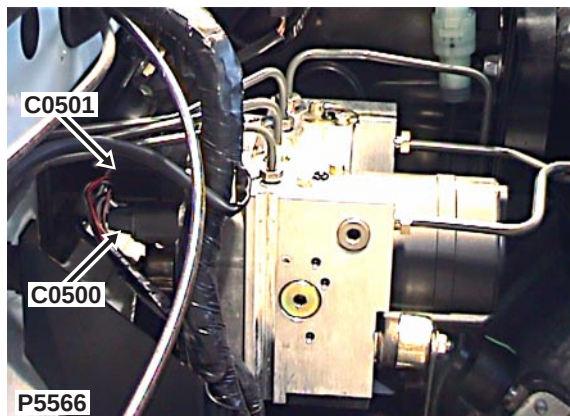
CONNECTOR



Modulator - ABS

Female
LIGHT GREY

Behind ABS modulator



YPC109840

Cav	Col	CCT
1	B	ALL

CONNECTOR

C0501

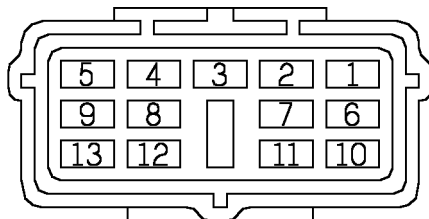
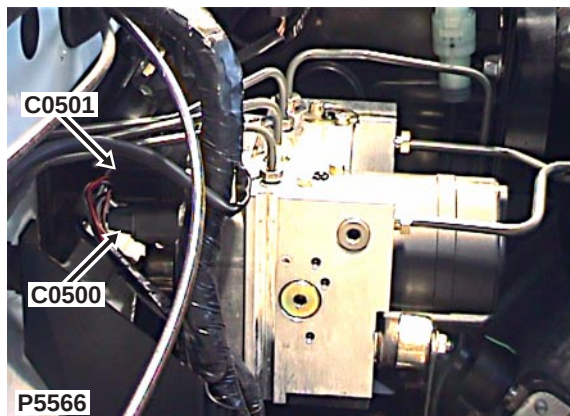


Modulator - ABS

Female

BLACK

Behind ABS modulator



YPC10062

Cav	Col	CCT
1	SW	ALL
2	SR	ALL
4	SK	ALL
5	SP	ALL
8	B	ALL
9	RB	ALL
10	SG	ALL
11	SU	ALL
12	SN	ALL
13	SY	ALL

C0502

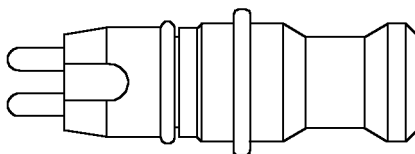
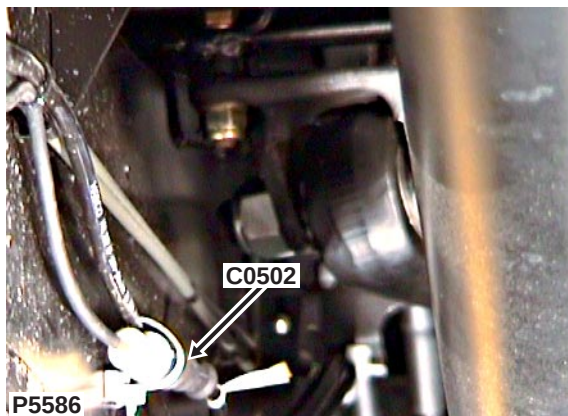
CONNECTOR



Sensor - ABS - Rear - LH

Male
NATURAL

Beneath centre of vehicle



51277057

Cav	Col	CCT
1	W	12
2	W	12

CONNECTOR

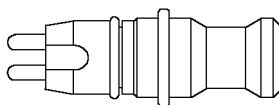
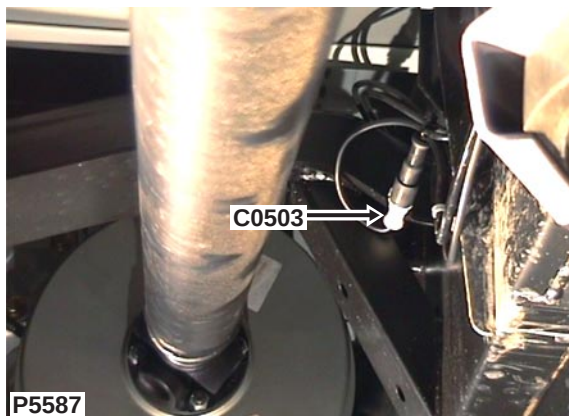
C0503



Sensor - ABS - Rear - RH

Male
NATURAL

Beneath centre of vehicle



51277058

Cav	Col	CCT
1	G	12
2	G	12

C0504

CONNECTOR

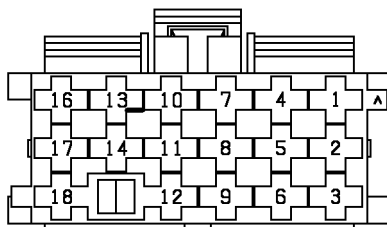
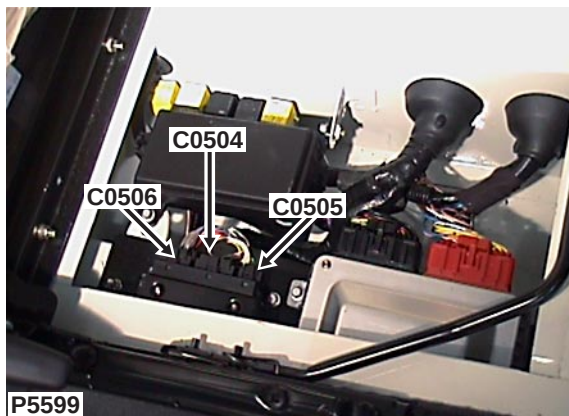


ECU - ABS

Female

BLACK

Beneath RH seat



YPC108720

Cav	Col	CCT
1	NW	12
2	GO	12
5	K	12
8	NR	ALL
9	BW	12
10	SP	12
11	YK	12
12	B	12
17	YS	ALL
18	RS	ALL

CONNECTOR

C0505

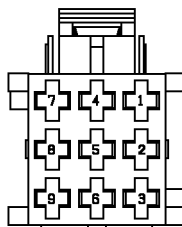
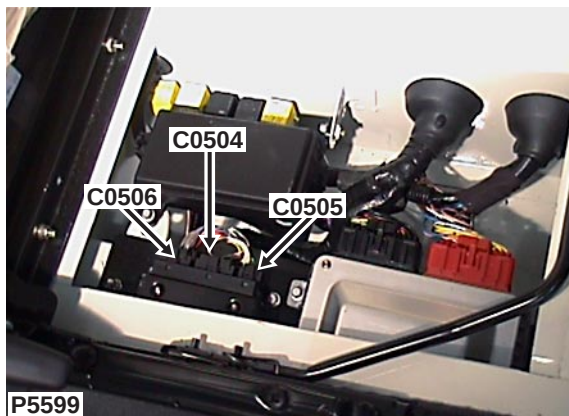


ECU - ABS

Female

BLACK

Beneath RH seat



YPC108770

Cav	Col	CCT
1	W	12
2	W	12
3	G	12
4	G	12
5	G	12
6	G	12
7	W	12
8	W	12

C0506

CONNECTOR

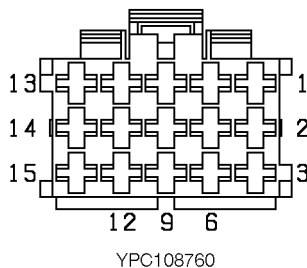
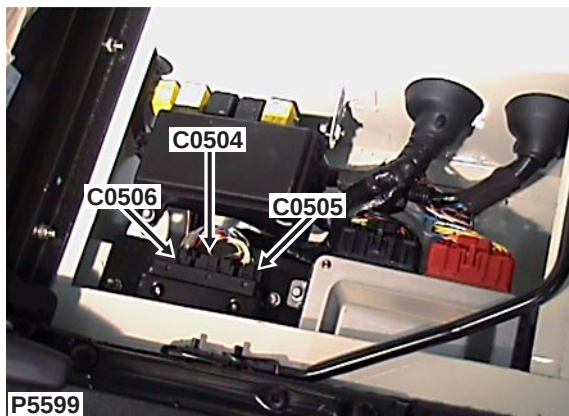


ECU - ABS

Female

BLACK

Beneath RH seat



Cav	Col	CCT
1	SW	ALL
2	SR	ALL
3	B	ALL
4	SG	ALL
5	SU	ALL
6	RB	ALL
7	SY	ALL
8	SN	ALL
10	SP	ALL
11	SK	ALL
15	WO	12

CONNECTOR

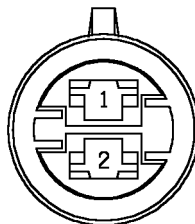
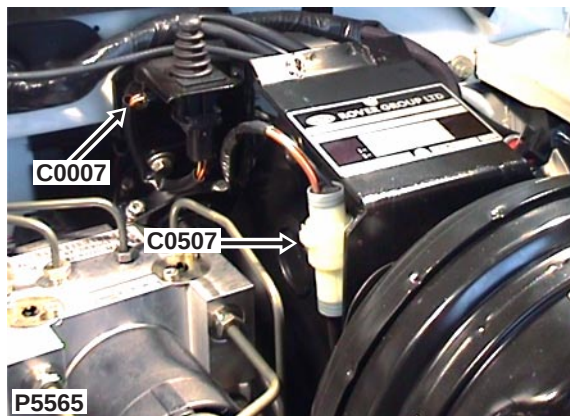
C0507

GB

Pump - Return - ABS

Female
NATURAL

Adjacent pedal box



AFU3727

Cav	Col	CCT
1	NR	ALL
2	B	ALL

C0508

CONNECTOR

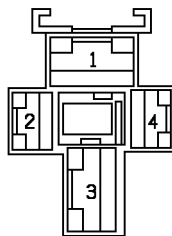
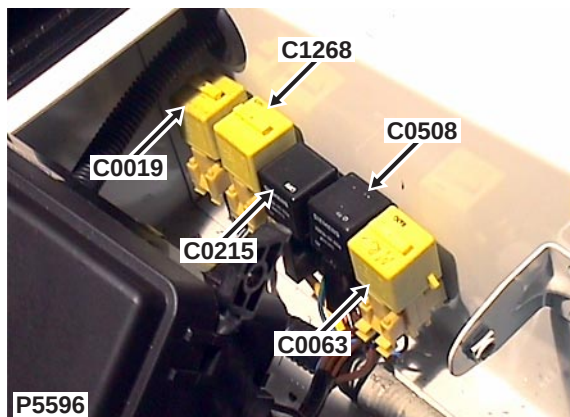
GB

Relay - ABS - Return pump

Female

BLACK

Beneath RH seat



YPP10005

Cav	Col	CCT
1	NR	ALL
2	WO	12
3	NW	12
4	B	12

CONNECTOR

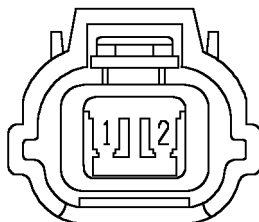
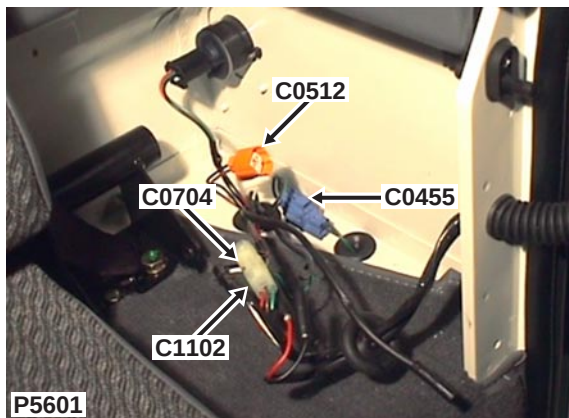
C0512

GB

Lamp - Fog guard - Rear -
RH

Female
ORANGE

RH side of taildoor, behind
trim panel



YPC10360

Cav	Col	CCT
1	B	ALL
2	RY	ALL

C0515

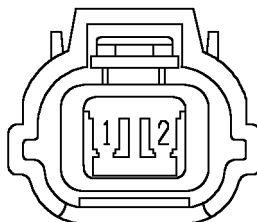
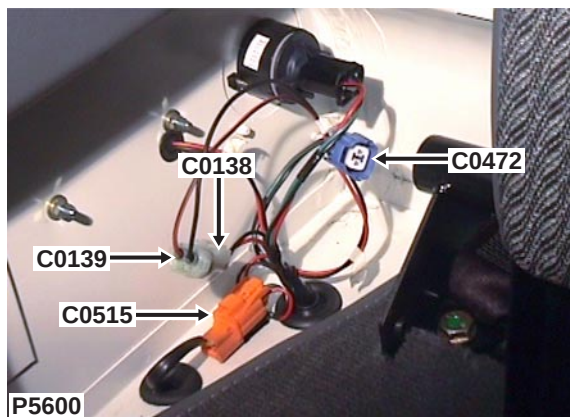
CONNECTOR

GB

Lamp - Fog guard - Rear -
LH

Female
ORANGE

RH side of tail door



YPC10360

Cav	Col	CCT
1	B	ALL
2	RY	ALL

CONNECTOR

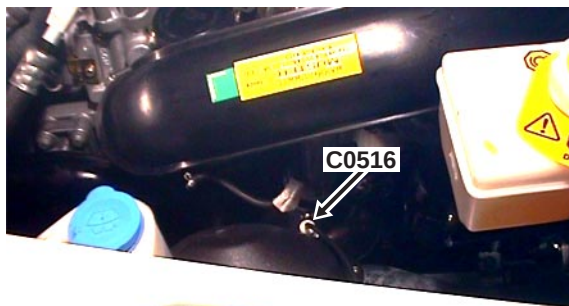
C0516



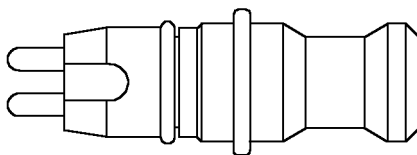
Sensor - ABS - Front - LH

Male
NATURAL

LH side of engine
compartment



P5574



51277056

Cav	Col	CCT
1	W	12
2	W	12

C0517

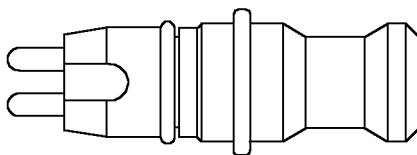
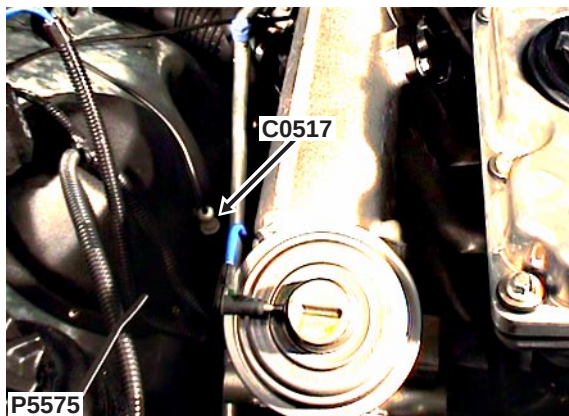
CONNECTOR



Sensor - ABS - Front - RH

Male
NATURAL

RH side of engine
compartment



51277055

Cav	Col	CCT
1	G	12
2	G	12

CONNECTOR

C0520

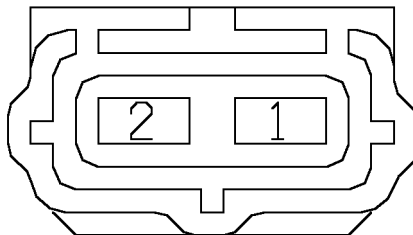
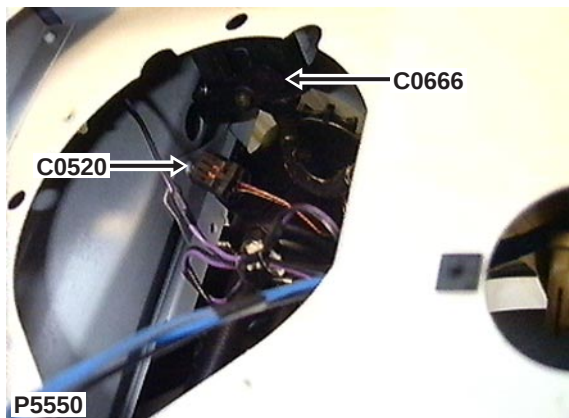
GB

Unit - Sounder - Alarm

Female

BLACK

Behind LH headlamp



YPC10070

Cav	Col	CCT
1	B	27
2	OB	27

C0521

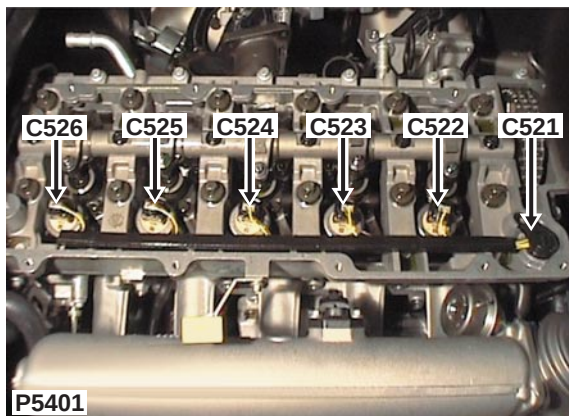
CONNECTOR



Engine harness to injector
harness - Td5

Female
BLACK

Top of engine



NO CONNECTOR FACE

Cav	Col	CCT
1	Y	ALL
2	YN	ALL
4	YR	ALL
5	YP	ALL
6	YU	ALL
7	NO	ALL
8	NB	ALL

CONNECTOR

C0522

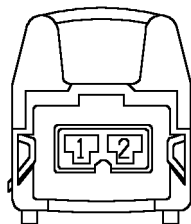
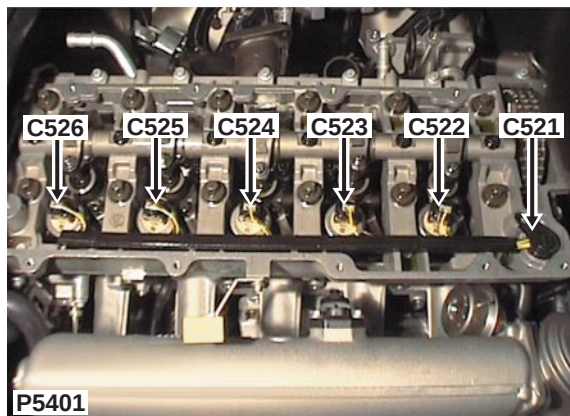


Fuel injector - No. 1 - Td5

Female

BLACK

Top of engine



YPC115190

Cav	Col	CCT
1	Y	ALL
2	NB	ALL

C0523

CONNECTOR

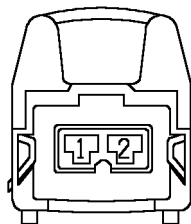
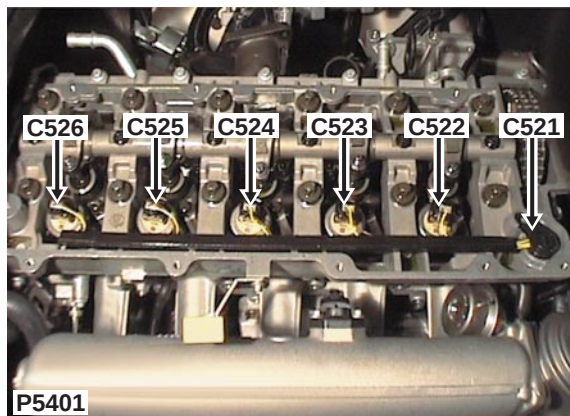


Fuel injector - No. 2 - Td5

Female

BLACK

Top of engine



YPC115190

Cav	Col	CCT
1	YN	ALL
2	NO	ALL

CONNECTOR

C0524

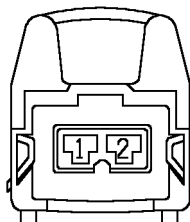
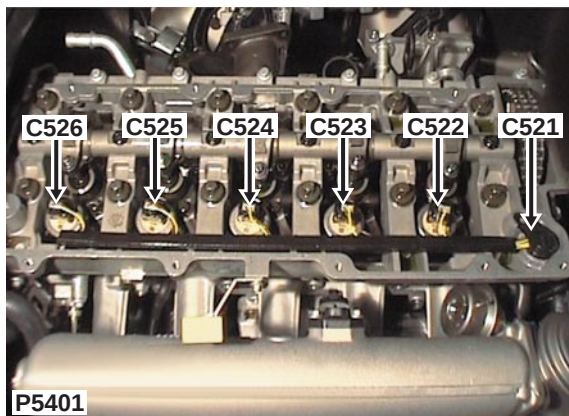


Fuel injector - No. 3 - Td5

Female

BLACK

Top of engine



YPC115190

Cav	Col	CCT
1	YU	ALL
2	NB	ALL

C0525

CONNECTOR

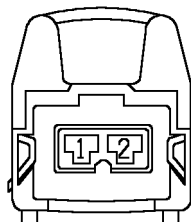
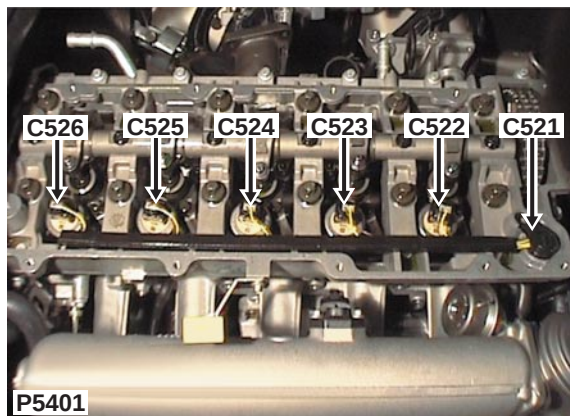


Fuel injector - No. 4 - Td5

Female

BLACK

Top of engine



YPC115190

Cav	Col	CCT
1	YR	ALL
2	NB	ALL

CONNECTOR

C0526

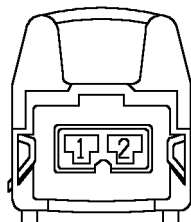
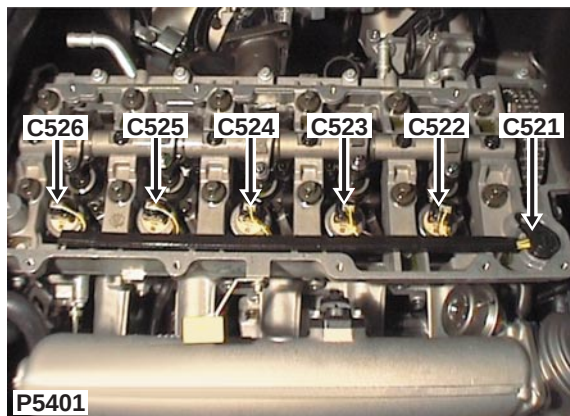


Fuel injector - No. 5 - Td5

Female

BLACK

Top of engine



YPC115190

Cav	Col	CCT
1	YP	ALL
2	NO	ALL

C0537

CONNECTOR

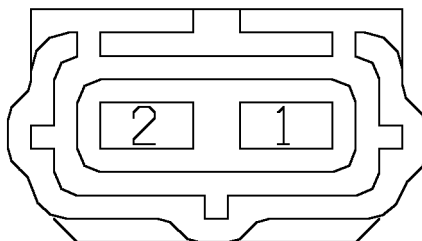
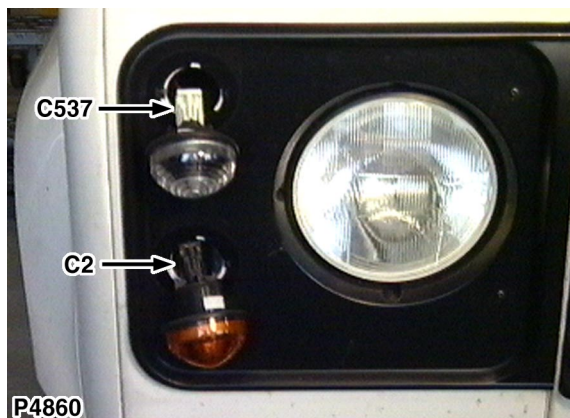


Lamp - Side - Front - RH

Female

WHITE

Behind RH front side lamp



YPC10187

Cav	Col	CCT
1	B	ALL
2	RO	ALL

CONNECTOR

C0538

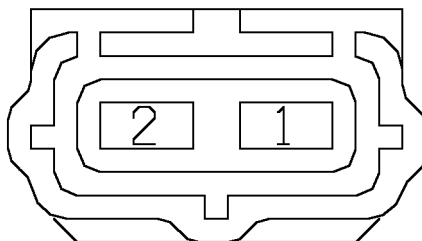
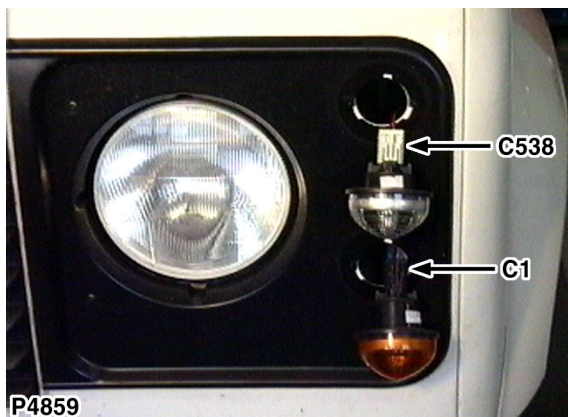


Lamp - Side - Front - LH

Female

WHITE

Behind LH front side lamp



YPC10187

Cav	Col	CCT
1	B	ALL
2	RB	ALL

C0543

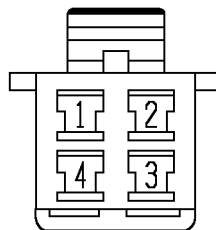
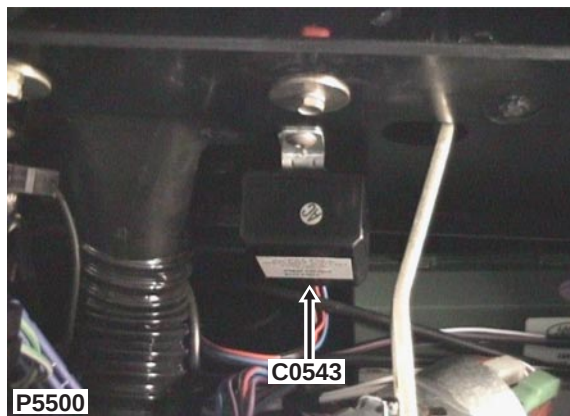
CONNECTOR

GB

ECU - Lamp - Fog guard -
Rear

Female
NATURAL

Behind instrument pack



YPC10002

Cav	Col	CCT
1	B	ALL
2	UP	ALL
3	RY	ALL
4	BS	ALL

CONNECTOR

C0547

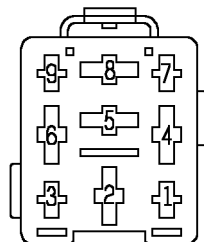
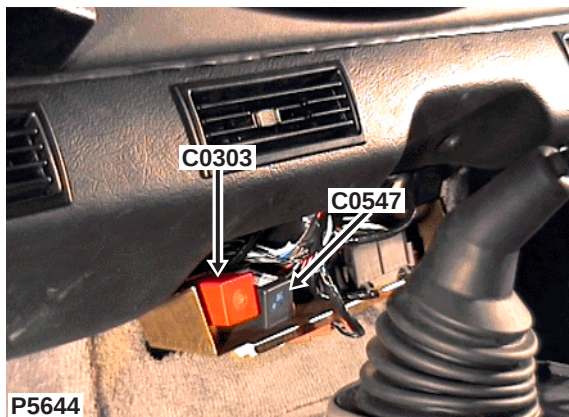


Relay - Hazard warning

Female

BLACK

Behind centre of fascia



YPP10001

Cav	Col	CCT
2	LGP	ALL
4	B	ALL
6	LG	ALL
8	LGN	ALL

C0549

CONNECTOR

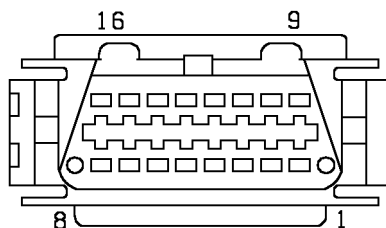
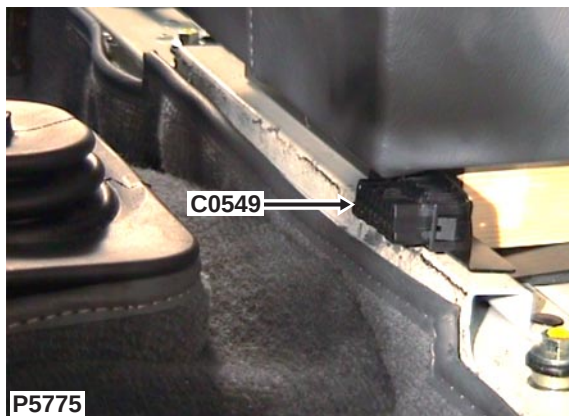


Diagnostic socket

Female

BLACK

Behind front of centre
console



YPC107920

Cav	Col	CCT
4	B	27
5	B	27
7	K	21
8	OLG	17
8	OLG	16
16	P	27

CONNECTOR

C0550

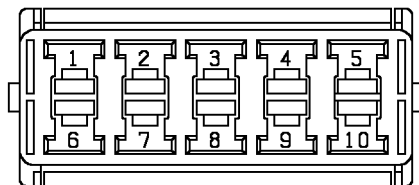


Header - Earth

Female

LIGHT GREY

Top of bulkhead - centre



YPC10611

Cav	Col	CCT
1	B	ALL
2	B	ALL
3	B	ALL
4	B	ALL
5	B	ALL
6	B	ALL
7	B	ALL
8	B	ALL
9	B	ALL
10	B	12

C0556

CONNECTOR

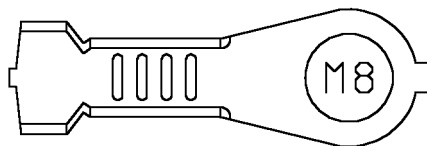
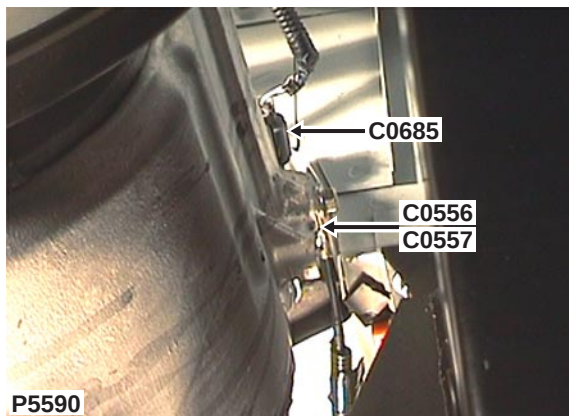


Earth

Eyelet

TIN-PLATE

LH side of transfer box



YPG10016

Cav	Col	CCT
1	B	ALL

CONNECTOR

C0557

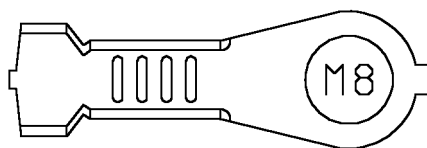
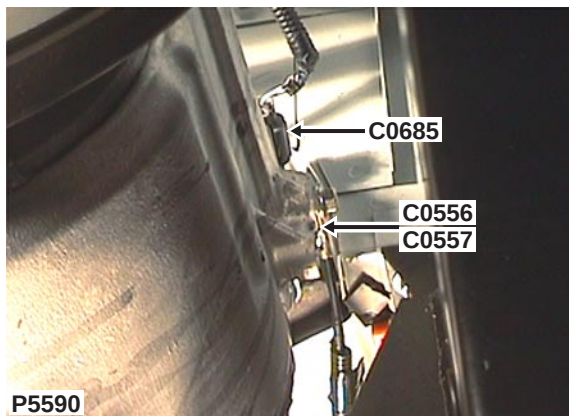


Earth

Eyelet

TIN-PLATE

LH side of transfer box



YPG10016

Cav	Col	CCT
1	B	ALL

C0558

CONNECTOR

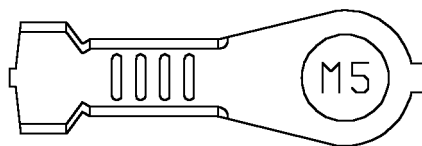
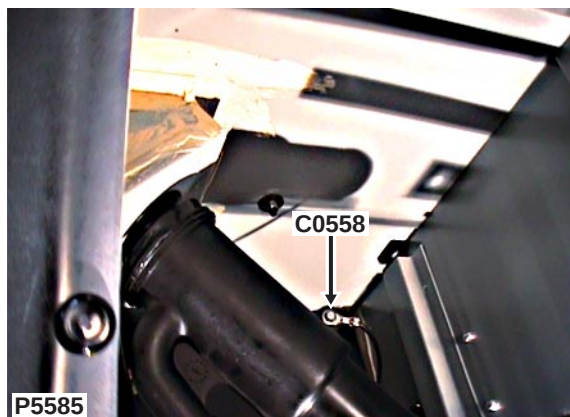
GB

Earth

Eyelet

TIN-PLATE

Below RH rear wheel arch



YPG10012

Cav	Col	CCT
1	B	ALL

CONNECTOR

C0559

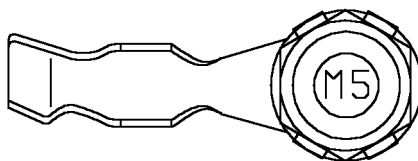
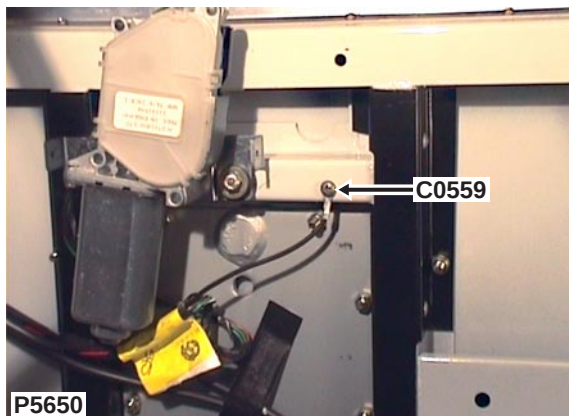
GB

Earth

Eyelet

TIN-PLATE

Centre of tail door, behind
trim panel



YPG10046

Cav	Col	CCT
1	B	ALL

C0560

CONNECTOR

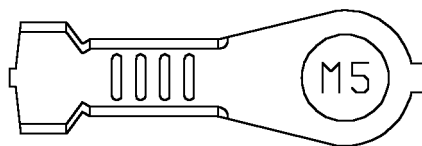
GB

Earth - Td5

Eyelet

TIN-PLATE

Beneath RH seat



YPG10012

Cav	Col	CCT
1	B	ALL

CONNECTOR

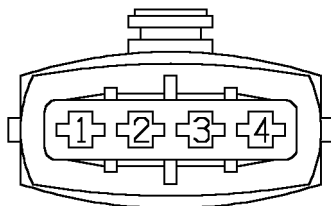
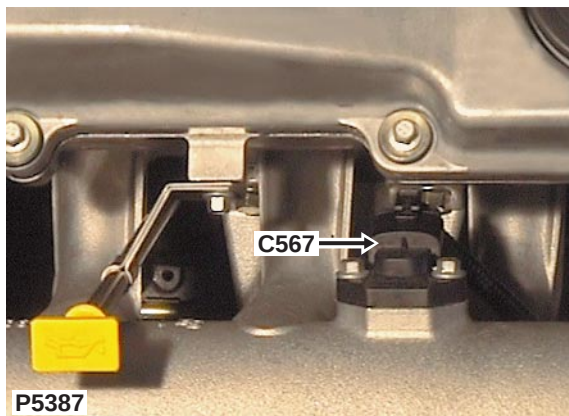
C0567

GB

Sensor - Inlet Air
Temperature (IAT) and
Manifold Absolute Pressure
(MAP) - Td5

Female
BLACK

Top of engine - RH side



YPC110150

Cav	Col	CCT
1	KB	ALL
2	GB	ALL
3	KP	ALL
4	WY	ALL

C0570

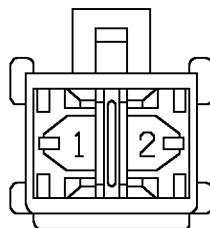
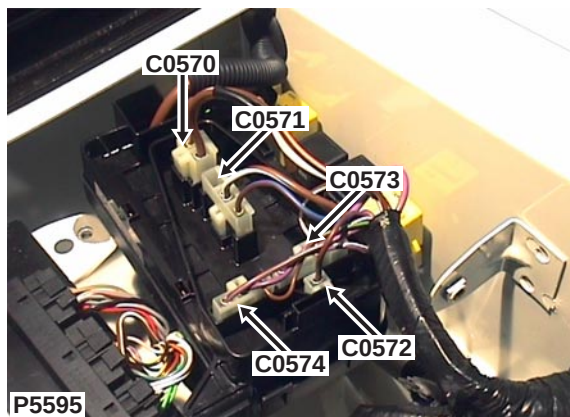
CONNECTOR



Fuse box - Engine compartment

Female
NATURAL

Beneath RH seat



YPC10135

Cav	Col	CCT
1	NK	1
2	NW	ALL

CONNECTOR

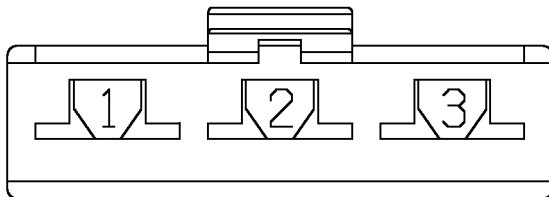
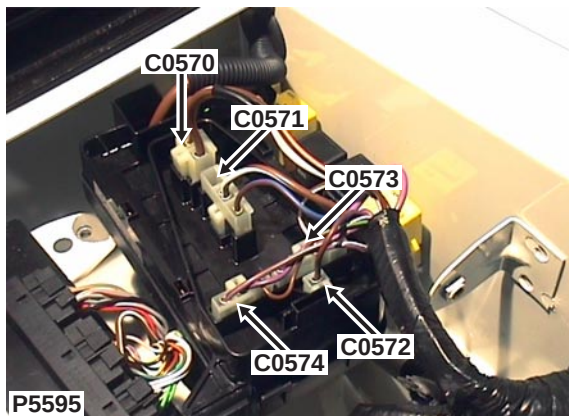
C0571

GB

Fuse box - Engine compartment

Female
NATURAL

Beneath RH seat



YPC10052

Cav	Col	CCT
2	NW	12
3	NU	ALL

C0572

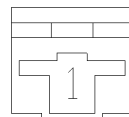
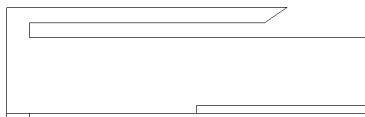
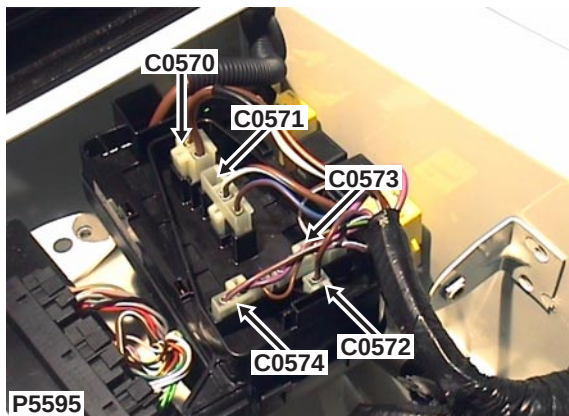
CONNECTOR



Fuse box - Engine compartment

Female
NATURAL

Beneath RH seat



YPC10007

Cav	Col	CCT
1	NP	ALL

CONNECTOR

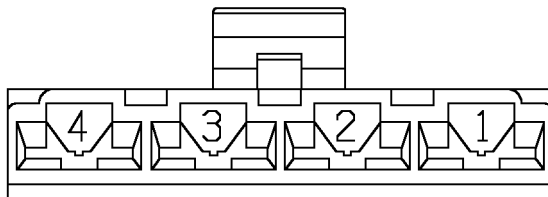
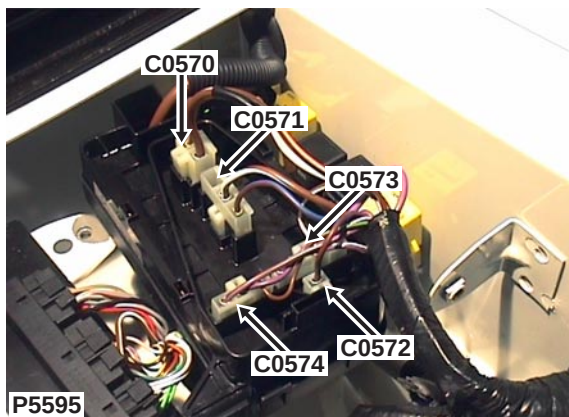
C0573



Fuse box - Engine compartment

Female
NATURAL

Beneath RH seat



YPC10053

Cav	Col	CCT
1	PW	21
3	NW	12
4	P	ALL

C0574

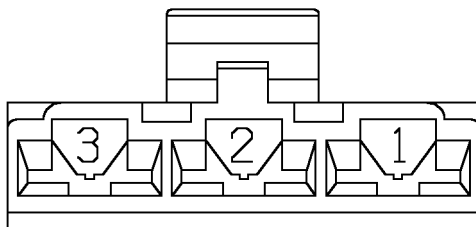
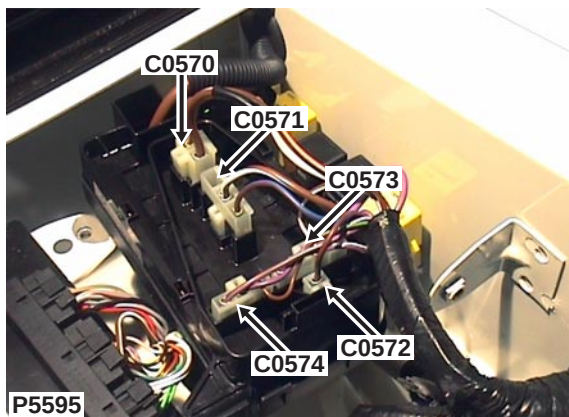
CONNECTOR



Fuse box - Engine compartment

Female
NATURAL

Beneath RH seat



YPC10085

Cav	Col	CCT
1	PN	ALL
2	PN	ALL
3	NLG	21

CONNECTOR

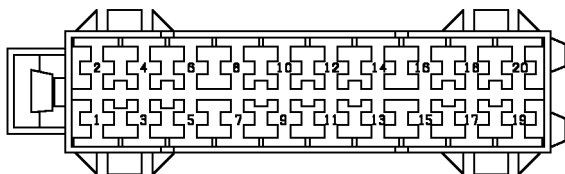
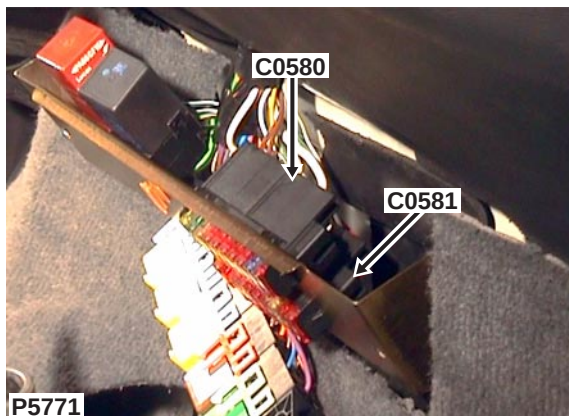
C0580

GB

Fuse box - Passenger compartment

Female
BLACK

Beneath centre console



YQE102850

Cav	Col	CCT
1	W	ALL
2	WG	15
4	WG	ALL
6	WG	ALL
8	GO	12
9	W	ALL
10	WG	ALL

Cav	Col	CCT
12	GY	ALL
14	WG	ALL
15	NW	ALL
16	P	27
17	NK	1
18	NP	1
20	NS	1

C0581

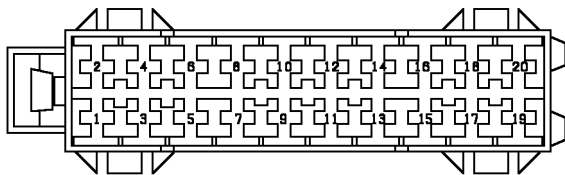
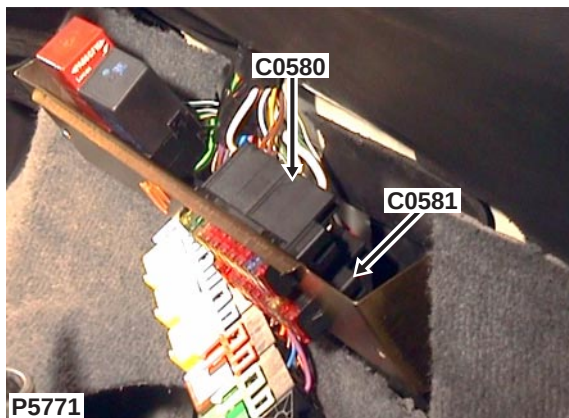
CONNECTOR

GB

Fuse box - Passenger compartment

Female
BLACK

Beneath centre console



YQE102850

Cav	Col	CCT
1	R	ALL
2	RB	ALL
4	RO	ALL
5	WO	ALL
6	PG	ALL
8	WO	ALL
9	UR	ALL
10	UB	ALL

Cav	Col	CCT
12	UK	ALL
13	UW	ALL
14	UO	ALL
16	US	ALL
17	U	ALL
18	UP	ALL
19	PB	15
20	OR	15

CONNECTOR

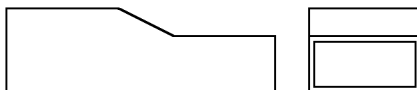
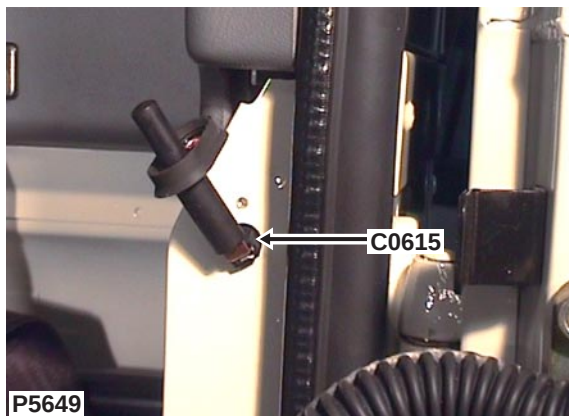
C0615

GB

Switch - Boot / taildoor

Female
NATURAL

RH 'A' post



ADU1790

Cav	Col	CCT
1	PU	ALL

C0633

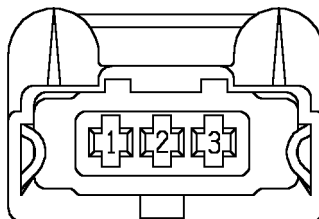
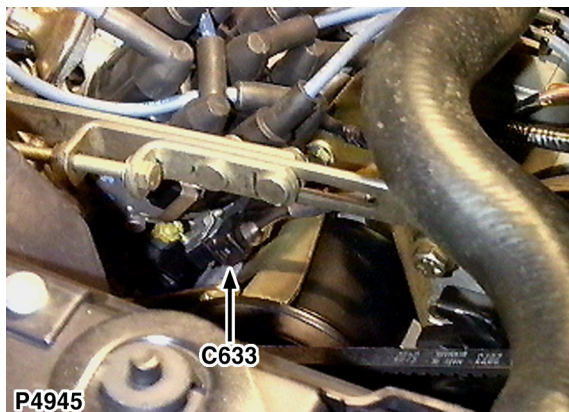
CONNECTOR



Module - Ignition amplifier -
V8

Female
BLACK

Front of engine - centre



YPC107900

Cav	Col	CCT
1	WB	ALL
3	W	ALL

CONNECTOR

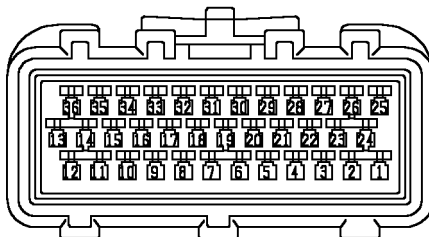
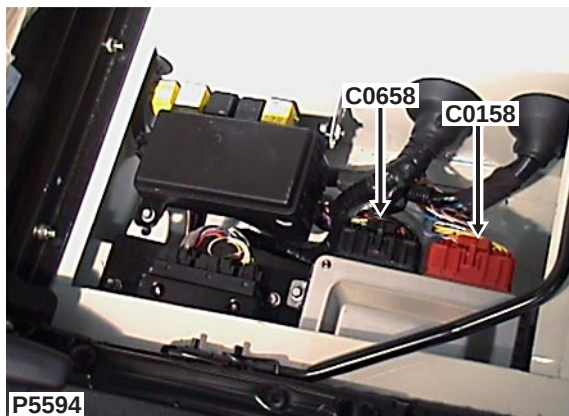
C0658



Engine control module
(ECM) - Td5

Female
BLACK

Beneath RH seat



YPC10073

Cav	Col	CCT
1	B	21
2	B	21
3	NO	21
4	BP	21
5	UP	21
6	RS	21
7	GU	21
9	YS	21
12	WG	21
13	YK	21
14	WP	21
16	GP	21
18	K	21
19	YK	12

Cav	Col	CCT
21	UR	21
22	NO	21
23	PB	21
24	B	21
25	B	21
26	BY	21
27	NO	21
29	BS	21
30	BY	21
32	SP	12
33	WG	21
34	LGS	21
35	BW	21
36	WS	21

C0666

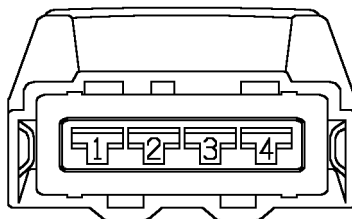
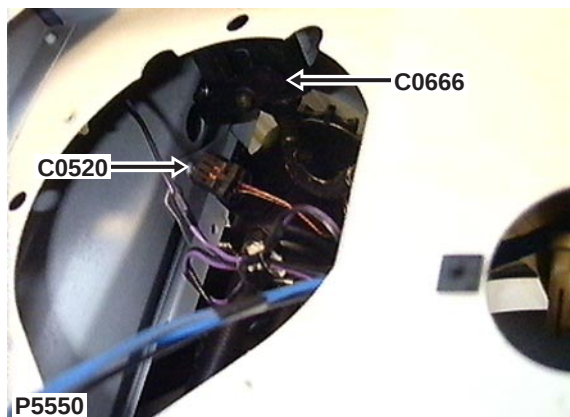
CONNECTOR

GB

Sounder - Alarm - Battery backed up

Female
BROWN

Behind LH headlamp



YPC108930

Cav	Col	CCT
1	B	27
2	B	27
3	B	27
4	B	27

CONNECTOR

C0667

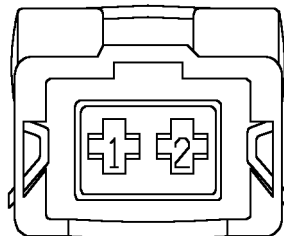
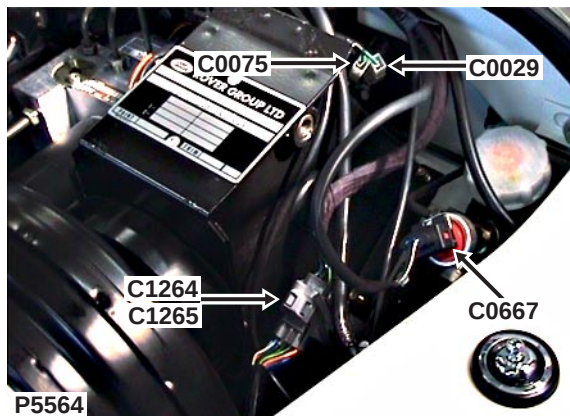


Switch - Clutch pedal - Td5

Female

BLACK

Adjacent pedal box



YPC107790

Cav	Col	CCT
1	BW	21
2	B	21

C0685

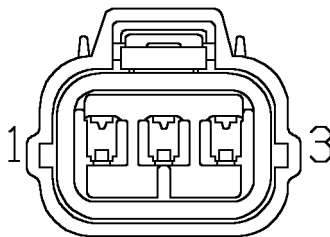
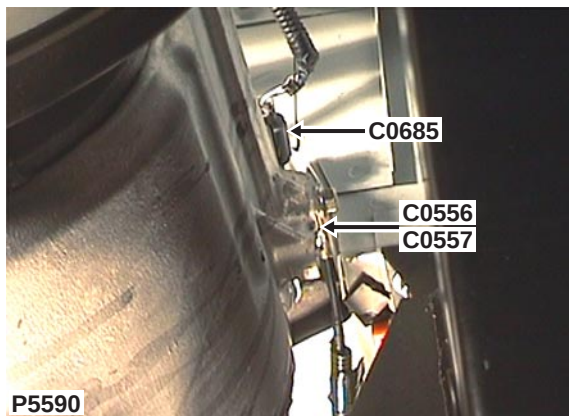
CONNECTOR

GB

Switch - Transmission -
High-Low

Female
LIGHT GREY

LH side of transfer box



YPC10181

Cav	Col	CCT
1	WB	ALL
3	B	ALL

CONNECTOR

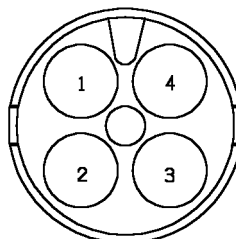
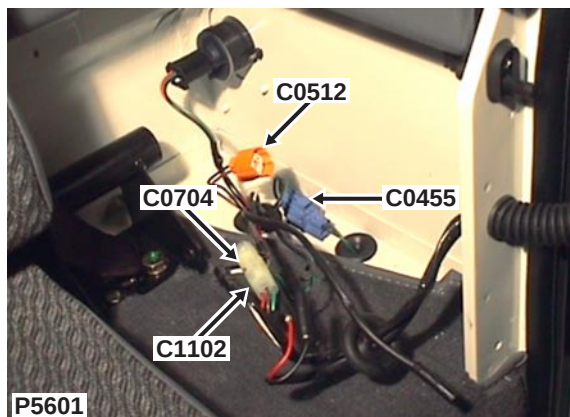
C0704

GB

Chassis harness to tail door
harness

Female
NATURAL

RH side of taildoor, behind
trim panel



ADU6789

Cav	Col	CCT
1	WG	ALL
2	NLG	ALL
3	RLG	ALL

C0719

CONNECTOR

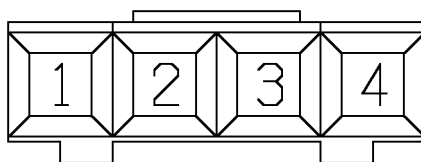
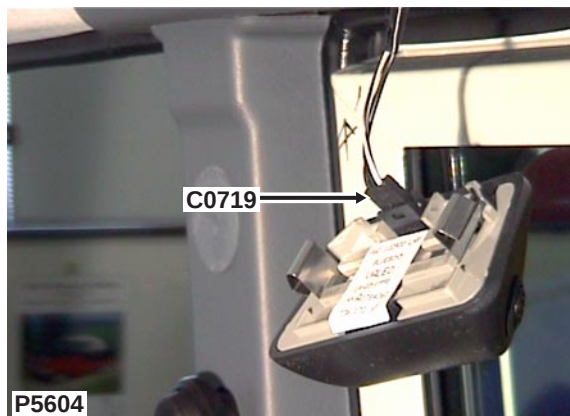


Sensor - Volumetric

Female

BLACK

Behind headlining top of RH
'B' post



YPC10199

Cav	Col	CCT
1	BN	ALL
2	B	15
3	WB	ALL

CONNECTOR

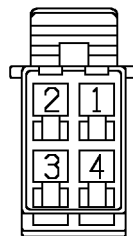
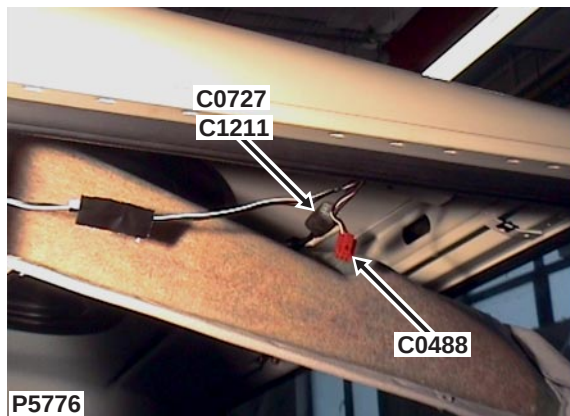
C0727

GB

Main harness to interior
lamp harness

Female
NATURAL

Headlining - front RH side



AFU3561

Cav	Col	CCT
1	B	15
2	PW	17
2	PW	16
3	PN	17
3	PN	16
4	PU	17
4	PU	16

C0730

CONNECTOR

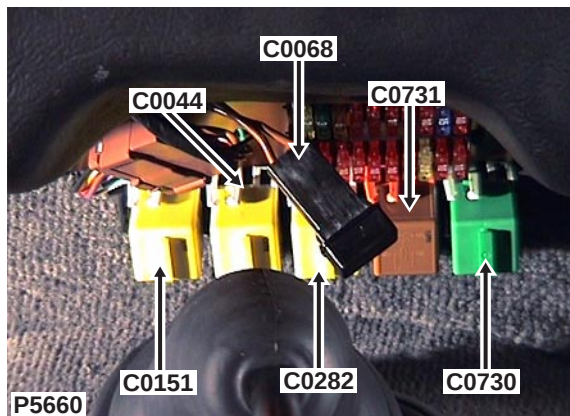


Relay - Fuel pump

Female

BLACK

Behind centre of fascia



NO CONNECTOR FACE

Cav	Col	CCT
2	PW	21
4	NO	21
6	UP	21
8	PW	21

CONNECTOR

C0731

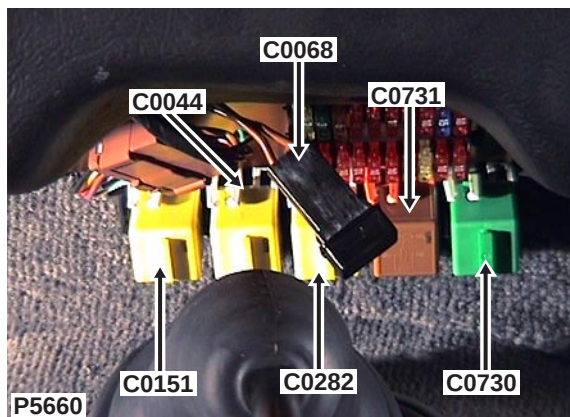
GB

Relay - Sounder - Alarm

Female

BLACK

Behind centre of fascia



NO CONNECTOR FACE

Cav	Col	CCT
2	OB	15
4	OW	15
5	OR	15
6	NU	15
8	NU	15

C0735

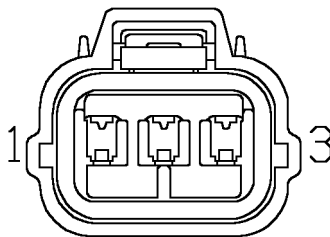
CONNECTOR



Sensor - Water filter

Female
LIGHT GREY

Below RH rear wheelarch



YPC10181

Cav	Col	CCT
1	OG	21
2	B	21
3	WG	21

CONNECTOR

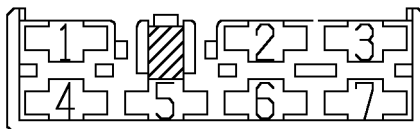
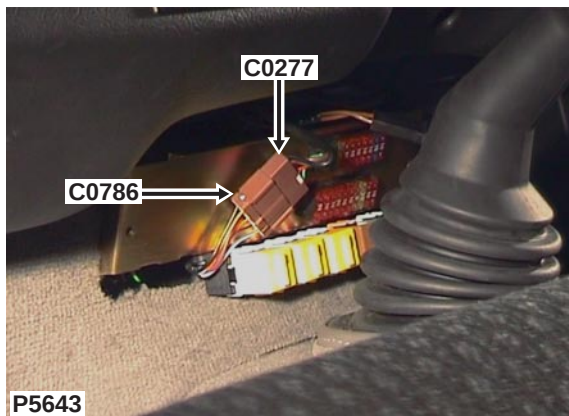
C0786



Main harness to air conditioning (A/C) harness

Female
BROWN

Behind centre of fascia



YPC10473

Cav	Col	CCT
1	WG	1
3	YS	21
3	BS	22
4	PB	21
4	BP	22
5	RO	1
6	NP	1
7	B	1

C0787

CONNECTOR



Switch - Throttle pedal - Td5

Female

BLACK

Under LH side of fascia



NO CONNECTOR FACE

Cav	Col	CCT
B	WP	ALL
D	BY	ALL
F	WG	ALL
G	BY	ALL
J	WP	ALL
K	WS	ALL

CONNECTOR

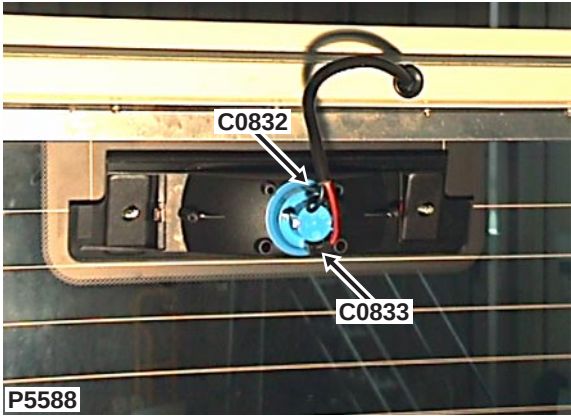
C0832



Lamp - brake - high
mounted

Male
BLACK

Top of rear screen



Cav	Col	CCT
1	GP	ALL

C0833

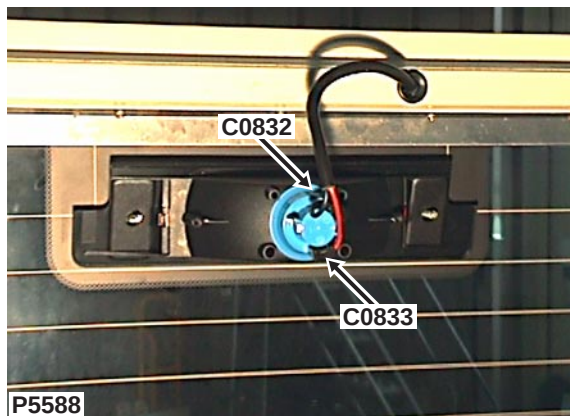
CONNECTOR



Lamp - brake - high
mounted

Male
BLACK

Top of rear screen



NO CONNECTOR FACE

Cav	Col	CCT
1	B	ALL

CONNECTOR

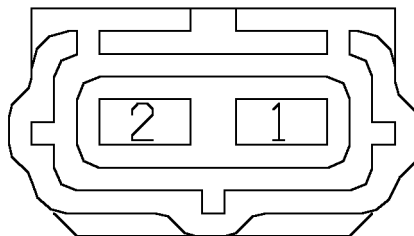
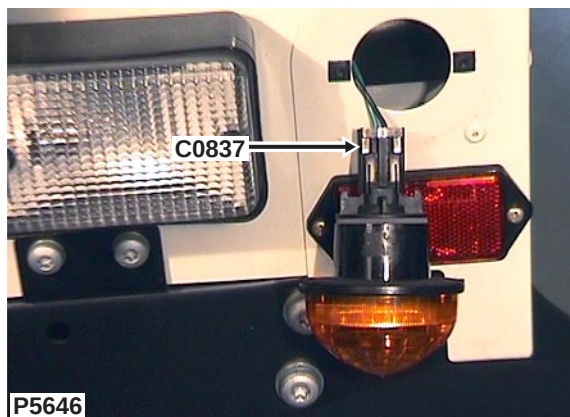
C0837

GB

Lamp - Direction indicator /
hazard warning - Rear - RH

Female
BLACK

RH rear of vehicle



YPC10070

Cav	Col	CCT
1	B	ALL
2	GW	ALL

C0928

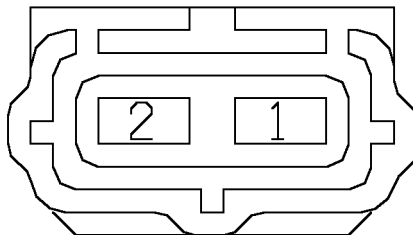
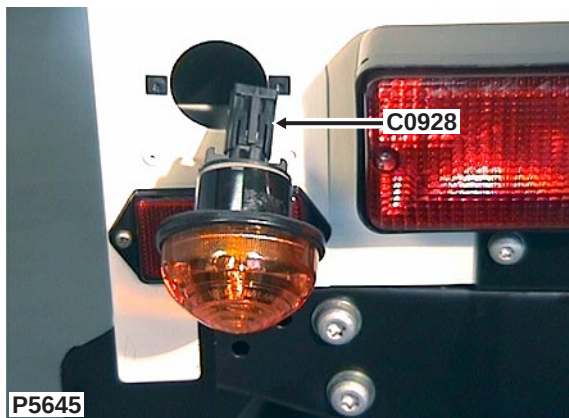
CONNECTOR



Lamp - Direction indicator /
hazard warning - Rear - LH

Female
BLACK

LH rear of vehicle



YPC10070

Cav	Col	CCT
1	B	ALL
2	GR	ALL

CONNECTOR

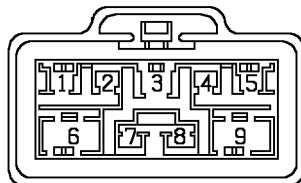
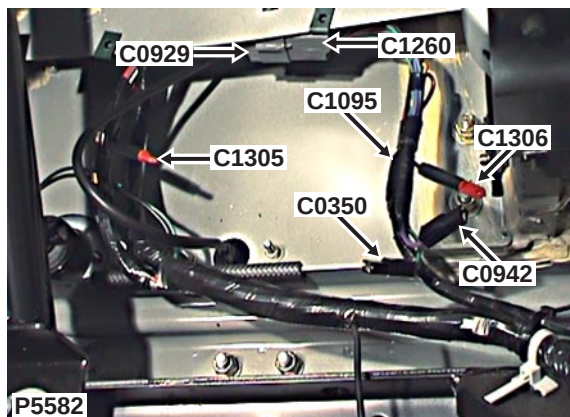
C0929



Trailer pick-up

Female
GREY

Below RH rear wheelarch



YPC114850

Cav	Col	CCT
1	GR	ALL
2	RB	ALL
3	GW	ALL
4	RO	ALL
5	GP	ALL
6	P	ALL
7	GN	ALL
8	RY	ALL
9	B	ALL

C0942

CONNECTOR

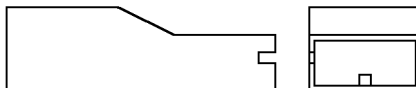
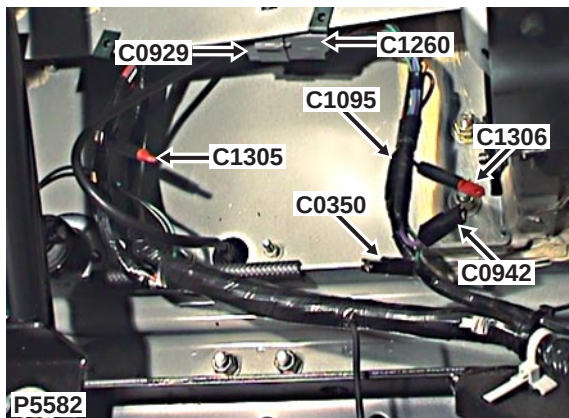


Socket - Accessory

Female

BLACK

Below RH rear wheelarch



AAU1010

Cav	Col	CCT
1	GN	ALL

CONNECTOR

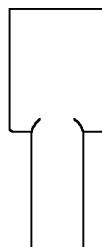
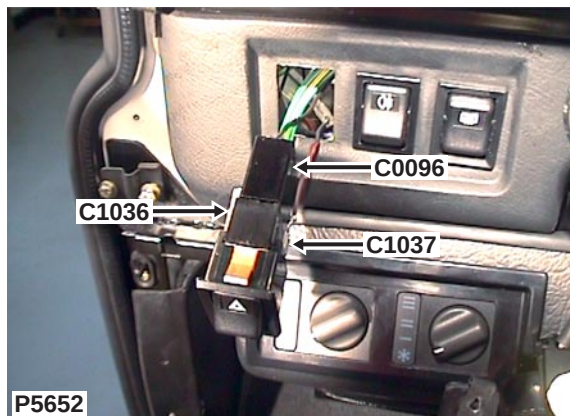
C1036

GB

Warning lamp - Hazard

Female
NATURAL

Adjacent steering column



37H3684

Cav	Col	CCT
1	B	ALL

C1037

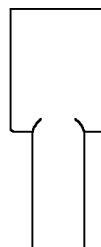
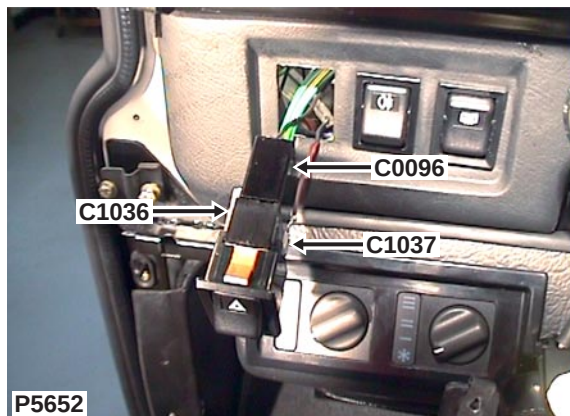
CONNECTOR

GB

Warning lamp - Hazard

Female
NATURAL

Adjacent steering column



37H3684

Cav	Col	CCT
1	BR	ALL

CONNECTOR

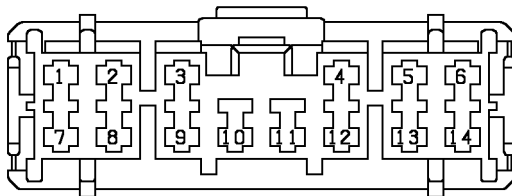
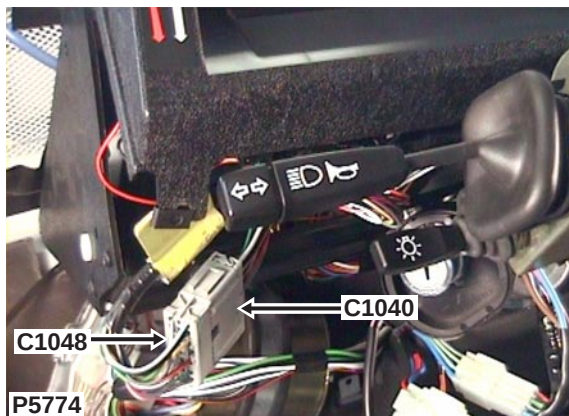
C1040

GB

Main harness to instrument
pack harness

Female
LIGHT GREY

Behind instrument pack



YPC10495

Cav	Col	CCT
1	WG	3
2	B	3
3	YK	21
4	RO	3
5	GB	3
6	PN	3
7	SB	3
8	GU	21

Cav	Col	CCT
8	GU	27
9	B	3
10	BR	3
11	NU	21
11	NU	24
12	WO	3
13	K	17

C1048

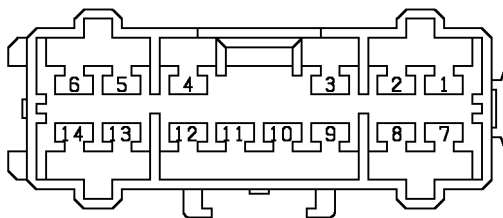
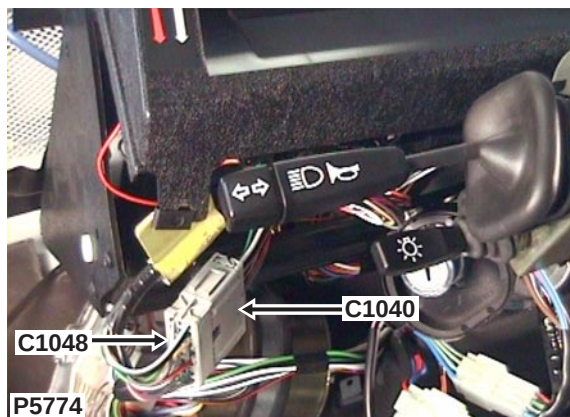
CONNECTOR



Main harness to instrument
pack harness

Male
LIGHT GREY

Behind instrument pack



YPC10592

Cav	Col	CCT
1	WG	ALL
2	B	ALL
3	YK	ALL
4	RO	ALL
5	GB	ALL
6	PN	ALL
7	SB	ALL
8	GU	22

Cav	Col	CCT
8	LGU	21
9	B	ALL
10	BR	ALL
11	NU	ALL
12	WO	ALL
13	K	ALL
14	WS	23

CONNECTOR

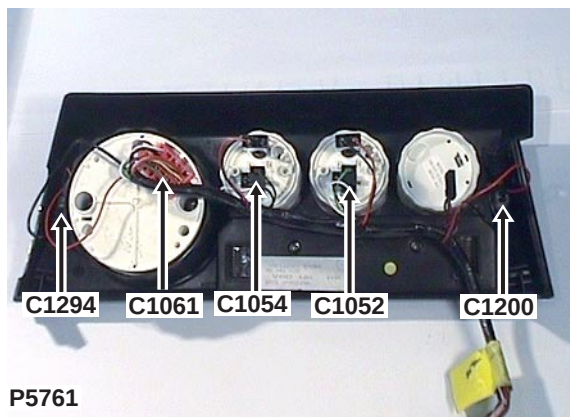
C1052



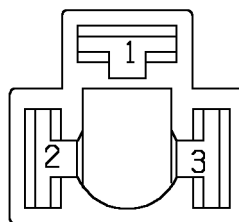
Gauge - Coolant
temperature

Female
BLACK

Behind instrument pack



P5761



YPC114046

Cav	Col	CCT
1	B	ALL
2	LGU	ALL
3	WG	ALL

C1053

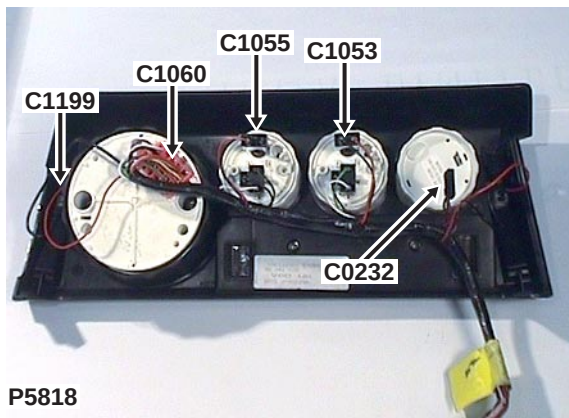
CONNECTOR



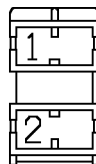
Gauge - Coolant
temperature

Female
BLACK

Behind instrument pack



P5818



ADU8885

Cav	Col	CCT
1	RO	ALL
2	B	ALL

CONNECTOR

C1054

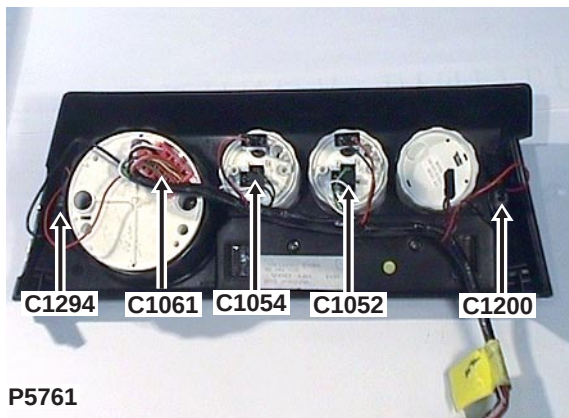


Gauge - Fuel

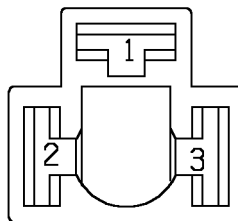
Female

BLACK

Behind instrument pack



P5761



YPC114046

Cav	Col	CCT
1	B	ALL
2	LGB	ALL
3	WG	ALL

C1055

CONNECTOR

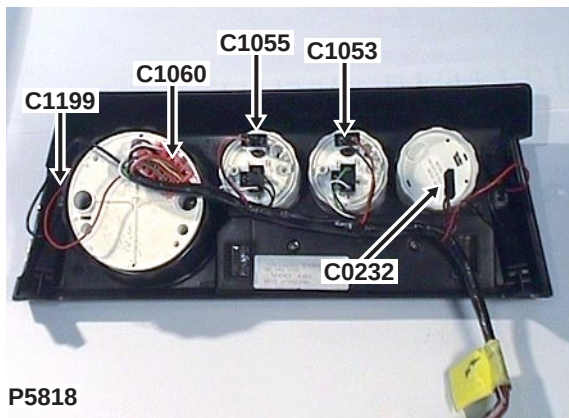


Gauge - Fuel

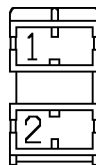
Female

BLACK

Behind instrument pack



P5818



ADU8885

Cav	Col	CCT
1	RO	ALL
2	B	ALL

CONNECTOR

C1060

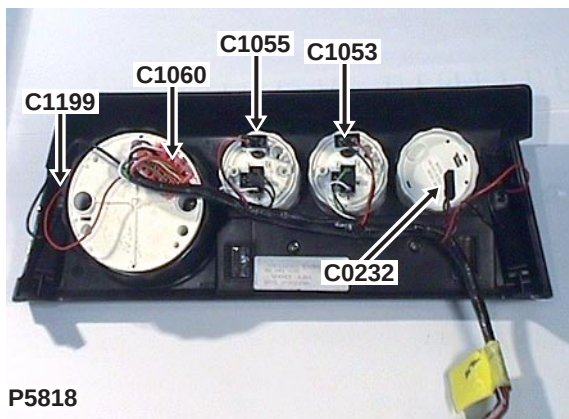


Speedometer

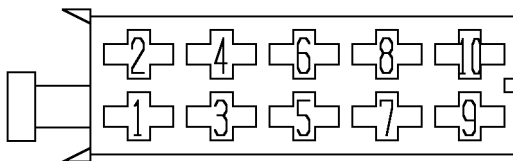
Female

RED

Behind instrument pack



P5818



YPC10192

Cav	Col	CCT
1	YK	ALL
2	BR	ALL
3	K	ALL
4	RO	ALL
6	NU	ALL
7	B	ALL
9	PN	ALL
10	WG	ALL

C1061

CONNECTOR

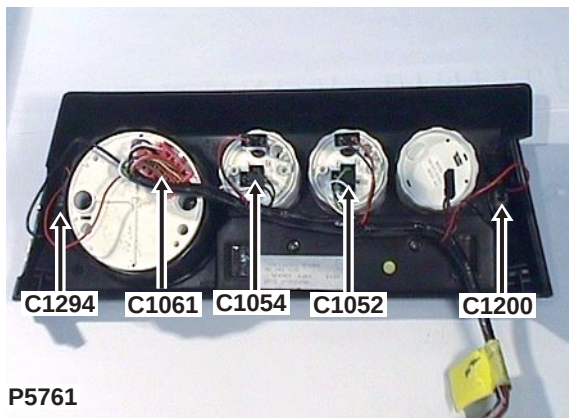


Speedometer

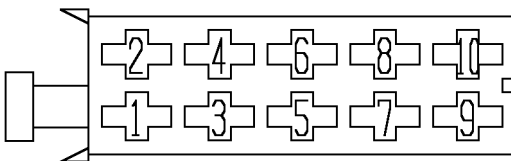
Female

RED

Behind instrument pack



P5761



YPC10192

Cav	Col	CCT
1	WO	ALL
3	GB	ALL
5	GU	22
7	LGB	ALL
9	LGU	22

CONNECTOR

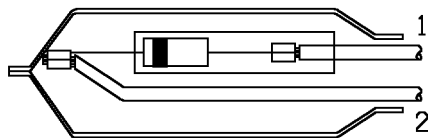
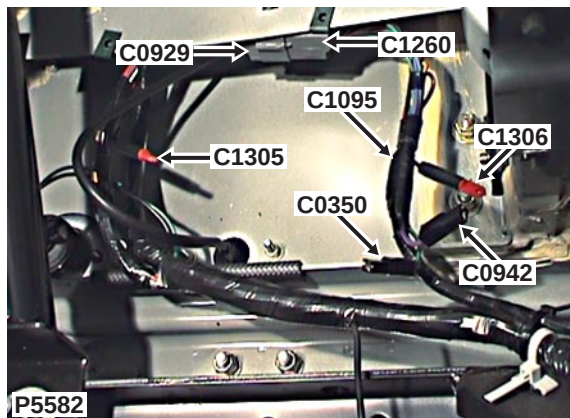
C1095



Diode

BLACK

Below RH rear wheelarch



YQP10003

Cav	Col	CCT
1	RY	ALL
2	RY	ALL

C1102

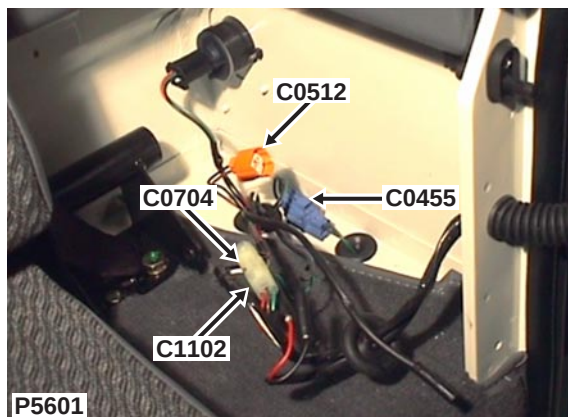
CONNECTOR



Tail door harness to chassis harness

Male
NATURAL

Behind RH rear trim panel



NO CONNECTOR FACE

Cav	Col	CCT
1	G	ALL
2	RLG	ALL
3	NLG	ALL

CONNECTOR

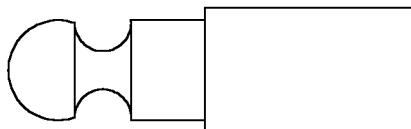
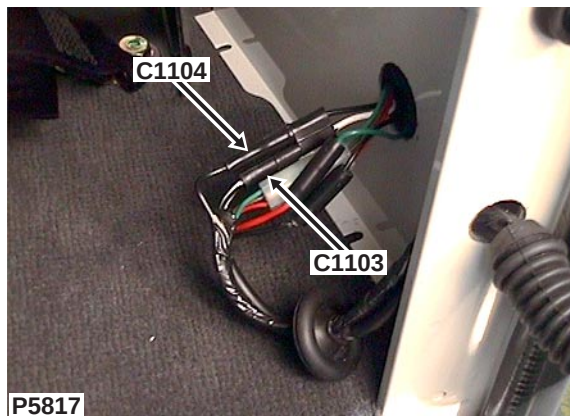
C1103

GB

Chassis harness to tail door
harness

Male
BLACK

RH side of taildoor, behind
trim panel



13H4716

Cav	Col	CCT
1	WB	ALL

C1104

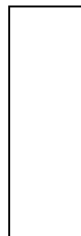
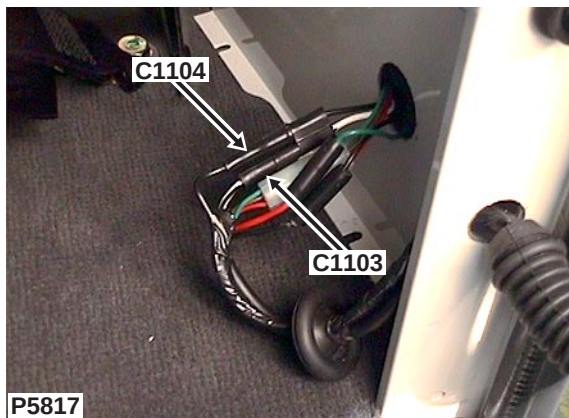
CONNECTOR

GB

Chassis harness to tail door
harness

Female
TIN-PLATE

RH side of taildoor, behind
trim panel



YPE10022

Cav	Col	CCT
1	B	ALL

CONNECTOR

C1105

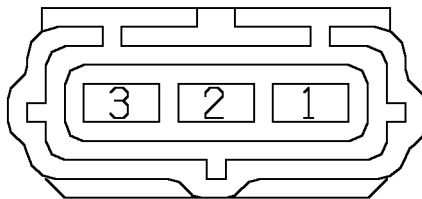
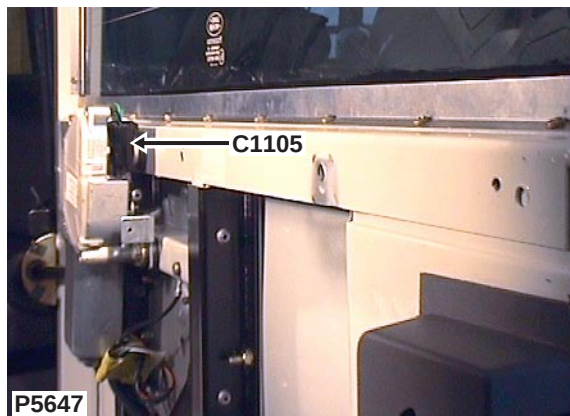


Switch - Park - Rear wiper

Female

BLACK

RH side of taildoor, behind
trim panel



YPC10068

Cav	Col	CCT
1	NLG	ALL
2	G	ALL
3	B	ALL

C1186

CONNECTOR

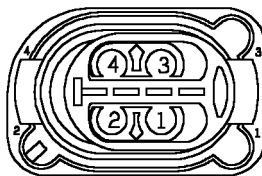
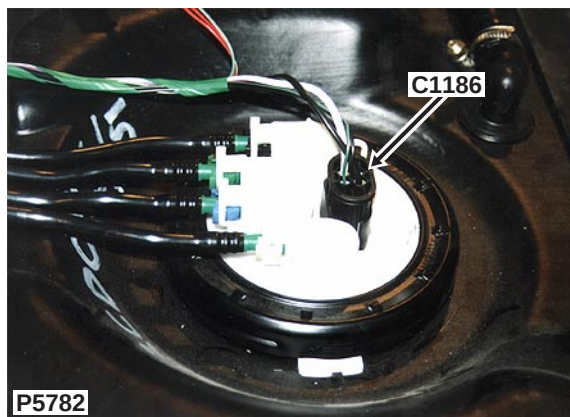
GB

Fuel Tank - Td5

Female

BLACK

Above fuel tank



YPC110200

Cav	Col	CCT
1	WP	9
2	GB	9
3	SB	9
4	B	9

CONNECTOR

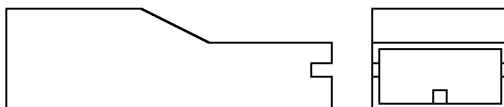
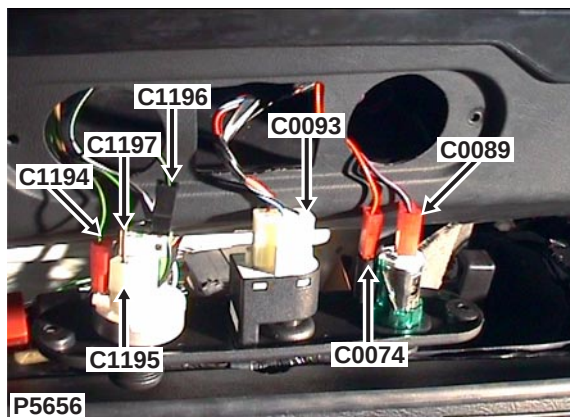
C1194

GB

Switch - Wash / wipe - Rear
screen

Female
RED

Behind centre of fascia



YPC10245

Cav	Col	CCT
1	RLG	ALL

C1195

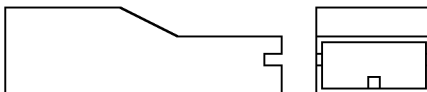
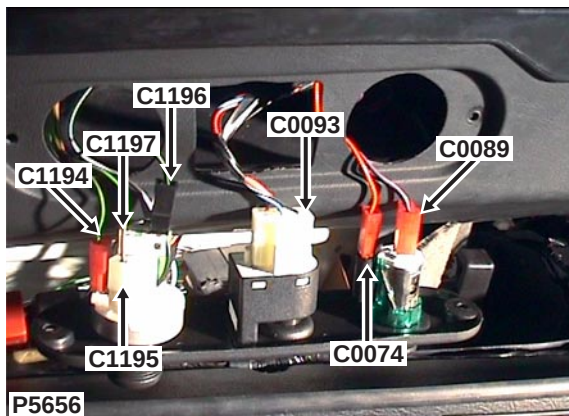
CONNECTOR

GB

Switch - Wash / wipe - Rear
screen

Female
NATURAL

Behind centre of fascia



ADU8339

Cav	Col	CCT
1	NLG	ALL

CONNECTOR

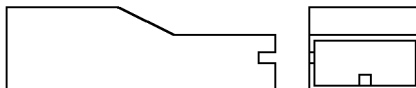
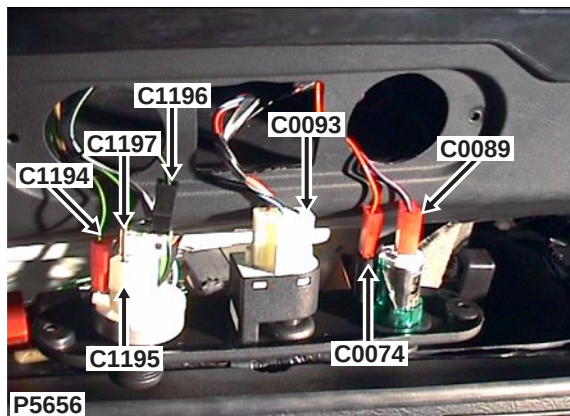
C1196

GB

Switch - Wash / wipe - Rear
screen

Female
BLACK

Behind centre of fascia



AAU1010

Cav	Col	CCT
1	BLG	ALL

C1197

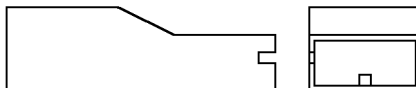
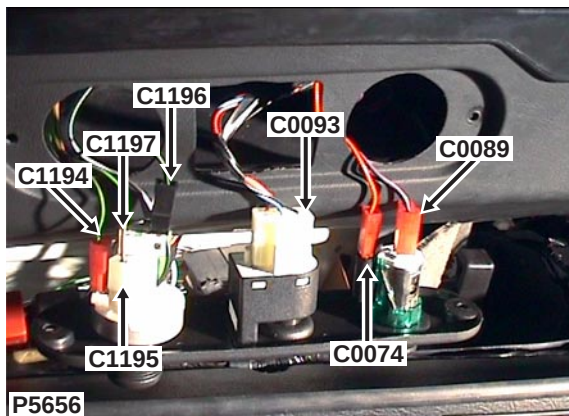
CONNECTOR

GB

Switch - Wash / wipe - Rear
screen

Female
GREEN

Behind centre of fascia



AAU1010

Cav	Col	CCT
1	WG	ALL

CONNECTOR

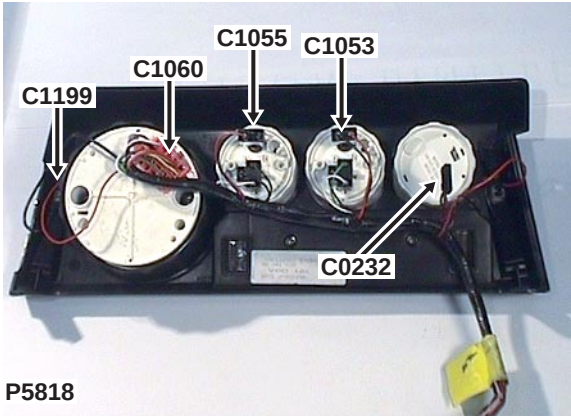
C1199



Illumination - Heater control
- LH

Female
TIN-PLATE

Behind instrument pack



P5818



Cav	Col	CCT
1	RO	ALL

C1200

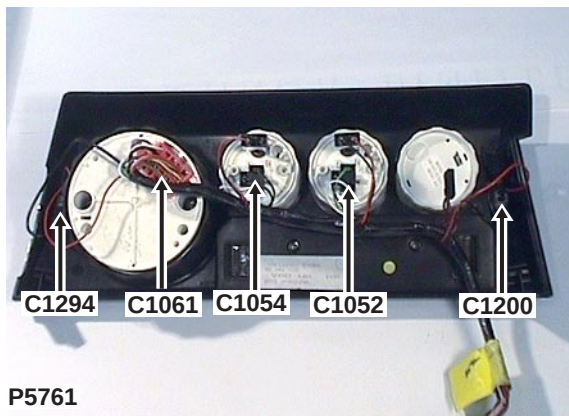
CONNECTOR



Illumination - Heater control
- RH

Female
TIN-PLATE

Behind instrument pack



P5761

NO CONNECTOR FACE

Cav	Col	CCT
1	RO	ALL

CONNECTOR

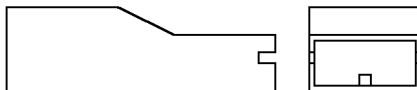
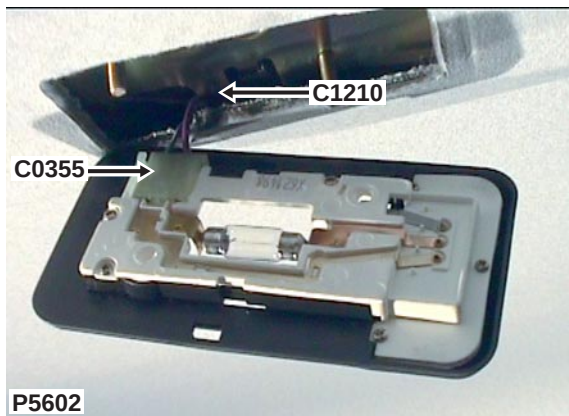
C1210



Earth

Female
BLACK

Front of headlining in the
centre



AAU1010

Cav	Col	CCT
1	B	ALL

C1211

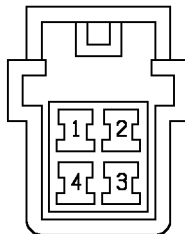
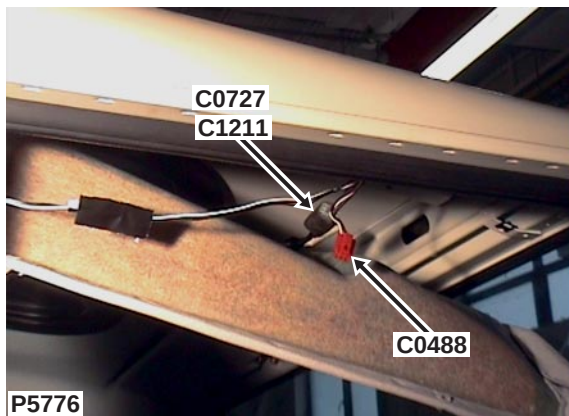
CONNECTOR

GB

Main harness to interior
lamp harness

Male
NATURAL

Headlining - front RH side



YPC10080

Cav	Col	CCT
1	B	ALL
2	PW	ALL
3	P	ALL
4	PU	ALL

CONNECTOR

C1260

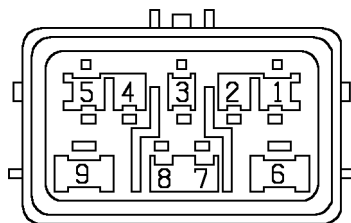
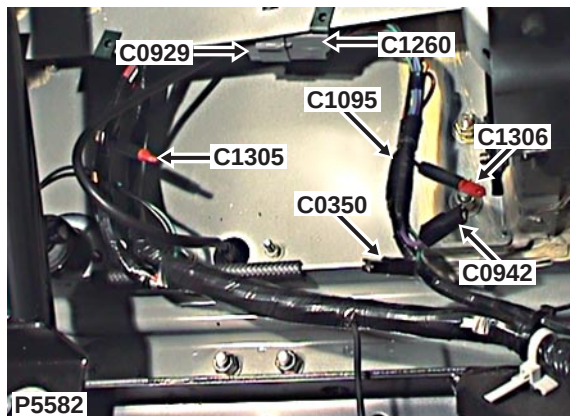
GB

Trailer pick-up

Male

DARK GREY

Below RH rear wheelarch



PC114860

Cav	Col	CCT
1	GR	ALL
2	RB	ALL
3	GW	ALL
4	RO	ALL
5	GP	ALL
6	P	ALL
7	GN	ALL
8	RY	ALL
9	B	ALL

C1264

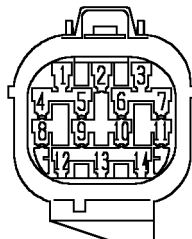
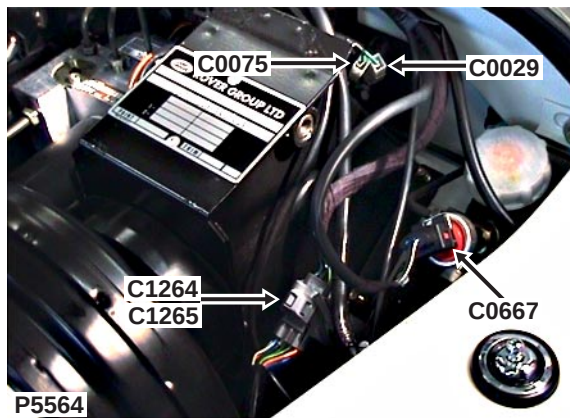
CONNECTOR



Main harness to wing
harness

Female
GREY

Adjacent pedal box



YPC10549

Cav	Col	CCT
1	US	ALL
2	UK	ALL
3	B	ALL
4	GR	ALL
5	RB	ALL
6	PB	ALL
7	RO	27

Cav	Col	CCT
8	OB	15
9	B	ALL
10	B	15
11	B	15
12	LGB	ALL
13	BLG	ALL
14	UY	27

CONNECTOR

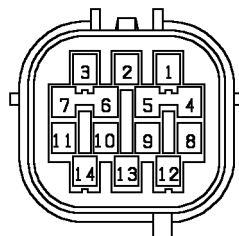
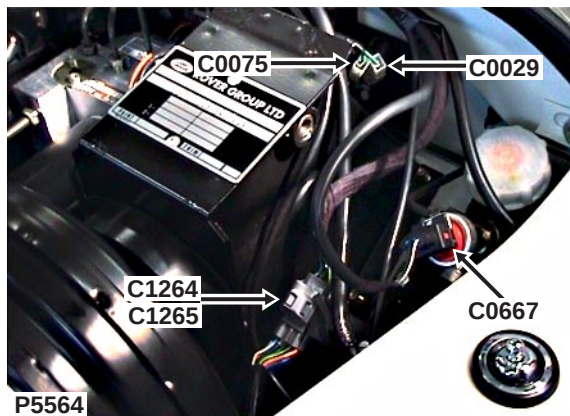
C1266

GB

Wing harness to main
harness - LH

Male
GREY

Adjacent pedal box



YPC10469

Cav	Col	CCT
1	US	ALL
2	UK	ALL
3	B	25
3	B	27
4	GR	ALL
5	RB	ALL
6	PB	ALL
7	RO	27

Cav	Col	CCT
8	OB	27
9	B	27
10	B	27
11	B	27
12	LGB	ALL
13	BLG	ALL
14	UY	27

C1266

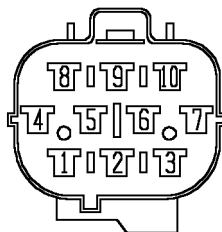
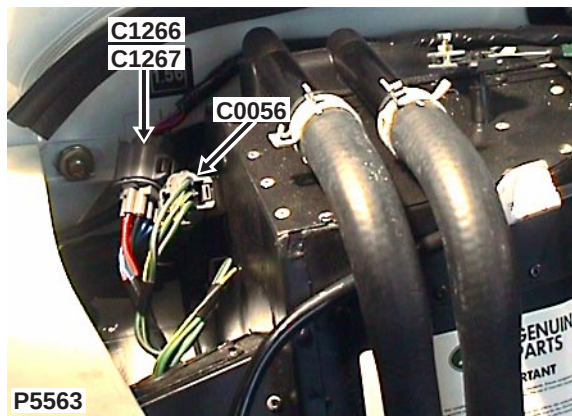
CONNECTOR



Main harness to wing
harness - RH

Female
GREY

Adjacent heater assembly



YPC10633

Cav	Col	CCT
1	UO	ALL
2	UB	ALL
3	B	ALL
4	GW	ALL
5	RO	ALL
6	PB	ALL
7	RO	27
8	UY	27
9	NW	25
10	NG	25

CONNECTOR

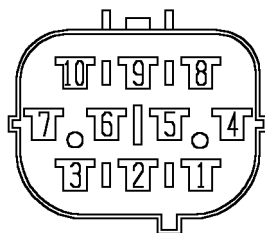
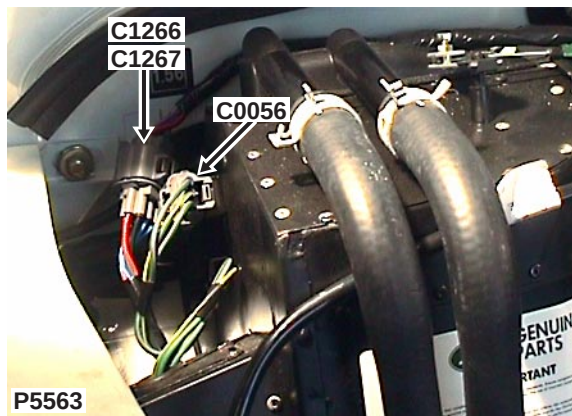
C1267

GB

Wing harness to main
harness - RH

Male
GREY

Adjacent heater assembly



YPC10468

Cav	Col	CCT
1	UO	ALL
2	UB	ALL
3	B	ALL
4	GW	ALL
5	RO	ALL
6	PB	ALL
7	RO	27
8	UY	27
9	NW	27
10	NG	27

C1268

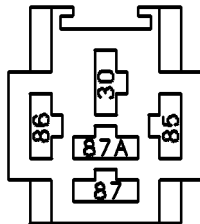
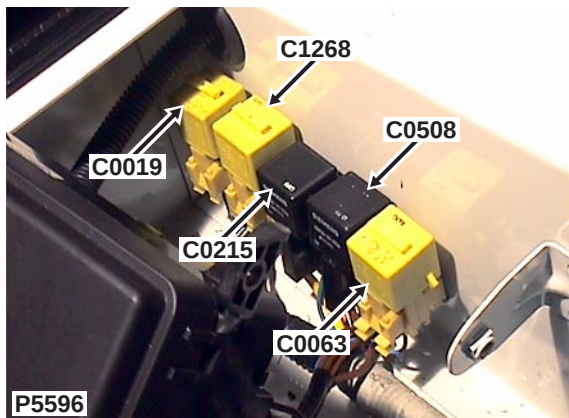
CONNECTOR

GB

Relay - Compressor clutch -
Air conditioning (A/C) - Td5

Female
YELLOW

Beneath RH seat



AFU3271

Cav	Col	CCT
30	NS	1
85	NO	1
85	WG	1
86	BS	1
86	WK	1
87	BG	1

CONNECTOR

C1273

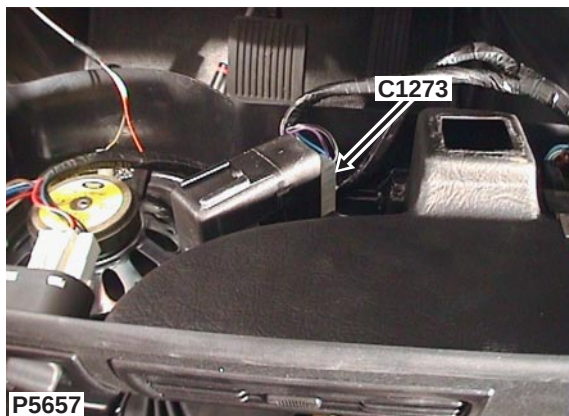


Unit - Air conditioning (a/c)

Female

Natural

Behind RH side of fascia



NO CONNECTOR FACE

Cav	Col	CCT
1	P	1
3	UN	1
4	RW	1
5	B	1
6	NG	1
7	BW	1
8	BW	1
10	U	1
11	WG	1
13	UB	1
14	O	1

C1294

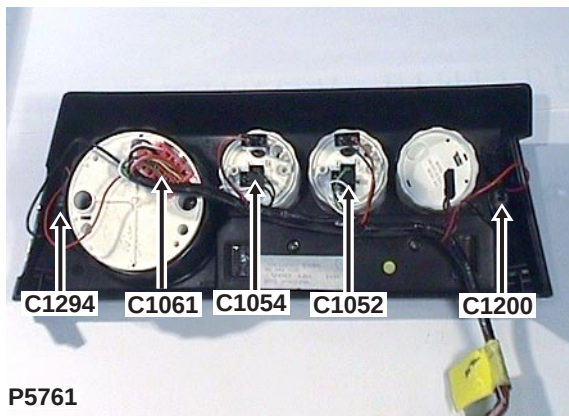
CONNECTOR



Illumination - Heater control
- LH

Female
TIN-PLATE

Behind instrument pack



P5761

NO CONNECTOR FACE

Cav	Col	CCT
1	B	ALL

CONNECTOR

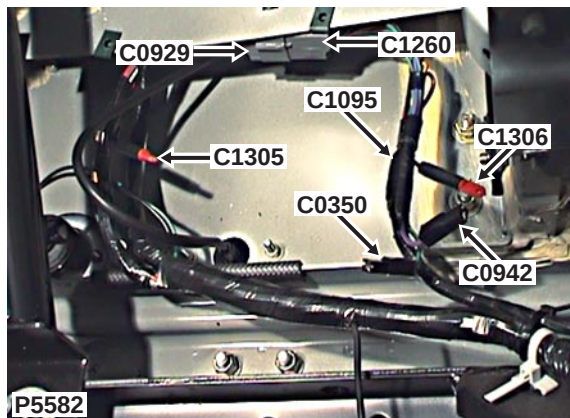
C1305

GB

Trailer pick-up

Male
BLACK

Below RH rear wheelarch



YPQ10008

Cav	Col	CCT
1	P	ALL

C1306

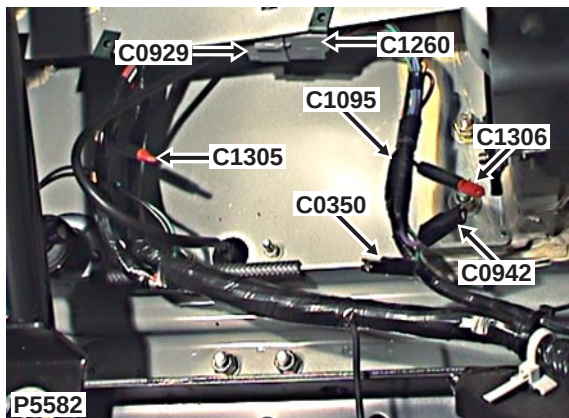
CONNECTOR



Trailer pick-up

Male
BLACK

Below RH rear wheelarch



YPQ10008

Cav	Col	CCT
1	P	ALL

CONNECTOR

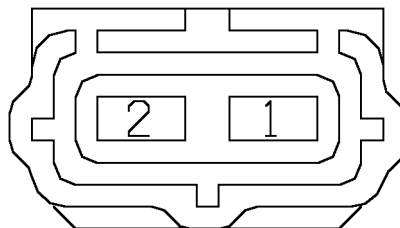
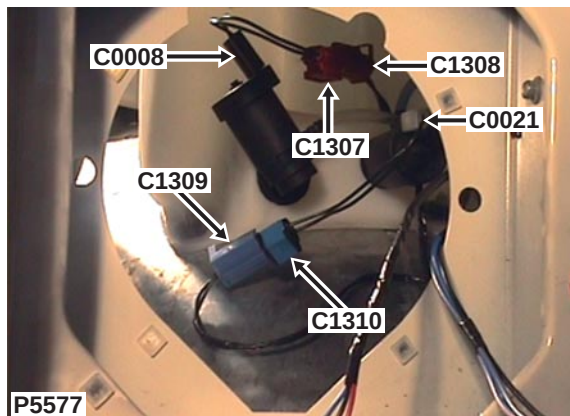
C1307

GB

Pump - Washer -
Windscreen

Female
RED

Behind LH headlamp



YPC10131

Cav	Col	CCT
1	B	ALL
2	LGB	ALL

C1308

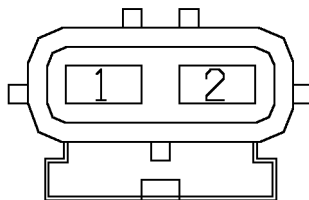
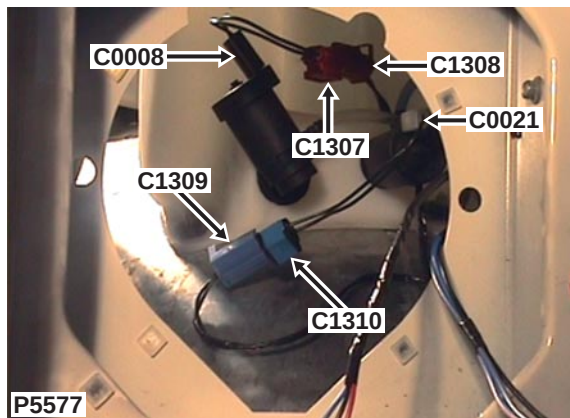
CONNECTOR

GB

Wing harness to washer
pump link harness

Male
RED

Behind LH headlamp



YPC10133

Cav	Col	CCT
1	B	ALL
2	LGB	ALL

CONNECTOR

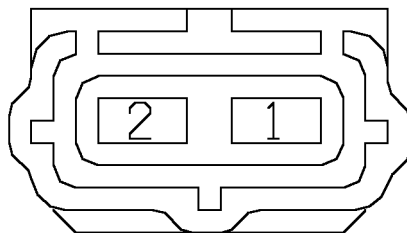
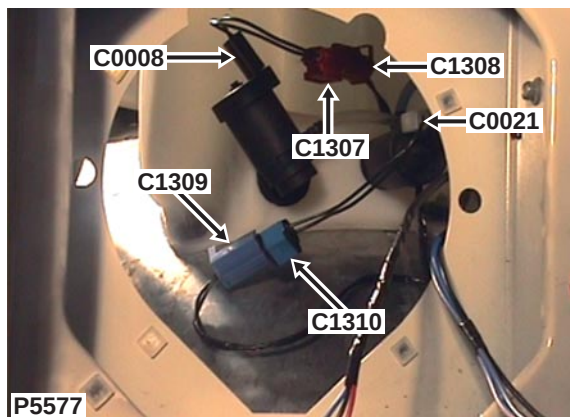
C1309

GB

Pump - Washer - Rear
screen

Female
BLUE

Behind LH headlamp



YPC10208

Cav	Col	CCT
1	B	ALL
2	BLG	ALL

C1310

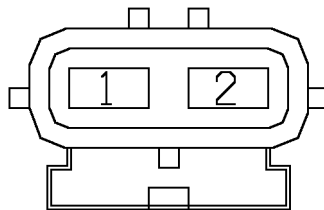
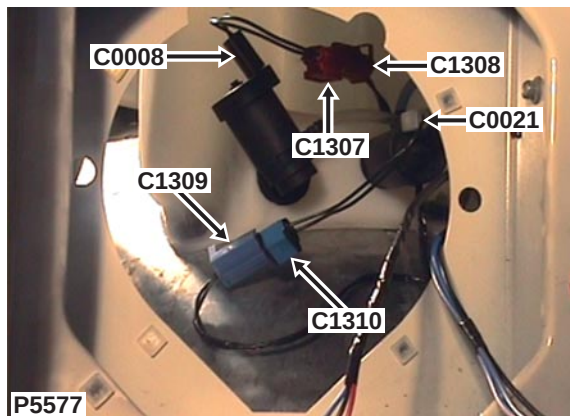
CONNECTOR

GB

Wing harness to washer
pump link harness

Male
BLUE

Behind LH headlamp



YPC10209

Cav	Col	CCT
1	B	ALL
2	BLG	ALL

CONNECTOR

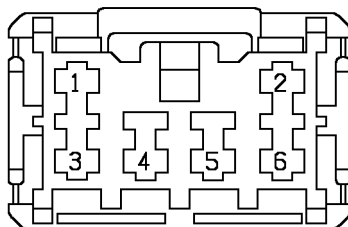
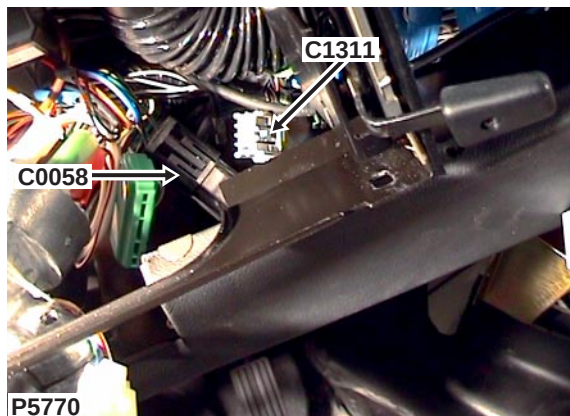
C1311

GB

ECU - Speed (Gulf states only)

Female
LIGHT GREY

Behind instrument pack



YPC10634

Cav	Col	CCT
1	WG	4
2	B	4
3	YK	ALL
4	BK	4
5	WP	4

C1494

CONNECTOR

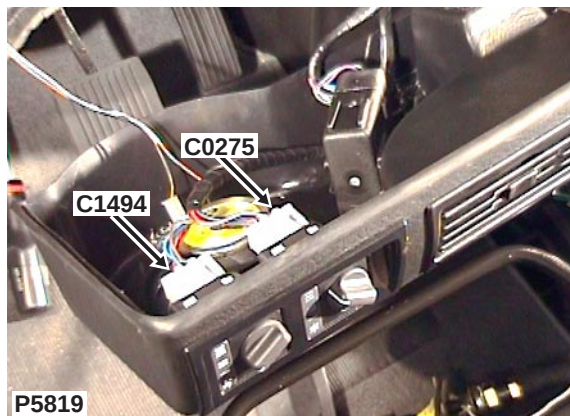


Switch - Blower

Female

WHITE

Behind LH side of fascia



NO CONNECTOR FACE

Cav	Col	CCT
2	W	1
3	UK	1
4	RB	1
5	U	1
6	UB	1