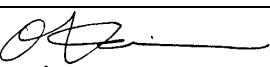




# SERVICE BULLETIN

SERVICE GROUP, WARRANTY & SERVICE DEP.  
MITSUBISHI MOTOR SALES EUROPE BV

<b>SERVICE BULLETIN</b>		No.: ESB- 96E55-502	
		Date: 1997-02-28	<Model> CARISMA <M/Y> 96-10
Subject:	ADDITION TO AIR PURIFIER TROUBLE-SHOOTING SECTION		
Group:	HEATER, A/C & VENTILATION		
Correction	 O. Kai - E.V.P. After Sales Service		

## 1. Description:

Supplementary information needs to be added to the air purifier troubleshooting section in accordance with this Service Bulletin.

## 2. Applicable Manual:

Manual	Pub. No.	Language	Page(s)
'96 CARISMA Workshop Manual	PWDE9502	(English)	55-49, 55-59, 55-60
Chassis	PWDS9503	(Spanish)	
	PWDF9504	(French)	
	PWDG9505	(German)	
	PWDD9506	(Dutch)	
	PWDW9507	(Swedish)	
	PWDI96E1	(Italian)	

## 4. Details:

Please refer to the attached page(s).

## INSPECTION CHART FOR TROUBLE SYMPTOMS

Troubles Symptom		Inspection procedure No.	Reference Page
Communication with the MUT-II is not possible	Communication with all systems is not possible	1	55-50
	Communication with A/C system only is not possible	2	55-50
Blowing of air does not stop even if blower switch is OFF.		3	55-50
No air is blown out from the air outlet even if blower switch is ON.		4	55-51
Inside/outside air changeover is not possible.		5	55-52
Air outlet is not changed over even if air outlet changeover switch is pressed.		6	55-52
When ignition switch and fan switch are ON, A/C does not operate even if A/C switch is turned to ON.		7	55-53
A/C is operated but inside air temperature is not lowered		8	55-54
Setting display temperature returns to 25°C when ignition switch is turned ON or OFF.		9	55-55
Setting temperature is increased but inside air temperature does not rise.		10	55-55
Window glass becomes cloudy although operation is in AUTO mode.		11	55-56
Outside air temperature display does not change from 20°C.		12	55-57
Condenser fan does not operate.		13	55-57
Air purifier does not operate.		14	55-59
Air purifier indicator lamp (A/P) does not illuminate.		15	55-59
Air purifier indicator lamp (A/P) flashes.  <b>&lt;Added&gt;</b>	Output voltages at collector and ionizer sections are not correct.	16	55-59-1
	Output voltages at collector and ionizer sections are correct.	17	55-59-1
Sparking sounds are generated intermittently or continuously.		18	55-59-2
A/C compressor (magnetic clutch) circuit inspection	16 → 19		55-60

### <Changed>

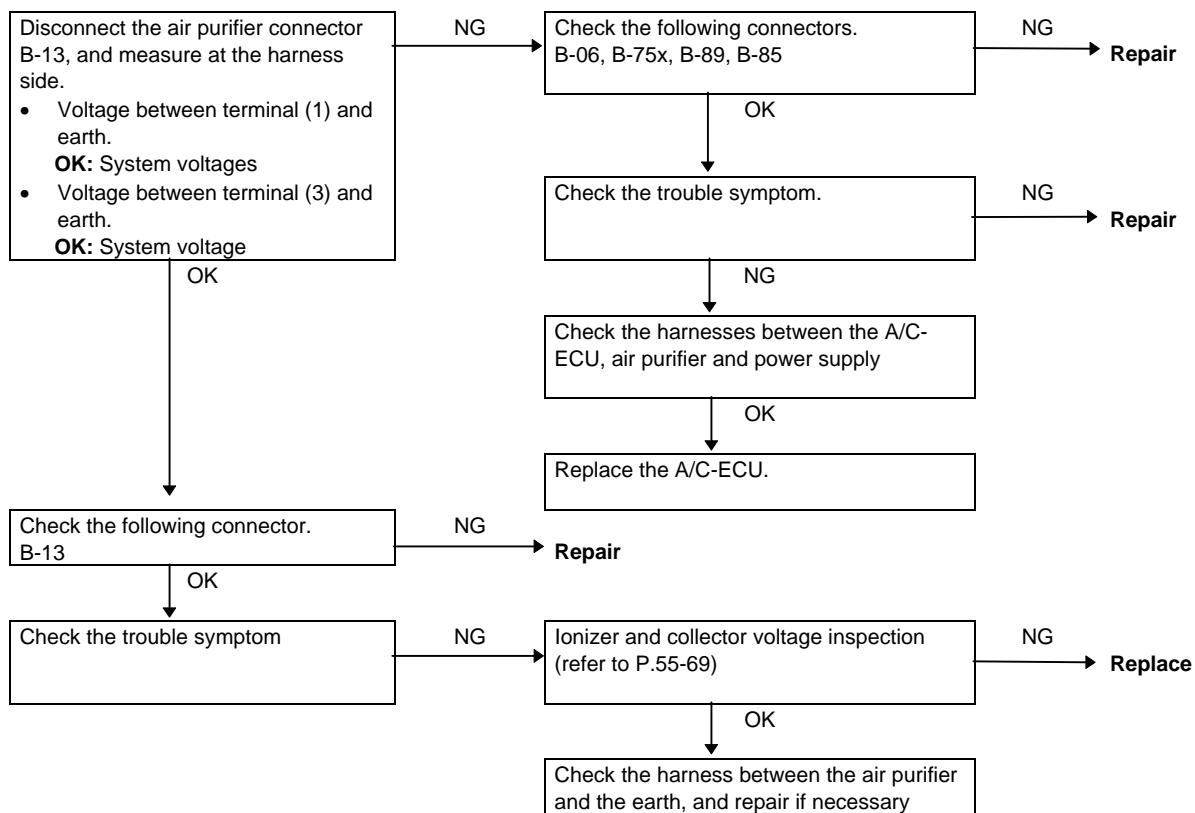
#### NOTE

#### **<Added>**

The air purifier indicator lamp (A/P) is located in the air conditioner control panel/ECU display panel. The lamp illuminates continuously while the air purifier is in operation (blower switch ON), but if an electric fault occurs in the air purifier, the lamp flashes to warn the abnormal condition.

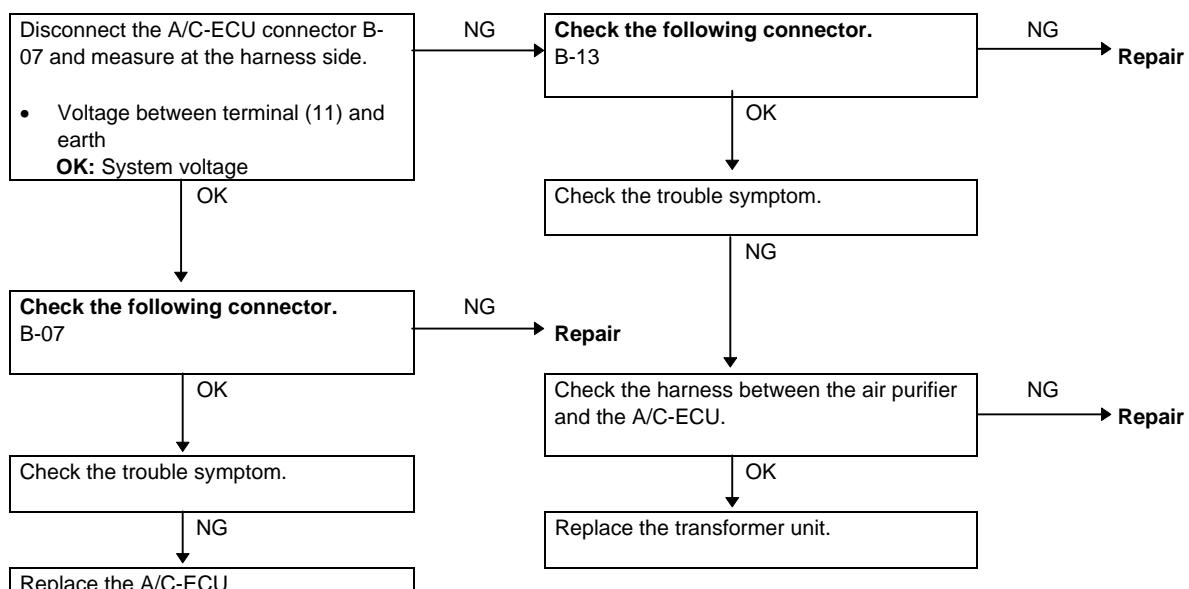
## Inspection procedure 14

Air purifier does not operate	Probable cause
<p>The air purifier operates when the ignition switch is at the ON position and the blower switch is turned to ON. Accordingly, if only the blower fan operates, the cause is probably a defective air purifier power supply circuit.</p>	<ul style="list-style-type: none"> <li>• Malfunction of ionizer</li> <li>• Malfunction of collector</li> <li>• Malfunction of transformer unit</li> <li>• Malfunction of connector</li> <li>• Malfunction of harness</li> <li>• Malfunction of A/C-ECU</li> </ul>



## Inspection procedure 15

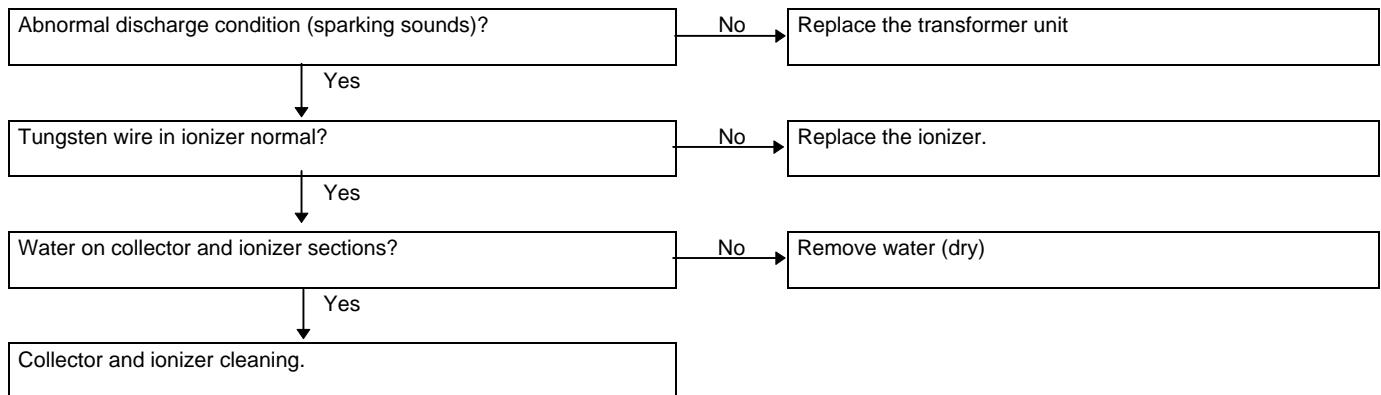
Air purifier indicator lamp (A/P) does not illuminate (however, air purifier is operating)	Probable cause
<p>The cause is probably an open circuit in the harness between the air purifier and the A/C-ECU, or a defective air purifier or A/C-ECU.</p>	<ul style="list-style-type: none"> <li>• Malfunction of connector</li> <li>• Malfunction of harness</li> <li>• Malfunction of transformer unit</li> <li>• Malfunction of A/C-ECU</li> </ul>



<Add the following two pages.>

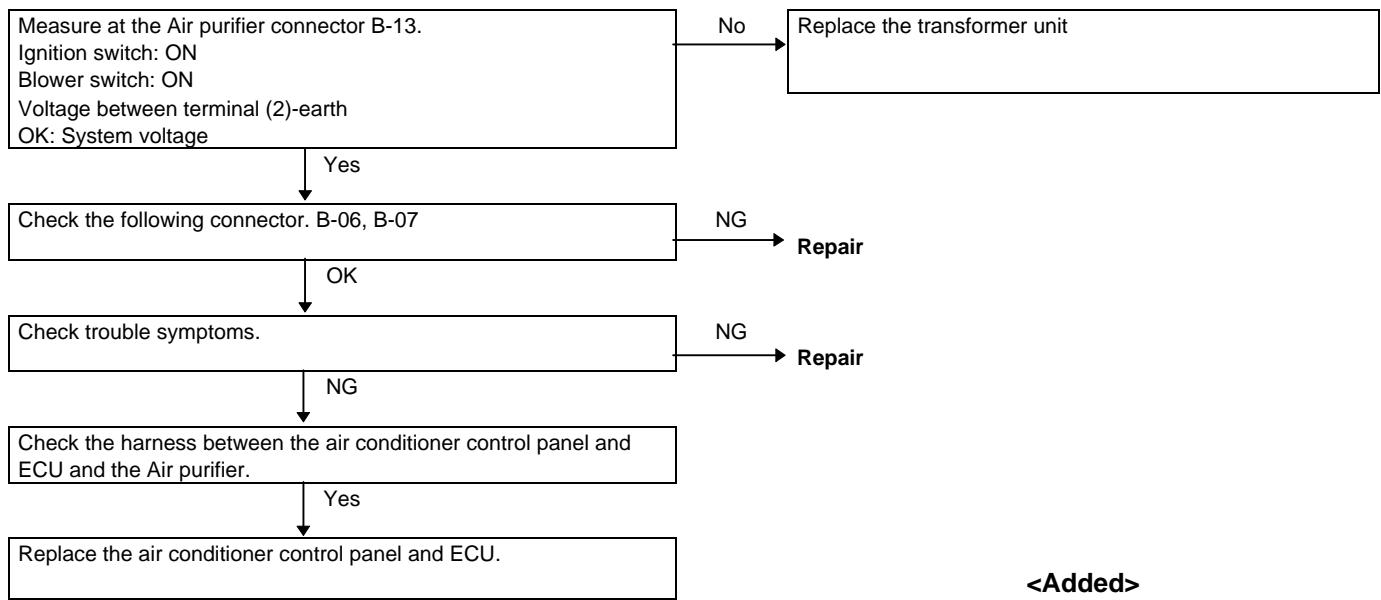
## Inspection procedure 16

Air purifier indicator lamp (A/P) flashes. (Incorrect output voltages at collector and ionizer sections)	Probable cause
<p>The air purifier indicator lamp (A/P) flashes if the air purifier's collector and ionizer are excessively contaminated or an abnormal current flows to the air purifier. The lamp may flash under certain weather conditions (such as very humid weather) where an abnormal current is liable to flow to the air purifier.</p>	<ul style="list-style-type: none"> <li>Abnormal discharge condition is prevailing due to water on the collector and ionizer sections.</li> <li>Contaminated collector sections.</li> <li>Contaminated ionizer section</li> <li>Open tungsten wire in ionizer</li> <li>Malfunction of transformer unit</li> </ul>



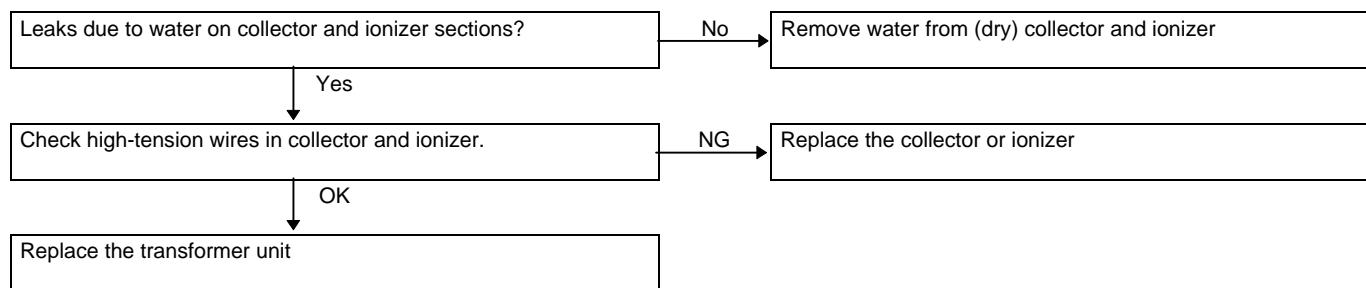
## Inspection procedure 17

Air purifier indicator lamp (A/P) flashes. (Collect output voltages at collector and ionizer sections)	Probable cause
Correct output voltages show that the purifier is operating. Faulty air purifier indicator lamp (A/P) related circuit is probable.	<ul style="list-style-type: none"> <li>Malfunction of transformer unit</li> <li>Malfunction of air conditioner control panel and ECU</li> <li>Malfunction of wiring harness</li> <li>Malfunction of connector</li> </ul>



## Inspection procedure 18

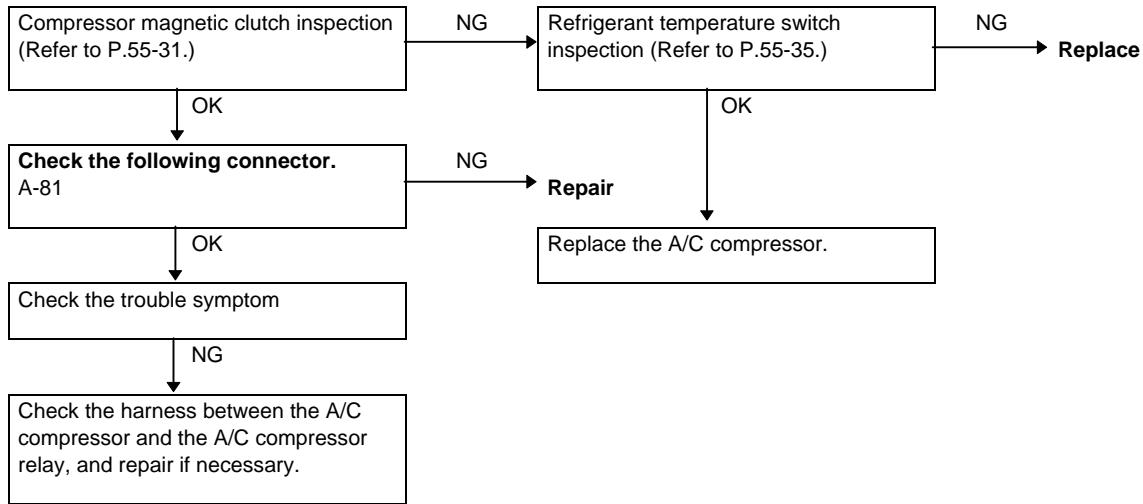
Intermittent or continuous sparking sounds	Probable cause
Leaks due to water on the collector and ionizer sections or faulty transformer unit are probable.	<ul style="list-style-type: none"> <li>• Water on collector and ionizer sections</li> <li>• Malfunction of ionizer</li> <li>• Malfunction of connector</li> <li>• Malfunction of transformer</li> </ul>



<Added>

## Inspection procedure 16 ← 19 &lt;CHANGED&gt;

## A/C compressor (magnetic clutch) circuit inspection



## SERVICE DATA REFERENCE TABLE

Item No.	Check Item	Check Condition		Normal Condition
11	Inside air temperature sensor	Ignition switch: ON		Inside air temperature and temperature displayed on the MUT-II are identical.
12	Outside air temperature sensor	Ignition switch: ON		Outside air temperature and temperature displayed on the MUT-II are identical
15	Heater water temperature switch	Ignition switch: ON		ON when heater core wall temperature is 30°C or higher
21	Air thermo sensor	Ignition switch: ON		Temperature of blow air from evaporator and temperature displayed on the MUT-II are identical.
25	Photo sensor	Ignition switch: ON		Amount of incident light is proportional to voltage displayed on the MUT-II.
31	Potentiometer of air mix damper motor	Ignition switch: ON	Damper position	Opening degree (%)
			MAX. HOT	Approx. 100
			MAX. COOL	Approx. 0
32	Potentiometer of air outlet changeover damper motor	Ignition switch: ON	Damper position	Opening degree (%)
			FACE	Approx. 0
			FOOT	Approx. 50
			FOOT/DEF.	Approx. 75
			DEF.	Approx. 100