

BODY ELECTRONICS MODULE (BEM)

TROUBLESHOOTING

INSPECTION CHART FOR TROUBLE SYMPTOMS

★ :Refer to TJ/KJ Base Manual.

Trouble symptom	Inspection procedure No.
Power windows and sunroof will not operate.	1
Seat belt warning won't go off.	2★
Vehicle will not respond to remote key.	3
Poor remote key range (all keys)	4★
No panic function.	5
No audible warning.	6
Lock over-use function inoperative.	7★
Engine will not start.	8★
Ignition key slot not illuminated (except executive models).	9★
No illuminated entry or fade.	10★
Headlamps on at all times.	11★
No headlamp delay function.	12★
No headlamp reminder function.	13★
No hazard flash acknowledgment.	14
Door ajar warning sounds with all doors closed.	15
Doors unlock intermittently.	16
Rear demister does not function.	17★
Trunk will not release with remote key.	18
Alarm sounds if trunk is opened with the mechanical key.	19
Doors unlock and interior lamps remain on.	20★
Interior lamp will not go out.	21★
Battery goes flat	22★
Able to lock car with key in ignition.	23

INSPECTION PROCEDURE 1

Power windows and sunroof do not operate	Probable cause
BEM supplies power to relay to operate windows and sunroof.	<ul style="list-style-type: none"> Malfunction of window relay. Malfunction of the BEM ECU.
Turn ignition ON. Test voltage at BEM pin No. 28. Voltage should be zero. Turn ignition OFF. Voltage should be zero then go to 12V after 30 seconds. 	

INSPECTION PROCEDURE 3

Vehicle will not respond to remote key	Probable cause
Signal from remote key not reaching or is different to BEM signal.	<ul style="list-style-type: none"> Malfunction of the BEM ECU. Bad earth Keys require reteaching

INSPECTION PROCEDURE 5

No panic function	Probable cause
Remote key may be out of range.	<ul style="list-style-type: none"> Malfunction of the BEM ECU. Remote key battery voltage. Faulty ignition switch.

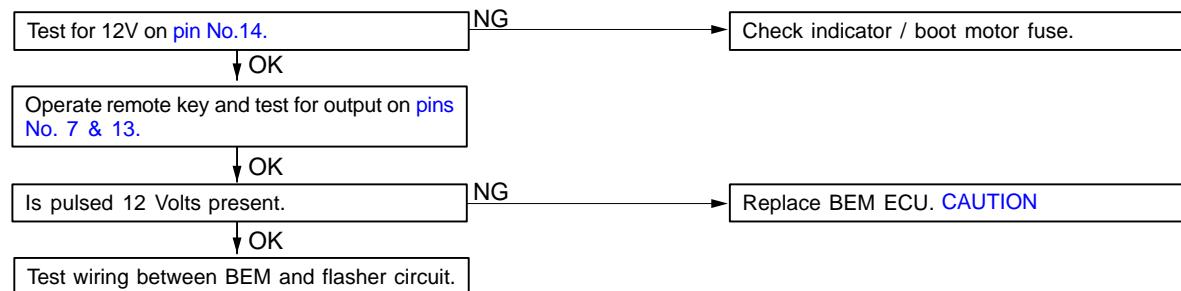
INSPECTION PROCEDURE 6

No audible warning	Probable cause
Horn relay may be defective.	<ul style="list-style-type: none"> • Horn relay • Malfunction of the BEM ECU.



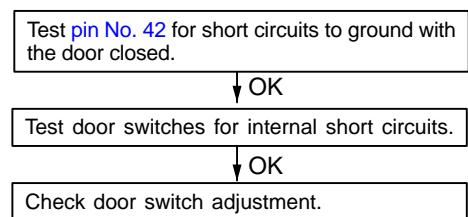
INSPECTION PROCEDURE 14

No hazard flash acknowledgment	Probable cause
Possible fault in wiring.	<ul style="list-style-type: none"> • Malfunction of the BEM ECU. • Blown fuse.



INSPECTION PROCEDURE 15

Door ajar warning sounds with all doors closed	Probable cause
Possible door switch malfunction.	<ul style="list-style-type: none"> • Malfunction of door switch. • Door switch adjustment.



INSPECTION PROCEDURE 16

Doors unlock intermittently	Probable cause
Door snib switch may be faulty.	<ul style="list-style-type: none"> Malfunction of the BEM ECU. Faulty door snib switch
Operate door snib switch and using an oscilloscope test voltages on pin No. 30 L/H or 41 R/H.	NG → Test door snib switch and earthing. NG → Replace
OK	
Test voltage between pin No. 9 positive and pin No. 12 negative. 12V should be present.	NG → Test parklamp switch earth circuit.
OK	
With a 12v lamp, test between pin No. 16 and pin No. 1, pin No. 16 and pin No. 11, while operating snib. Lamp should illuminate each time the snib moves between open and closed.	NG → Replace BEM ECU. CAUTION
OK	
Check door motor.	

INSPECTION PROCEDURE 18

Trunk lid will not release with remote key.	Probable cause
Faulty trunk lid release motor.	<ul style="list-style-type: none"> Malfunction of the BEM ECU. Faulty trunk lid release relay. Faulty trunk lid motor.
Check remote key.	NG → Replace
OK	
Check voltage on pin No. 14. Press remote key trunk lid button and check pulse output on pin No. 2.	NG → Replace BEM ECU. CAUTION
OK	
Check trunk lid release relay or boot motor on low series. Test if 12V on pin No. 30. Test relay closes and 12V output on pin No. 87.	NG → Replace
OK	
Test trunk lid release motor.	

INSPECTION PROCEDURE 19

Alarm sounds if trunk lid is opened with the mechanical key.	Probable cause
Faulty trunk lid release motor.	<ul style="list-style-type: none"> Malfunction of the BEM ECU. Faulty trunk lid release relay. Faulty trunk lid motor.
Test wiring for open circuits between BEM pin No. 31 and trunk lid cylinder switch.	NG → Repair
OK	
Test continuity of trunk lid switch.	NG → Repair
OK	
Check wiring at trunk lid hinge for O/C.	NG → Repair

INSPECTION PROCEDURE 23

Able to lock car with key in ignition.	Probable cause
Possible faulty key remind switch.	<ul style="list-style-type: none"> • Malfunction of the BEM ECU. • Faulty key in lock switch. • Fault in wiring.

