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# ALARM - - ELECTRONIC ANTI-THEFT SYSTEM

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## GENERAL

The vehicle is equipped with a remote control electronic anti-theft system. The remote control also actuates the centralized door lock/unlock system.

The anti-theft system consists of an electronic unit, a syren located in the right side of trunk, and a remote control used to activate/deactivate the system.

The syren is powered by a dedicated battery and is provided with an ON/OFF key.

Activation of the anti-theft system is indicated by flashing of a led on the central console, actuation of the centralized door lock and illumination for a few seconds of the turn signal lamps. Activation of the anti-theft system also locks the engine ignition circuit.

Deactivation of the anti-theft system is indicated by illumination of the turn signal lamps, centralized unlocking of door and switching off of led on the central console.

The system is protected by free fuse G258 (15A) ANTI-THEFT SYSTEM.

## OPERATIONAL DESCRIPTION

The 12V power supply line is connected directly to the anti-theft system syren O11, to pins 5 and 12 of the anti-theft control unit N45 through the free fuse G258, and to led D31 on the central console.

Activation of the anti-theft system is obtained by directing the remote control towards the vehicle and pressing the

control push button; the remote control is provided with and indicator light which illuminates any time the control pushbutton is pressed.

The control unit N45 provides the following functions when the anti-theft system is activated:

- Flashing of led D31 (pin 8 of control unit).
- Actuation of centralized door lock (pins 16 and 18).
- Flashing of the four turn signal lamps (pins 1, 3, 15 and 17).
- Engagement of engine ignition circuit lock (pin 2).

When the anti-theft system is activated, opening of doors, engine hood or trunk lid is sensed by the control unit N45, with consequent activation of siren O11. Information about opening of doors, engine hood and trunk lid is trasmitted to the control unit by dedicated switches.

When a door is opened, the corresponding switch opens and supplies a "door open" input to pin 3 of control unit N45. When the engine hood or the trunk lid are opened, the corresponding switches H44 and H24 close, and connect to ground pins 10 or 7 of the control unit N45.

With the ignition key inserted, the battery power is supplied to pin 14 of control unit N45, thus allowing inhibition of the receiver to prevent accidental activations.



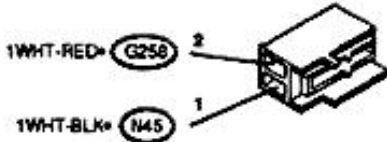
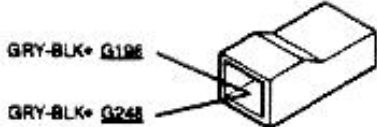
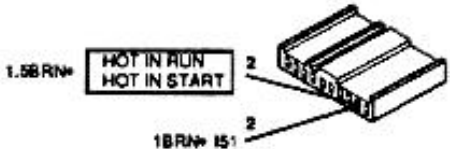

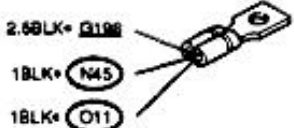
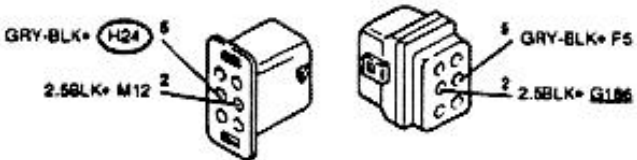
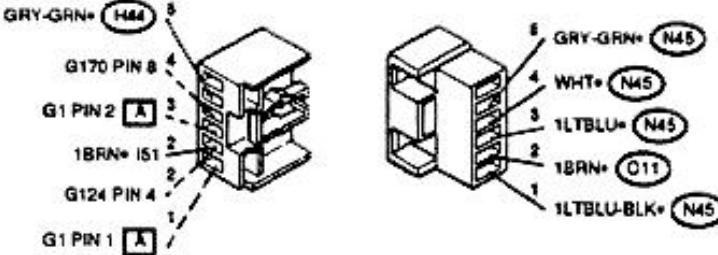

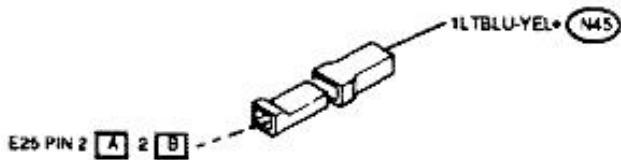
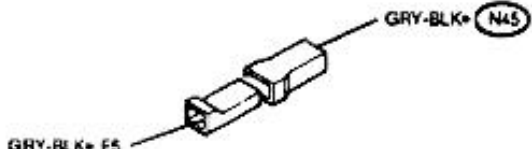
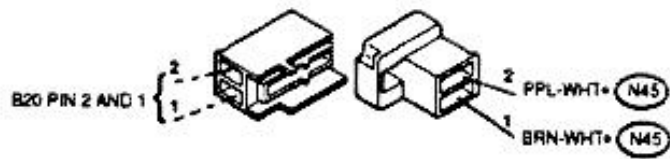
TROUBLESHOOTING TABLE

FAULT TYPE	FAILED COMPONENT						
	G25B FUSE	H24 SWITCH	H44 SWITCH	D31 LED	O11 SYREN	H45 CONTROL UNIT	REMOTE CONTROL
ANTI-THEFT ACTIVATION/DE-ACTIVATION MODES INOPERATIVE	●					●	●
ANTI-THEFT ACTIVATION MODE INOPERATIVE						●	
SYREN INOPERATIVE		●	●	●	●	●	





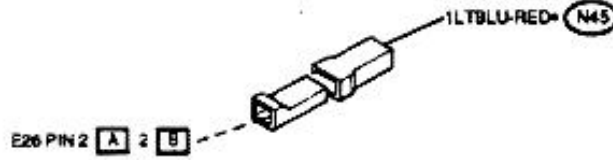
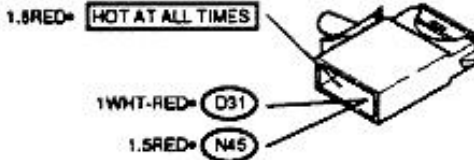
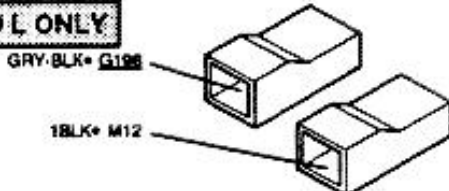
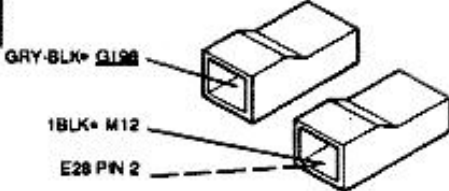
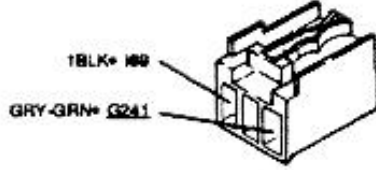
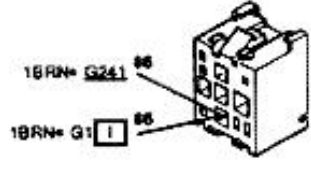
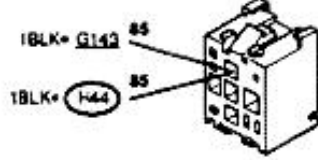
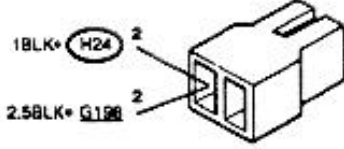
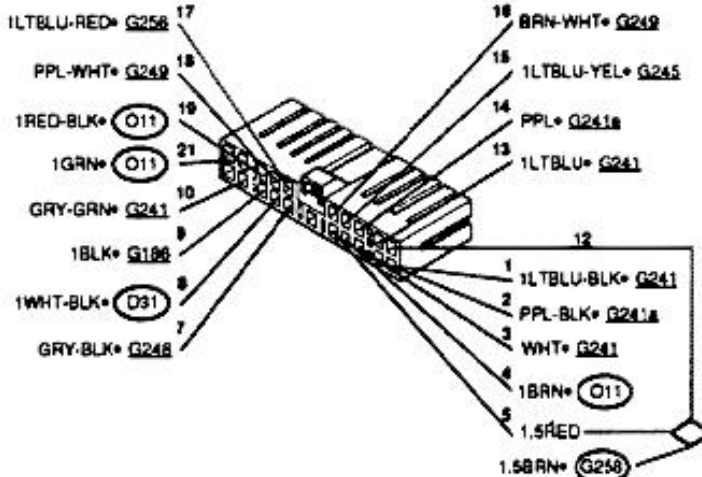
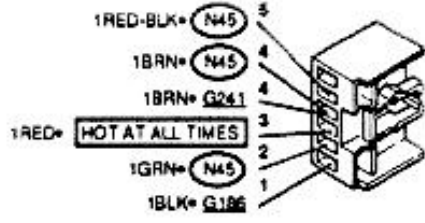
**ALARM - - ELECTRONIC ANTI-THEFT SYSTEM**

<p>Anti-theft system led</p>	<p><b>D31</b></p>	<p>Rear cargo lamp</p>	<p><b>F5</b></p>
			
<p>Fuse box</p>	<p><b>G1</b></p>	<p>Central bulkhead ground</p>	<p><b>G143</b></p>
			
<p>Trunk right side ground</p>	<p><b>G186</b></p>	<p>Connector, right rear wiring to trunk lock wiring</p>	<p><b>G198</b></p>
			
<p>Board wiring to anti-theft system wiring connector</p>	<p><b>G241</b></p>	<p>Board wiring to anti-theft system wiring connector</p>	<p><b>G241a</b></p>
			
<p>Right rear wiring connector, anti-theft system</p>		<p><b>G245</b></p>	
		<p>Anti-theft system wiring connector - console wiring</p>	
<p>Anti-theft system wiring connector right rear wiring</p>	<p><b>G248</b></p>	<p>Anti-theft system wiring connector - console wiring</p>	<p><b>G249</b></p>
			

(Cont d)



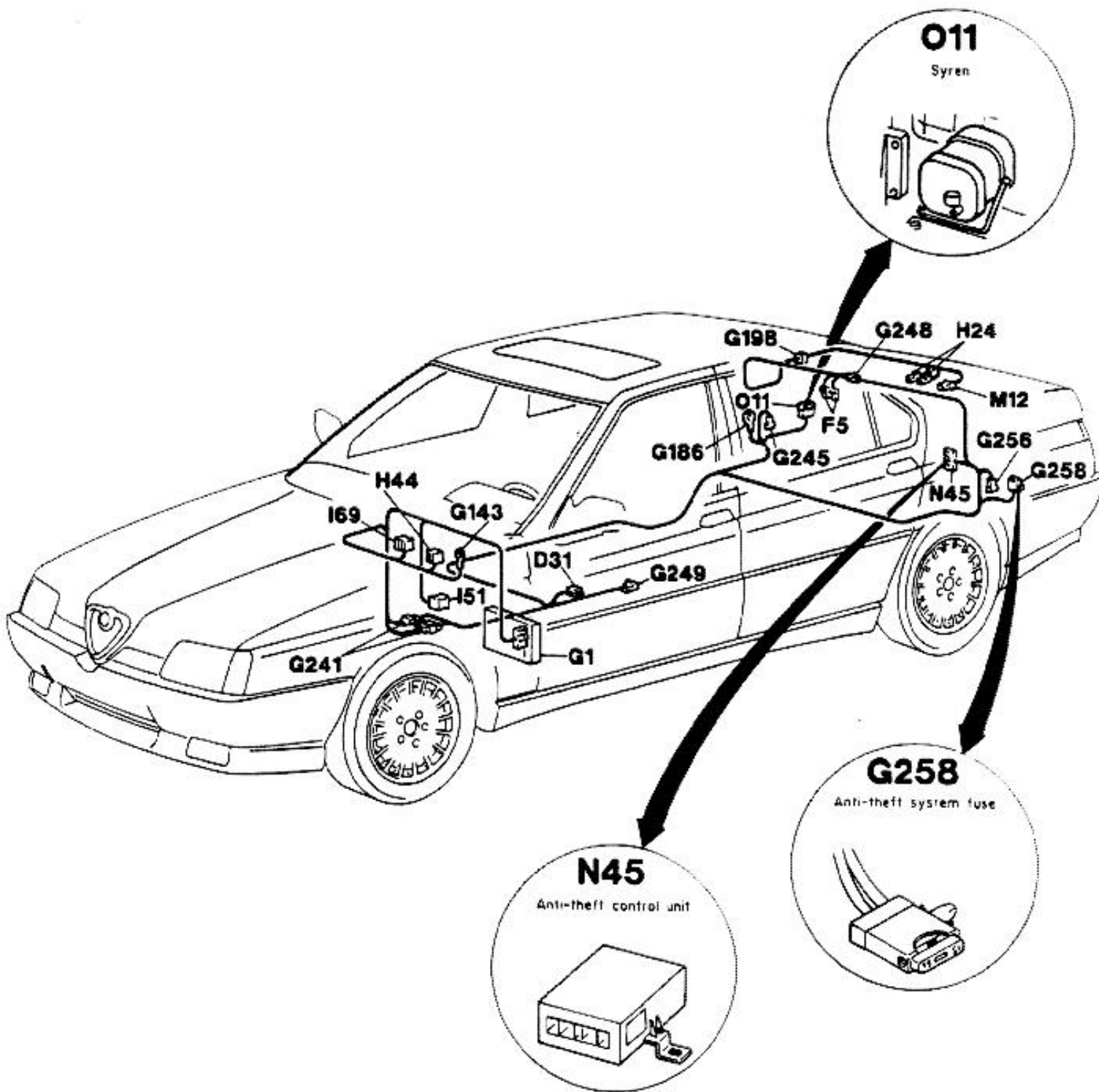
ALARM - - ELECTRONIC ANTI-THEFT SYSTEM

<p>Left rear wiring connector, anti-theft system</p>	<p>G256</p>	<p>Anti-theft system fuse</p>	<p>G258</p>
		<p>Trunk illumination switch</p>	<p>Trunk illumination switch</p>
<p><b>BASE AND L ONLY</b></p> 	<p><b>S ONLY</b></p> 	<p>Engine compartment anti-theft system switch</p>	<p>Electronic control units power supply relay</p>
		<p>Stop lamps switch relay</p>	<p>Trunk opening solenoid</p>
		<p>Anti-theft control unit</p>	<p>Syren</p>
		<p>ALFA ROMEO</p>	<p>ALFA ROMEO</p>











ALARM - - ELECTRONIC ANTI-THEFT SYSTEM

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<b>ANTI-THEFT ACTIVATION/DE-ACTIVATION MODES INOPERATIVE</b>	<b>TEST A</b>
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TEST STEPS	RESULTS	REMEDY
<p><b>NOTE:</b> In case the operation of remote control requires to approach the vehicle excessively, replace the remote control batteries. In any case, replacement of batteries every 12 months is recommended.</p>		
<b>A1</b> FUSE CHECK	 ►  ►	Carry-out step A2
- Check free fuse <b>G258</b> for integrity		Replace free fuse <b>G258</b>
<b>A2</b> REMOTE CONTROL BATTERIES CHECK	 ►  ►	Carry-out step A3
- Actuate the remote control pushbutton and check that led on remote control illuminates		Replace remote control batteries
<b>A3</b> CONTROL UNIT CHECK	 ►  ►	Replace control unit <b>N45</b>
- Check for presence of 12V between pins 5 and 12 of control unit <b>N45</b> and ground		Carry-out step A4
<b>A4</b> VOLTAGE CHECK	 ►  ►	Carry-out step A5
- Check for presence of 12V between pin of free fuse <b>G258</b> (RED wire) and ground		Failure of the power distribution circuit, refer to the relevant circuit of sheet 1 of 2













<b>ANTI-THEFT ACTIVATION/DE-ACTIVATION MODES INOPERATIVE</b>	<b>TEST A</b>
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<b>TEST STEPS</b>		<b>RESULTS</b>	<b>REMEDY</b>
<b>A5</b>	<b>GROUNDING CHECK</b>		
<ul style="list-style-type: none"> <li>- Check for presence of 0V (zero) at pin 9 of control unit N45</li> </ul>		<p>○ OK      ►</p> <p><del>○ OK</del>      ►</p>	<p>Repair wiring between pins 5, 12 of control unit N45 and pin of free fuse G258</p> <p>Repair wiring between pin 9 of control unit N45 and ground point G186</p>











<b>ANTI-THEFT ACTIVATION MODE INOPERATIVE</b>	<b>TEST B</b>
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TEST STEPS		RESULTS	REMEDY
<b>B1</b>	<b>SIMULTANEOUS ILLUMINATION OF TURN SIGNAL LAMPS CHECK</b>	 ►  ►	Carry-out <b>step B11</b>
- Check that the four turn signal lamps illuminate simultaneously			Carry-out <b>step B2</b>
<b>B2</b>	<b>TURN SIGNAL LAMPS CHECK</b>	 ►  ►	Replace control unit <b>N45</b>
- Check that all the four turn signal lamps remain off			Carry-out <b>step B3, B5 or B7 or B9</b>
<b>B3</b>	<b>LEFT FRONT TURN SIGNAL LAMP CHECK</b>	 ►  ►	Carry-out <b>step B4</b>
- Actuate the multiple switch as required to turn on the left front turn signal lamp, and check the lamp turns on			Replace <b>bulb</b>
<b>B4</b>	<b>CONTINUITY CHECK</b>	 ►  ►	Replace control unit <b>N45</b>
- Check for continuity between pin 1 of control unit <b>N45</b> , pin 1 of connector <b>G241</b> and pin 1A of fuse box <b>G1</b>			Replace or repair <b>wires, as necessary</b>











<b>ANTI-THEFT ACTIVATION MODE INOPERATIVE</b>	<b>TEST B</b>
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TEST STEPS		RESULTS	REMEDY
<b>B5</b>	<b>RIGHT FRONT TURN SIGNAL LAMP CHECK</b>		
	- Actuate the multiple switch as required to turn on the right front turn signal lamp, and check the lamp turns on	 ▶  ▶	Carry-out step B6  Replace bulb
<b>B6</b>	<b>CONTINUITY CHECK</b>		
	- Check for continuity between pin 13 of control unit N45, pin 3 of connector G241 and pin 2A of fuse box G1	 ▶  ▶	Replace control unit N45  Replace or repair wires, as necessary
<b>B7</b>	<b>LEFT REAR TURN SIGNAL LAMP CHECK</b>		
	- Actuate the multiple switch as required to turn on the left rear turn signal lamp, and check the lamp turns on	 ▶  ▶	Carry-out step B8  Replace bulb
<b>B8</b>	<b>CONTINUITY CHECK</b>		
	- Check for continuity between pin 17 of control unit N45, connector G256 and pins 2A and 2B of tail lamp E26	 ▶  ▶	Replace control unit N45  Replace or repair wires, as necessary











<b>ANTI-THEFT ACTIVATION MODE INOPERATIVE</b>	<b>TEST B</b>
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TEST STEPS		RESULTS	REMEDY
<b>B9</b>	<b>RIGHT REAR TURN SIGNAL LAMP CHECK</b>		
	- Actuate the multiple switch as required to turn on the right rear turn signal lamp, and check the lamp turns on	 ►	Carry-out step B10
		 ►	Replace bulb
<b>B10</b>	<b>CONTINUITY CHECK</b>		
	- Check for continuity between pin 15 of control unit N45, connector G245 and pins 2A and 2B of tail lamp E25	 ►	Replace control unit N45
		 ►	Replace or repair wires, as necessary
<b>B11</b>	<b>DOOR LOCK CHECK</b>		
	- Check locking of all the four doors	 ►	Carry-out step B13
		 ►	Carry-out step B12
<b>B12</b>	<b>VOLTAGE CHECK</b>		
	- Check for presence of 12V between pins 16 and 18 of control unit N45	 ►	Repair wiring between pins 16 and 18 of control unit N45, pins 1 and 2 of connector G249 and pins 2 and 1 of switch B20
		 ►	Replace control unit N45











<b>ANTI-THEFT ACTIVATION MODE INOPERATIVE</b>	<b>TEST B</b>
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TEST STEPS		RESULTS	REMEDY
<b>B13</b>	<b>LED CHECK</b>		
- Check flashing of led on the central console			Carry-out step B16
			Carry-out step B14
<b>B14</b>	<b>ELECTRONIC UNIT CHECK</b>		
- Check for presence at pin 8 of control unit N45 of a signal switching from 0V (zero) to open circuit conditions, and vice versa			Carry-out step B15
			Replace control unit N45
<b>B15</b>	<b>TTL SIGNAL CHECK</b>		
- Check for presence of TTL signal to terminals of led D31			Replace led D31
			.Repair wiring between pin 2 of led D31 (anode) and fuse G258, and between pin1 of led D31 (cathode) and pin 8 control unit N45
<b>B16</b>	<b>ENGINE IGNITION INHIBITION CHECK</b>		
- With anti-theft system activated, check that engine can not be started			Carry-out step B19
			Carry-out step B17











ANTI-THEFT ACTIVATION MODE INOPERATIVE	<b>TEST B</b>
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TEST STEPS		RESULTS	REMEDY
<b>B17</b>	CONTROL UNIT CHECK		
	- With anti-theft system activated, check for presence of 0V (zero) at pin 2 of control unit N45		Repair wiring between pin 2 of control unit N45, pin 2 of connector G241a and pin 86 of relay I10
			Carry-out step B18
<b>B18</b>	VOLTAGE CHECK		
	- With the ignition key set to "start" position, check for presence of 12V between pin 14 of control unit N45 and ground		Replace control unit N45
			Carry-out step B19
<b>B19</b>	VOLTAGE CHECK		
	- With the ignition key set to "start" position, check for presence of 12V between pin 1 of connector G241a and ground		Repair wiring between pin 1 of G241a and pin 14 of control unit N45
			Failure of the power distribution circuit, refer to the relevant circuit of sheet 2 of 2



<b>SYREN INOPERATIVE</b>	<b>TEST C</b>
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TEST STEPS		RESULTS	REMEDY
<b>C1</b>	<b>SYREN CHECK</b>		
<ul style="list-style-type: none"> <li>- Check syren activation by disconnecting one of the battery terminals</li> </ul>		 ►  ►	Carry-out step C4  Carry-out step C2
<b>C2</b>	<b>VOLTAGE CHECK</b>		
<ul style="list-style-type: none"> <li>- Re-connect battery terminal and, with the ignition key set to "run" or to "start" position, check for presence of 12V between pin 4 of syren O11 and ground</li> </ul>		 ►  ►	Replace syren battery and/or siren O11  Carry-out step C3
<b>C3</b>	<b>VOLTAGE CHECK</b>		
<ul style="list-style-type: none"> <li>- With the ignition key set to "run" or to "start" position, check for preence of 12V between pin 2 of G241 and ground</li> </ul>		 ►  ►	Repair wiring between pin 2 of connector G241 and pin 4 of syren O11  Failure of the power distribution circuit, refer to the relevant circuit of sheet 2 of 2
<b>C4</b>	<b>SYREN CHECK</b>		
<ul style="list-style-type: none"> <li>- Check that syren does not activate when the trunk lid, engine hood and doors are opened</li> </ul>		 ►  ►	Carry-out step C5  Carry-out step C7









<b>SYREN INOPERATIVE</b>	<b>TEST C</b>
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TEST STEPS		RESULTS	REMEDY
<b>C5</b>	<b>VOLTAGE CHECK</b>		
- Check for presence of 12V between pins 1 and 2 of syren O11		<div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;">OK</div> <div style="font-size: 2em;">▶</div> </div> <div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;"><del>OK</del></div> <div style="font-size: 2em;">▶</div> </div>	<p>Replace syren O11</p> <p>Carry-out step C6</p>
<b>C6</b>	<b>VOLTAGE CHECK</b>		
- Check for presence of 12V between pin 21 control unit N45 and ground		<div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;">OK</div> <div style="font-size: 2em;">▶</div> </div> <div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;"><del>OK</del></div> <div style="font-size: 2em;">▶</div> </div>	<p>Repair wiring between pin 21 of control unit N45 and pin 2 of syren O11, and between pin 1 of syren O11 and ground point G186</p> <p>Replace control unit N45</p>
<b>C7</b>	<b>DOOR SYREN ACTIVATION CHECK</b>		
- Check syren activation by opening of either door		<div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;">OK</div> <div style="font-size: 2em;">▶</div> </div> <div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;"><del>OK</del></div> <div style="font-size: 2em;">▶</div> </div>	<p>Carry-out step C9</p> <p>Carry-out step C8</p>
<b>C8</b>	<b>GROUNDING CHECK</b>		
- Check for presence of 0V (zero) at pin 3 of control unit N45		<div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;">OK</div> <div style="font-size: 2em;">▶</div> </div> <div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;"><del>OK</del></div> <div style="font-size: 2em;">▶</div> </div>	<p>Replace control unit N45</p> <p>Repair wiring between pin 3 of control unit N45, pin 4 of connector G241 and pin 8 of connector G170</p>











<b>SYREN INOPERATIVE</b>	<b>TEST C</b>
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TEST STEPS		RESULTS	REMEDY
<b>C9</b>	<b>HOOD SYREN ACTIVATION CHECK</b>		
- Check syren activation by opening the engine hood			Carry-out step C12
			Carry-out step C10
<b>C10</b>	<b>GROUNDING CHECK</b>		
- Check for presence of 0V (zero) at pin 10 of control unit N45			Replace control unit N45
			Carry-out step C11
<b>C11</b>	<b>GROUNDING CHECK</b>		
- Check for presence of 0V (zero) at pin 5 of connector G241			Repair wiring between pin 5 of connector G241 and pin 10 of control unit N45
			Carry-out step C12















SYREN INOPERATIVE	TEST C
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TEST STEPS		RESULTS	REMEDY
<b>C12</b>	<b>SWITCH CHECK</b>		
	- Check anti-theft system switch H44 in the engine compartment for proper operation	<div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;">  </div> <div style="font-size: 2em;">▶</div> </div> <div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;">  </div> <div style="font-size: 2em;">▶</div> </div>	<p>Repair wiring between switch H44 (GRY-GRN wire) and pin 5 of connector G241 and between switch H44 (BLK wire) and ground point G143</p> <p>Replace switch H44</p>
<b>C13</b>	<b>TRUNK LID SYREN ACTIVATION CHECK</b>		
	- Check syren activation by opening the trunk lid	<div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;">  </div> <div style="font-size: 2em;">▶</div> </div> <div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;">  </div> <div style="font-size: 2em;">▶</div> </div>	<p>Carry-out step C3</p> <p>Carry-out step C14</p>
<b>C14</b>	<b>GROUNDING CHECK</b>		
	- Check for presence of 0V (zero) at pin 7 of control unit N45	<div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;">  </div> <div style="font-size: 2em;">▶</div> </div> <div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;">  </div> <div style="font-size: 2em;">▶</div> </div>	<p>Replace control unit N45</p> <p>Carry-out step C15</p>



<b>SYREN INOPERATIVE</b>	<b>TEST C</b>
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TEST STEPS		RESULTS	REMEDY
<b>C15</b>	<b>GROUNDING CHECK</b>		
- Check for presence of 0V (zero) at connector <b>G248</b>		 	Repair wiring between connector <b>G248</b> and pin 7 of control unit <b>N45</b>
		 	Carry-out step <b>C16</b>
<b>C16</b>	<b>GROUNDING CHECK</b>		
- Check for presence of 0V (zero) at pin 5 of connector <b>G198</b>		 	Repair wiring between connector <b>G198</b> and <b>G248</b>
		 	Carry-out step <b>C17</b>
<b>C17</b>	<b>SWITCH CHECK</b>		
- Check that trunk illumination switch <b>H24</b> is operational		 	Repair wiring between switch <b>H24</b> and pin 5 of connector <b>G198</b> , and between switch <b>H24</b> , pin 2 of connector <b>G198</b> and ground point <b>G186</b>
		 	Replace switch <b>H24</b>



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