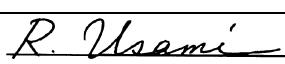




# SERVICE BULLETIN

QUALITY INFORMATION ANALYSIS

OVERSEAS SERVICE DEPT. MITSUBISHI MOTORS CORPORATION

SERVICE BULLETIN		No.: MSB-97E52-001	
		Date: 1997-04-30	
<b>Subject:</b> ADDITION OF SRS AIR BAG MAINTENANCE PROCEDURE			<b>&lt;Model&gt;</b> ALL MODELS <b>&lt;M/Y&gt;</b> 91-10
<b>Group:</b> INTERIOR		<b>Draftno:</b> 96-AL-022	
<b>INFORMATION</b>	OVERSEAS SERVICE DEPT	 R. USAMI - MANAGER QUALITY INFORMATION ANALYSIS	

## 1. Description:

In the SRS air bag troubleshooting, items of cause of trouble in the inspection procedure for each diagnostic trouble code, have been added.

## 2. Applicable Vehicles:

- '91~'10 SIGMA
- '92~'10 3000GT
- '91~'10 COLT/LANCER
- '93~'10 GALANT
- '92~'10 SPACE RUNNER/SPACE WAGON
- '95~'10 L400
- '91~'10 PAJERO/MONTERO
- '97~'10 L200

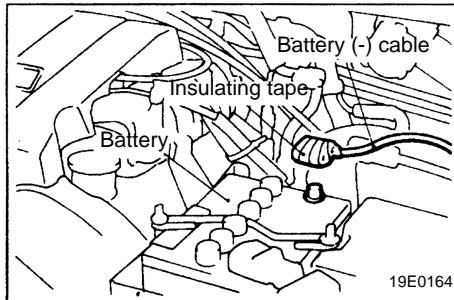
## 3. Applicable Manuals:

Manual	Pub. No.	Language	Page(s)
SIGMA Workshop Manual chassis	PWGE9004-G	(English)	52B-14
	PWGS9005-F	(Spanish)	
	PWGF9006-F	(French)	
	PWGG9007-F	(German)	
	PWGD9008-F	(Dutch)	
	PWGW900-F	(Swedish)	
3000GT Workshop Manual chassis	PWUE9119-D	(English)	52B-12
'97 3000GT Workshop Manual chassis Supplement	PWUE9119-F	(English)	52B-6
	COLT/LANCER Workshop Manual chassis	(English)	52B-12
	PWME9117-D		
	PWMS9118-D		
	PWMF9119-D		
	PWMG9120-D		
	PWMD9121-D		
	PWMW9122-D	(Swedish)	

Manual	Pub. No.	Language	Page(s)
95'COLT/LANCER Workshop Manual chassis Supplement	PWME9117-E	(English)	52B-7
	PWMS9118-E	(Spanish)	
	PWMF9119-E	(French)	
	PWMG9120-E	(German)	
	PWMD9121-E	(Dutch)	
	PWMW9122-E	(Swedish)	
'97 COLT/LANCER Workshop Manual chassis Supplement	PWME9117-F	(English)	52B-5
	PWMS9118-F	(Spanish)	
	PWMF9119-F	(French)	
	PWMG9120-F	(German)	
	PWMD9121-F	(Dutch)	
	PWMW9122-F	(Swedish)	
'96 COLT/LANCER Workshop Manual chassis	PWME9511	(English)	52B-8
	PWMS9512	(Spanish)	
	PWMF9513	(French)	
	PWMG9514	(German)	
	PWMD9515	(Dutch)	
	PWMW9516	(Swedish)	
GALANT Workshop Manual chassis	PWDE9211-B	(English)	52B-13
	PWDS9212-B	(Spanish)	
	PWDF9213-B	(French)	
	PWDG9214-B	(German)	
	PWDD9215-B	(Dutch)	
	PWDW9216-B	(Swedish)	
'96 GALANT Workshop Manual chassis Supplement	PWDE9211-D	(English)	52B-7
	PWDS9212-D	(Spanish)	
	PWDF9213-D	(French)	
	PWDG9214-D	(German)	
	PWDD9215-D	(Dutch)	
	PWDW9216-D	(Swedish)	
SPACE RUNNER/SPACE WAGON Workshop Manual chassis	PWDE9104-D	(English)	52B-9
	PWDS9105-D	(Spanish)	
	PWDF9106-D	(French)	
	PWDG9107-D	(German)	
	PWDD9108-D	(Dutch)	
	PWDW9109-D	(Swedish)	
'95 SPACE RUNNER/SPACE WAGON Workshop Manual chassis Supplement	PWDE9104-E	(English)	52B-8
	PWDS9105-E	(Spanish)	
	PWDF9106-E	(French)	
	PWDG9107-E	(German)	
	PWDD9108-E	(Dutch)	
	PWDW9109-E	(Swedish)	

Manual	Pub.No.	Language	Page(s)
'97 SPACE RUNNER/SPACE WAGON Workshop Manual chassis Supplement	PWDE9104-G	(English)	52B-6
	PWDS9105-G	(Spanish)	
	PWDF9106-G	(French)	
	PWDG9107-G	(German)	
	PWDD9108-G	(Dutch)	
	PWDW9109-G	(Swedish)	
'95 L400 Workshop Manual chassis	PWWE9410	(English)	52B-9
	PWWS9411	(Spanish)	
	PWWG9412	(French)	
	PWWG9413	(German)	
	PWWD9415	(Dutch)	
	PWWW9416	(Swedish)	
'97 L400 Workshop Manual chassis Supplement	PWWE9410-B	(English)	52B-5
	PWWS9411-B	(Spanish)	
	PWWG9412-B	(French)	
	PWWG9413-B	(German)	
	PWWD9415-B	(Dutch)	
	PWWW9416-B	(Swedish)	
PAJERO Workshop Manual chassis	PWJE9086-F	(English)	52B-10
MONTERO Workshop Manual chassis	PWJS9087-F	(Spanish)	
PAJERO Workshop Manual chassis	PWJF9088-F	(French)	
	PWJG9089-F	(German)	
	PWJD9090-F	(Dutch)	
	PWJW9091-F	(Swedish)	
'96 PAJERO Workshop Manual chassis Supplement	PWJE9086-G	(English)	52B-10
'96 MONTERO Workshop Manual chassis Supplement	PWJS9087-G	(Spanish)	
'96 PAJERO Workshop Manual chassis Supplement	PWJF9088-G	(French)	
	PWJG9089-G	(German)	
	PWJD9090-G	(Dutch)	
	PWJW9091-G	(Swedish)	
'97 PAJERO Workshop Manual chassis Supplement	PWJE9086-H	(English)	52B-6, 52B-7
'97 MONTERO Workshop Manual chassis Supplement	PWJS9087-H	(Spanish)	
'97 PAJERO Workshop Manual chassis Supplement	PWJF9088-H	(French)	
	PWJG9089-H	(German)	
	PWJD9090-H	(Dutch)	52B-7
	PWJW9091-H	(Swedish)	52B-6, 52B-7
'97 L200 Workshop Manual chassis	PWTE96E1	(English)	52B-8

Code No. 21 or 22	Air bag module (squib) system	Probable cause																
(Comment)																		
(1) These diagnosis codes are output if there is abnormal resistance between the input terminals of the air bag module (squib). The trouble causes for each code No. are as follow																		
Code No.	Trouble Symptom																	
21	<ul style="list-style-type: none"> <li>Short in air bag module (squib) or harness short</li> <li>Short in clock spring</li> <li>Short in air bag module (squib) or front impact sensor harnesses leading to the power supply</li> </ul>	<ul style="list-style-type: none"> <li>Malfunction of clock spring</li> <li>Open circuit in clock spring due to inappropriate neutral position</li> <li>Malfunction of harness or connectors</li> <li>Malfunction of air bag module (squib)</li> <li>Malfunction of SDU</li> </ul>																
22	<ul style="list-style-type: none"> <li>Open circuit in air bag module (driver's side squib) or open harness</li> <li>Open circuit in clock spring</li> <li>Disconnected connector in the driver's side air bag module (squib)</li> <li>Open-circuit in clock spring due to inappropriate neutral position</li> <li>Malfunction of connector contact</li> <li>Short in air bag module (squib) or front impact sensor harnesses leading to the power supply</li> </ul>	<ul style="list-style-type: none"> <li>Malfunction of connector contact</li> <li>Short in air bag module (squib) or front impact sensor harnesses leading to the power supply</li> </ul>																
(2) Diagnosis codes 21 and 22 are sometimes generated in combination with malfunction codes relating to the front impact sensor (code Nos. 11, 12 and 13), but sometimes only one should also be inspected at the same time. The relationships between the codes are as follows.																		
		Front impact sensor																
		<table border="1"> <thead> <tr> <th></th><th>Short</th><th>Open circuit (1 sensor)</th><th>Open circuit (2 sensors)</th></tr> </thead> <tbody> <tr> <td>Air bag module (squib)</td><td> <table border="1"> <tr> <td>Short</td><td>11 or 21</td><td>12 or 21</td><td>13 or 21</td></tr> <tr> <td>Open circuit</td><td>11 or 22</td><td>12 or 22</td><td>13 or 22</td></tr> </table> </td><td></td><td></td></tr> </tbody> </table>		Short	Open circuit (1 sensor)	Open circuit (2 sensors)	Air bag module (squib)	<table border="1"> <tr> <td>Short</td><td>11 or 21</td><td>12 or 21</td><td>13 or 21</td></tr> <tr> <td>Open circuit</td><td>11 or 22</td><td>12 or 22</td><td>13 or 22</td></tr> </table>	Short	11 or 21	12 or 21	13 or 21	Open circuit	11 or 22	12 or 22	13 or 22		
	Short	Open circuit (1 sensor)	Open circuit (2 sensors)															
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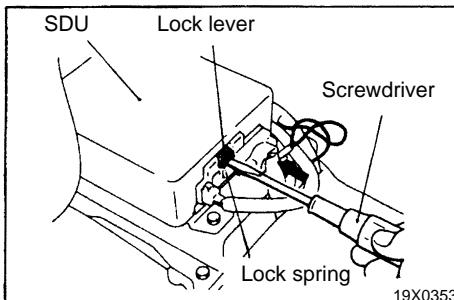


- Turn the ignition key to the "LOCK" position, disconnect the negative battery cable and tape the terminal.

**Caution**

**Wait at least 60 seconds after disconnecting the battery cable before doing any further work. (Refer to P. 52B-4)**

- Remove the floor console assembly. (Refer to GROUP 52A - Floor Console.)



- Place a flat-tipped (-) screwdriver against the lock spring (metal portion) of the SDU connector lock lever, and push the spring horizontally toward the inside of the unit.

**Caution**

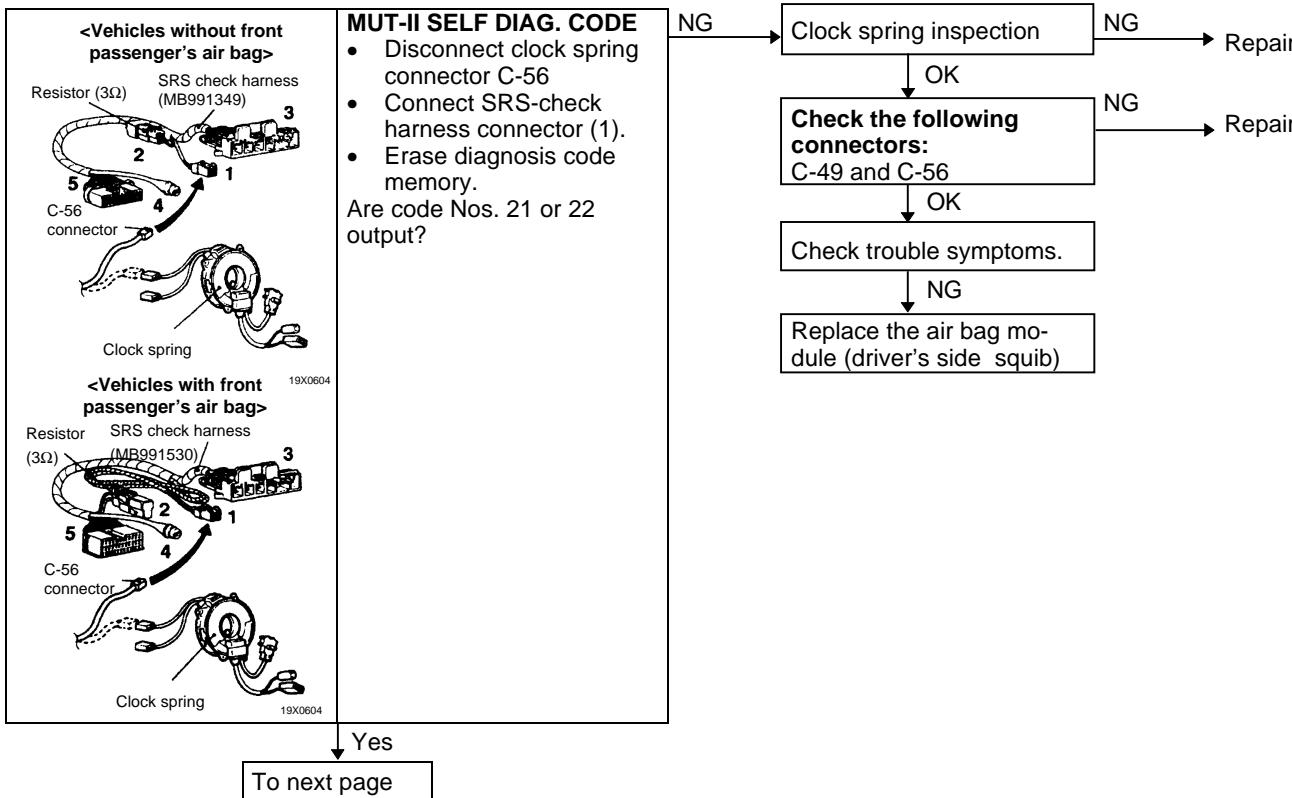
- Do not use excessive force to raise the lock lever (green)**
- do not insert the screwdriver into the gap between the lock lever (green) and the lock spring (metal portion).**

- Disconnect the red 14-pin connector from the SDU.

Code No. 21 or 22 Driver's air bag module (squib) system	Probable cause
<p>(1) These diagnosis codes are output if there is abnormal resistance between the input terminals of the driver's air bag module (squib). Refer to table 1 for the conditions for output of each diagnosis code.</p> <p>(2) Diagnosis codes 21 and 22 are sometimes generated in combination with diagnosis codes relating to the front impact sensor (code Nos. 11, 12 and 13), but sometimes only one may be output instead of both being memorised. Because of this, the front impact sensor should also be inspected at the same time. Refer to table 2 for the failure mode combinations.</p>	<ul style="list-style-type: none"> <li>malfunction of clock spring</li> <li>Open-circuit in clock spring due to inappropriate neutral position</li> <li>Malfunction of harnesses or connectors</li> <li>Malfunction of air bag module (driver's side squib)</li> <li>Malfunction of SDU</li> </ul> <p style="text-align: right;"><b>&lt;Added&gt;</b></p>

TABLE 1: CONDITIONS FOR OUTPUT OF EACH DIAGNOSIS CODE

Code No.	Trouble symptoms
21	<ul style="list-style-type: none"> <li>Short in air bag module (driver's side squib) or harness short</li> <li>Short in clock spring</li> <li>Short in driver's side air bag module (squib) or front impact sensor harnesses leading to the power supply</li> </ul>
22	<ul style="list-style-type: none"> <li>Open circuit in air bag module (driver's side squib) or open harness</li> <li>Open circuit in clock spring</li> <li>Disconnected connector in the driver's side air bag module (squib).</li> <li>Open circuit in clock spring due to inappropriate neutral position.</li> <li>Malfunction of connector contact</li> <li>Short in driver's air bag module (squib) or front impact sensor harnesses leading to the power supply</li> </ul> <p style="text-align: right;"><b>&lt;Added&gt;</b></p>



## INSPECTION PROCEDURE CLASSIFIED BY DIAGNOSTIC TROUBLE

Code No. 14 Analog G-sensor system in the SRS-ECU	Probable cause
<p>The SRS-ECU monitors the output of the analog G-sensor inside the SRS-ECU. It outputs this code when any of the following are detected</p> <ul style="list-style-type: none"> <li>• When the analog-G sensor is not operating</li> <li>• When the characteristics of the analog-G sensor are abnormal</li> <li>• When the output from the analog G-sensor is abnormal</li> </ul>	<ul style="list-style-type: none"> <li>• Malfunction of SRS-ECU</li> </ul>

Replace the SRS-ECU

Code No.15 or 16 Safing G-sensor system in the SRS-ECU	Probable cause
<p>This code is output if there is a short or open circuit between the terminals of the safing G-sensor inside the SRS-ECU.</p> <p>The trouble causes for each diagnosis code No. are as follows</p>	<ul style="list-style-type: none"> <li>• Malfunction of SRS-ECU</li> </ul>

Code No.	Trouble Symptom
15	Short circuit in the safing G-sensor
16	Open circuit in the safing G-sensor

Replace the SRS-ECU

Code No. 21, 22 or 61 Air bag module (driver's side squib) system	Probable cause
<p>These diagnosis codes are output if there is abnormal resistance between the input terminals of the air bag module (driver's side squib).</p> <p>The trouble causes for each code No. are as follows</p> <p style="text-align: center;"><b>&lt;Added&gt;</b></p>	<ul style="list-style-type: none"> <li>• Malfunction of clock spring</li> <li>• Open-circuit in clock spring due to inappropriate neutral position</li> <li>• Malfunction of harnesses or connectors</li> <li>• Malfunction of air bag module (driver's side squib)</li> <li>• Malfunction of SRS-ECU</li> </ul>

Code No.	Trouble symptoms
21	<ul style="list-style-type: none"> <li>• Short in air bag module (driver's side squib) or harness short</li> <li>• Short in clock spring</li> </ul>
22	<ul style="list-style-type: none"> <li>• Open circuit in air bag module (driver's side squib) or open harness</li> <li>• Open circuit in clock spring</li> <li>• Disconnected connector in the driver's side air bag module (squib).</li> <li>• Open circuit in clock spring due to inappropriate neutral position.</li> <li>• Malfunction of connector contact</li> </ul>
61	<ul style="list-style-type: none"> <li>• Short in air bag module (driver's side squib) harness leading to the power supply</li> </ul>

