



A5.9 PIN-POINT TESTS

The following information details test procedures to identify specific component faults.

The table below provides a key to items identified on the following schematic diagrams.

Item No.	Description	Item No.	Description
1	Security / Locking Control Module	21	Hood switch
2	Central locking switch	22	LH Engine bay fuse-box
3	Front passenger door ajar switch	23	Horn relay
4	RH rear passenger door ajar switch	24	Horn unit LH
5	LH rear passenger door ajar switch	25	Horn unit RH
6	Driver's door ajar switch	26	Horn switches
7	Driver's door lock switch	27	Inclination sensor
8	Passenger's door lock switch	28	Intrusion sensor LH
9	Driver's door unlock relay (NAS only)	29	Intrusion sensor RH
10	Non-deadlock shorting links (NAS only)	30	Passenger door key barrel switch
11	Front left / rear right deadlock relay	31	Driver's door key barrel switch
12	Front right / rear left deadlock relay	32	Reader exciter module
13	Door lock relay	33	Reader exciter coil
14	Door unlock relay	34	Trunk fuse-box
15	LH Rear door actuator and switch	35	Security active indicator
16	RH Rear door actuator and switch	36	Security sounder
17	Front door actuator lock / deadlock status switches	37	Trunk release relay
18	Driver's door actuator lock / deadlock status switches	38	Trunk release actuator
19	Driver's door unlock shorting link	39	Trunk release switch (fascia)
20	RH 'A' post base fuse-box	40	Trunk release switch
		41	Valet switch

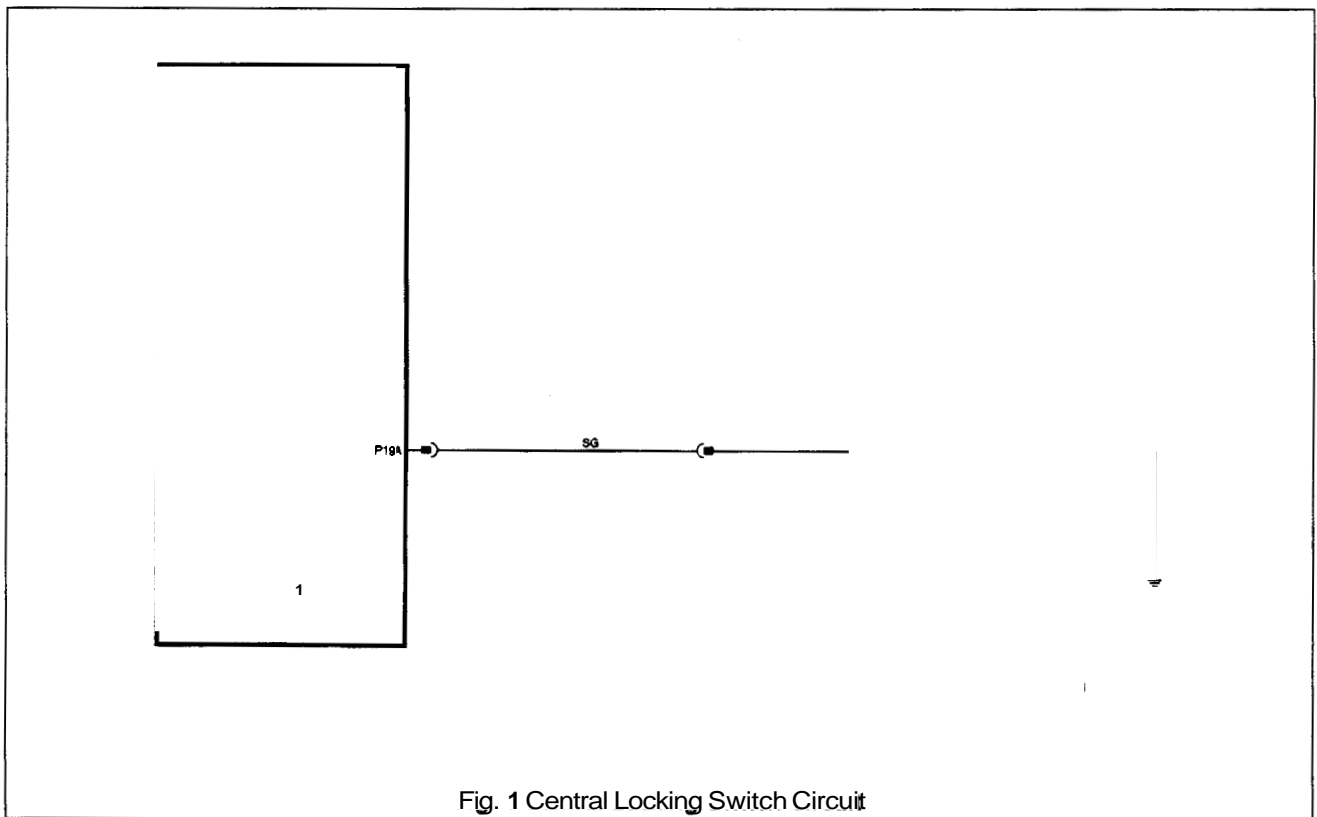
A5



A5.9.1 Central locking switch

1. Check continuity from 22-way multi-plug pin **19** to ground, open circuit should be recorded.
2. Operate switch and check that short circuit to ground is now present.
3. Check wiring continuity from 22-way multi-plug pin **19** to switch connector pin **3**.
4. Check wiring continuity from switch connector pin **1** to ground.

Note: If switch is faulty the whole clock module must be renewed; refer to sub-section **15.9.10**.



A5

Fig. 1 Central Locking Switch Circuit



A5.9.2 Door ajar switches

1. Close all four doors and turn ignition to ON.
2. Open each door in turn, checking that instrument pack indicator lamp illuminates at every opening action.
3. On identification of non-illumination check continuity across suspect door switch, door closed - switch open circuit, door open switch short circuit.
4. If switches test correctly check wiring continuity between SLCM connector and switches, then to ground as detailed below

A5

Door	SLCM	Switch	Ground
Driver's	Pin 07, 12-way	Pin 06	Pin 07
Passenger's (front)	Pin 01, 16-way	Pin 06	Pin 06
Passenger's (rear)	Pin 21, 22-way	Pin 05	Pin 06

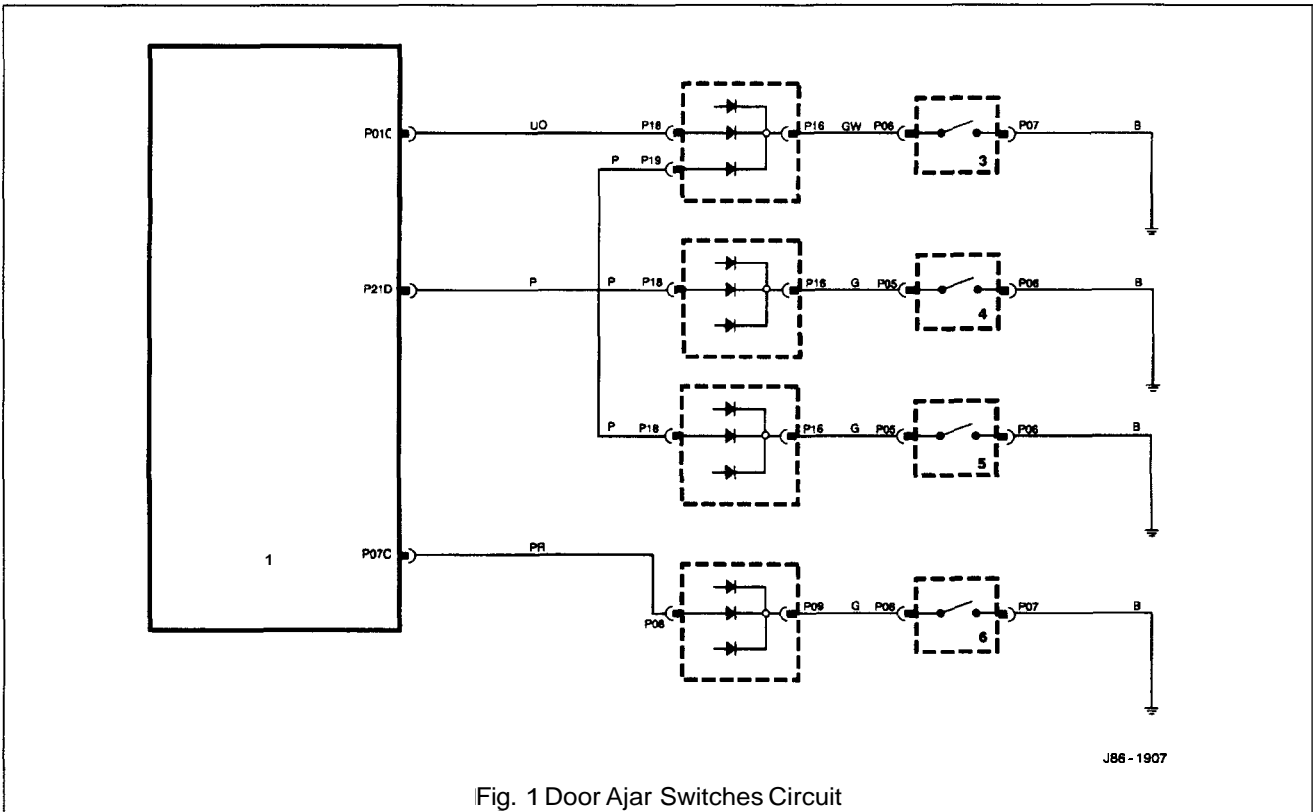
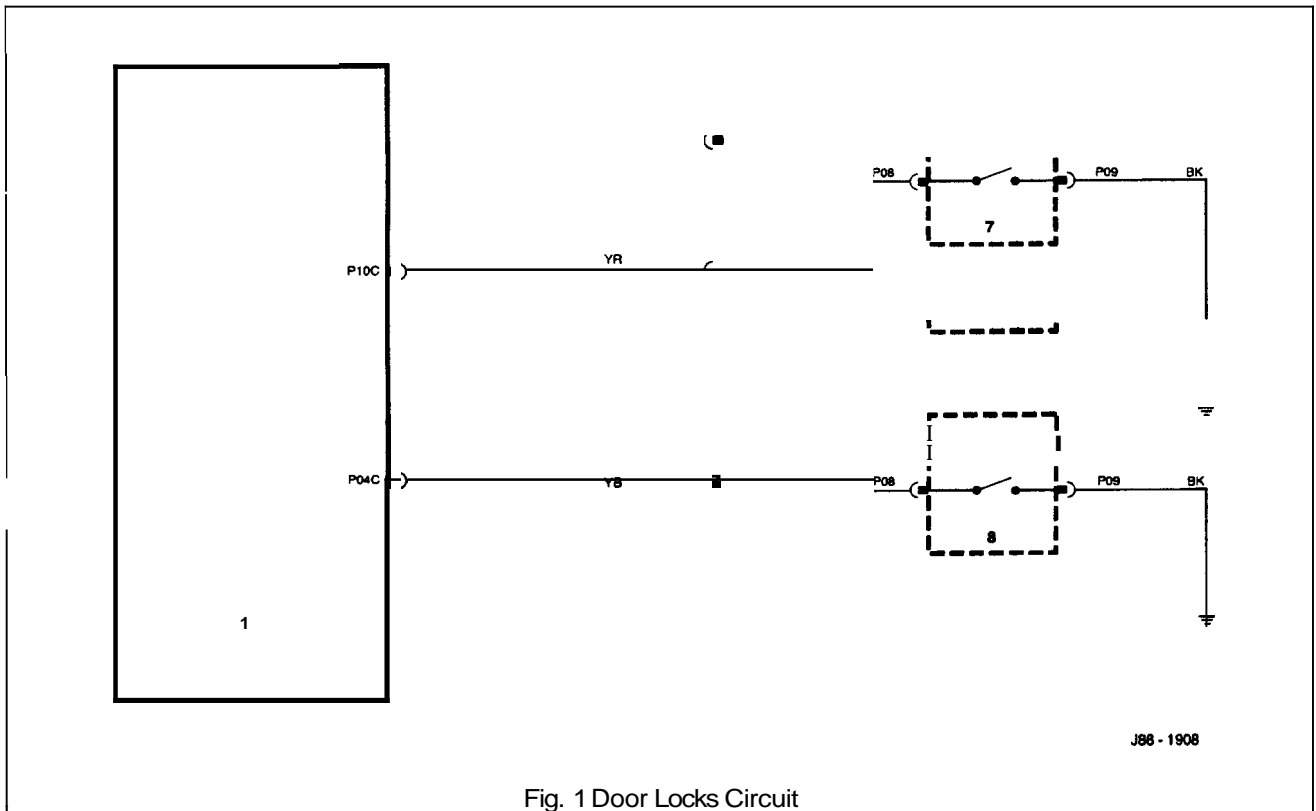


Fig. 1 Door Ajar Switches Circuit



A5.9.3 Door locks

1. Check harness wiring continuity between multi-plug 12-way connector pins 10 (driver's side) and 4 (passenger's side) to respective door lock connector pin 8. Ensure secure ground connection from each lock connector pin 9.
2. Test continuity across switch pins, readings should be open circuit with door unlocked, short circuit with door locked.



A5

Fig. 1 Door Locks Circuit



A5.9.4 Door lock actuators and switch

1. Examine fuse F1 in right hand 'A' post base fusebox, if blown determine reason for rupture and renew.
2. Check continuity of harness wiring as shown on Fig. 1 below. Ensure secure ground connection from lock/ unlock and deadlock (not N.A.S.) relay pins 4 and 9.
3. Remove the left hand rear seat hell board, gaining access to lock/ unlock and deadlock (not N.A.S.) relays. Operate lock/ unlock and deadlock checking for audible relay operation. renew suspect relays.
4. Release door lock and measure resistance between actuator unit pins **2** and **3**, a value of approximately **8Ω** should be recorded. Operate door lock and check that circuit between pins **2** and **3** is opened. Resistance across pins **1** and **3** should now be approximately **88**.

A5

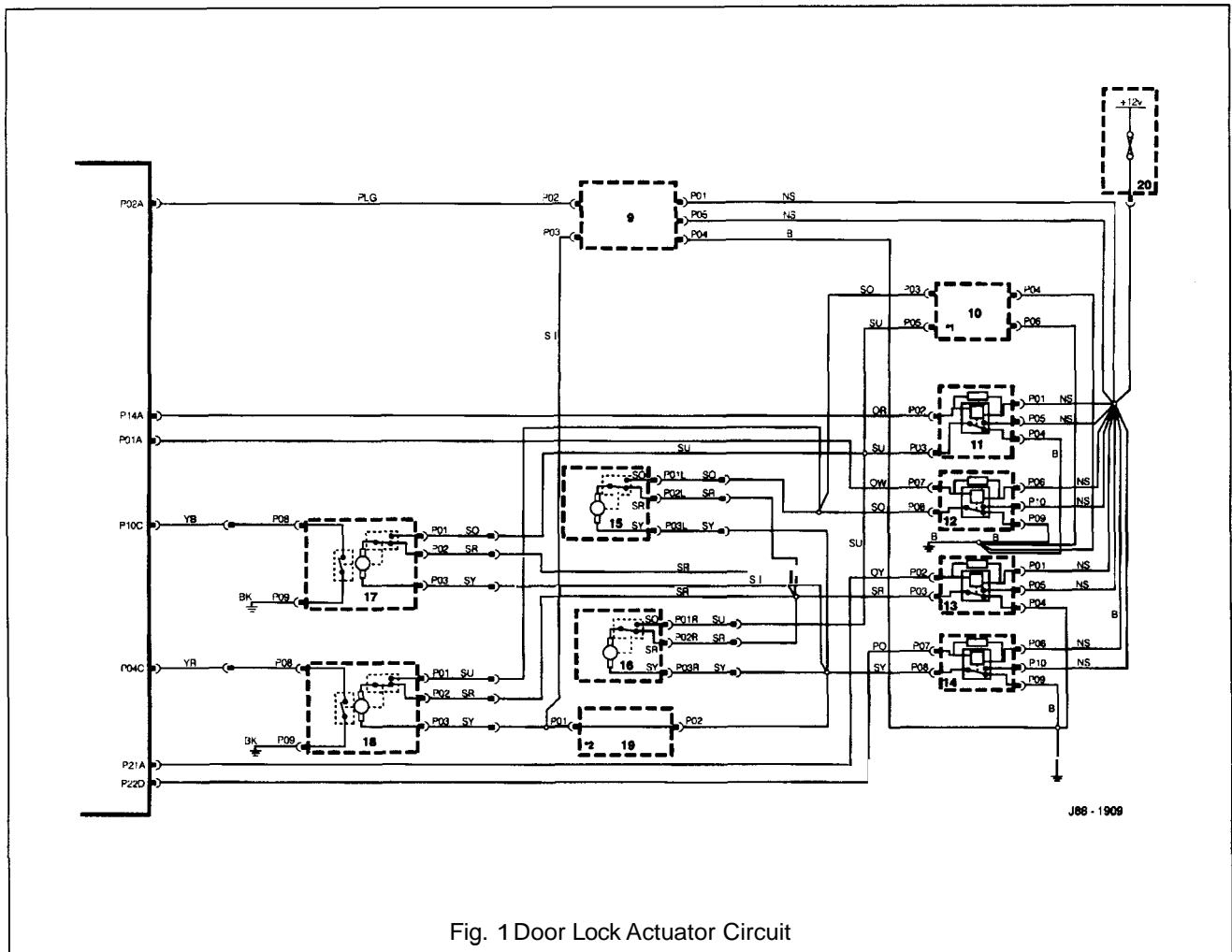


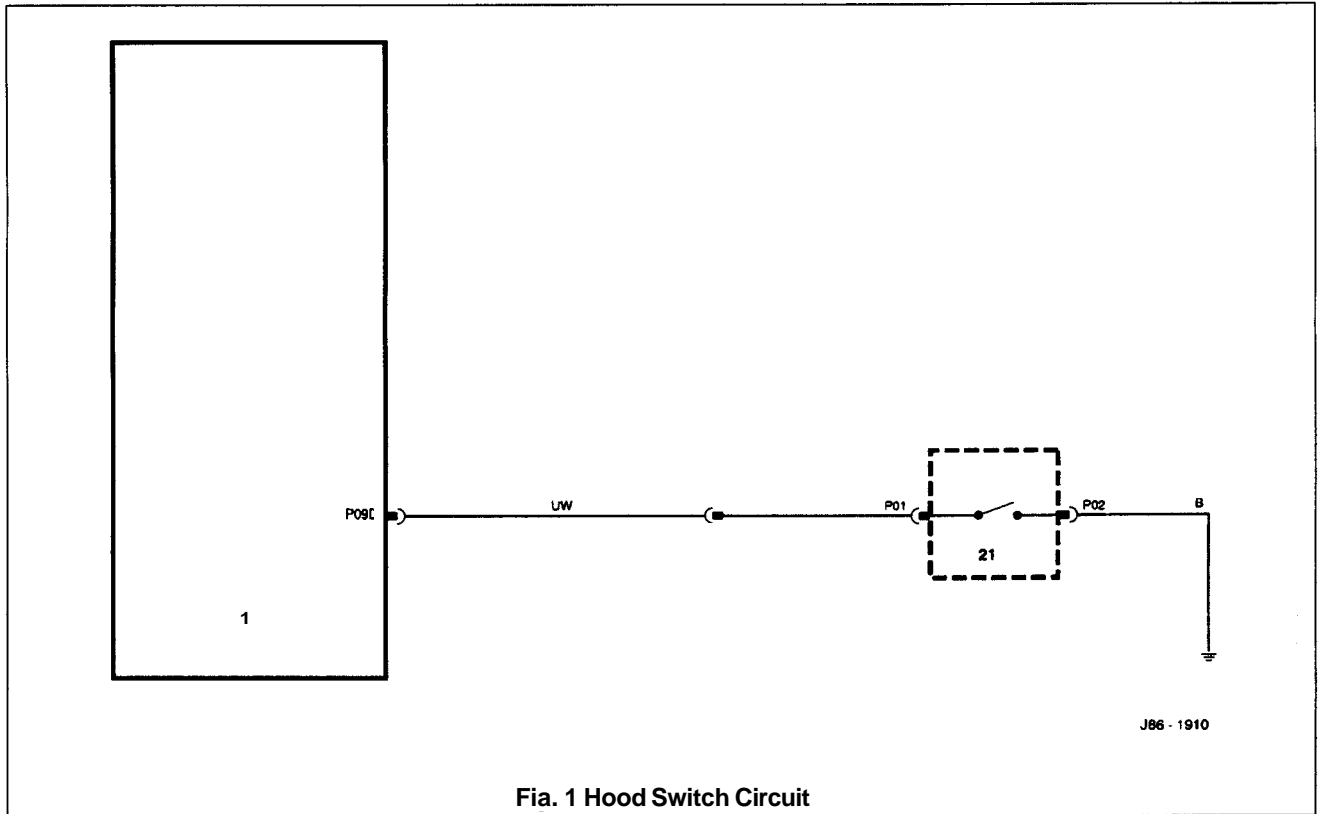
Fig. 1 Door Lock Actuator Circuit

*1 N.A.S. only
 *2 Not N.A.S.



A5.9.5 Hood Switch

1. Check continuity between SLCM 22-way connector pin 9 and ground. With hood closed open circuit should be recorded, with hood open short circuit to ground should be recorded.
2. Check wiring continuity from pin 9 to switch connector pin 1, and from switch connector pin 2 to ground.



A5



A5.9.6 Horns

1. Check fuses **F10** and **F14** in LH engine bay fuse box; if blown determine reason for rupture and renew.
2. Check wiring harness continuity from multi-plug 26-way connector pin **24** to relay unit connector pin **6** and column switchgear connector pin **16**. Ensure secure ground connection from column switchgear connector pin 7.

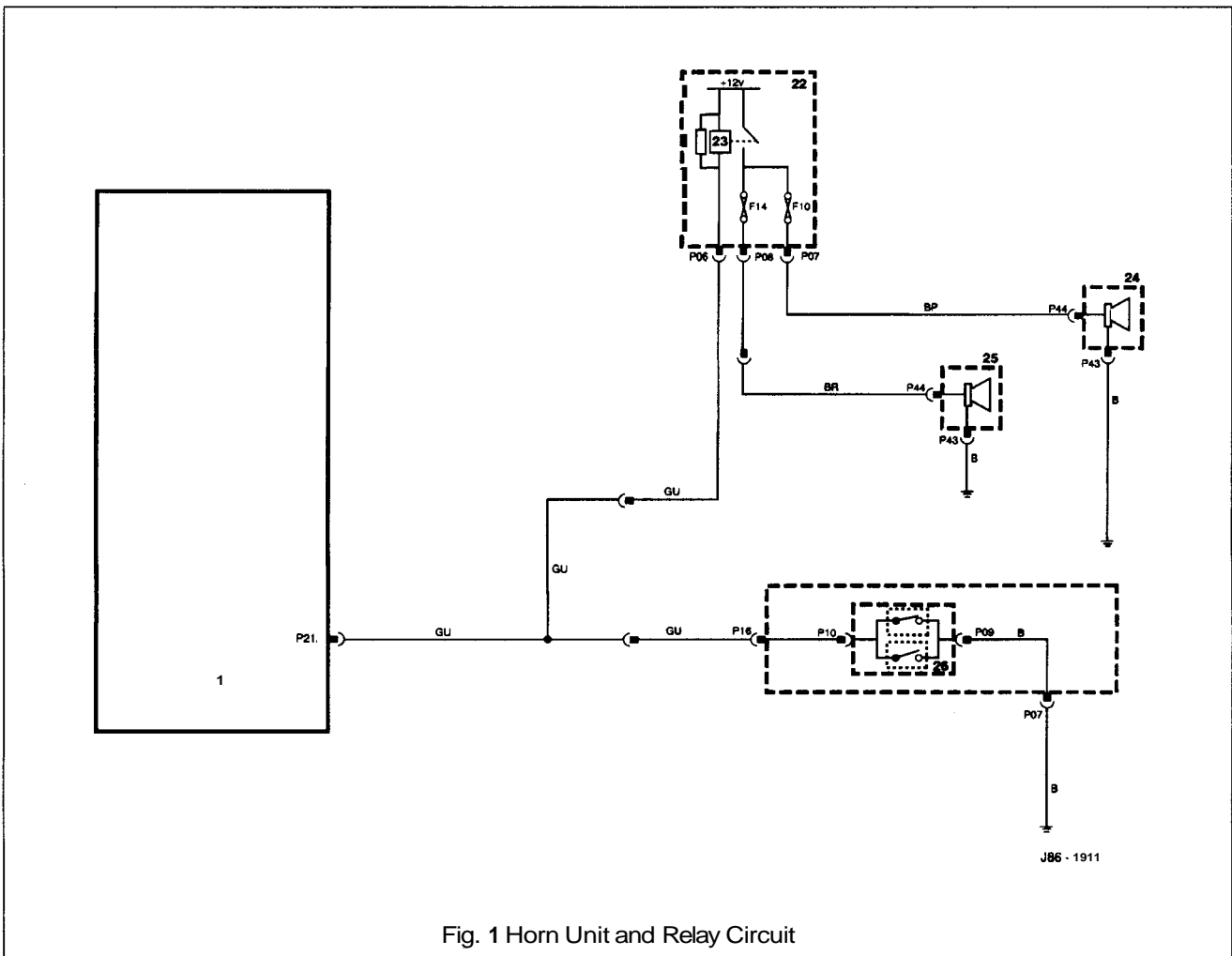
Check wiring harness continuity from fuse connector pins 7 and 8 to LH and RH horn respectively. Ensure secure ground connection from both horn units.

Ensure that **+12V** (nominal) is present at the relay connector pin.

Operate horn switches and check that **+12V** (nominal) is present at the two fuse connector pins and at speaker connector pin **44** (both units).

Check resistance across speaker unit pins; a value of approximately **2Ω** should be recorded.

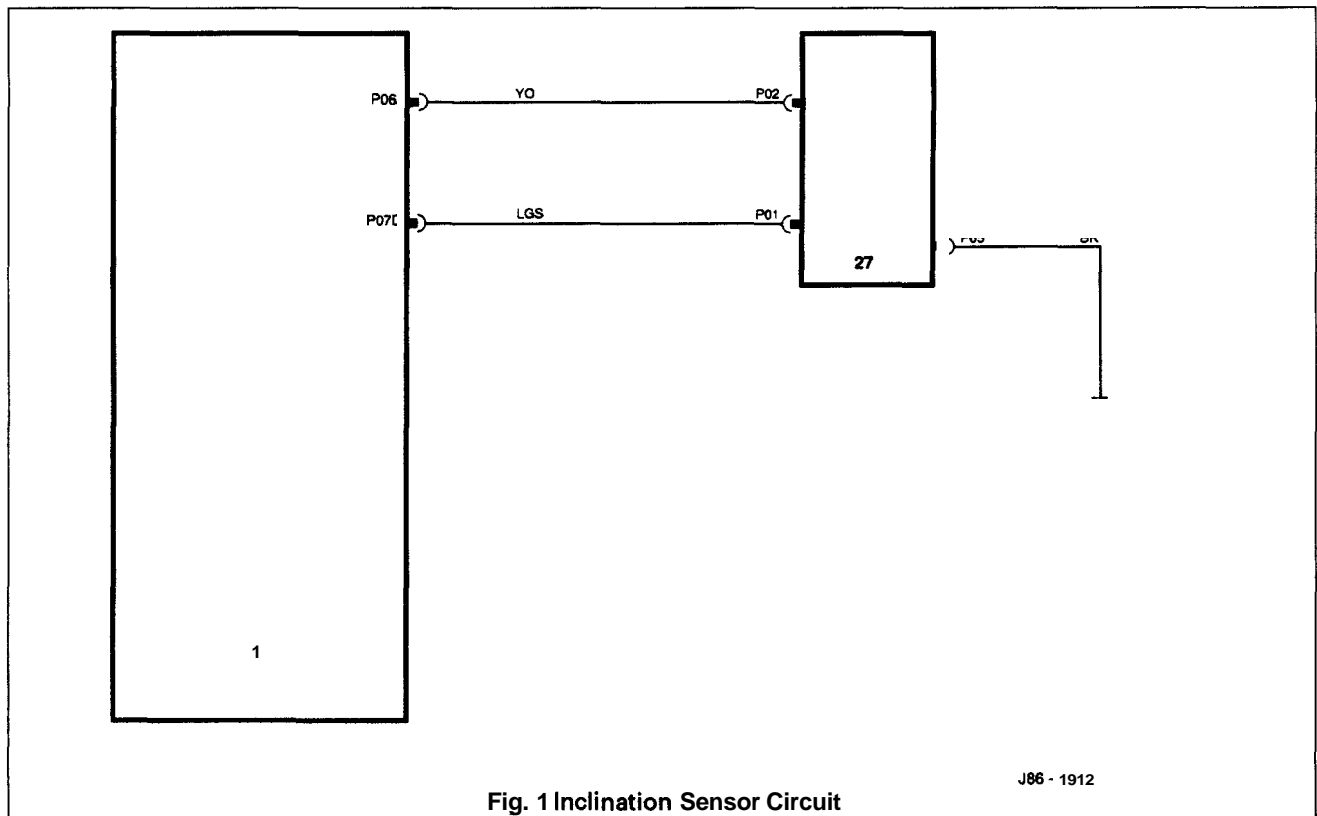
A5





A5.9.7 Inclination sensor

1. Check harness wiring from multi-plug 26-way connector pin 6 to sensor connector pin 2.
2. Check harness wiring from multi-plug 22-way connector pin 7 to sensor connector pin 1.
3. Check harness wiring continuity from sensor connector pin 5 to ground.
4. Remove trim to gain access to sensor and loosen fixings. Lock and arm the vehicle (an error beep will sound indicating boot open but alarm will still set), then tilt the sensor a minimum of 15° away from horizontal checking that the alarm is activated.



A5



A5.9.8 Intrusion sensors

1. Check harness wiring continuity as shown below:

SLCM connector	Sensor connector	Function
Left-hand side sensor		
pin 10	pin 2	ground
pin 11	pin 4	40kHz
pin 12	pin 5	I / P
pin 13	pin 3	+2v
Right-hand side sensor		
pin 2	pin 2	ground
pin 3	pin 4	40kHz
pin 4	pin 1	I / P
pin 5	pin 3	+2v

2. Lock and arm the vehicle while sat inside; wait 15 seconds, then attempt to cover either sensor area with the palm of the hand. Check that sensor detects movement and activates alarm. Repeat test for second sensor.

A5

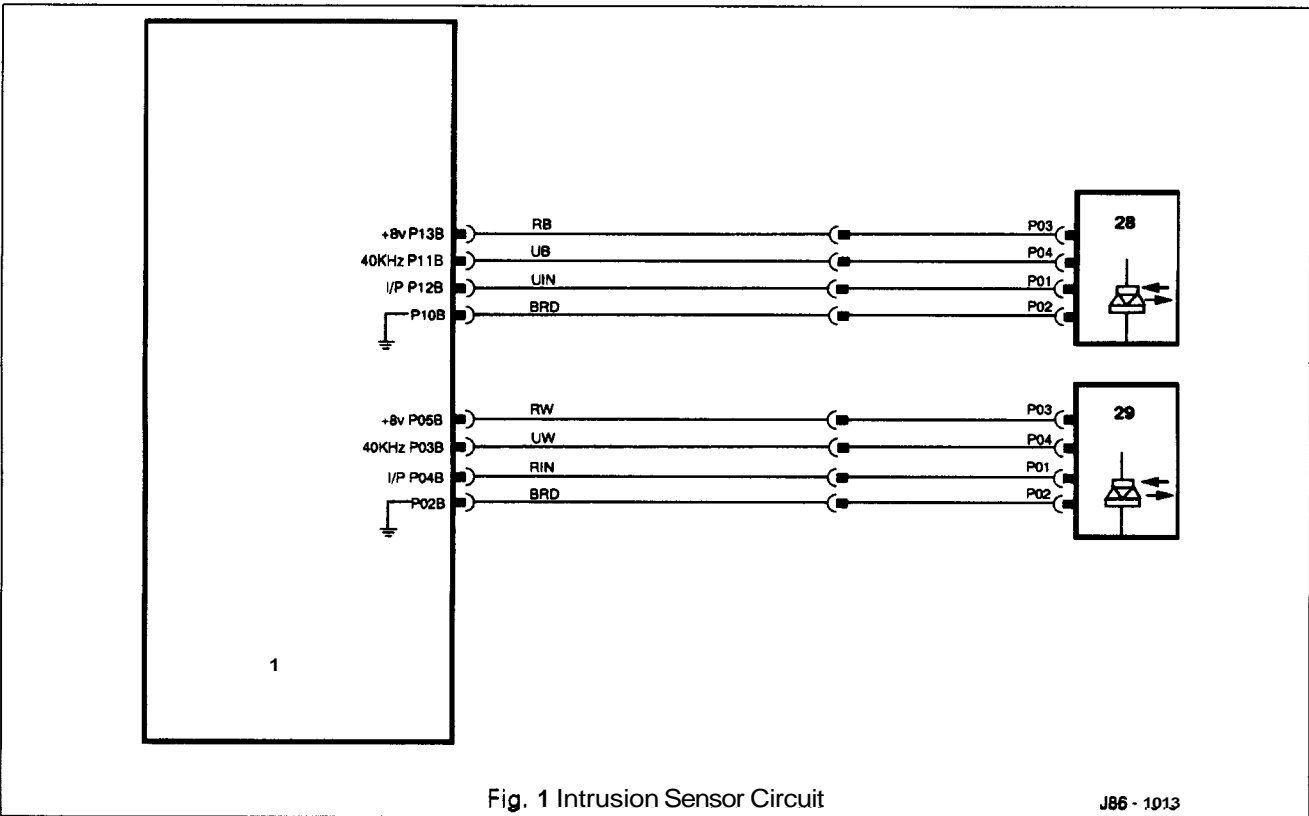


Fig. 1 Intrusion Sensor Circuit

J86 - 1013



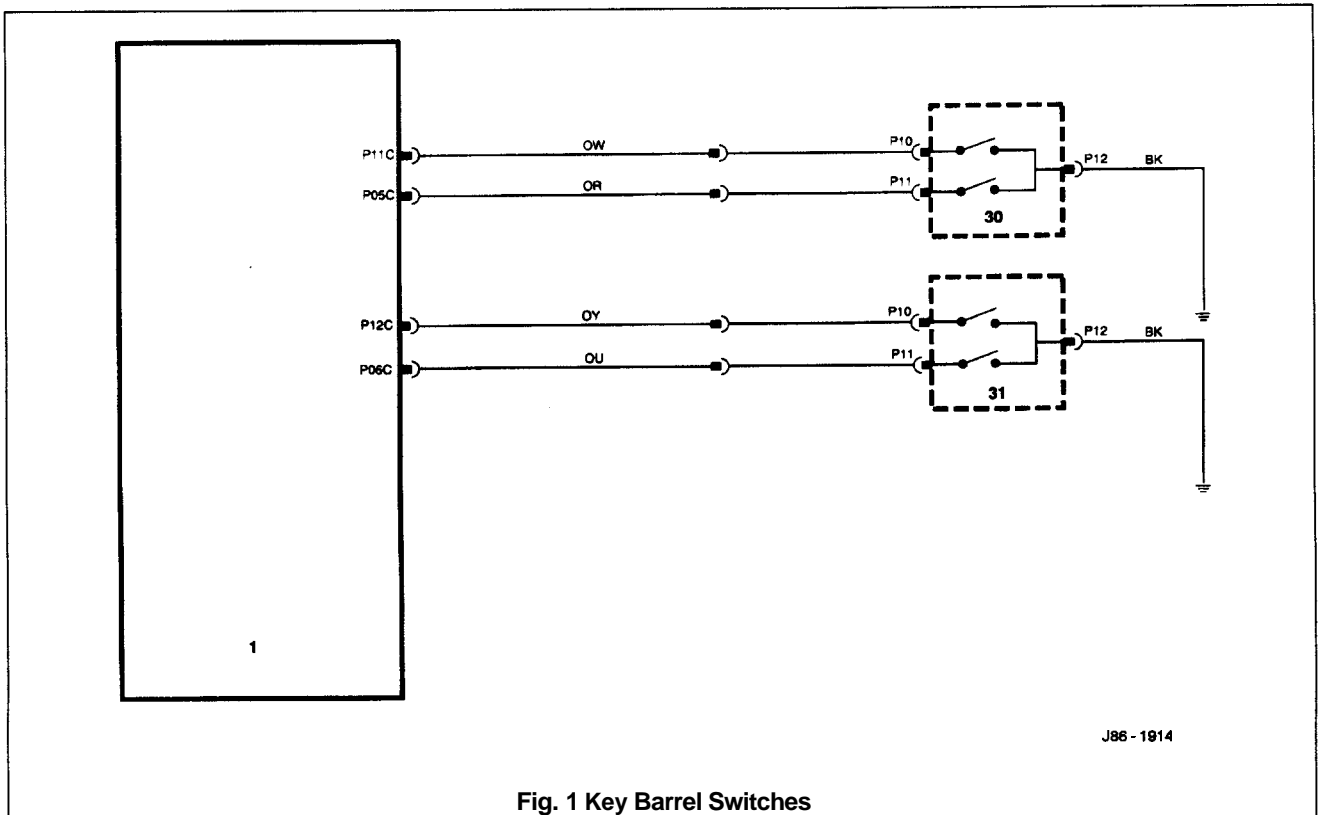
A5.9.9 Key barrel switches

1. Check harness wiring continuity as follows:

SLCM 16-way connector	Switch	Function
Driver's side		
pin 6	pin 11	unlock signal
pin 12	pin 10	lock signal
	pin 12	ground
Passenger's side		
pin 5	pin 11	unlock signal
pin 10	pin 10	lock signal
	pin 12	ground

A5

2. Check continuity from switch pin 10 to ground with door locked, and from switch pin 11 to ground with door unlocked.



J86 - 1914

Fig. 1 Key Barrel Switches



A5.9.10 Reader exciter coil and module

1. Check fuse F4 in trunk fuse box, if blown determine reason for rupture and renew.
2. Check harness wiring continuity as follows:

SLCM connector	Module connector	Coil connector	Function
pin 6 (16-way)	pin 19	-	ground
pin 9 (12-way)	pin 06	-	data code
pin 11 (22-way)	pin 08	-	immobilization on
-	pin 1	pin 10	coil terminal 2
-	pin 9	pin 11	coil terminal 1
-	pin 10	-	+12V
-	pin 20	-	ground

3. Measure continuity between coil pins.

A5

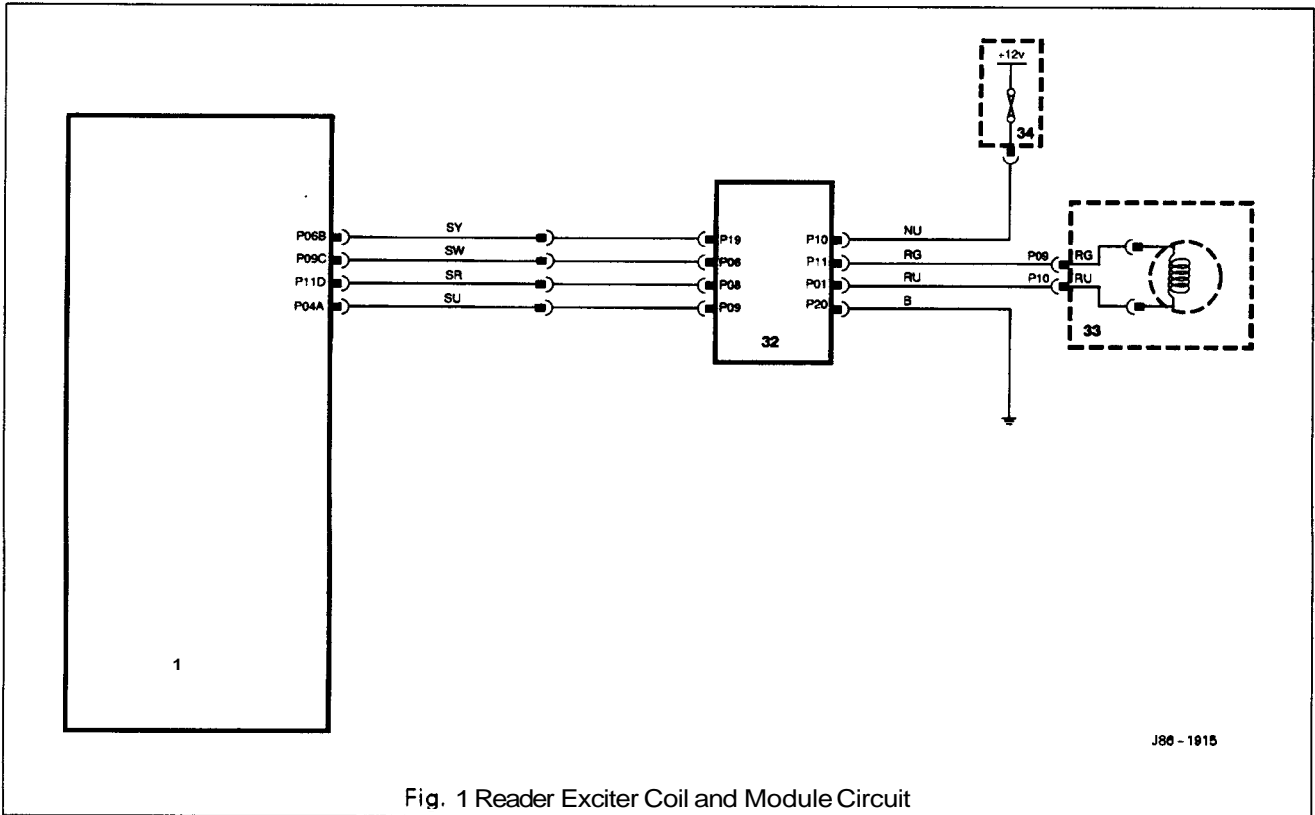


Fig. 1 Reader Exciter Coil and Module Circuit

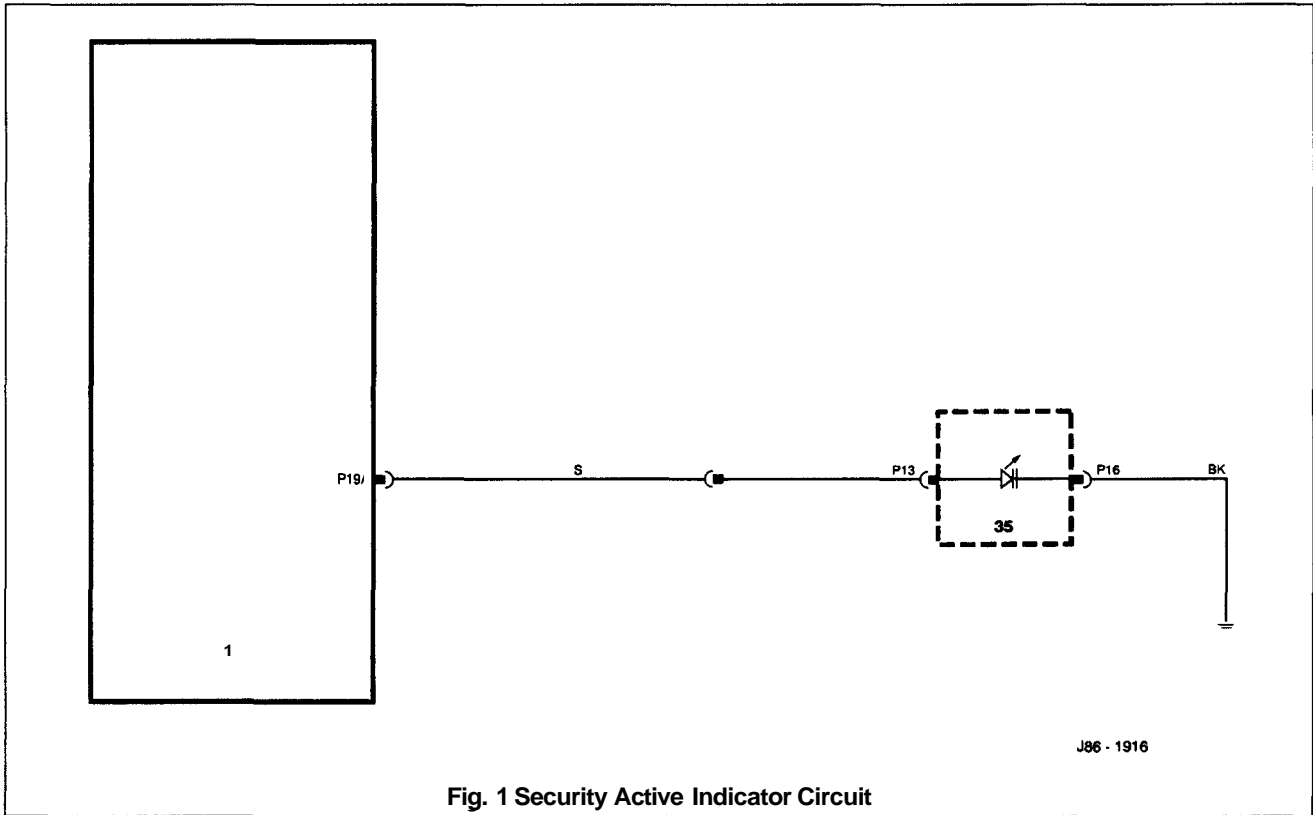
J86 - 1015



A5.9.11 Security active indicator

1. Check wiring continuity from multi-plug 26-way connector pin 19 to central locking switch connector pin 13. Ensure secure ground at switch connector pin 16.

Note: If indicator is faulty the whole clock module must be renewed, refer to sub-section 15.9.10.





A5.9.12 *Sounder*

1. Check harness wiring continuity from multi-plug 26-way connector pins 13 and 26 to sounder connector pins 2 and 1 respectively.
2. Measure resistance across sounder pins; a value of 8Ω should be recorded.

A5

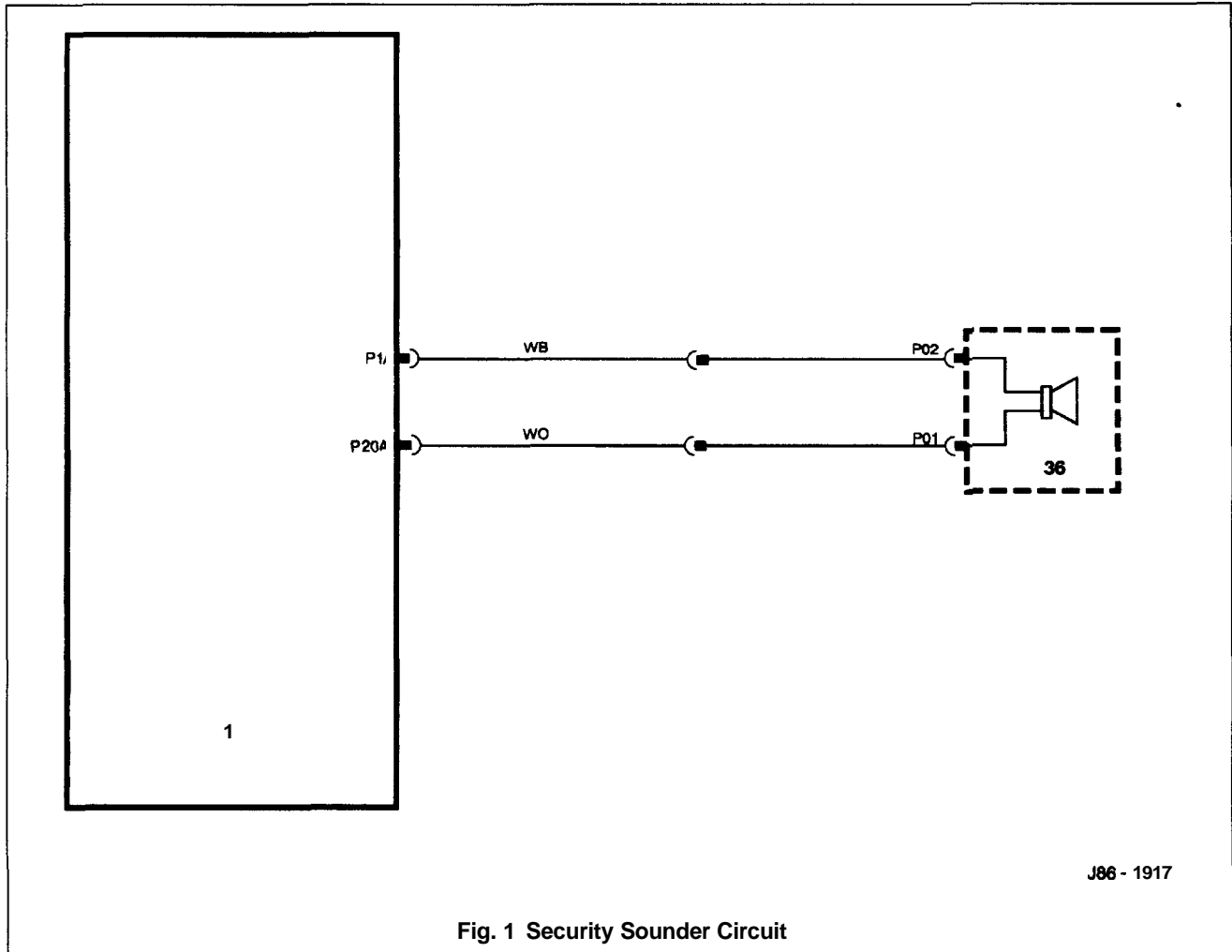


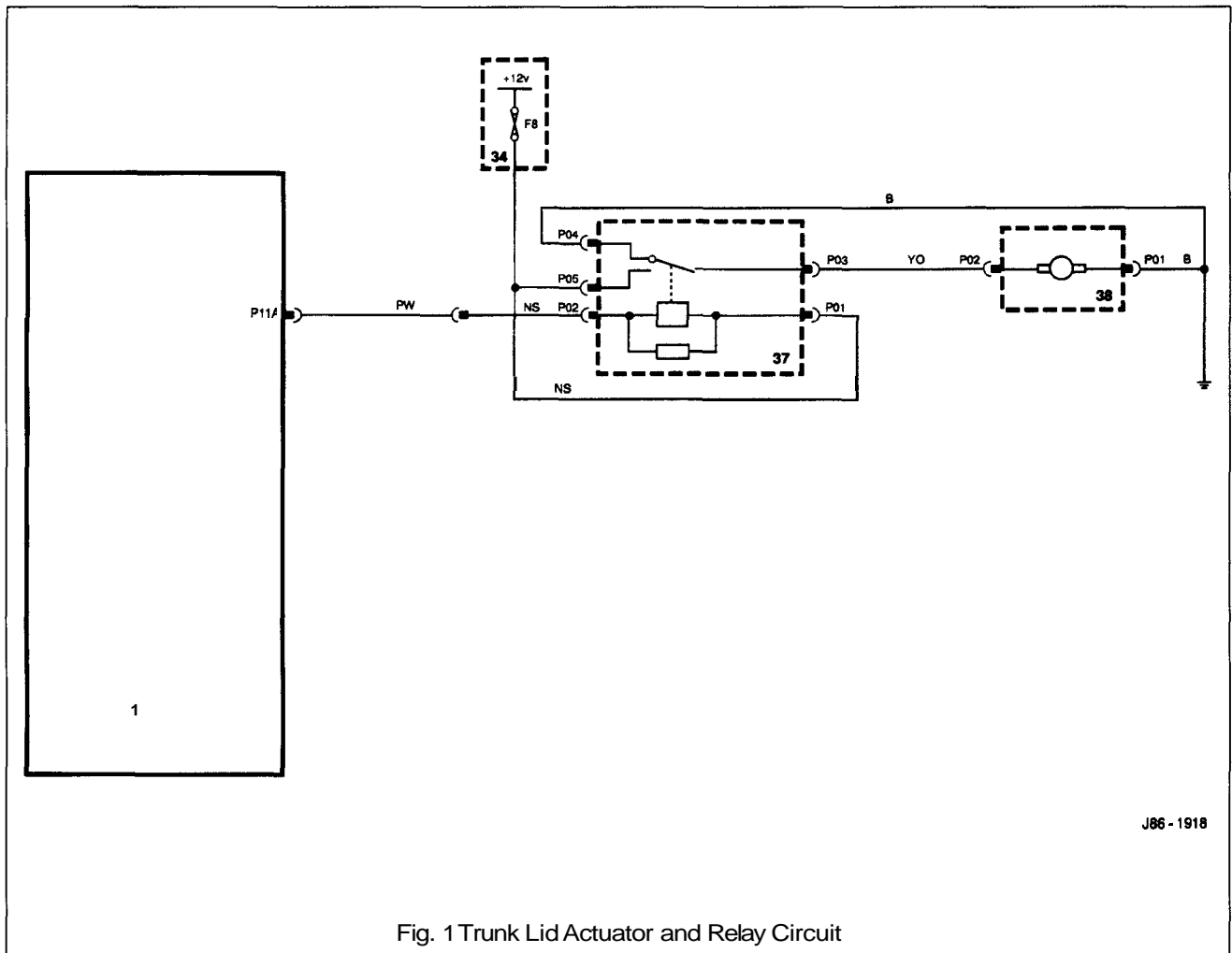
Fig. 1 Security Sounder Circuit



A5.9.13 Trunk lid release actuator and relay

1. Check fuse F8 in trunk fusebox; if blown determine reason for rupture and renew.
2. Check harness wiring continuity between trunk fuse box connector pin 7 and relay pins 1 and 5.
3. Check harness wiring continuity to ground from relay connector pin 4 and actuator connector pin 1.
4. Check harness wiring from multi-plug 26-way connector pin 11 to relay connector pin 2.
5. Check harness wiring continuity from relay connector pin 3 to actuator connector pin 2.
6. Measure resistance across relay connections 1 and 2; a value of 85Q should be recorded.
7. Measure resistance across actuator pins; a value in the region of 20–30Q should be recorded.

A5

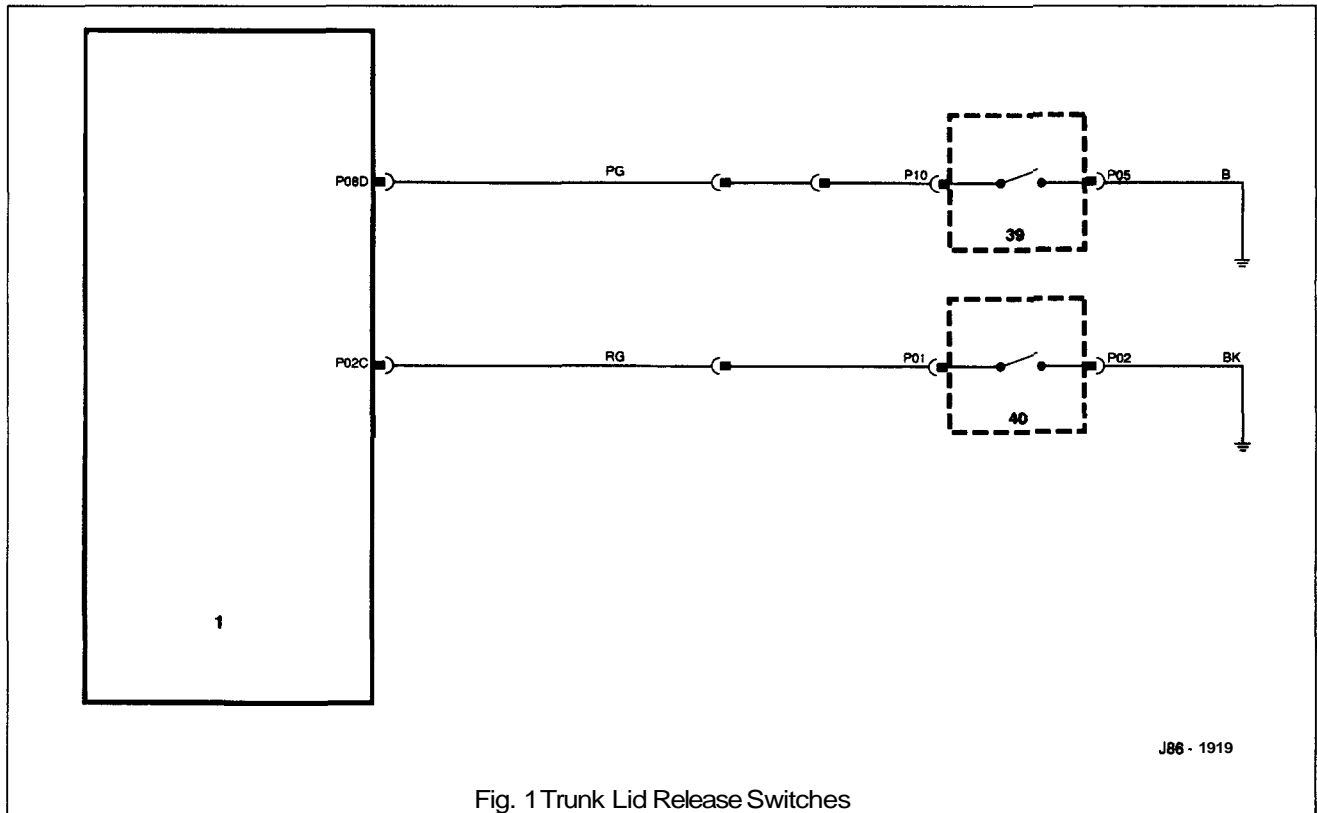




A5.9.14 Trunk lid release switches

1. Check harness wiring continuity from multi-plug 12-way connector pin 2 to external trunk release switch connector pin 10. Ensure secure ground connection from switch pin 5.
2. Check harness wiring continuity from multi-plug 22-way connector pin 8 to internal trunk release switch connector pin 1. Ensure secure ground connection from switch pin 2.
3. Test continuity across switch pins, operate switch and ensure short circuit occurs.

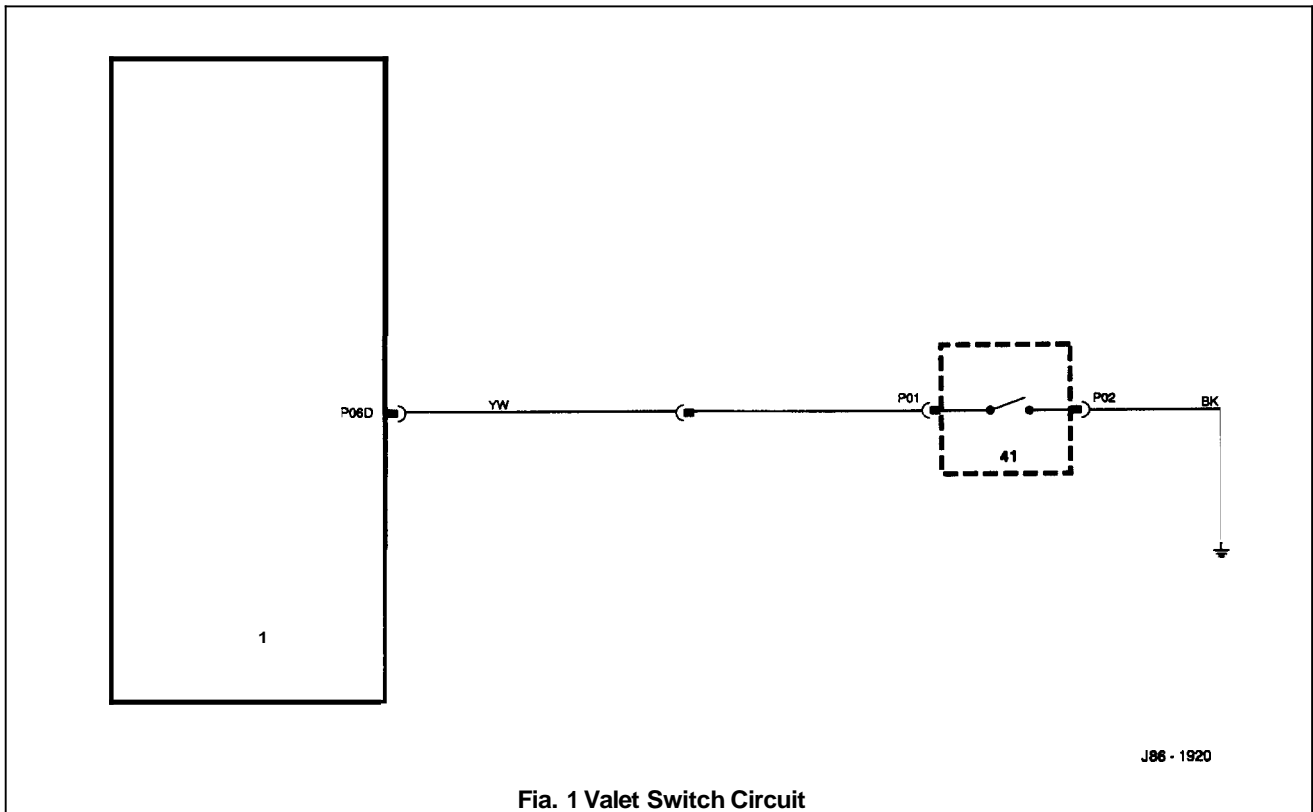
A5





A5.9.15 Valet switch

1. Check harness wiring continuity from multi-plug 22-way connector pin 6 to valet switch connector pin 1.
2. Test continuity across switch connections, operate switch and ensure short circuit occurs.



A5



A5.10 INCLINATION SENSOR – RENEW

SRO 86.52.21

- Remove the trunk floor carpet.
- Remove the trunk front liner.
- Remove the trunk seal retainer. See SRO 76.19.44, Section 13.
- Remove the trunk side liner.
- Disconnect the inclination sensor multiplug. (1 Fig. 1).
- Undo and remove the sensor mounting bracket securing nuts (2 Fig. 1). Remove the sensor (3 Fig. 1) complete with mounting bracket (4 Fig. 1).
- Displace the mounting bracket retaining tang and remove the sensor.
- Fitting a new inclination sensor is the reverse of the removal procedure.

A5

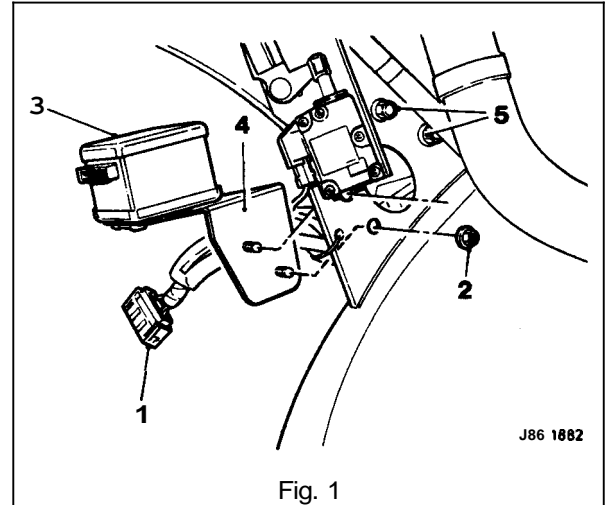


Fig. 1

A5.11 SECURITY & LOCKING CONTROL MODULE (SLCM) – RENEW

SRO 86.52.01

- Open the trunk and remove the battery cover.
- Disconnect the battery ground lead.
- Remove the trunk floor carpet.
- Remove the trunk front liner.
- Remove the trunk seal retainer. See SRO 76.19.44, Section 13.
- Remove the trunk side liner.
- Undo and remove the inclination sensor securing nuts (2 Fig. 1) and displace the sensor (3 Fig. 1) to gain access to the SLCM (1 Fig. 2).
- Undo and remove the SLCM securing nuts (5 Fig. 1).
- Displace the SLCM. Identify the SLCM multi-plugs (2 Fig. 2) for subsequent reconnection. Disconnect the multi-plugs and remove the SLCM.
- Fitting a new SLCM is the reverse of the removal procedure. Make sure that the multi-plugs are reconnected as removed from the old SLCM.

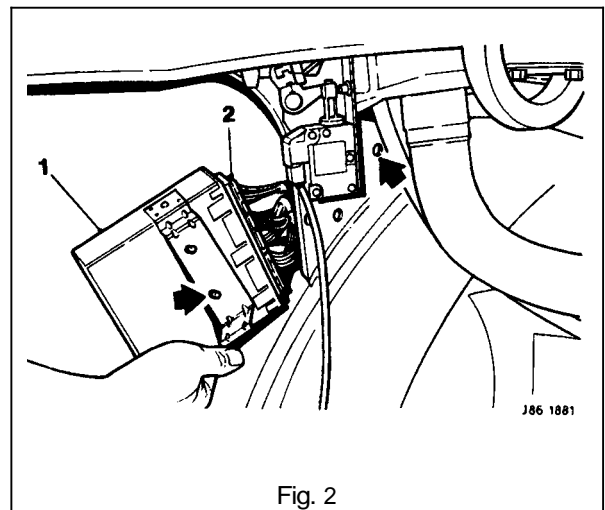


Fig. 2

Note: The arrows on Fig. 2 show the position of the mounting bolts and mounting holes.



A5.12 INTRUSION SENSOR - RENEW

SRO 86.52.20

- Carefully displace the intrusion sensor from the headlining.

Note: View 1 (Fig. 1) shows a vehicle fitted with a sliding roof. View 2 (Fig. 1) shows a vehicle without a sliding roof.

- Disconnect the multi-plug and remove the intrusion sensor.
- Reconnect multi-plug to a new intrusion sensor.
- Locate the intrusion sensor securing studs and carefully push into the headlining. Make sure the intrusion sensor is fully seated.

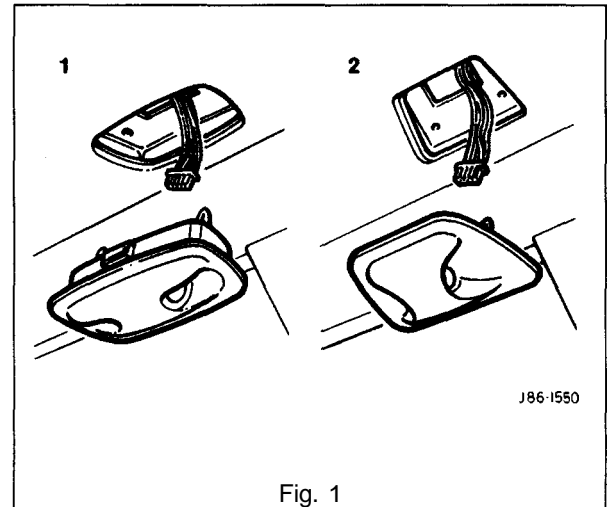


Fig. 1

A5

A5.13 HAND TRANSMITTER BATTERY - RENEW

SRO 86.52.28

- Remove the hand transmitter rear cover (1 Fig. 2).
- Remove batteries (2 Fig. 2) and discard.
- Fit two new batteries making sure the polarity is as shown in Fig 2.
- Fit and fully seat the transmitter rear cover.

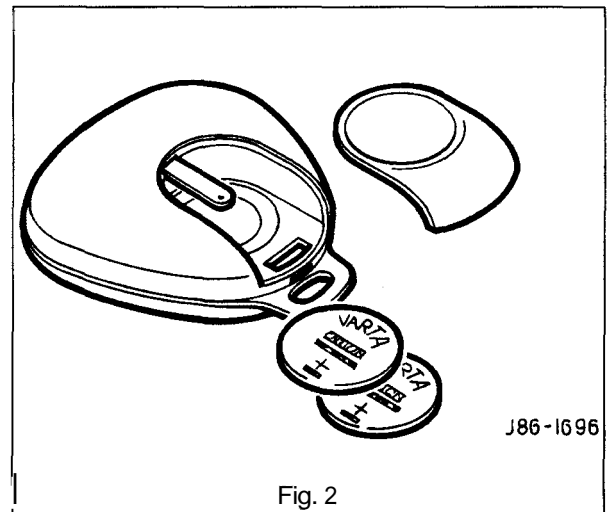


Fig. 2

A5.14 VALET SWITCH - RENM

SRO 86.52.08

- Open the centre console compartment and carefully displace the valet switch.
- Disconnect the harness connector and remove the valet switch.
- Fitting a new valet switch is the reverse of the removal procedure. Make sure the switch is fully seated.

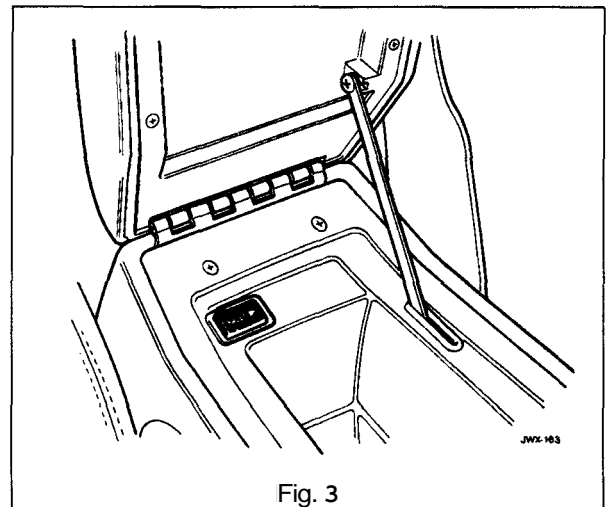


Fig. 3



A5.15 SECURITY SIREN (12 CYL)- RENEW

SRO 86.52.03

- Open the trunk and remove the battery cover.
- Disconnect the battery ground lead.
- Open the hood and remove the headlamp / relay cover. See SRO 76.11.22, Section 13.
- Remove the RH air cleaner element. See SRO 19.10.11, Section 5.2.
- Remove the RH air cleaner assembly. See SRO 19.10.02, Section 5.2.
- Identify the RH forward harness relays (1 Fig. 1) for subsequent refitting. Remove the relays and relay bases from the mounting bracket.
- Disconnect the siren harness multi-plug (2 Fig. 1).
- Reposition the side harness (3 Fig. 1) to gain access to the siren securing bolts.
- Undo the siren securing bolts (1 Fig. 2) and remove the siren (2 Fig. 2).

Note: The siren securing bolts remain captive.

- Remove the captive washers and the siren securing bolts.
- Fit the siren securing bolts to a new siren.
- Fit and fully seat the captive washers.
- Align the siren securing bolts to the vehicle chassis. Tighten the siren securing bolts.

Refitting the remaining components is the reverse of the removal procedure.

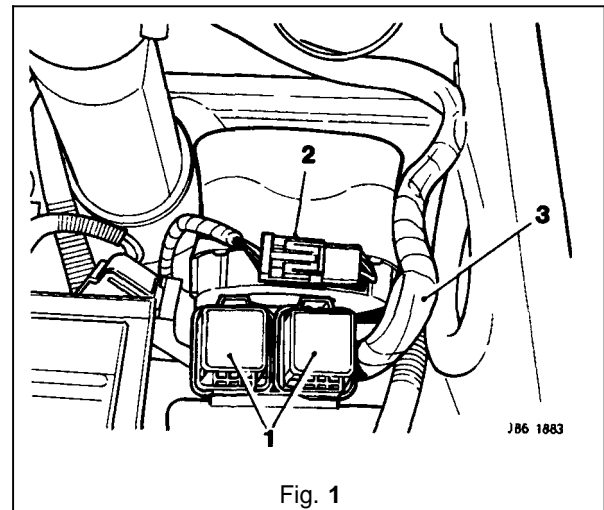


Fig. 1

J86 1883

A5.16 SECURITY SIREN (6 CYL) - RENEW

SRO 8652.03

- Open the trunk and remove the battery cover.
- Disconnect the battery ground lead.
- Open the hood and remove the headlamp / relay cover. See SRO 76.11.22, Section 13.
- Identify the RH forward harness relays for subsequent refitting. Remove the relays and relay bases from the mounting bracket.
- Disconnect the siren harness multi-plug.
- Reposition the side harness to gain access to the siren securing bolts.
- Undo the siren securing bolts and remove the siren.

Note: The siren securing bolts remain captive.

- Remove the captive washers and the siren securing bolts.
- Fit the siren securing bolts to a new siren.
- Fit and fully seat the captive washers.
- Align the siren securing bolts to the vehicle chassis. Tighten the siren securing bolts.

Refitting the remaining components is the reverse of the removal procedure.

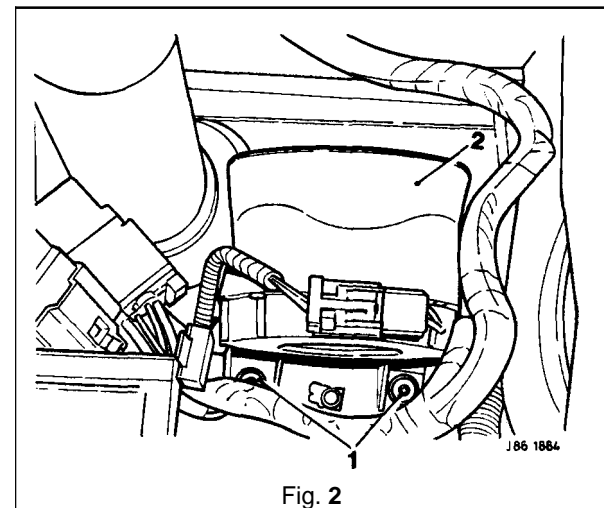


Fig. 2

J86 1884

A5



A5.17 FRONT DOOR LOCK ASSEMBLY – RENEW

SRO 86.25.45

- Remove the veneer trim pad. See Section 13 of the VSM.
 - Remove the upper trim pad. See Section 13 of the VSM.
 - Remove the lower trim pad. See Section 13 of the VSM.
- Remove the weather shield to door sealant and pull back the weather shield (1 Fig. 1) for access to the door lock assembly.
 - Disconnect the door handle link rod (2 Fig. 1).
 - Disconnect the door sill button link rod (3 Fig. 1).
 - Disconnect the key barrel link rod (4 Fig. 1).
 - Displace and reposition the door lock assembly multi-plug from the mounting bracket and disconnect.
- Undo and remove the lower securing bolt (5 Fig. 1) from the glass frame.
 - Undo and remove the door lock assembly securing bolts (6 Fig. 1).
 - Displace and reposition the glass frame.
 - Displace and reposition the door lock assembly (7 Fig. 1).
 - Displace and remove the edge clip from the door handle release cable (8 Fig. 1).
 - Displace and reposition the door handle release cable from the abutments.
 - Displace and remove the door lock assembly.
 - Position the new door lock assembly to the door.
 - Position and fit door handle release cable to abutments.
 - Fit and fully seat the cable retaining edge clip.
 - Fit and tighten the door lock assembly securing bolts.
 - Reposition glass frame. Fit and tighten frame securing bolt.
 - Connect the multi-plug and fit to the mounting bracket.
 - Connect the key barrel link rod.
 - Connect the door sill button link rod.
 - Connect the door handle link rod.
 - Reposition the weather shield to the door. Using a suitable tool, apply pressure to the weather shield edge to ensure adhesion to the door.
- Refit the lower trim pad, upper trim pad and the veneer trim pad.

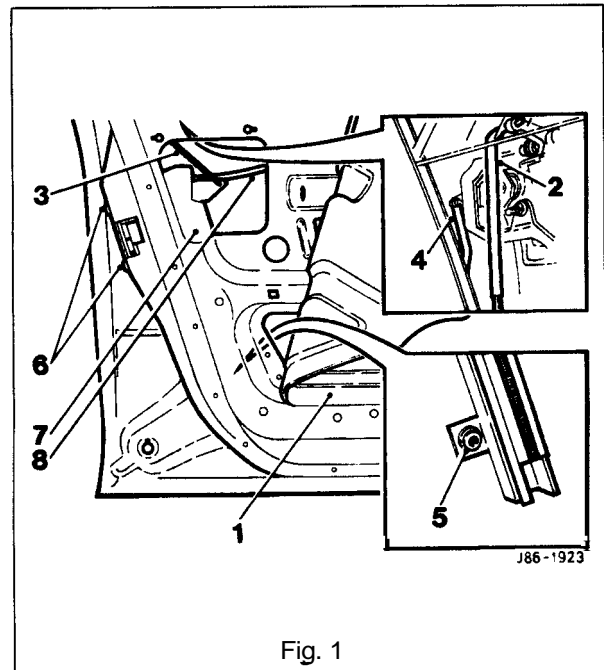


Fig. 1

A5



A5.18 REAR DOOR LOCK ASSEMBLY – RENEW

SRO 86.25.47

- Remove the veneer trim pad. See Section 13 of the **VSM**.
- Remove the upper trim pad. See Section 13 of the **VSM**.
- Remove the lower trim pad. See Section 13 of the **VSM**.
- Using a suitable plastic knife, cut through the weathershield to door sealant and pull back the weathershield for access to the door lock assembly.
- Cut and remove the securing tie-wrap from the door lock assembly harness multi-plug.
- Displace and reposition the door lock assembly multi-plug from the mounting bracket and disconnect.
- Disconnect the door handle link rod.
- Disconnect and remove the door sill button link rod.
- Undo and remove the door lock assembly securing bolts.
- Undo and remove the lower securing bolt from the glass frame.
- Displace and reposition the door lock assembly into the bottom of the door.
- Displace and remove the edge clip from the door handle release cable.
- Displace and reposition the door handle release cable.
- Displace and remove the door lock assembly.

A5.19 TRUNK LID LOCK ACTUATOR – RENEW

SRO 86.25.49

- Open the trunk lid.
- Remove the luggage compartment lamp assembly. See Section 15 of the **VSM**.
- Displace and remove the trunk lid liner fasteners and reposition for access.
- Undo and remove actuator mounting bracket securing bolts.
- Disconnect the actuator harness multi-plug.
- Disconnect the actuator to lock mechanism link rod.
- Remove the actuator and motor.
- Undo and remove the actuator to mounting bracket securing screws.

Fitting a new actuator is the reverse of the removal procedure.

15.20 CLOCK MODULE – RENEW

SRO 86.80.13

- Remove centre console ashtray and veneer panel., refer to **VSM**, section 13.
- Release and remove gear selector illumination module securing screws.
- Re-position illumination module as necessary for removal of radio console.
- Release radio console securing screws, partially withdraw radio console from center console so that console harness and radio aerial connectors can be removed.
- Release radio ground lead from securing nut.
- Remove dedicated radio harness connector from multi-plug.
- Fully withdraw radio console and remove radio unit.
- Release securing screws and remove clock module.

15.21 READER EXCITER COIL AND MODULE – RENEW

- Access to the reader exciter coil is gained by removing top and bottom ignition cowls, refer to **VSM**, Section 13 for remove / refit instructions.
- The exciter coil is mounted around the ignition switch and can be removed by releasing spring tension coil clips.
- The module is mounted on the steering column assembly, secured by two bolts.
- To remove the module disconnect the harness multi-plug and remove the securing bolts.