

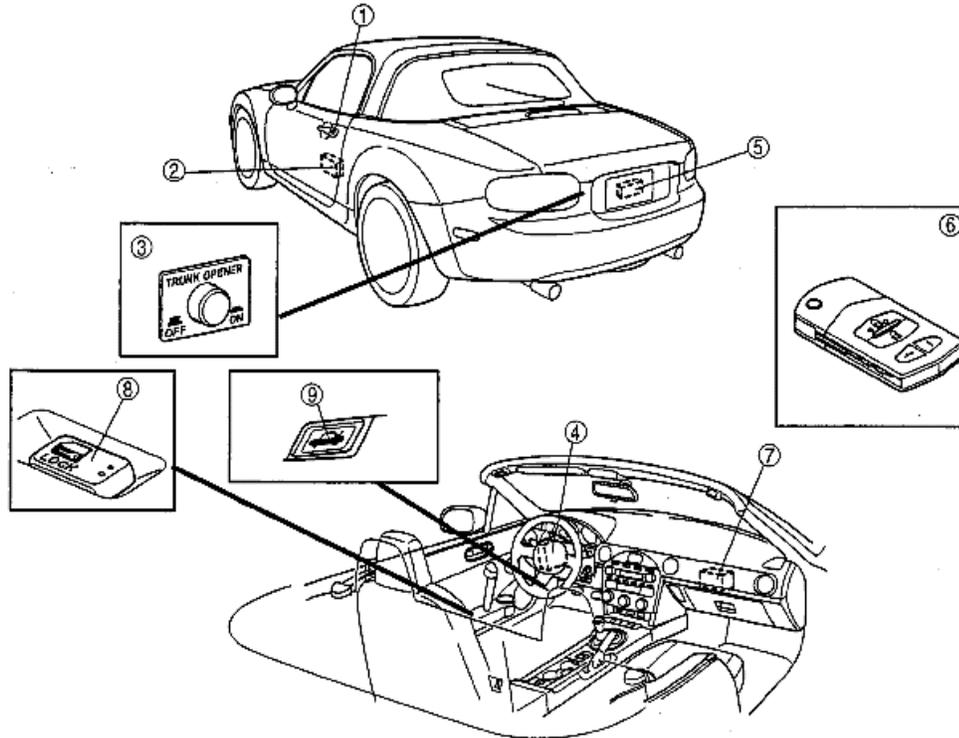
2007 Mazda MX-5 Miata Sport

2007 ACCESSORIES & BODY, CAB Security and Locks (Keyless Entry System) - MX-5 Miata

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Security and Locks (Keyless Entry System) - MX-5 Miata

POWER DOOR LOCK SYSTEM AND KEYLESS ENTRY SYSTEM LOCATION INDEX[KEYLESS ENTRY SYSTEM]



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1	Door key cylinder (See 09-14A-4 DOOR KEY CYLINDER REMOVAL/INSTALLATION[ADVANCED KEYLESS SYSTEM])
2	Door latch and lock actuator (See 09-14A-5 DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION[ADVANCED KEYLESS SYSTEM]) (See 09-14A-6 DOOR LOCK ACTUATOR INSPECTION[ADVANCED KEYLESS SYSTEM])
3	Trunk lid opener cancel switch (See 09-14A-38 TRUNK LID OPEN CANCEL SWITCH REMOVAL/INSTALLATION[ADVANCED KEYLESS SYSTEM]) (See 09-14A-39 TRUNK LID OPEN CANCEL SWITCH INSPECTION[ADVANCED KEYLESS SYSTEM])
4	Keyless control module (See 09-14A-22 KEYLESS CONTROL MODULE REMOVAL/INSTALLATION[ADVANCED KEYLESS SYSTEM]) (See 09-14B-14 KEYLESS CONTROL MODULE INSPECTION[KEYLESS ENTRY SYSTEM])

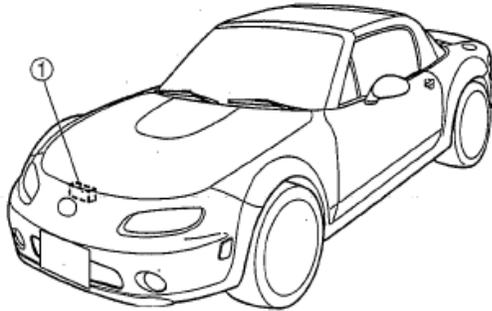
5	Trunk lid latch and opener (See 09-14A-38 TRUNK LID OPENER REMOVAL/INSTALLATION[ADVANCED KEYLESS SYSTEM]) (See 09-14A-37 TRUNK LID OPENER INSPECTION[ADVANCED KEYLESS SYSTEM])
6	Transmitter (See 09-14B-11 TRANSMITTER BATTERY REPLACEMENT[KEYLESS ENTRY SYSTEM]) (See 09-14B-12 TRANSMITTER ID CODE REGISTRATION[KEYLESS ENTRY SYSTEM])
7	Keyless receiver (See 09-14A-31 KEYLESS RECEIVER REMOVAL/INSTALLATION[ADVANCED KEYLESS SYSTEM]) (See 09-14B-17 KEYLESS RECEIVER INSPECTION[KEYLESS ENTRY SYSTEM])
8	Door lock switch (See 09-14A-5 DOOR LOCK SWITCH REMOVAL/INSTALLATION[ADVANCED KEYLESS SYSTEM]) (See 09-14A-5 DOOR LOCK SWITCH INSPECTION[ADVANCED KEYLESS SYSTEM])
9	Trunk lid opener switch (See 09-14A-38 TRUNK LID OPENER SWITCH REMOVAL/INSTALLATION[ADVANCED KEYLESS SYSTEM]) (See 09-14A-40 TRUNK LID OPENER SWITCH INSPECTION[ADVANCED KEYLESS SYSTEM])

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Fig. 1: Identifying Power Door Lock System And Keyless Entry System Components Location
Courtesy of MAZDA MOTORS CORP.

THEFT-DETERRENT SYSTEM LOCATION INDEX[KEYLESS ENTRY SYSTEM]



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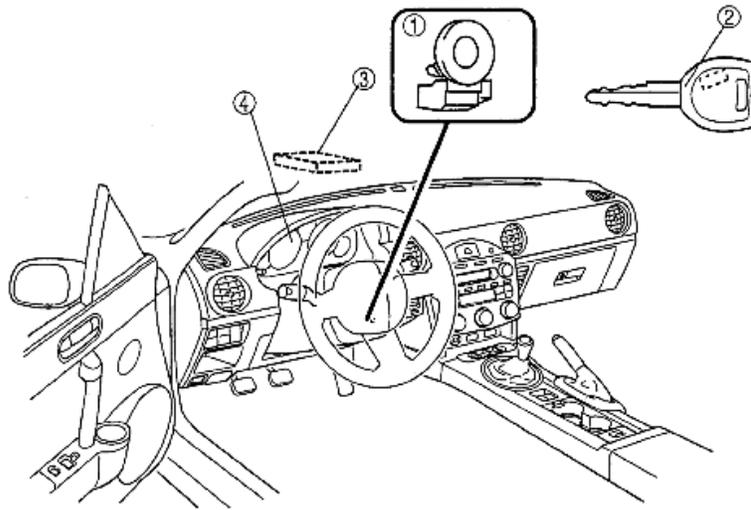
1	Hood latch (See 09-14A-19 HOOD LATCH AND RELEASE LEVER REMOVAL/INSTALLATION[ADVANCED KEYLESS SYSTEM]) (See 09-14A-20 HOOD LATCH SWITCH INSPECTION[ADVANCED KEYLESS SYSTEM])
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Fig. 2: Identifying Hood Latch
Courtesy of MAZDA MOTORS CORP.

IMMOBILIZER SYSTEM LOCATION INDEX[KEYLESS ENTRY SYSTEM]

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1	Coil antenna (See 09-14A-9 COIL ANTENNA REMOVAL/ INSTALLATION[ADVANCED KEYLESS SYSTEM])
2	Key (transponder) (See 09-14B-5 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING[KEYLESS ENTRY SYSTEM])

3	PCM (See 09-14B-5 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING[KEYLESS ENTRY SYSTEM])
4	Instrument cluster (See 09-14B-5 IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING[KEYLESS ENTRY SYSTEM])

Fig. 3: Identifying Immobilizer System Components Location

Courtesy of MAZDA MOTORS CORP.

COIL ANTENNA REMOVAL/INSTALLATION[KEYLESS ENTRY SYSTEM]

NOTE:

- Do not remove the coil antenna unless you are replacing it.

1. Disconnect the negative battery cable.
2. Remove the following parts:
 1. Hood release lever (See **HOOD LATCH AND RELEASE LEVER REMOVAL/INSTALLATION[ADVANCED KEYLESS SYSTEM]** .)
 2. Scuff plate (Driver's side) (See **SCUFF PLATE REMOVAL/INSTALLATION** .)
 3. Front side trim (Driver's side) (See **FRONT SIDE TRIM REMOVAL/INSTALLATION** .)
 4. Lower panel (See **LOWER PANEL REMOVAL/INSTALLATION** .)
 5. Column cover (See **COLUMN COVER REMOVAL/INSTALLATION** .)
3. Disconnect the coil antenna connector.
4. Detach the steering lock tabs from the holes on the coil antenna.
5. Install in the reverse order of removal.

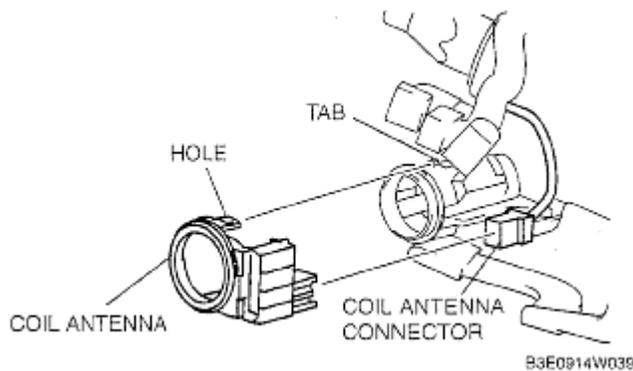


Fig. 4: Removal/Installation Of Coil Antenna
 Courtesy of MAZDA MOTORS CORP.

IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING[KEYLESS ENTRY SYSTEM]

FOREWORD

- When performing the following procedures, the immobilizer resetting procedure using the M-MDS must also always be performed: "instrument cluster replacement", "PCM replacement", "instrument cluster and PCM joint replacement", "Key ID number clearing". The engine will not start unless all work is performed using the M-MDS.
- There are two methods for registering an additional key: Using the M-MDS and using two keys that are able to start the engine.
- When replacing any of the immobilizer system component parts, adding/erasing keys or performing other functions, refer to the following table and perform the applicable procedure (No.1 to 5).

IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING PROCEDURE [KEYLESS ENTRY SYSTEM]

Reference number	Situation	Required items	Cautionary notes
1	Making a spare key when the customer has two or more keys that can start the engine. Or registering an additional key.	<ul style="list-style-type: none"> • Registration key 	<ul style="list-style-type: none"> • If the additional key registration method has been changed to "Customer spare key programming disabled" (inhibiting the method that uses two keys that are able to start the engine), the M-MDS is required when registering the additional key. In that

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			case, perform procedure No.2
2	Making a spare key when the customer has one key that can start the engine or no keys. Or registering an additional key.	<ul style="list-style-type: none"> • Registration key • M-MDS 	-
3	Clearing previously registered key ID numbers.	<ul style="list-style-type: none"> • Registration keys (two or more) • M-MDS 	<ul style="list-style-type: none"> • All the key ID numbers registered in the vehicle will be cleared. • Unless keys are re-registered after clearing the key ID numbers, the engine cannot be started. Before beginning the procedure, verify that the customer has turned in all of the keys for the vehicle. • Unless two or more keys are registered after replacement, the engine cannot be started. • The keys (two or more keys) readied before beginning the procedure do not have to be new keys. Any key that is capable of starting the engine before beginning the procedure can be used.
3	Replace all the keys. (Key cylinder replacement)	<ul style="list-style-type: none"> • Registration keys (two or more) • M-MDS 	<ul style="list-style-type: none"> • When replacing the key cylinder, have two or more keys ready for registration before beginning the procedure, since the previous keys will be invalid.
	Changing the method for registering additional keys.	<ul style="list-style-type: none"> • M-MDS 	<ul style="list-style-type: none"> • After performing this procedure it is not

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4	(Method for registering other keys using two keys that can start the engine is disabled.)		possible to register additional keys according to procedure No.1. The system can be returned to the original setting. The M-MDS must always be used to change the system setting.
4	Changing the method for registering additional keys. (Method for registering other keys using two keys that can start the engine is enabled.)	<ul style="list-style-type: none"> • M-MDS 	<ul style="list-style-type: none"> • This is the default setting on new vehicles.
5	Replacing the instrument cluster.	<ul style="list-style-type: none"> • Replacement instrument cluster • Registration keys (two or more) • M-MDS 	<ul style="list-style-type: none"> • Unless keys are registered after replacing the steering lock, the engine cannot be started. Before beginning the procedure, verify that the customer has turned in all of the keys for the vehicle. • Unless two or more keys are registered after replacement, the engine cannot be started. • The keys (two or more keys) readied before beginning the procedure do not have to be new keys. Any key that is capable of starting the engine before beginning the procedure can be used.
5	Replacing the PCM.	<ul style="list-style-type: none"> • Replacement PCM • M-MDS 	-
	Replacing the PCM and instrument cluster.	<ul style="list-style-type: none"> • Replacement PCM • Replacement instrument cluster 	<ul style="list-style-type: none"> • Unless keys are registered after replacing the steering

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5		<ul style="list-style-type: none"> • Registration keys (two or more) • M-MDS 	<p>lock, the engine cannot be started. Before beginning the procedure, verify that the customer has turned in all of the keys for the vehicle.</p> <ul style="list-style-type: none"> • Unless two or more keys are registered after replacement, the engine cannot be started. • The keys (two or more keys) readied before beginning the procedure do not have to be new keys. Any key that is capable of starting the engine before beginning the procedure can be used.
-	Replacing the coil antenna.	<ul style="list-style-type: none"> • New coil antenna 	<ul style="list-style-type: none"> • It is not necessary to reset the immobilizer system.

CAUTION:

- **If any of the following items are touching or near the key head, signal communication between the key and vehicle is negatively affected, resulting in the engine not starting or the key registration failure. Do not perform the procedure if any of the following items are touching or near the key head.**
 - Any metallic object
 - Spare keys or keys for other vehicles equipped with an immobilizer system
 - Any electronic device, or any credit or other cards with magnetic strips

NOTE:

- **Within the following procedures, the term a "valid key" means a "key that can start the engine".**
- **After adding/registering keys, clearing ID numbers or replacing any component part of the immobilizer system, verify that all keys can start the engine within 5 s .**
- **When verifying that the keys can start the engine, wait at least 5 s or more**

between inserting them.

- If the engine cannot be started using a registered key, repeat the procedure from the beginning.
- Do not start the engine until the key registration procedure for all the necessary keys is completed. If the engine is started during the registration procedure, registration is stopped at that point. Repeat the procedure starting from the beginning if the engine is started before completion.
- Two or more key ID numbers must be registered for the engine to start.
- A maximum of eight key ID numbers can be registered for one vehicle. The M-MDS can be used to verify the number of key ID numbers registered to a single vehicle.
- Do not select screen menus of the M-MDS that are not indicated within the procedures.

EXAMPLES:



METAL RING LYING ON KEY HEAD



METAL PART OF ANOTHER
KEY TOUCHING KEY HEAD



KEY IS NEAR OR TOUCHING
ANOTHER IMMOBILIZER SYSTEM KEY

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Fig. 5: Caution For Key Registration Failure
Courtesy of MAZDA MOTORS CORP.

NO.1 ADDITIONAL KEY REGISTRATION PROCEDURE (USING TWO VALID KEYS) CONDITIONS

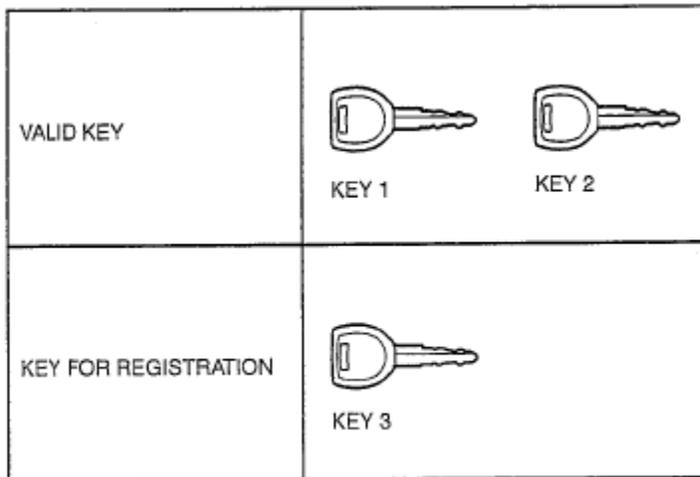
- Customer has two or more valid keys.

NOTE:

- A maximum of eight keys can be registered for any one vehicle. If key registration is not successful and DTC 15 appears even though the procedure was performed properly, use the PID/data monitor function of the M-MDS and verify the number of keys that have been registered.
- If eight keys have already been registered, and it is necessary to register other keys, the previously registered key ID numbers must first be cleared.

To clear the key ID numbers, refer to "**NO.3 KEY REPLACEMENT PROCEDURE (CLEARING PREVIOUSLY REGISTERED KEY ID NUMBERS, KEY RE-REGISTRATION)**".

Procedure



CHU0914WD46

Fig. 6: Identifying Valid Key And Key For Registration
 Courtesy of MAZDA MOTORS CORP.

1. Have one key (key 3) ready for registration.
2. Using key 1, turn the ignition switch to the ON position.
3. Verify that the security light illuminates for **approx. 3 s** and then goes out.
4. Using key 1, turn the ignition switch to the LOCK position **within approx. 4 s** after the security light goes out.
5. Remove key 1
6. Repeat Steps 2-5 using key 2.
7. Repeat Steps 2-5 using key 3.
8. If additional keys need to be registered, repeat Steps 1-7 in the same manner as key 3.

NO.2 ADDITIONAL KEY REGISTRATION PROCEDURE (USING THE M-MDS) CONDITIONS

- Customer has only one valid key. Or customer has no valid keys. (Can also be performed even if there are two or more valid keys)

NOTE:

- A maximum of eight keys can be registered for any one vehicle. If key registration is not successful and DTC 15 appears even though the procedure was performed properly, use the PID/data monitor function of the M-MDS and verify the number of keys that have been registered.
- If eight keys have already been registered, and it is necessary to register

other keys, the previously registered key ID numbers must first be cleared. To clear the key ID numbers, refer to "**NO.3 KEY REPLACEMENT PROCEDURE (CLEARING PREVIOUSLY REGISTERED KEY ID NUMBERS, KEY RE-REGISTRATION)**".

Procedure

1. Have one key (key 1) ready for registration.
2. Using key 1, turn the ignition switch to the ON position.

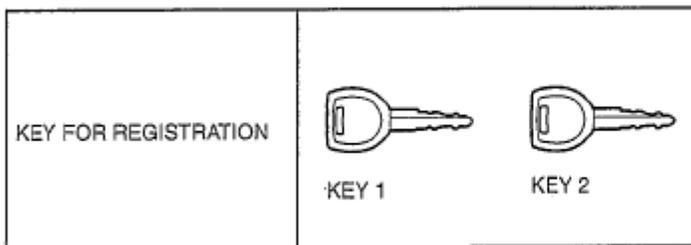
NOTE:

- Although the security light flashes and DTC 15 is displayed, this does not indicate an improper procedure. Continue to perform the procedure as indicated.

3. Connect the M-MDS to the DLC-2.
4. Select "Body/Security/PATS function" from the M-MDS screen menu.
5. Perform security access as indicated on the M-MDS screen. (See **NO.6 SECURITY ACCESS PROCEDURE.**)
6. Select "Program Additional Ignition Key" from the M-MDS screen menu.

NO.3 KEY REPLACEMENT PROCEDURE (CLEARING PREVIOUSLY REGISTERED KEY ID NUMBERS, KEY RE-REGISTRATION)

Procedure



CHU0914W047

Fig. 7: Identifying Keys For Registration
Courtesy of MAZDA MOTORS CORP.

1. Have two or more keys (key 1, key 2) ready for registration after the clearing the key ID numbers.
2. Using key 1, turn the ignition switch to the ON position.

NOTE:

- Although the security light flashes and DTC 15 is displayed, this does not indicate an improper procedure. Continue to perform the procedure as indicated.

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3. Connect the M-MDS to the DLC-2.
4. Select "Body/Security/PATS function" from the M-MDS screen menu.
5. Perform security access as indicated on the M-MDS screen. (See **NO.6 SECURITY ACCESS PROCEDURE.**)
6. Select "Ignition key ID number Erase" from the M-MDS screen menu and perform the tasks according to the M-MDS screen.

NO.4 CHANGING THE METHOD FOR REGISTERING ADDITIONAL KEYS

NOTE:

- This procedure is for changing the enable/disable setting of the "No.1 Additional Key Registration Procedure (Using Two Valid Keys)".
- The default setting for new vehicles and new instrument cluster replacement is "Enabled".
- By disabling the "No.1 Additional Key Registration Procedure (Using Two Valid Keys)", only the M-MDS can be used to register additional keys, thereby preventing two valid keys from being used to create an unauthorized spare key. This function is for use by rental car or other companies with vehicle fleets.

Procedure

1. Using any key, turn the ignition switch to the ON position. (Either a valid or an unregistered key can be used.)

NOTE:

- When using an unregistered key, although the security light flashes and DTC 15 is displayed, this does not indicate an improper procedure. Continue to perform the procedure as indicated.

2. Connect the M-MDS to the DLC-2.
3. Select "Body/Security/PATS function" from the M-MDS screen menu.
4. Perform security access as indicated on the M-MDS screen. (See **NO.6 SECURITY ACCESS PROCEDURE.**)
5. Select either "Customer Spare Key Programming Enable" or "Customer Spare Key Programming Disable" from the M-MDS screen menu. Depending on the selected menu, the additional key registration method is as shown below:

ADDITIONAL KEY REGISTRATION METHOD

Setting	Additional key registration method	
	Procedure using two valid keys	Procedure using the M-MDS
Customer spare key programming enable	x	x
Customer spare key programming disable	-	x

x: Procedure is possible
-: Procedure is not possible

6. After verifying that the PATS function menu is displayed again on the M-MDS screen, select "Exit" to complete the M-MDS function.
7. After Step 6, wait **10 s or more** and then turn the ignition switch to the LOCK position.

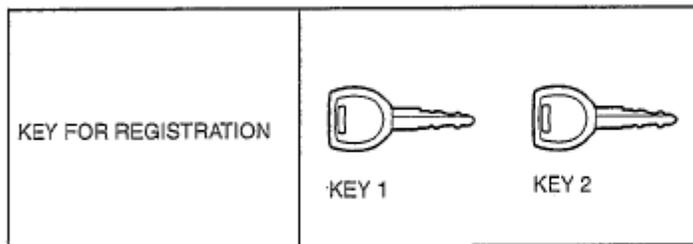
NO.5 RESETTING PROCEDURE FOR THE IMMOBILIZER SYSTEM WHEN REPLACING THE PCM OR INSTRUMENT CLUSTER CONDITIONS

- When replacing only the PCM: No conditions.
- When replacing only the instrument cluster: Customer has two or more valid keys after replacement tasks.
- When replacing the PCM and the instrument cluster: Customer has two or more valid keys after replacement.

CAUTION:

- **When replacing the PCM and the instrument cluster at the same time, follow the same instructions described in the procedure for "when replacing the instrument cluster".**
- **When replacing only the PCM, start from Step 2. Also, when key 1 is indicated within the procedure, any valid key can be used.**
- **Before starting Step 1, complete the procedure for PCM and instrument cluster replacement.**

Procedure



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Fig. 8: Identifying Keys For Registration
Courtesy of MAZDA MOTORS CORP.

1. Have two or more keys (key 1, key 2) ready for registration.
2. Using key 1, turn the ignition switch to the ON position.

NOTE:

- **When replacing only the PCM: The security light illuminates for 3 s and then goes out.**
- **When replacing the instrument cluster: Although the security light flashes and DTC 15 is displayed, this does not indicate an improper**

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procedure. Continue to perform the procedure as indicated.

3. Connect the M-MDS to the DLC-2.
4. Select "Body/Security/PATS function" from the M-MDS screen menu.
5. Perform security access as indicated on the M-MDS screen. (See **NO.6 SECURITY ACCESS PROCEDURE.**)
6. Select "Parameter Reset" from the M-MDS screen menu.
7. Perform security access again as indicated on the M-MDS screen. (See **NO.6 SECURITY ACCESS PROCEDURE.**)
8. Select the replaced part as indicated on the M-MDS screen.
 - When replacing only the PCM: Select "PCM".
 - When replacing only the instrument cluster: Select "HEC".

NOTE:

- **At this time, do not select any other parts from the M-MDS screen menu.**

9. Perform the tasks according to the M-MDS screen.

NO.6 SECURITY ACCESS PROCEDURE

NOTE:

- **Security access must be performed when performing the following functions: "Program Additional Ignition Key", "Ignition Key ID Number Erase", "Customer Spare Key Programming Enable/Disable" and "Parameter Reset".**

Procedure

1. Connect the M-MDS to the DLC-2.
2. Select "Body/Security/PATS function" from the M-MDS screen menu.
3. Security access is started and the M-MDS displays "Outcode".

CAUTION:

- **After reading out the outcode, do not turn ignition switch from LOCK to ON position 5 times, otherwise the outcode value will be changed.**

4. Input the corresponding "Incode" for the "Outcode" displayed on the M-MDS screen.
5. After successfully performing security access, "Program Additional Ignition Key", "Ignition key ID number Erase" or "Customer Spare Key Programming Enable/Disable" is displayed on the M-MDS screen. When performing "Parameter Reset", security access is requested two times and after successfully performing it the second time, "Replacement Module" is displayed.

TRANSMITTER BATTERY REPLACEMENT[KEYLESS ENTRY SYSTEM]

RETRACTABLE KEY TYPE

1. Insert a small screwdriver into the slot and push the tab to remove the key from the transmitter.

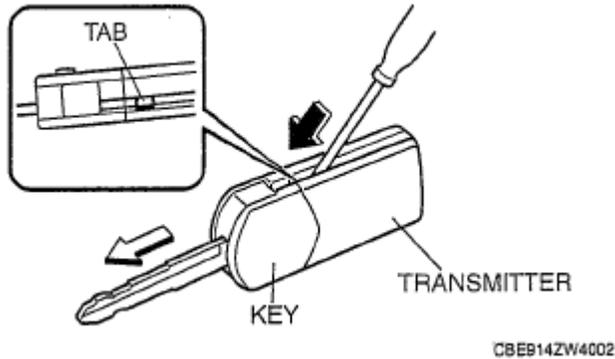


Fig. 9: Removing Key From Transmitter
Courtesy of MAZDA MOTORS CORP.

2. Insert a small screwdriver into the slot and gently pry open the transmitter.

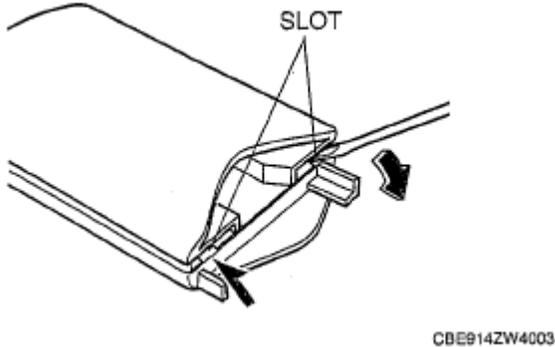


Fig. 10: Opening Transmitter
Courtesy of MAZDA MOTORS CORP.

3. Remove the battery.

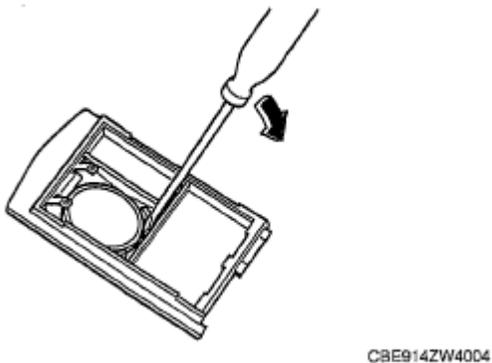


Fig. 11: Removing Battery

Courtesy of MAZDA MOTORS CORP.

4. Put in the new battery (CR1620) with the positive pole (+) facing down.
5. Align the front and back covers and snap the transmitter shut.

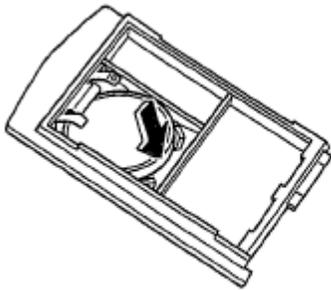
Battery specification

Lithium CR1620 x 1

NOTE:

- The batteries will last about 2 years when used 10 times a day.

6. Install the key to the transmitter.



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Fig. 12: Position Of Putting New Battery

Courtesy of MAZDA MOTORS CORP.

TRANSMITTER ID CODE REGISTRATION[KEYLESS ENTRY SYSTEM]

CAUTION:

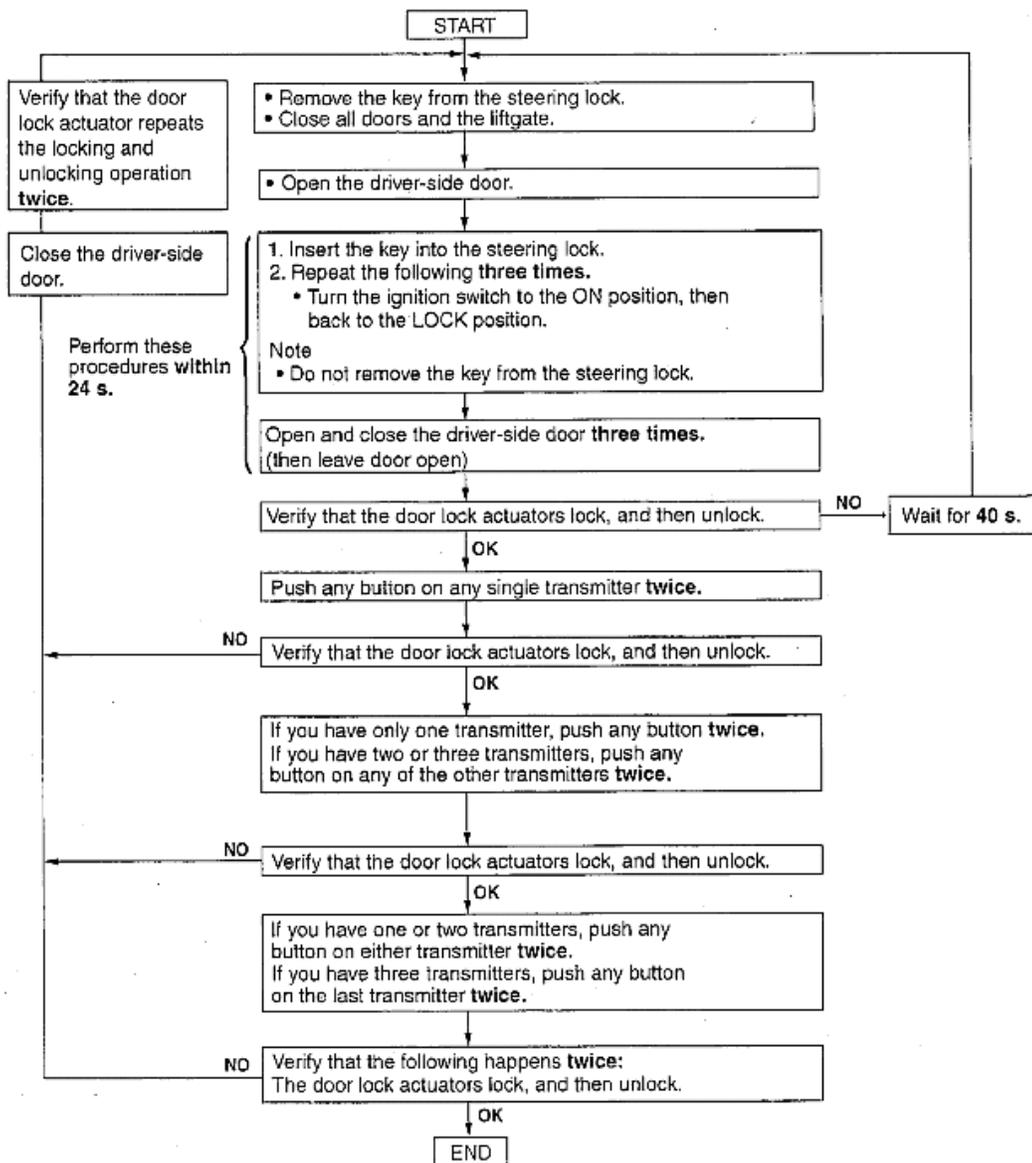
- Always program three ID codes because the programming mode terminates if three ID codes are programmed. At this time, the same transmitter (programmed transmitter) can be programmed two or three times.

NOTE:

- Always program three ID codes because all the ID codes programmed prior to activation are cleared when the programming mode is activated.
- A maximum of three ID codes can be programmed.
- When programming the ID code into a keyless control module, verify that other transmitters are not being operated in the vicinity.
- After ID code programming, remove the key from the steering lock and verify that all doors lock/unlock normally using the transmitter.

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Fig. 13: Doors Lock/Unlock Program Flow Chart
Courtesy of MAZDA MOTORS CORP.

KEYLESS CONTROL MODULE REMOVAL/INSTALLATION[KEYLESS ENTRY SYSTEM]

1. Disconnect the negative battery cable. (See **BATTERY REMOVAL/INSTALLATION [LF]** .)
2. Remove the side panel. (See **SIDE PANEL REMOVAL/INSTALLATION** .)
3. Remove the bolt and nut.
4. While inclining the keyless control module along the body panel in the direction indicated by the arrow, disengage the bracket tab from the hole in the body panel.
5. Disconnect the keyless control module connector.

6. Remove the keyless control module.

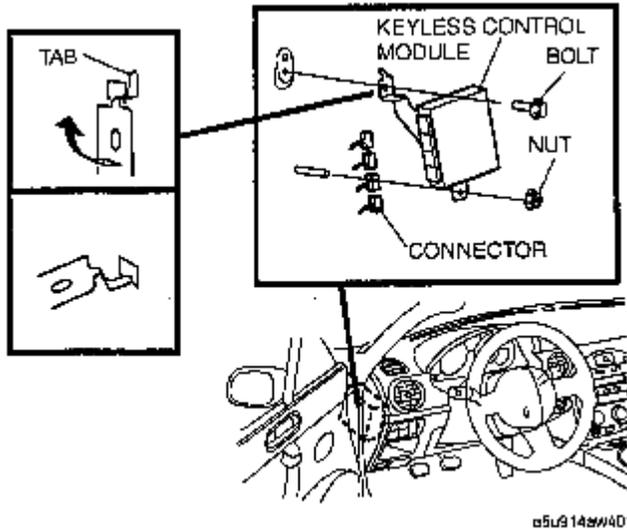


Fig. 14: Disengaging Bracket Tab
Courtesy of MAZDA MOTORS CORP.

7. Remove the screw, then remove the bracket.

NOTE:

- The screw which fixes the keyless control module and bracket is for a body ground connection. Be sure to secure the screw when installing.

8. Install in the reverse order of removal.

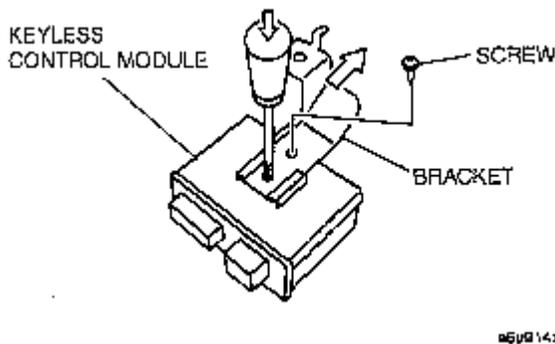


Fig. 15: Removing Bracket & Screw
Courtesy of MAZDA MOTORS CORP.

KEYLESS CONTROL MODULE INSPECTION[KEYLESS ENTRY SYSTEM]

1. Measure the voltage or inspect for continuity according to the Terminal Voltage Table (Reference).

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					• Battery
3B	IG1	METER 15 A fuse	Ignition switch is at ON position	B+	METER 15 A fuse
			Ignition switch is at LOCK or ACC position	1.0 or less	
3C	GND	body ground	Under any condition: Inspect for continuity to ground.	Continuity detected	GND
3F	Security light	Instrument cluster	Under any condition: Inspect for continuity to instrument cluster.	Continuity detected	Instrument cluster
3O	Key reminder switch	Steering lock unit	Key reminder switch is ON	B+	Steering lock unit
			Other	1.0 or less	
3R	TPMS signal	Instrument cluster	Under any condition: Inspect for continuity to instrument cluster.	Continuity detected	Instrument cluster
3S	Power supply (keyless receiver)	Keyless receiver	Under any condition	B+	Keyless receiver
3U	Communication (keyless receiver)	Keyless receiver	Under any condition: Inspect for continuity to keyless receiver.	Continuity detected	Keyless receiver
3Z	Trunk open signal	Trunk compartment light switch	Trunk lid open (trunk compartment light switch on)	1.0 or less	<ul style="list-style-type: none"> • Trunk compartment light switch • Related wiring harnesses
			Trunk lid closed (trunk compartment light switch off)	B+	
4B	Lock/unlock input	Door lock switch	Door lock switch is locked	2.5	<ul style="list-style-type: none"> • Door lock switch (driver-side) • Door lock switch (passenger-side) • Related wiring harnesses
			Door lock switch is unlocked	1.0 or less	
			Other	5	
4E	Lock signal input	Door lock-link switch (driver-side)	Driver-side door is locked: Inspect for continuity to ground.	Continuity detected	Door lock-link switch (driver-side)
			Driver-side door is unlocked: Inspect for continuity to ground.	No continuity	
			At the moment key		

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4G	Lock/unlock input	Driver-side door key cylinder switch	cylinder is locked	2.5	<ul style="list-style-type: none"> • Driver-side door key cylinder switch • Related wiring harnesses
			At the moment key cylinder is unlocked	1.0 or less	
			At the moment key cylinder is neutral position	5	
4I	Unlock signal input	Door lock-link switch (driver-side)	Driver-side door is unlocked: Inspect for continuity to ground.	Continuity detected	Door lock-link switch (driver-side)
			Driver-side door is locked: Inspect for continuity to ground.	No continuity	
4K	Unlock input (trunk lid)	Trunk key cylinder switch	At the moment key cylinder is unlocked	1.0 or less	<ul style="list-style-type: none"> • Trunk key cylinder switch • Related wiring harnesses
			At the moment key cylinder is neutral position	5	
4N	Hazard output	Hazard warning light	Press the LOCK button (transmitter)	B+ <-- 1.0 or less<--B+	<ul style="list-style-type: none"> • Hazard warning light • Related wiring harnesses
			Press the UNLOCK button (transmitter)	B+ <-- 1.0 or less<--B+<-- 1.0 or less<--B+	
			Other	B+	
4P	Trunk open output	Trunk opener relay	Press the trunk open switch	1.0 or less	<ul style="list-style-type: none"> • Trunk opener relay • Related wiring harnesses
			Other	B+	
4Q	Door switch signal (RH) output	Door switch	Door open (RH) (Door switch on)	1.0 or less	<ul style="list-style-type: none"> • Door switch (RH) • Related wiring harnesses
			Door closed (RH) (Door switch off)	B+	
4R	Unlock signal input	Door lock-link switch (passenger-side)	Passenger-side door is unlocked: Inspect for continuity to ground.	Continuity detected	Door lock-link switch (passenger-side)
			Passenger-side door is locked: Inspect for continuity to ground.	No continuity	
4S*1	Serial communication	Power window main switch	Because this terminal is for communication, good/no good judgment by terminal voltage is not possible.	-	<ul style="list-style-type: none"> • Power window main switch • Related wiring harnesses
			Door open (LH) (Door		

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4T	Door switch signal (LH) output	Door switch	switch on)	1.0 or less	<ul style="list-style-type: none"> • Door switch (LH) • Related wiring harnesses
			Door closed (LH) (Door switch off)	B+	
4U	Horn on/off	Horn relay	Transmitter LOCK button is pressed twice within 5 s.	B+<--1.0 or less<--B+	<ul style="list-style-type: none"> • Horn relay • Related wiring harnesses
			Other	B+	
4V	Hood switch signal	Hood switch	Hood open (Hood latch switch off)	B+	<ul style="list-style-type: none"> • Hood latch switch • Related wiring harnesses
			Hood closed (Hood latch switch on)	1.0 or less	

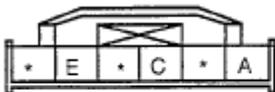
*1: With exterior open function (Power window system)

KEYLESS RECEIVER INSPECTION[KEYLESS ENTRY SYSTEM]

1. Measure the voltage or inspect for continuity according to the Terminal Voltage Table (Reference).
 - If the voltage is not as specified in the Terminal Voltage Table (Reference), inspect the parts under "Inspection item(s)" and related wiring harnesses.

TERMINAL VOLTAGE TABLE (REFERENCE)

KEYLESS RECEIVER
WIRING HARNESS-SIDE CONNECTOR



E6U814ZW1007

Fig. 17: Identifying Keyless Receiver Connector Terminals
Courtesy of MAZDA MOTORS CORP.

KEYLESS RECEIVER CONNECTOR TERMINALS VOLTAGE TABLE (REFERENCE)

Terminal	Signal name	Connected to	Measured condition	Voltage (V)/ Continuity	Inspection item(s)
A	Power supply	Keyless control module	Under any condition	B+	<ul style="list-style-type: none"> • Keyless control module • Related wiring harnesses

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C	Data	Keyless control module	Under any condition: Inspect the wiring harness between the keyless receiver and keyless control module terminal 3U for continuity.	Continuity detected	<ul style="list-style-type: none">• Keyless control module• Related wiring harnesses
E	GND	Body ground	Under any condition: Inspect for continuity to ground.	Continuity detected	GND