

GROUP 54

CHASSIS ELECTRICAL

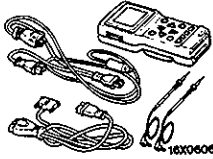

GENERAL

OUTLINE OF CHANGES

- The immobilizer-ECU has been changed. The service procedures except for those described below are the same as before.
 - (1) A troubleshooting item (for diagnosis code No. 33) has been added for when the engine starting prevention mode is activated because the incorrect key has been used five times in succession.
 - (2) Diagnosis code No. 11 is now erased automatically when the condition returns to normal. (Previously it was erased using the MUT-II.)

IMMOBILIZER SYSTEM

SPECIAL TOOLS

Tool	Number	Name	Use
 16X0606	MB991502	MUT-II sub assembly	<ul style="list-style-type: none">• Immobilizer system check (Diagnosis display using the MUT-II)• Registration of the ID code.
 16X0607		ROM back	

TROUBLESHOOTING

INSPECTION CHART FOR DIAGNOSIS CODES

Diagnosis code No.	Inspection items	Reference page
11*1	Transponder communication system	Refer to '96 PAJERO Workshop Manual (PWJE9086-G)
12*1	ID code are not the same or are not registered	Refer to '96 PAJERO Workshop Manual (PWJE9086-G)
21*2	Communication system between MUT-II and engine-ECU	Refer to '96 PAJERO Workshop Manual (PWJE9086-G)
21*3	Communication system between fuel cut valve-ECU and immobilizer-ECU	Refer to '96 PAJERO Workshop Manual (PWJE9086-G)
22*3	Fuel cut valve-ECU system	Refer to '96 PAJERO Workshop Manual (PWJE9086-G)
23*3	Starting permission codes are not identical	Refer to '96 PAJERO Workshop Manual (PWJE9086-G)
31	EEPROM abnormality inside immobilizer-ECU	Refer to '96 PAJERO Workshop Manual (PWJE9086-G)
32*2	Ignition switch IG signal circuit system	Refer to '96 PAJERO Workshop Manual (PWJE9086-G)
33	Starting prevention system activated due to incorrect operation	54-2

NOTE

- (1) *1: Diagnosis code No.11 and No.12 are not recorded.
 (2) *2: Indicates vehicles with petrol engines.
 (3) *3: Indicates vehicles with Diesel engines.

INSPECTION PROCEDURE FOR DIAGNOSIS CODES

Code No. 33 Starting prevention system activated due to incorrect operation	Probable cause
If the ignition switch is turned on more than five times in succession using an invalid key which does not have an ID code registered, diagnosis code No. 33 is generated and starting prevention mode is activated. (When starting prevention mode is activated, the engine will not start even when a proper key is used. This condition will continue until starting prevention mode is cleared.)	<ul style="list-style-type: none"> The ID code in the ignition key being used has not been properly registered. Malfunction of the immobilizer-ECU

Turn the ignition switch on for 20 minutes or more and then turn it back off.
(This operation will cause starting prevention mode to be cleared.)

Was the engine started using a proper key which already had an ID code registered?

Yes

Normal

No

Read the diagnosis codes.

Code No. 11 or No. 12 displayed

Code No. 33 displayed

Replace the immobilizer-ECU.

To Inspection Chart Classified by Diagnosis Codes
[Refer to '96 PAJERO Workshop Manual (PWJE9086-G)]