

2008 Mazda CX-9 Grand Touring

2008 BODY & ACCESSORIES Symptom Troubleshooting [Power Window System (Exterior Open/Close Function)] - Mazda CX-9

2008 BODY & ACCESSORIES

Symptom Troubleshooting [Power Window System (Exterior Open/Close Function)] - Mazda CX-9

SYMPTOM TROUBLESHOOTING CHART [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)]

SYMPTOM TROUBLESHOOTING CHART

NO.	TROUBLESHOOTING ITEM	PAGE
1	Door glass does not operate even through various operation are performed	(See <u>NO.1 UNABLE TO COMMUNICATE WITH GENERIC ELECTRONIC MODULE (GEM) [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)].</u>)
2	Door glass does not operate using the keyless transmitter	(See <u>NO.2 DOOR GLASS DOES NOT OPERATE USING THE KEYLESS TRANSMITTER [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)].</u>)
3	Door glass does not operate using the request switch	(See <u>NO.3 DOOR GLASS DOES NOT OPERATE USING THE REQUEST SWITCH [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)].</u>)
4	Passenger door glass do not operate	(See <u>NO.4 PASSENGER DOOR GLASS DOES NOT OPERATE [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)].</u>)
5	Door glass stops before fully opening/closing	(See <u>NO.5 DOOR GLASS STOPS BEFORE FULLY OPENING/CLOSING [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)].</u>)
6	Door glass reverse before it fully opens	(See <u>NO.6 DOOR GLASS REVERSES BEFORE IT FULLY OPENS [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)].</u>)
7	Driver and passenger door glasses operate accidentally	(See <u>NO.7 DRIVER AND PASSENGER DOOR GLASSES OPERATE ACCIDENTALLY [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)].</u>)
8	Passenger door glass operates accidentally	(See <u>NO.8 PASSENGER DOOR GLASS OPERATES ACCIDENTALLY [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)].</u>)

QUICK DIAGNOSTIC CHART [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)]

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X: Applied

Possible factor Troubleshooting item	1	2	3	4	5	6	7	8
	Door glass does not operate even though various operations are performed	Door glass does not operate using the keyless transmitter	Door glass does not operate using the request switch	Passenger's door glass do not operate	Door glass stops before fully opening/closing	Door glass reverses before it fully opens	Driver's and passenger's door glasses operate accidentally	Passenger's door glass operates
Power window main switch malfunction	X				X		X	
Power window subswitch (passenger's) malfunction				X	X		X	X
Power window motor malfunction	X			X	X	X		
Battery malfunction (low voltage)	X			X	X	X		
Power window system initial setting error	X			X	X			
Open circuit in wiring harness between power window main switch and BCM	X							
BCM malfunction	X	X	X		X		X	
Advanced keyless control module malfunction			X					
Keyless control module malfunction		X	X					
Open circuit in wiring harness between keyless receiver and BCM		X	X					
Any door or liftgate is open.		X	X					
Key is inserted in steering lock.		X	X					
Open circuit in wiring harness between request switch and keyless control module.			X				X	
Start knob is in a position other than LOCK position.			X					
Open circuit in wiring harness between power window main switch and power window subswitch				X			X	
Improper installation of door glass					X	X		
Keyless entry system signal reception error (outside operation area, radio signal interference)					X			
Transmitter malfunction							X	
Request switch malfunction							X	
Power window main switch malfunction							X	
Power window subswitch malfunction							X	X

#CXUW00000957

Fig. 1: Troubleshooting Chart
Courtesy of MAZDA MOTORS CORP.

NOTE:

- The exterior open/close function does not operate when the following conditions are met.
 - Any door or liftgate is open.
 - The key is inserted in the steering lock.
 - The start knob is not in the LOCK position.
- The auto-open/close function (the exterior open/close function) does not operate if the power window initialization procedure has been reset.

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- Depending on the temperature and battery conditions, the window may reverse on rare occasions.

NO.1 UNABLE TO COMMUNICATE WITH GENERIC ELECTRONIC MODULE (GEM) [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)]

POSSIBLE CAUSE CHART

1	Door glass does not operate even though various operations are performed
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Power window main switch malfunction • Power window motor malfunction • Battery malfunction (low voltage) • power window initialization procedure error • Open circuit in wiring harness between power window main switch and BCM • BCM malfunction

DIAGNOSTIC PROCEDURE

DIAGNOSTIC PROCEDURE

Step	Inspection	Action	
1	<ul style="list-style-type: none"> • Inspect the operation of the door glass by operating the power window main switch. • Is the manual operation normal? 	Yes	Go to the next step.
		No	Inspect the following parts, and repair or replace. <ul style="list-style-type: none"> • Power window main switch (See <u>POWER WINDOW MAIN SWITCH INSPECTION</u> .) <ul style="list-style-type: none"> • Power window motor (See <u>POWER WINDOW MOTOR INSPECTION</u> .) <ul style="list-style-type: none"> • Battery (low voltage)
2	<ul style="list-style-type: none"> • Inspect the operation of the door glass by operating the power window main switch. • Does the door glass operate in auto? 	Yes	Go to the next step.
		No	Perform the power window initialization procedure. (See <u>POWER WINDOW INITIALIZATION PROCEDURE</u> .)
3		Yes	Inspect the wiring harness between the power window main switch and the BCM. If there is any malfunction, repair or replace the applicable part.

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	No	Replace the BCM. (See <u>BODY CONTROL MODULE (BCM) REMOVAL/INSTALLATION .</u>)
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NO.2 DOOR GLASS DOES NOT OPERATE USING THE KEYLESS TRANSMITTER [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)]

POSSIBLE CAUSE CHART

2	DOOR GLASS DOES NOT OPERATE USING THE KEYLESS TRANSMITTER
POSSIBLE CAUSE	<ul style="list-style-type: none"> Keyless control module malfunction BCM malfunction Open circuit in wiring harness between keyless control module and BCM Any door or liftgate is open Key is inserted in steering lock

DIAGNOSTIC PROCEDURE

DIAGNOSTIC PROCEDURE

Step	Inspection	Action	Action
1	<ul style="list-style-type: none"> Inspect the door lock/unlock operation using the transmitter. Does it operate normally? 	Yes	Inspect the following parts, and repair or replace. <ul style="list-style-type: none"> BCM (See <u>BODY CONTROL MODULE (BCM) INSPECTION .</u>) <ul style="list-style-type: none"> Keyless control module (Vehicles with advanced keyless system) (See <u>KEYLESS CONTROL MODULE INSPECTION [ADVANCED KEYLESS SYSTEM] .</u>)
		No	Go to the next step.
2	<ul style="list-style-type: none"> Inspect the open/close condition of the doors and the liftgate. Is the reason why they do not lock/unlock because a door or the liftgate is open? 	Yes	System is normal (Does not operate when a door or the liftgate is open).
		No	Go to the next step.
	<ul style="list-style-type: none"> Verify whether the key is in the steering lock. 	Yes	System is normal (Does not operate when the key is inserted in the steering wheel lock)

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3	<ul style="list-style-type: none"> Is the reason why they do not lock/unlock because the key is inserted in the steering lock? 	No	Go to the next step.
4	<ul style="list-style-type: none"> When the lock/unlock operation does not operate for reasons other than the above Steps 2 and 3. 	Yes	Inspect the following parts, and repair or replace. <ul style="list-style-type: none"> Keyless control module (See <u>KEYLESS CONTROL MODULE INSPECTION [ADVANCED KEYLESS SYSTEM]</u>) <ul style="list-style-type: none"> Wiring harness between keyless control module and BCM.
		No	Reinspect for malfunction recurrence. If the malfunction is not corrected, repeat the procedure from Step 1.

NO.3 DOOR GLASS DOES NOT OPERATE USING THE REQUEST SWITCH [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)]

POSSIBLE CAUSE CHART

3	Door glass does not operate using the request switch
POSSIBLE CAUSE	<ul style="list-style-type: none"> Keyless control module malfunction BCM malfunction Open circuit in wiring harness between request switch and keyless control module. Any door or liftgate is open. Key is inserted in steering lock. Start knob is in a position other than LOCK position.

DIAGNOSTIC PROCEDURE

DIAGNOSTIC PROCEDURE

Step	Inspection	Action
1	<ul style="list-style-type: none"> Verify the door lock/unlock operation by operating the request switch. Does it operate normally? 	Inspect the following parts, and repair or replace. <ul style="list-style-type: none"> Keyless control module (See <u>KEYLESS CONTROL MODULE INSPECTION [ADVANCED KEYLESS SYSTEM]</u> .) <ul style="list-style-type: none"> BCM

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			(See BODY CONTROL MODULE (BCM) INSPECTION .)
		No	Go to the next step.
2	<ul style="list-style-type: none"> Verify the open/close condition of the doors and the liftgate. Is the reason why they do not lock/unlock because a door or the liftgate is open? 	Yes	The system is normal (When any door or the liftgate is open, the system does not operate).
		No	Go to the next step.
3	<ul style="list-style-type: none"> Verify the start knob position, or if the key is in the steering lock. Is the reason why the door lock/unlock does not operate because the start knob is in a position other than LOCK, or the key is inserted? 	Yes	The system is normal (When the start knob is in a position other than LOCK, or the key is inserted in the steering lock, the system does not operate).
		No	Go to the next step.
4	<ul style="list-style-type: none"> The door lock/unlock does not operate for reasons other than Steps 2 and 3 above. 	Yes	Inspect the following parts, and repair or replace. <ul style="list-style-type: none"> Keyless control module (See KEYLESS CONTROL MODULE INSPECTION [ADVANCED KEYLESS SYSTEM] .) <ul style="list-style-type: none"> Wiring harness between the request switch and the keyless control module.
		No	Reinspect for malfunction recurrence. If the malfunction is not corrected, repeat the procedure from Step 1.

NO.4 PASSENGER DOOR GLASS DOES NOT OPERATE [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)]

POSSIBLE CAUSE CHART

4	Passenger door glass does not operate
POSSIBLE CAUSE	<ul style="list-style-type: none"> Power window subswitch (passenger side) malfunction Power window motor malfunction Battery malfunction (low voltage) Open circuit in wiring harness between power window main switch and power window subswitch (passenger side) power window initialization procedure error

DIAGNOSTIC PROCEDURE

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DIAGNOSTIC PROCEDURE

Step	Inspection	Action	
1	<ul style="list-style-type: none"> • Inspect the door glass operation by operating the power window subswitch (passenger side). • Does it operate normally? 	Yes	Go to the next step.
		No	Inspect the following parts, and repair or replace. <ul style="list-style-type: none"> • Power window subswitch (passenger side) (See <u>POWER WINDOW SUBSWITCH INSPECTION</u> .) <ul style="list-style-type: none"> • Power window motor (See <u>POWER WINDOW MOTOR INSPECTION</u> .) <ul style="list-style-type: none"> • Battery (low voltage)
2	<ul style="list-style-type: none"> • Inspect the door glass operation by operating the power window subswitch (passenger side). • Does it operate in auto? 	Yes	Inspect the wiring harness between the power window main switch and the power window subswitch (passenger side). If there is any malfunction, repair or replace the applicable part.
		No	Perform the power window initialization procedure. (See <u>POWER WINDOW INITIALIZATION PROCEDURE</u> .)

NO.5 DOOR GLASS STOPS BEFORE FULLY OPENING/CLOSING [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)]

POSSIBLE CAUSE CHART

5	DOOR GLASS STOPS BEFORE FULLY OPENING/CLOSING
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Power window main switch malfunction • Power window subswitch (passenger side) malfunction • Power window motor malfunction • Battery malfunction (low voltage) • Door glass improper installation • Power window initialization procedure error • Keyless control module malfunction • BCM malfunction • Keyless entry system signal reception error (outside operation area, radio signal interference)

DIAGNOSTIC PROCEDURE

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DIAGNOSTIC PROCEDURE

Step	Inspection	Action	
1	<ul style="list-style-type: none"> • Operate the door glass in auto/manual by operating the power window main switch/power window subswitch (passenger side). • Does the door glass stop before fully opening/closing using either operation? 	Yes	Inspect the following parts, and repair or replace. <ul style="list-style-type: none"> • Power window main switch (See <u>POWER WINDOW MAIN SWITCH INSPECTION</u> .) • Power window subswitch (passenger side) (See <u>POWER WINDOW SUBSWITCH INSPECTION</u> .) • Power window motor) (See <u>POWER WINDOW MOTOR INSPECTION</u> .) • Battery (low voltage) • Door glass (Installation condition)
		No	Go to the next step.
2	<ul style="list-style-type: none"> • Inspect the operation of the door glass by repeating Step 1 above. • Does the door glass stop before fully opening/closing while in auto operation? 	Yes	Perform the power window initialization procedure. (See <u>POWER WINDOW INITIALIZATION PROCEDURE</u> .)
		No	Go to the next step.
3	<ul style="list-style-type: none"> • Open the door glass by operating the transmitter. • Does the door glass stop before fully opening? 	Yes	Inspect the following parts, and repair or replace. <ul style="list-style-type: none"> • Keyless control module (Vehicles with advanced keyless system) (See <u>KEYLESS CONTROL MODULE INSPECTION [ADVANCED KEYLESS SYSTEM]</u> .) • BCM (See <u>BODY CONTROL MODULE (BCM) INSPECTION</u> .)
		No	Go to the next step.
			Inspect the following parts, and repair or

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4	<ul style="list-style-type: none"> Close the door glass by operating the transmitter. Does the door glass stop before fully closing? 	Yes	<p>replace.</p> <ul style="list-style-type: none"> Keyless control module (Vehicle with advanced keyless system) <p>(See <u>KEYLESS CONTROL MODULE INSPECTION [ADVANCED KEYLESS SYSTEM]</u> .)</p> <ul style="list-style-type: none"> BCM (See <u>BODY CONTROL MODULE (BCM) INSPECTION</u> .) Keyless entry system signal reception error (outside operation area, radio signal interference)
		No	<p>Reinspect for malfunction recurrence. If the malfunction is not corrected, repeat the procedure from Step 1.</p>

NO.6 DOOR GLASS REVERSES BEFORE IT FULLY OPENS [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)]

POSSIBLE CAUSE CHART

6	Door glass reverses before it fully opens
POSSIBLE CAUSE	<ul style="list-style-type: none"> Malfunction in power window motor Malfunction in battery Improper installation of door glass

DIAGNOSTIC PROCEDURE

DIAGNOSTIC PROCEDURE

Step	INSPECTION		ACTION
1	<ul style="list-style-type: none"> By operating a power window main switch / power window subswitch (passenger side), operate the door glass. Does the door glass mis-reverse? 	Yes	<p>Inspect the power window motor and repair or replace it. (See <u>POWER WINDOW MOTOR INSPECTION</u> .)</p>
		No	<p>Inspect the following parts and repair or replace them.</p> <ul style="list-style-type: none"> Power window motor (See <u>POWER WINDOW MOTOR INSPECTION</u> .) <ul style="list-style-type: none"> Battery (brownout) Door glass (improper installation)

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NOTE:

- Depending on the temperature, battery, and voltage condition, the door glass may mis-reverse.

NO.7 DRIVER AND PASSENGER DOOR GLASSES OPERATE ACCIDENTALLY [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)]

POSSIBLE CAUSE CHART

7	Driver and passenger door glasses operate accidentally
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Transmitter malfunction • Request switch malfunction • Open or short circuit in wiring harness between request switch (each door) and keyless control module. • Power window main switch malfunction • Power window subswitch (passenger side) malfunction • Open or short circuit in wiring harness between power window main switch and power window subswitch (passenger side) • BCM malfunction

DIAGNOSTIC PROCEDURE

DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<ul style="list-style-type: none"> • Inspect if malfunction is in operating by transmitter 	Yes Inspect the transmitter.
		No
2	<ul style="list-style-type: none"> • Inspect if malfunction is in operating by request switch 	<p>Inspect the following parts and repair or replace.</p> <ul style="list-style-type: none"> • Request switch <p>(See <u>REQUEST SWITCH INSPECTION [ADVANCED KEYLESS SYSTEM]</u> .)</p> <ul style="list-style-type: none"> • Wiring harness between request switch and

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			keyless control module
		No	Go to the next step.
3	<ul style="list-style-type: none"> Inspect if malfunction is in operating power window main switch 	Yes	Inspect power window main switch (See <u>POWER WINDOW MAIN SWITCH INSPECTION</u> .)
		No	Go to the next step.
4	<ul style="list-style-type: none"> Inspect if malfunction is in without operating Step 1 to 3 	Yes	Inspect the following parts and repair or replace <ul style="list-style-type: none"> Power window subswitch (passenger side) (See <u>POWER WINDOW SUBSWITCH INSPECTION</u> .) BCM (See <u>BODY CONTROL MODULE (BCM) INSPECTION</u> .) Wiring harness between power window subswitch (passenger side) and power window main switch
		No	Reinspect for malfunction recurrence. If the malfunction is not corrected, repeat the procedure from Step 1.

NO.8 PASSENGER DOOR GLASS OPERATES ACCIDENTALLY [POWER WINDOW SYSTEMS (EXTERIOR OPEN/CLOSE FUNCTION)]

POSSIBLE CAUSE CHART

8	Passenger door glass operates accidentally
POSSIBLE CAUSE	<ul style="list-style-type: none"> Power window subswitch (passenger side) malfunction

DIAGNOSTIC PROCEDURE

DIAGNOSTIC PROCEDURE

ACTION
Inspect the power window subswitch of the passenger door glass and repair or replace (See <u>POWER WINDOW SUBSWITCH INSPECTION</u> .)