



SERVICE BULLETIN

DOMESTIC SALES & AFTER SALES SERVICE OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : CORRECTION	ISSUE NO. : MSB-10E00-502	DATE : 2010-06-20
SUBJECT : ID CODE REGISTRATION NECESSITY JUDGMENT TABLE	<div><MODEL> <M/Y></div> <div>(EUR/RUSSIA/UK) See following <u>2. Applicable Manuals table.</u></div>	
GROUP : GENERAL		

1. Description:

There have been some errors in the ID CODE REGISTRATION NECESSITY JUDGMENT TABLEs for KOS, WCM and immobilizer. This Service Bulletin contains the correct information.

2. Applicable Manuals:

See Attached sheets 1 (1/5) to 1 (5/5).

Note:

The page numbers or Info IDs shown in the Attached sheets do not necessarily correspond to the actual page numbers or Info IDs of each Workshop Manual. However, their contents are the same.

There may be some attached sheets not included in this Service Bulletin because they are not applicable to your market. Their sheet numbers are not listed in the above table.

3. Corrected Specifications:

See Attached sheets 4, 5, 8, 9, 12, 13, 15, 20 and 23.

<EUR>

Manual/Model	<M/Y>	Pub. No.	Title (Info-ID)	Attached Sheet
2008 LANCER Workshop Manual (CY0A)	08	CG1E08E2-CD (English) CG1S08E2-CD (Spanish) CG1F08E2-CD (French) CG1G08E2-CD (German)	ID Code Registration Necessity Judgment Table (M429-60-480-39900-01)	Attached sheet 4
			ID Codes Registration Procedures (M429-61-170-28600-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-27900-01)	Attached sheet 5
			ID Codes Registration Procedures (M427-50-630-28901-01)	
2009 LANCER Workshop Manual (CY0A)	09	CG1E09E1-CD (English) CG1S09E1-CD (Spanish) CG1F09E1-CD (French) CG1G09E1-CD (German) CG1I09E1-CD (Italian)	ID Code Registration Necessity Judgment Table (M429-60-480-39900-01)	Attached sheet 4
			ID Codes Registration Procedures (M429-61-170-46800-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-27900-01)	Attached sheet 5
			ID Codes Registration Procedures (M427-50-630-43801-01)	
2010 LANCER Workshop Manual (CY0A)	10	CG1E10E1-CD (English) CG1S10E1-CD (Spanish) CG1F10E1-CD (French) CG1G10E1-CD (German) CG1I10E1-CD (Italian)	ID Code Registration Necessity Judgment Table (M429-60-480-39901-01)	Attached sheet 4
			ID Codes Registration Procedures (M429-61-170-46801-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-27901-01)	Attached sheet 5
			ID Codes Registration Procedures (M427-50-630-43801-01)	
2009 LANCER EVOLUTION/ LANCER EVOLUTION EX Workshop Manual (CZ4A)	09	CGEE09E1-CD (English) CGES09E1-CD (Spanish) CGEF09E1-CD (French) CGEG09E1-CD (German) CGEI09E1-CD (Italian)	ID Code Registration Necessity Judgment Table (M429-60-480-39900-01)	Attached sheet 4
			ID Codes Registration Procedures (M429-61-170-54300-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-34300-01)	Attached sheet 5
			ID Codes Registration Procedures (M427-50-630-50201-01)	
2010 LANCER EVOLUTION Workshop Manual (CZ4A)	10	CGEE10E1-CD (English) CGES10E1-CD (Spanish) CGEF10E1-CD (French) CGEG10E1-CD (German) CGEI10E1-CD (Italian)	ID Code Registration Necessity Judgment Table (M429-60-480-66700-01)	Attached sheet 4
			ID Codes Registration Procedures (M429-61-170-68400-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-34301-01)	Attached sheet 5
			ID Codes Registration Procedures (M427-50-630-50201-01)	

Manual/Model	<M/Y>	Pub. No.	Title (Info-ID)	Attached Sheet
2007 OUTLANDER Workshop Manual (CW0W)	07	CGXE07E1-CD (English) CGXS07E1-CD (Spanish) CGXF07E1-CD (French) CGXG07E1-CD (German)	ID Code Registration Necessity Judgment Table (M429-60-480-47400-01)	Attached sheet 8
			ID Codes Registration Procedures (M429-61-170-60600-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-36500-01)	Attached sheet 9
			ID Codes Registration Procedures (M427-50-630-37500-01)	
2008 OUTLANDER Workshop Manual (CW0W)	08	CGXE08E2-CD (English) CGXS08E2-CD (Spanish) CGXF08E2-CD (French) CGXG08E2-CD (German)	ID Code Registration Necessity Judgment Table (M429-60-480-23600-01)	Attached sheet 12
			ID Codes Registration Procedures (M429-61-170-14500-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-17200-01)	Attached sheet 13
			ID Codes Registration Procedures (M427-50-630-17101-01)	
2009 OUTLANDER Workshop Manual (CW0W)	09	CGXE09E1-CD (English) CGXS09E1-CD (Spanish) CGXF09E1-CD (French) CGXG09E1-CD (German) CGXI09E1-CD (Italian)	ID Code Registration Necessity Judgment Table (M429-60-480-62300-01)	Attached sheet 12
			ID Codes Registration Procedures (M429-61-170-48001-01)	
			ID Code Registration Necessity Judgment Table (M427-50-445-0300-01)	Attached sheet 13
			ID Codes Registration Procedures (M427-50-630-44901-01)	
2010 OUTLANDER Workshop Manual (CW0W)	10	CGXE10E1-CD (English) CGXS10E1-CD (Spanish) CGXF10E1-CD (French) CGXG10E1-CD (German) CGXI10E1-CD (Italian)	ID Code Registration Necessity Judgment Table (M429-60-480-65600-01)	Attached sheet 12
			ID Codes Registration Procedures (M429-61-170-67300-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-51400-01)	Attached sheet 13
			ID Codes Registration Procedures (M427-50-630-55700-01)	
2009 LANCER SPORTBACK Workshop Manual (CX0A)	09	CG4E09E1-CD (English) CG4S09E1-CD (Spanish) CG4F09E1-CD (French) CG4G09E1-CD (German) CG4I09E1-CD (Italian)	ID Code Registration Necessity Judgment Table (M429-60-480-53700-01)	Attached sheet 12
			ID Codes Registration Procedures (M429-61-170-45700-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-41700-01)	Attached sheet 13
			ID Codes Registration Procedures (M427-50-630-42701-01)	

Manual/Model	<M/Y>	Pub. No.	Title (Info-ID)	Attached Sheet
2010 LANCER SPORTBACK Workshop Manual (CX0A)	10	CG4E10E1-CD (English)	ID Code Registration Necessity Judgment Table (M429-60-480-53701-01)	Attached sheet 12
		CG4S10E1-CD (Spanish)	ID Codes Registration Procedures (M429-61-170-45701-01)	
		CG4F10E1-CD (French)	ID Code Registration Necessity Judgment Table (M427-50-440-41701-01)	Attached sheet 13
		CG4G10E1-CD (German)	ID Codes Registration Procedures (M427-50-630-42701-01)	
2007 L200 Workshop Manual (KA0T/KB0T)	07	CCRE07E2-CD (English)	Encrypted Code Registration Criteria Table (M541-10-680-01600-01)	Attached sheet 15
		CCRS07E2-CD (Spanish)	How to Register Encrypted Code (M541-10-430-02601-01)	
		CCRF07E2-CD (French)		
		CCRG07E2-CD (German)		
2009 L200 Workshop Manual (KA0T/KB0T)	09	CCRE09E1-CD (English)	Encrypted Code Registration Criteria Table (M541-10-680-32800-01)	
		CCRS09E1-CD (Spanish)	How to Register Encrypted Code (M541-10-430-23100-01)	
		CCRF09E1-CD (French)		
		CCRG09E1-CD (German)		
2010 L200 Workshop Manual (KA0T/KB0T)	10	CCRE10E1-CD (English)	Encrypted Code Registration Criteria Table (M541-10-680-32800-01)	
		CCRS10E1-CD (Spanish)	How to Register Encrypted Code (M541-10-430-23101-01)	
		CCRF10E1-CD (French)		
		CCRG10E1-CD (German)		
2009.5 PAJERO/MONTERO Workshop Manual (V80/90)	09.5	CBKE09E2-CD (English)	ID Codes Registration Criteria Table (M541-10-680-38400-01 <3200>, M541-10-680-39500-01 <3800>)	Attached sheet 20
		CBKS09E2-CD (Spanish)		
		CBKF09E2-CD (French)		
		CBKG09E2-CD (German)		
2010 PAJERO/MONTERO Workshop Manual (V80/90)	10	CBKE10E1-CD (English)	ID Codes Registration Criteria Table (M541-10-680-38401-01 <3200>, M541-10-680-39501-01 <3800>)	
		CBKS10E1-CD (Spanish)		
		CBKF10E1-CD (French)		
		CBKG10E1-CD (German)		
2010 PAJERO/MONTERO Workshop Manual (V80/90)	10	CBKE10E1-CD (English)	ID Codes Registration Criteria Table (M541-10-680-38401-01 <3200>, M541-10-680-39501-01 <3800>)	
		CBKS10E1-CD (Spanish)		
		CBKF10E1-CD (French)		
		CBKG10E1-CD (German)		

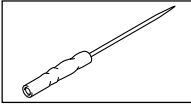
<RUSSIA>

Underneath Manual/Model	<M/Y>	Underneath Pub. No.	Title (Info-ID)	Attached Sheet
2008 LANCER Workshop Manual (CY0A)	08	N/A	ID Code Registration Necessity Judgment Table (M429-60-480-39900-01)	Attached sheet 4
			ID Codes Registration Procedures (M429-61-170-28600-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-27900-01)	Attached sheet 5
			ID Codes Registration Procedures (M427-50-630-28901-01)	
			ID Code Registration Necessity Judgment Table (M429-60-480-20300-01)	Attached sheet 4
			ID Codes Registration Procedures (M429-61-170-12300-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-15000-01)	Attached sheet 5
			ID Codes Registration Procedures (M427-50-630-14801-01)	
2010 LANCER EVOLUTION Workshop Manual (CZ4A)	10	N/A	ID Code Registration Necessity Judgment Table (M429-60-480-66700-01)	Attached sheet 4
			ID Codes Registration Procedures (M429-61-170-68400-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-34301-01)	Attached sheet 5
			ID Codes Registration Procedures (M427-50-630-50201-01)	
2007 OUTLANDER Workshop Manual (CW0W)	07	N/A	ID Code Registration Necessity Judgment Table (M429-60-480-47400-01)	Attached sheet 8
			ID Codes Registration Procedures (M429-61-170-60600-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-36500-01)	Attached sheet 9
			ID Codes Registration Procedures (M427-50-630-37500-01)	
2010 L200 Workshop Manual (KA0T/KB0T)	10	N/A	Encrypted Code Registration Criteria Table (M541-10-680-32800-01)	Attached sheet 15
			How to Register Encrypted Code (M541-10-430-23101-01)	
2009 PAJERO SPORT Workshop Manual (KH0W)	09	N/A	Key ID Registration Criteria Table (M541-10-680-24300-01)	
			How to Register Key ID (M541-10-430-29700-01)	

Underneath Manual/Model	<M/Y>	Underneath Pub. No.	Title (Info-ID)	Attached Sheet
2010 PAJERO SPORT Workshop Manual (KH0W)	10	N/A	Key ID Registration Criteria Table (M541-10-680-24300-01)	Attached sheet 15
			How to Register Key ID (M541-10-430-29700-01)	
2007 GALANT Workshop Manual (DJ0A)	07	N/A	Encrypted Code Registration Criteria Table (M543-02-600-25901-01)	Attached sheet 23
2008 GALANT Workshop Manual (DJ0A)	08			
2009+2009.5 GALANT Workshop Manual (DJ0A)	09+09.5			
2010 GALANT Workshop Manual (DJ0A)	10			

<UK>

Manual/Model	<M/Y>	Pub. No.	Title (Info-ID)	Attached Sheet
2008 LANCER EVOLUTION X Workshop Manual (CZ4A)	08	N/A	ID Code Registration Necessity Judgment Table (M429-60-480-29200-01)	Attached sheet 4
			ID Codes Registration Procedures (M429-61-170-18900-01)	
			ID Code Registration Necessity Judgment Table (M427-50-440-19400-01)	Attached sheet 5
			ID Codes Registration Procedures (M427-50-630-19301-01)	

Tool	Number	Name	Use
 MB992006	MB992006	Extra fine probe	Continuity check and voltage measurement at harness wire or connector

TROUBLESHOOTING

STANDARD FLOW OF DIAGNOSTIC TROUBLESHOOTING

M1429604400056

Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points [P.00-5](#).

DIAGNOSIS FUNCTION

M1429605400101

HOW TO READ DIAGNOSIS CODE

Refer to GROUP 00 – How to Use Troubleshooting and Inspection Service Points [P.00-7](#).

HOW TO ERASE DIAGNOSIS CODE

Refer to GROUP 00 – How to Use Troubleshooting and Inspection Service Points [P.00-7](#).

Display item list

Item No.	Item name	Data item	Unit
1	Odometer	Total driving distance after the diagnosis code is generated	km
2	Ignition cycle	Number of times the ignition switch is turned "ON" or "LOCK (OFF)" after the past failure transition	Number of counts is displayed.
4	Accumulated minute	Cumulative time for current malfunction of diagnosis code	min

ID CODE REGISTRATION NECESSITY JUDGMENT TABLE

M1429604800203

⚠ CAUTION

- Do not replace the engine-ECU and KOS-ECU at the same time. When replacing several ECUs, always replace one ECU at a time, register the necessary IDs in it, and then replace the next ECU.
- Do not register the keyless operation key registered for other vehicles.

The individual unique ID code is stored in the transponder (small transmitter) and KOS-ECU incorporated in the keyless operation key, engine ECU, keyless operation key, and steering lock unit for

MSB-10E00-502 (10AL012)


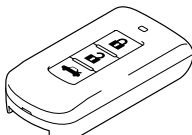
KOS. Under the conditions shown in the table, the corresponding ID code must be registered with KOS-ECU or the engine ECU again. **<Incorrect>**

NOTE: The KOS-ECU memory can memorise the maximum 4 different keyless operation keys (keyless operation key ID codes and key ID codes).

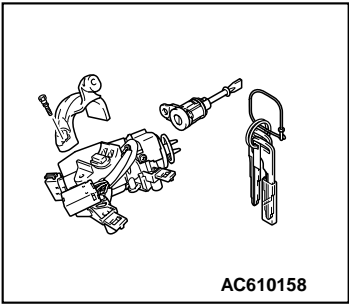
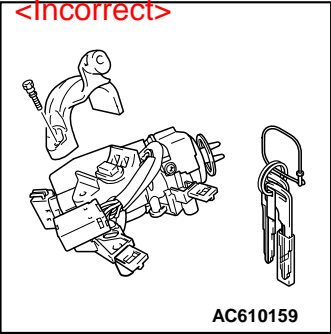
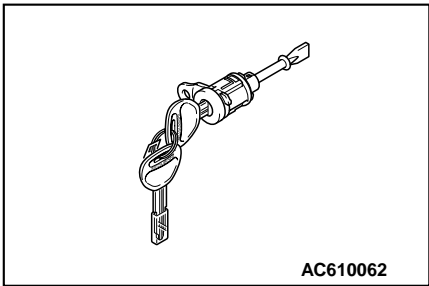
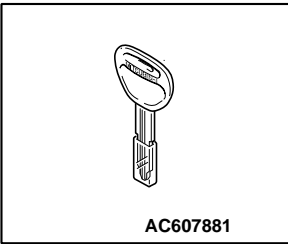
in
<Correct>

Item	Operation contents and procedure	Reference page for registration content
When the engine-ECU is replaced	Registration of Key code & chassis No.	Key code & chassis No. registration (Refer to GROUP 00 – Precautions before Service – How to Perform Chassis No. Writing P.00-23.)
When KOS-ECU is replaced <Correct> Write Chassis No.	<ol style="list-style-type: none"> 1. Register the steering lock unit again. <Incorrect> 2. Chassis No. programmed 3. Register all the keyless operation keys again. 	<ul style="list-style-type: none"> • Write the Chassis No. (Refer to GROUP 00 – Precautions before Service – How to Perform Chassis No. Writing P.00-23). • Steering Lock Unit Registration and Key and KOS Key Registration (Refer to P.42B-89)
When the receiver antenna module is replaced	Operation is not needed	–
When a keyless operation key is added or replaced	Register all the keyless operation keys again.	Key and KOS Key Registration (Refer to P.42B-89)
When a keyless operation key is lost	Register all keyless operation keys other than the lost one again.	
When an emergency key is added as a unit	Operation is not needed <Correct> steering <Incorrect>	–
When an emergency key is replaced as a full service key set is replaced as a unit		
When an emergency key is replaced as a handle lock service key set is replaced as a unit		
When an key is replaced as a door service key set is replaced as a unit		

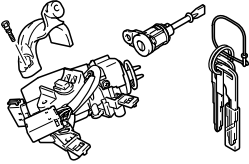
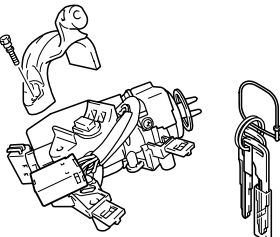
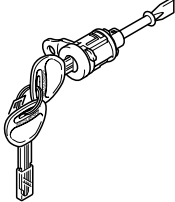
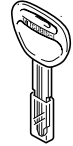
KEY SUPPLY UNIT

Emergency key	Keyless operation key
 AC610642	 AC700123

KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY

Full service key set		Handle lock service key set	
 <p>AC610158</p>	<p><Correct> Steering</p>	 <p>AC610159</p>	<p><Incorrect></p>
Door service key set		<p>NOTE: It is the key that comes with the door service key set. It can only be used for locking and unlocking, and it cannot start the engine.</p>	
 <p>AC610062</p>		 <p>AC607881</p>	

KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY

Full service key set	Handle lock service key set
 <p>AC610158</p> <p><Correct> Steering</p>	 <p>AC610159</p> <p><Incorrect></p>
Door service key set	NOTE: It is the key that comes with the door service key set. It can only be used for locking and unlocking, and it cannot start the engine.
 <p>AC610062</p>	 <p>AC607881</p>



NOTE:

- When re-registering the key (key ID and keyless operation key ID), all the keys (key ID and keyless operation key ID) registered before must be re-registered because all of them will be erased.
- For registration, the keyless operation key and the emergency key are needed.
- For the additional registration of keyless operation key, up to four keys can be registered.
- If the registration fails, repeat from the start.
- When the key cannot be registered using M.U.T.-III MB991958, refer to Inspection Procedure 2 "The keyless operation key cannot be registered using M.U.T.-III [P.42B-55](#).
- After the keyless operation key is registered, start the engine with all the keyless operation keys, and check that KOS operates normally.

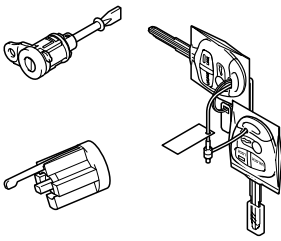
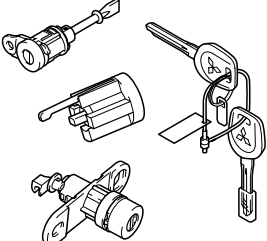
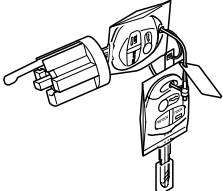
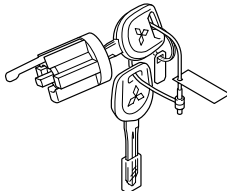
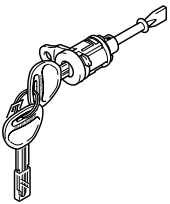
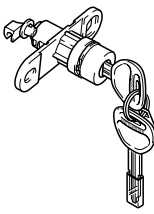

Item	Operation contents and procedure	Reference page for registration contents
When the engine-ECU is replaced	Registration of Key code & chassis No. <div style="border: 1px solid red; padding: 2px; display: inline-block; color: red;"> <Correct> Write Chassis No. </div> <div style="color: red;"> <Incorrect> ↓ </div>	Key code & chassis No. registration (Refer to GROUP 00 – Precautions before Service – How to Perform Chassis No. Writing P.00-23.)
When WCM is replaced	<div style="border: 1px solid red; padding: 2px; display: inline-block; color: red;"> 1. Chassis No. programmed </div> 2. Register all the ignition keys again. 3. Register the keyless ID for all the ignition keys again (keys with transmitters only).	<ul style="list-style-type: none"> • Write the Chassis No. (Refer to GROUP 00 – Precautions before Service – How to Perform Chassis No. Writing P.00-23.) • Registering keys and keyless IDs. (Refer to P.42C-37.)
When the ignition key is added as a single unit*	1. Register all the ignition keys again. 2. Register the keyless ID for all the ignition keys again (keys with transmitters only).	Key Registration and Keyless ID Registration (Refer to P.42C-37)
When the ignition key is lost as a single unit	1. Register all the ignition keys other than the lost one again. 2. Register the keyless ID for all ignition key other than the lost ignition key again (keys with transmitters only).	
When the ignition key is replaced by the full service key set.	1. Register all ignition keys again <input barcode No.>	Key Registration (Barcode No.) and Keyless ID Registration (Refer to P.42C-37)
When the ignition key is replaced by the <div style="border: 1px solid red; padding: 2px; display: inline-block; color: red;">handle</div> lock service key set. <div style="color: red;"><Incorrect></div>	2. Register the keyless ID for all the ignition keys again (set supply only).	
When the key is replaced by the door service key set.	Operation is not needed	–
When the key is replaced by the trunk lid service key set.		

NOTE: When available, key registration should be done beginning with a key that has been registered.

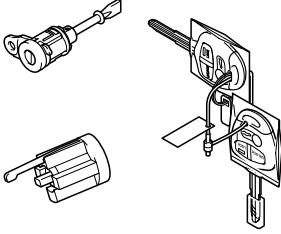
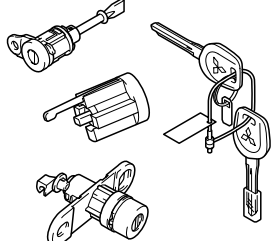
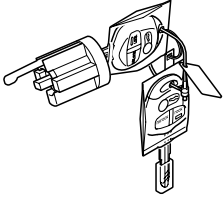
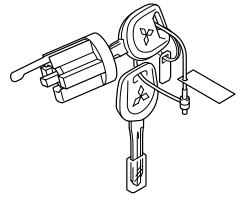
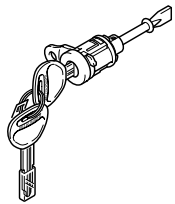
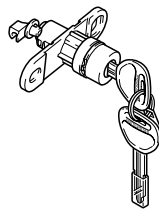
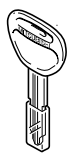
SUPPLY UNIT LIST FOR INDIVIDUAL KEY

Ignition key (with transmitter)	Ignition key (without transmitter)
 AC700158	 AC502117

KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY

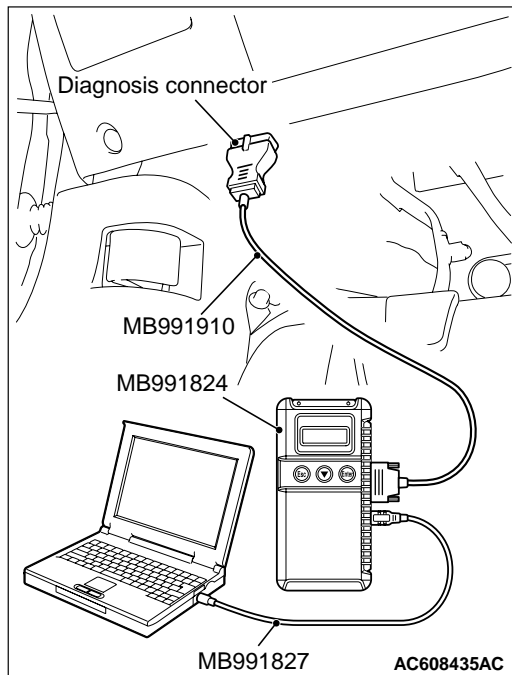
Full service key set <vehicles with keyless entry system>		Full service key set <vehicles without keyless entry system>	
 <p>AC700087</p>		 <p>AC610065</p>	
<p>Handle lock service key set <vehicles with keyless entry system></p>  <p>AC700089</p>		<p>Handle lock service key set <vehicles without keyless entry system></p>  <p>AC700088</p>	
Door service key set		Trunk lid service key set <vehicles without keyless entry system>	<p>NOTE: It is the key that comes with the door service key set and the trunk lid service key set. It can only be used for locking and unlocking, and it cannot start the engine.</p>
 <p>AC610062</p>		 <p>AC610063</p>	 <p>AC607881</p>

KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY

Full service key set <vehicles with keyless entry system>		Full service key set <vehicles without keyless entry system>	
 <p>AC700087</p> <p><Incorrect></p>		 <p>AC610065</p> <p><Incorrect></p>	
<p>Handle lock service key set <vehicles with keyless entry system></p>  <p>AC700089</p>		<p>Handle lock service key set <vehicles without keyless entry system></p>  <p>AC700088</p>	
<p>Door service key set</p>  <p>AC610062</p>		<p>Trunk lid service key set <vehicles without keyless entry system></p>  <p>AC610063</p>	<p>NOTE: It is the key that comes with the door service key set and the trunk lid service key set. It can only be used for locking and unlocking, and it cannot start the engine.</p>  <p>AC607881</p>

NOTE:

- When re-registering the key (key ID and keyless ID), all the keys (key ID and keyless ID) registered before must be re-registered because all of them will be erased.
- When the ignition key was replaced by the key set, register the key (key ID) using the bar code No. attached to the key.
- If the registration fails, repeat from the start.
- If the key registration cannot be performed, check the trouble symptom. (Refer to [P.42C-27.](#))
- After registering the keys, make sure that the engine is started normally with all of the keys registered.

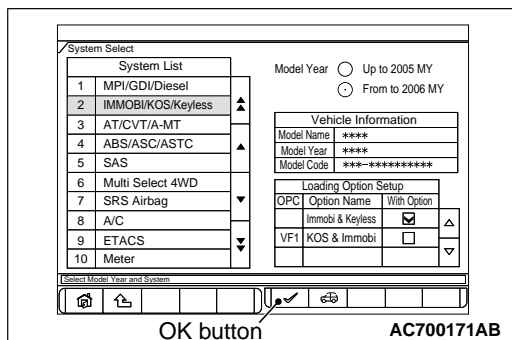


Connect the M.U.T.-III to the 16-pin diagnosis connector as follows.

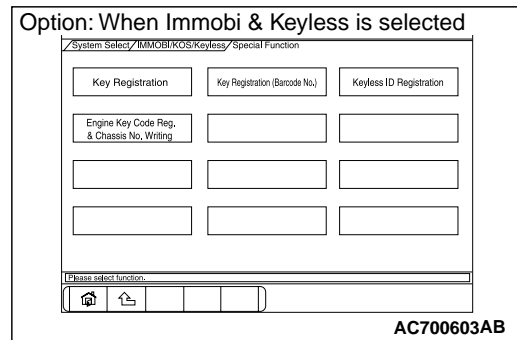
NOTE: For details on how to use the M.U.T.-III, refer to the "M.U.T.-III User's Manual."

1. Start the M.U.T.-III system on the PC and turn the ignition switch to the "ON" position.

NOTE: Since the M.U.T.-III screen display changes according to the vehicle specifications, the illustrations for each item may differ from the actual screen display.



2. Select "IMMOBI/KOS/Keyless" button from the "System Select" screen. Then, select the applicable option code item and push the OK button.
 - The display of "Special Function" screen changes, depending on the contents of the option. For vehicles with KOS, select "KOS&Immobi." For vehicles with WCM, select "Immobi&Keyless."
3. Select "Special Function" on the next screen.



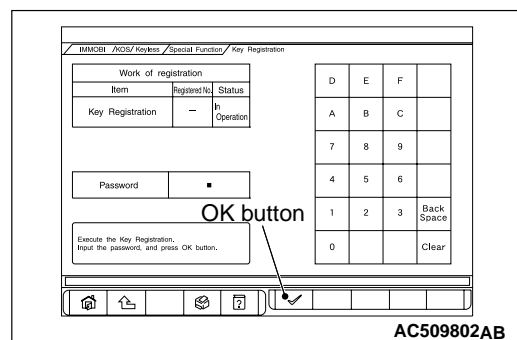
4. Select the button of the operation to be performed from the "Special Function" screen.

<Correct steering>

- "Key Registration": When the ignition key is replaced or added as a single unit and WCM is replaced.
- "Key Registration (Barcode No.)": When the ignition key is replaced by the full service key set or the **handle lock** service key set is replaced by the piece. <Incorrect>
- "Keyless ID Registration": When the ignition key (with transmitter) is replaced or added and WCM is replaced.
- "Engine Key Code Reg. & Chassis No. Writing": When the engine-ECU is replaced

NOTE: For "Engine Key Code Reg. & Chassis No. Writing," refer to GROUP 00 – Precautions before Service P.00-23.

KEY REGISTRATION METHOD



1. When "Key registration" screen is displayed, enter the password for the key registration and press the OK button. Then, "Executing!" is displayed and the registration process starts.

NOTE:


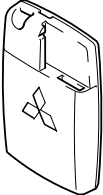

- If the wrong password is entered consecutively 5 times, the password entry for the key registration will be disabled for 16 minutes.
- The key registration cannot be cancelled during the operation.

Item	Operation contents and procedure	Reference page for registration contents
When the engine-ECU is replaced	Registration of Key codes	Key code registration (Refer to GROUP 00 – Precautions before Service – How to Perform chassis No. Writing).
When KOS-ECU is replaced <div>Write chassis No. <Correct></div>	<ol style="list-style-type: none"> 1. Register the steering lock unit again. <Incorrect> 2. chassis No. programmed 3. Register all the emergency keys again. 4. Register all the keyless operation keys again. 	<ul style="list-style-type: none"> • Steering Lock Unit Registration and Key and KOS Key Registration (Refer to P.42B-98) • Write the chassis No. (Refer to GROUP 00 – Precautions before Service – How to Perform chassis No. Writing).
When the receiver antenna module is replaced	Operation is not needed	–
When a keyless operation key is added or replaced* ¹	<ol style="list-style-type: none"> 1. Register all the emergency keys again. 2. Register all the keyless operation keys again. 	Key Registration (Refer to P.42B-98)
When a keyless operation key is lost	<ol style="list-style-type: none"> 1. Register all emergency keys other than the lost one again. 2. Register all keyless operation keys other than the lost one again. 	
When an emergency key is added as a unit or service key assembly	<ol style="list-style-type: none"> 1. Register all the emergency keys again. 2. Register all the keyless operation keys again. 	
When an emergency key is lost as a unit <div><Correct> emergency</div>	<ol style="list-style-type: none"> 1. Register all emergency keys other than the lost one again. 2. Register all the keyless operation keys again. <Incorrect> 	
When the emergency key is replaced by the full service key set or the handle lock service key set is replaced by the piece. <div><Incorrect></div>	<ol style="list-style-type: none"> 1. Register all emergency keys again. input barcode No. 2. Register all the keyless operation keys again. 	Key (Barcode No.) and KOS Key Registration (Refer to P.42B-98) <div>(input barcode No.) <Correct></div>
When the blank key* is replaced by the door service key set or glove box service key set is added by the piece.	Operation is not needed <div>steering <Correct> . <Added> <Incorrect></div>	–

NOTE: *: Blank key (the key that can be used to lock/unlock the door or glove box only)

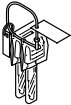
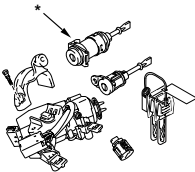
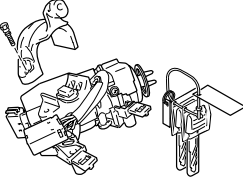
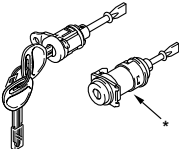

NOTE: *¹: When available, key registration should be done beginning with a key that has been registered.

Key supply unit

<div>Emergency key</div> <div><Incorrect></div> <div><Correct> Emergency</div>	Keyless operation key	<div>NOTE: Blank key (It is the key that comes with the door service key set and the glove box service key set. It can only be used for locking and unlocking, and it cannot start the engine.)</div>
<div></div> <div>AC502119</div>	<div></div> <div>AC502599</div>	<div>BLANK KEY</div> <div></div> <div>AC607881AB</div>

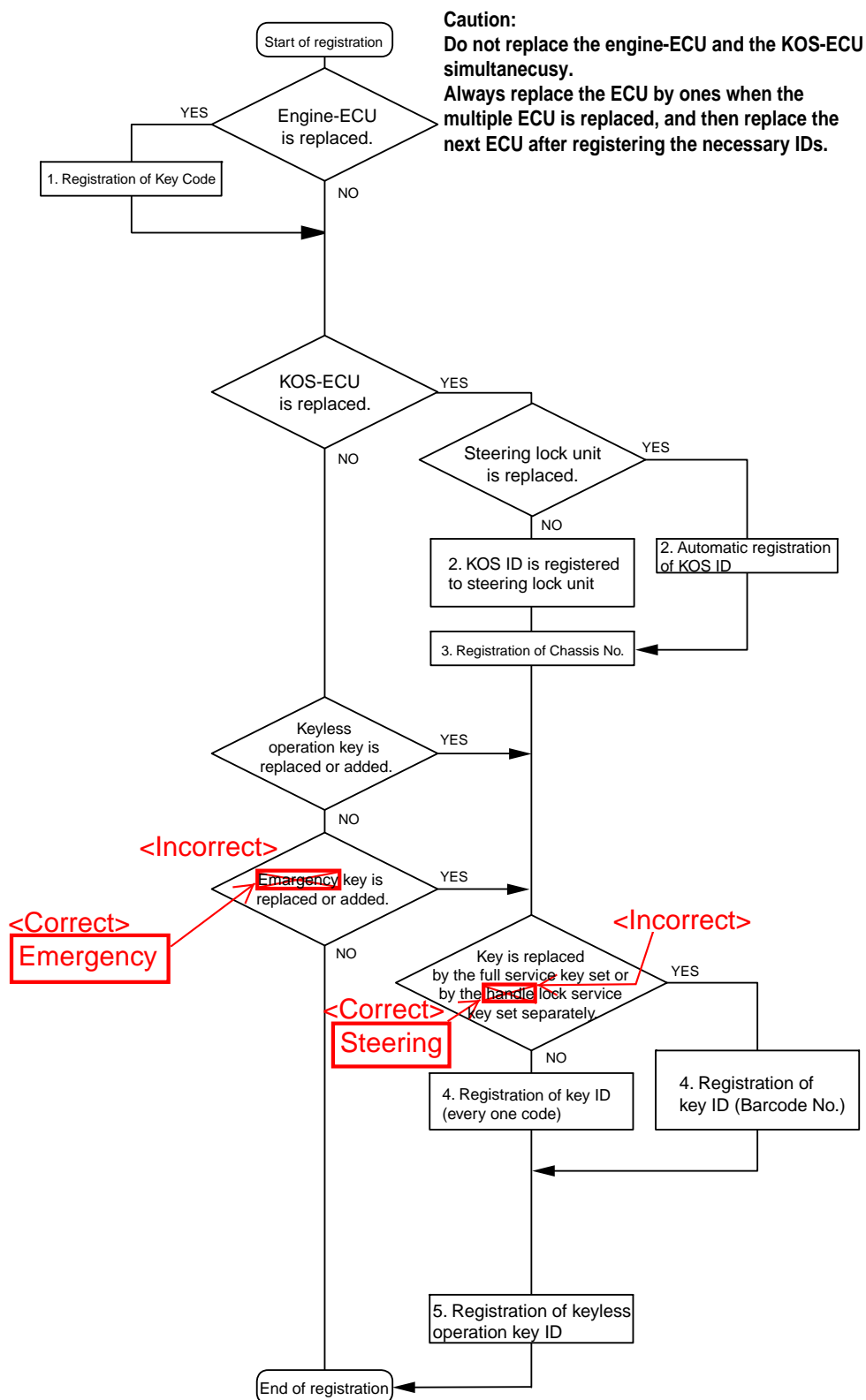
<Correct> Steering

KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY

Service key assembly	Full service key set <Incorrect>	Handle lock service key set	Door service key set	Glove box service key set
<div></div> <div>ZC607879</div>	<div></div> <div>AC607950AB</div>	<div></div> <div>AC607880</div>	<div></div> <div>AC607951AB</div>	<div></div> <div>AC607882</div>

*: Vehicles for dead lock system

Registration flow chart



AC508147AE

ON-VEHICLE SERVICE

ID CODES REGISTRATION PROCEDURE



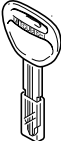
M1429611700037

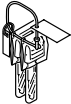
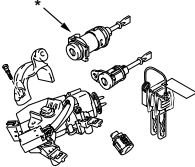
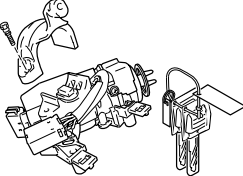
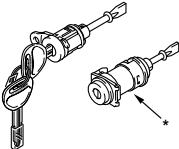

By operating the M.U.T.-III screen, the ID code registration and antenna communication required to the keyless operation system can be performed.

CAUTION

When the door service key set or the glove box service key set is replaced as a unit, do not register the barcode No. attached to the key. If registered, starting the engine by using the conventional key becomes impossible. The new key will not be able to start the engine, too, because it has a different key groove.

Key supply unit

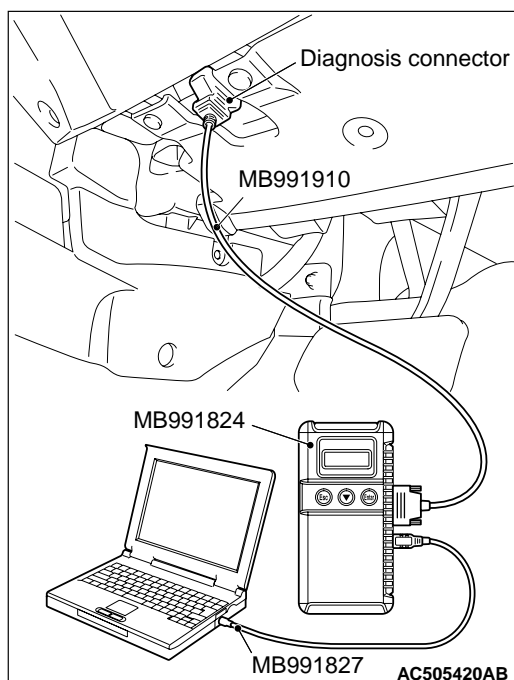
Emaregency key <Incorrect> Emergency <Correct>	Keyless operation key	NOTE: Blank key (It is the key that comes with the door service key set and the glove box service key set. It can only be used for locking and unlocking, and it cannot start the engine.)
 AC502119	 AC502599	BLANK KEY  AC607881AB

KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY				
Service key assembly	Full service key set	Handle lock service key set	Door service key set	Glove box service key set
 ZC607879	 AC607950AB	 AC607880	 AC607951AB	 AC607882

*: Vehicles for dead lock system

NOTE:

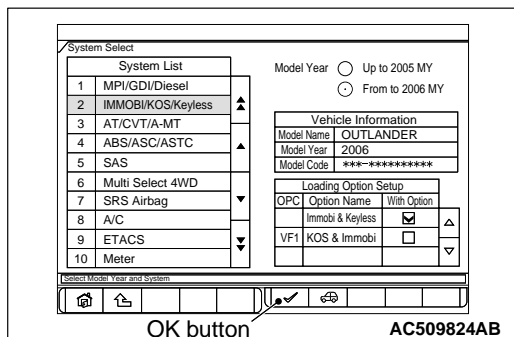
- When re-registering the key (key ID), all the keys (key ID) registered before must be re-registered because all of them will be erased.
- When the emergency key was replaced by the full service key set or by the handle lock service key set as a unit, register the key (key ID) using the barcode No. attached to the key.
- If the handle lock service key set, door service key set or glove box service key set is replaced as a unit, two kinds of keys should be used (the key that starts the engine and the key that opens and closes the doors).
- After the key and keyless operation key is registered, start the engine with all the keys and keyless operation keys, and check that KOS operates normally.



Connect the M.U.T.-III to the 16-pin diagnosis connector as follows.

NOTE: For details on how to use the M.U.T.-III, refer to the "M.U.T.-III User's Manual."

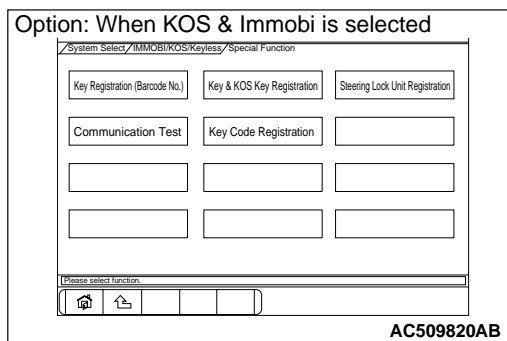
1. Start the M.U.T.-III system on the PC and turn the ignition switch to the "ON" position.



2. Select "IMMOBI/KOS/Keyless" button from the "System Select" screen. Then, select the applicable option code item and push the OK button.
 - The display of "Special Function" screen changes, depending on the contents of the option. For vehicles with KOS, select "KOS&Immobi." For vehicles with WCM, select "Immobi&Keyless."
3. Select "Special Function" on the next screen.

NOTE:

- If the wrong password is entered consecutively 5 times, the password entry for the key registration will be disabled for 16 minutes.
- The key registration cannot be cancelled during the operation.



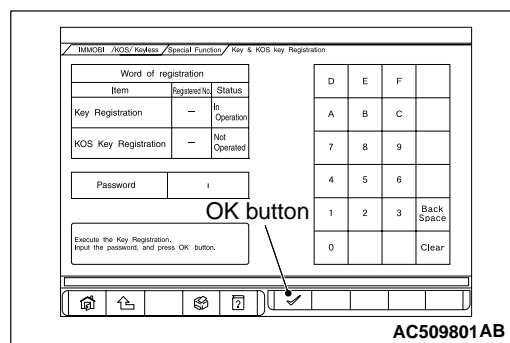
<Incorrect>

4. Select the button of the operation to be performed from the "Special Function" screen.

- "Key & KOS Key Registration": When the keyless operation key, emergency key or service key assembly is replaced or added as a single unit or by the full service key set or the handle lock service key set as a unit.
 - "Key Registration (Barcode No.)": When the emergency key is replaced by the full service key set or the handle lock service key set as a unit.
 - "Key Code Registration": When the engine-ECU is replaced
 - "Steering Lock Unit Registration": When KOS-ECU is replaced but the steering lock assembly is not replaced
 - "Communication Test": When the KOS antenna communication status is checked

NOTE: For "Key Code Registration," refer to GROUP 00 – Precautions before Service .

"KEY & KOS Key Registration" method



1. When "Key & KOS Key Registration" screen is displayed, enter the password for the key registration and press the OK button. Then, "Executing!" is displayed and the key registration process starts.

ing the operation.

Display item list

Item No.	Item name	Data item	Unit
1	Odometer	Total driving distance after the diagnosis code is generated	km
2	Ignition cycle	Number of times the ignition switch is turned "ON" or "LOCK (OFF)" after the past failure transition	Number of counts is displayed.
4	Accumulated minute	Cumulative time for current malfunction of diagnosis code	min

**ID CODE REGISTRATION NECESSITY
JUDGMENT TABLE**

M1427504400042

NOTE: Up to eight ignition keys (key ID and keyless entry secret code) can be stored in the memory of WCM.

⚠ CAUTION

Do not replace the engine-ECU and WCM at the same time. When replacing several ECUs, always replace one ECU at a time, register the necessary IDs in it, and then replace the next ECU.

The transponder (a small transmitter) in the ignition key, WCM, and the engine-ECU have their own ID codes stored in them. When the cases listed in the table below occurred, the ID codes must be registered in the WCM or engine-ECU again. For the ignition key (incorporating a transmitter), a keyless entry secret code must be registered.




Item	Operation contents and procedure	Reference page for registration contents
When the engine-ECU is replaced	Registration of Key codes Write Chassis No. <Correct> <Incorrect>	Key code registration (Refer to GROUP 00 – Precautions before Service – How to Perform Chassis No. Writing).
When WCM is replaced	1. Chassis No. programmed 2. Register all the ignition keys again. 3. Register the keyless entry secret code for all the ignition keys again (keys with transmitters only).	<ul style="list-style-type: none"> Write the Chassis No. (Refer to GROUP 00 – Precautions before Service – How to Perform Chassis No. Writing). Registering keys and keyless IDs (Refer to P.42C-35).

Item	Operation contents and procedure	Reference page for registration contents
When the ignition key is added as a single unit *1	1. Register all the ignition keys again. 2. Register the keyless entry secret code for all the ignition keys again (keys with transmitters only).	Key Registration and Keyless ID Registration (Refer to P.42C-35)
When the ignition key is lost as a single unit <Incorrect>	1. Register all the ignition keys other than the lost one again. 2. Register the keyless entry secret code for all ignition key other than the lost ignition key again	
When the ignition key is replaced by the full service key set or the handle lock service key set is replaced by the piece. steering <Correct>	1. Register all ignition keys again <input bar code No.> 2. Register the keyless entry secret code for all the ignition keys again (set supply only).	Key Registration (Barcode No.) and Keyless ID Registration (Refer to P.42C-35)
When the blank key* is replaced by the door service key set, tailgate service key set or glove box service key set is added by the piece.	Operation is not needed	—

NOTE: *: Blank key (the key that can be used to lock/unlock the door, tailgate or glove box only)

NOTE: *1: When available, key registration be done beginning with a key that has been registered.

Key supply unit

Ignition key (without transmitter)	Ignition key (with transmitter)	NOTE: Blank key (It is the key that comes with the door service key set, tailgate service key set and the glove box service key set. It can only be used for locking and unlocking, and it cannot start the engine.)
 AC502117	 AC502118	 BLANK KEY  AC607881AB

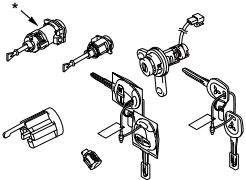
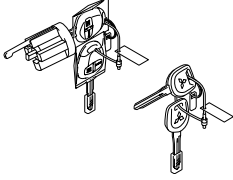
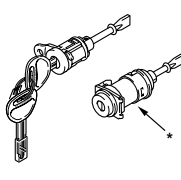

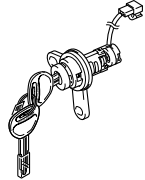
<Correct> Steering

WIRELESS CONTROL MODULE (WCM) TROUBLESHOOTING

Attached sheet 9(3/5)

42C-7

KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY

Full service key set <Incorrect>	Handle lock service key set	Door service key set	Glove box service key set	Tailgate service key set
 AC607953AB	 AC607954	 AC607951AB	 AC607882	 AC607952

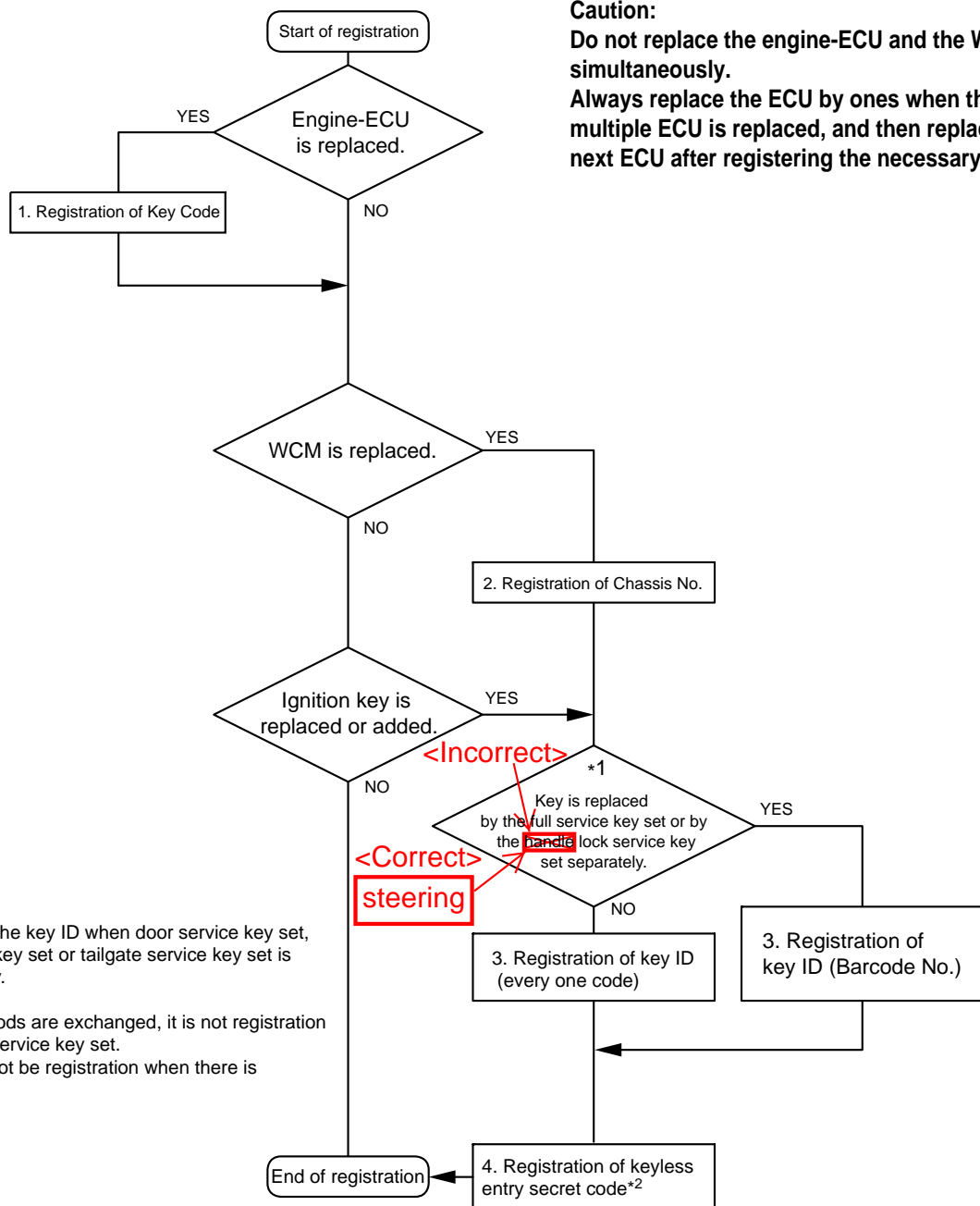
*: Vehicles for dead lock system

Registration flow chart

Caution:

Do not replace the engine-ECU and the WCM simultaneously.

Always replace the ECU by ones when the multiple ECU is replaced, and then replace the next ECU after registering the necessary IDs.






AC508146AD

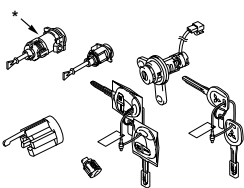
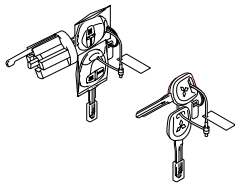
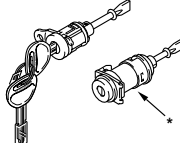

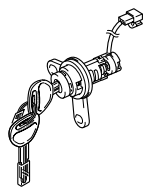
⚠ CAUTION

- When the door lock cylinder or the glove box lock cylinder is replaced as a single unit, do not register the bar code No. attached to the ignition key. If registered, starting the engine by using the conventional key becomes impossible. The new key will not be able to start the engine, too, because it has a different key groove.
- If the ignition key with transmitter is added or replaced, register the key (key ID), and then register the keyless entry secret code again.

Key supply unit

Ignition key (without transmitter)	Ignition key (with transmitter)	NOTE: Blank key (It is the key that comes with the door service key set, tailgate service key set and the glove box service key set. It can only be used for locking and unlocking, and it cannot start the engine.)
 AC502117	 AC502118	BLANK KEY  AC607881AB

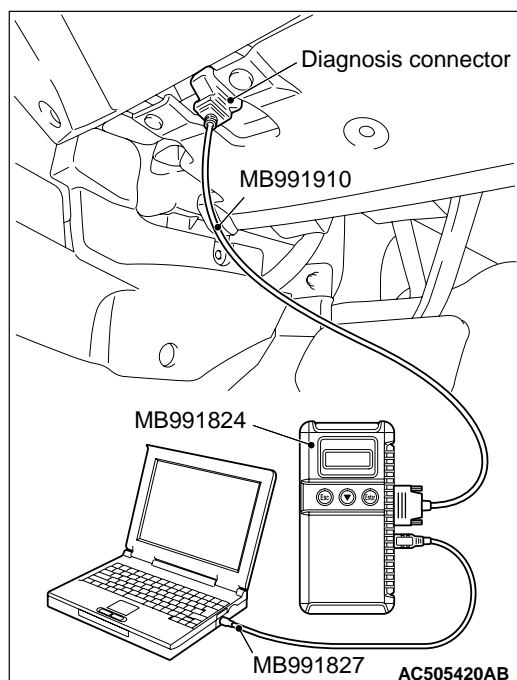
<Correct> **Steering****KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY**

Full service key set <Incorrect>	Handle lock service key set <Incorrect>	Door service key set	Glove box service key set	Tailgate service key set
 AC607953AB	 AC607954	 AC607951AB	 AC607882	 AC607952

*: Vehicles for dead lock system

NOTE:

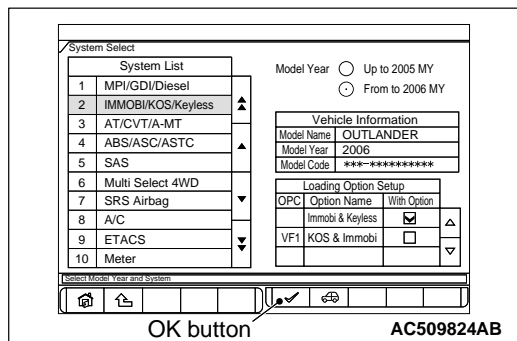
- When re-registering the key (key ID), all the keys (key ID) registered before must be re-registered because all of them will be erased.
- When the ignition key was replaced by the full service key set or when the ignition key was replaced by the handle lock service key set separately, register the key (key ID) using the barcode No. attached to the key.
<Incorrect> **handle** **steering** <Correct>
- If the handle lock service key set, door service key set, tailgate service key set or glove box service key set is replaced as a unit, two kinds of keys are used (the key that starts the engine and the key that opens and closes the doors). To use only one key, replace the ignition key by the full service key set instead of replacing it by a unit.
- After registering the keys, make sure that the engine is started normally with all of the keys registered.



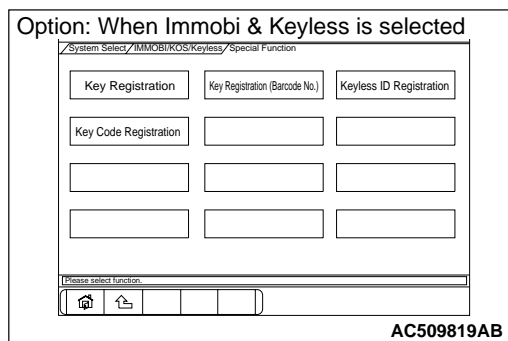
Connect the M.U.T.-III to the 16-pin diagnosis connector as follows.

NOTE: For details on how to use the M.U.T.-III, refer to the "M.U.T.-III User's Manual."

1. Start the M.U.T.-III system on the PC and turn the ignition switch to the "ON" position.



2. Select "IMMOBI/KOS/Keyless" button from the "System Select" screen. Then, select the applicable option code item and push the OK button.
 - The display of "Special Function" screen changes, depending on the contents of the option. For vehicles with KOS, select "KOS&Immobi." For vehicles with WCM, select "Immobi&Keyless."
3. Select "Special Function" on the next screen.



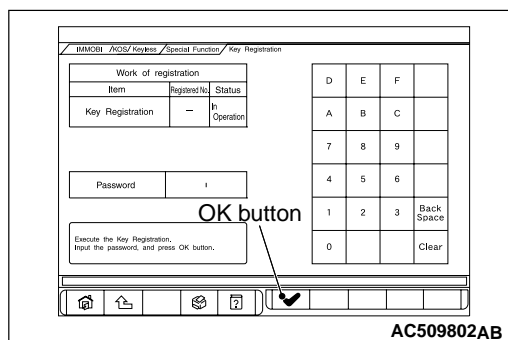
4. Select the button of the operation to be performed from the "Special Function" screen.

- "Key Registration": When the ignition key is replaced or added as a single unit
- "Key Registration (Barcode No.)": When the ignition key is replaced by the full service key set or the **handle lock** service key set is replaced by the **steering** piece.
- "Key Code Registration": When the engine-ECU is replaced
- "Keyless ID Registration": When the ignition key is replaced or added

<Incorrect> **handle lock** **steering** <Correct>

NOTE: For "Key Code Registration," refer to GROUP 00 – Precautions before Service .

KEY REGISTRATION METHOD



1. When "Key registration" screen is displayed, enter the password for the key registration and press the OK button. Then, "Executing!" is displayed and the registration process starts.

NOTE:

- If the wrong password is entered consecutively 5 times, the password entry for the key registration will be disabled for 16 minutes.
- The key registration cannot be cancelled during the operation.

ID CODE REGISTRATION NECESSITY
JUDGEMENT TABLE

M1429604800526

⚠ CAUTION

- Do not replace the engine-ECU and KOS-ECU at the same time. When replacing several ECUs, always replace one ECU at a time, register the necessary IDs in it, and then replace the next ECU.
- Do not register the keyless operation key registered for other vehicles.

The individual unique ID code is stored in the transponder (small transmitter) and KOS-ECU incorporated in the keyless operation key, engine ECU, keyless operation key, and steering lock unit for KOS. Under the conditions shown in the table, the corresponding ID code must be registered ~~with~~ KOS-ECU or the engine ECU again.

~~Incorrect~~ **in** ~~Correct~~

NOTE: The KOS-ECU memory can memorise the maximum 4 different keyless operation keys (keyless operation key ID codes and key ID codes).


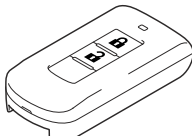
Item	Operation contents and procedure	Reference page for registration content
When the engine-ECU is replaced	Registration of Key code & chassis number	Key code & chassis number registration [Refer to GROUP 00 – Precautions before Service –How to Perform Chassis Number (Chassis No.) Writing P.00-44.]
When KOS-ECU is replaced	<ol style="list-style-type: none"> 1. Register the steering lock unit again. Incorrect 2. Chassis No. programmed Write Chassis No. Correct 3. Register the key IDs of all the keyless operation keys again. 4. Register the keyless operation key IDs of all the keyless operation keys again. 	<ul style="list-style-type: none"> • Write the Chassis No. (Refer to GROUP 00 –Precautions before Service –How to Perform Chassis No. (Chassis No.) Writing P.00-44). • Steering Lock Unit Registration and Key and KOS Key Registration (Refer to P.42B-105)
When the receiver antenna module is replaced	Operation is not needed	–
When a keyless operation key is added or replaced*1	<ol style="list-style-type: none"> 1. Register the key IDs of all the keyless operation keys again. 2. Register the keyless operation key IDs of all the keyless operation keys again. 	Key and KOS Key Registration (Refer to P.42B-105)
When a keyless operation key is lost	<ol style="list-style-type: none"> 1. Register the key IDs of all the keyless operation keys other than the lost one again. 2. Register the keyless operation key IDs of all the keyless operation keys other than the lost one again. 	

Item	Operation contents and procedure	Reference page for registration content
When an emergency key is added as a unit	<p>Operation is not needed</p> <p><Correct></p> <p>steering</p> <p><Incorrect></p>	—
When an emergency key is replaced as a full service key set is replaced as a unit		
When an emergency key is replaced as a handle lock service key set is replaced as a unit		
When the key* is replaced by the door service key set or glove box service key set is added by the piece.		

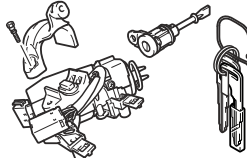
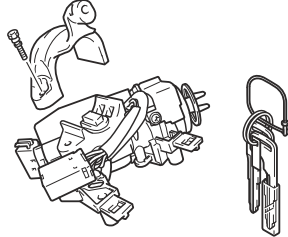
NOTE: *: Key (the key that can be used to lock/unlock the door or glove box only)

NOTE: *1: When available, key registration be done beginning with a key that has been registered.

KEY SUPPLY UNIT

Emergency key	Keyless operation key
 <p>AC610642</p>	 <p>AC703764</p>

KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY

Full service key set	Handle lock service key set
 <p>AC610158</p>	 <p>AC610159</p>

<Correct>

Steering

<Incorrect>

ON-VEHICLE SERVICE

ID CODES REGISTRATION PROCEDURE


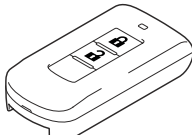
M1429611700446

By operating the M.U.T.-III screen, the ID code registration and antenna communication required to the keyless operation system can be performed.

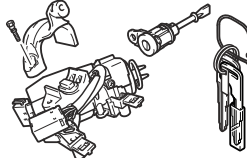
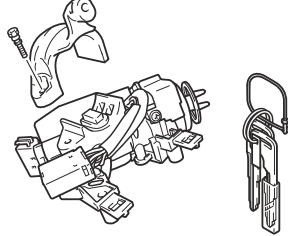
CAUTION

- When the door service key set or the glove box service key set is replaced as a unit, do not register the barcode No. attached to the key. If registered, starting the engine by using the conventional key becomes impossible. The new key will not be able to start the engine, too, because it has a different key groove.
- Do not register the keyless operation key registered for other vehicles.

KEY SUPPLY UNIT

Emergency key	Keyless operation key
 AC610642	 AC703764

KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY

Full service key set	Handle lock service key set
 AC610158	 AC610159

<Correct>
Steering

<Incorrect>

Display item list

Item No.	Item name	Data item	Unit
1	Odometer	Total driving distance after the diagnosis code is generated	km
2	Ignition cycle	Number of times the ignition switch is turned "ON" or "LOCK (OFF)" after the past failure transition	Number of counts is displayed.
4	Accumulated minute	Cumulative time for current malfunction of diagnosis code	min

ID CODE REGISTRATION NECESSITY
JUDGEMENT TABLE

NOTE: Up to eight ignition keys (key ID and keyless ID) can be stored in the memory of WCM.

M1427504400406

⚠ CAUTION

- Do not replace the engine-ECU and WCM at the same time. When replacing several ECUs, always replace one ECU at a time, register the necessary IDs in it, and then replace the next ECU.
- Do not register the ignition key registered for other vehicle.

The transponder (a small transmitter) in the ignition key, WCM, and the engine ECU have their own ID codes stored in them. When the cases listed in the table below occurred, the ID codes must be registered in the WCM or engine ECU again. For the ignition key (incorporating a transmitter), an ID for the keyless operation must be registered.

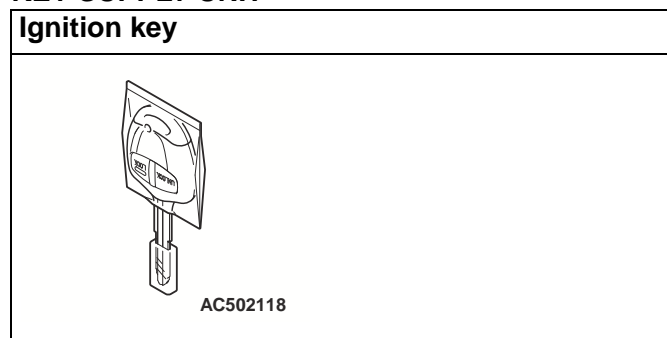
Item	Operation contents and procedure	Reference page for registration contents
When the engine-ECU is replaced	Registration of Key code & chassis No.	Key code & chassis No. registration (Refer to GROUP 00 – Precautions before Service –How to Perform Chassis No. Writing P.00-44.)
When WCM is replaced	<p><Incorrect></p> <ol style="list-style-type: none"> 1. Chassis No. programmed 2. Register the key ID for all the ignition keys again. 3. Register the keyless ID for all the ignition keys again. <p><Correct></p>	<ul style="list-style-type: none"> • Write the Chassis No. (Refer to GROUP 00 –Precautions before Service –How to Perform Chassis No. Writing P.00-44). • Registering keys and keyless IDs. (Refer to P.42C-37.)

Item	Operation contents and procedure	Reference page for registration contents
When the ignition key is added as a single unit* ¹	1. Register the key ID for all the ignition keys again. 2. Register the keyless ID for all the ignition keys again.	Key Registration and Keyless ID Registration (Refer to P.42C-37)
When the ignition key is lost as a single unit steering <Correct>	1. Register the key ID for all ignition key other than the lost ignition key again. 2. Register the keyless ID for all ignition key other than the lost ignition key again.	
When the ignition key is replaced by the full service key set or the handle lock service key set is replaced by the piece. <Incorrect>	1. Register the key ID of the replaced ignition key again <input barcode No.>. 2. Register the keyless ID for all the ignition keys again (set supply only).	Key Registration (Barcode No.) and Keyless ID Registration (Refer to P.42C-37).
When the key* is replaced by the door service key set or glove box service key set is added by the piece.	Operation is not needed	—

NOTE: *: Key (the key that can be used to lock/unlock the door or glove box only)

NOTE: *¹: When available, key registration be done beginning with a key that has been registered.

KEY SUPPLY UNIT



KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY

Full service key set	Handle lock service key set
<p>AC703799</p> <p>Steering <Correct></p>	<p>AC703800</p> <p><Incorrect></p>

Terminal No.	Check item	Check condition	Normal condition
1 -5	-	-	-
6	Power supply (Battery)	Always	System voltage
7	Earth	Always	0 V
8	-	-	-
9	Power supply (Ignition switch: IG1)	Ignition switch: ON	System voltage
10	CAN L	-	-
11	CAN H	-	-

ON-VEHICLE SERVICE

ID CODES REGISTRATION PROCEDURE

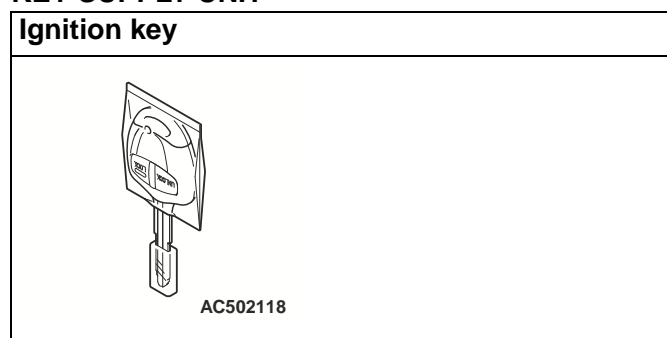
M1427506300416

The ID codes necessary for the engine immobilizer system and the keyless entry system can be registered by operating on the M.U.T.-III screen.

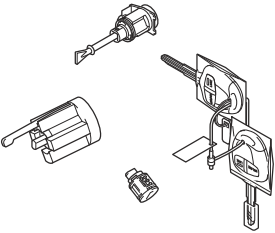
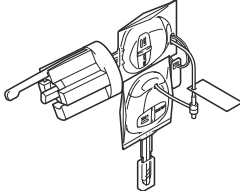
CAUTION

- When the door lock cylinder or the glove box lock cylinder is replaced as a single unit, do not register the bar code No. attached to the ignition key. If registered, starting the engine by using the conventional key becomes impossible. The new key will not be able to start the engine, too, because it has a different key groove.
- If the ignition key with transmitter is added or replaced, register the key (key ID), and then register the keyless entry secret code again.
- Do not register the ignition key registered for other vehicle.

KEY SUPPLY UNIT

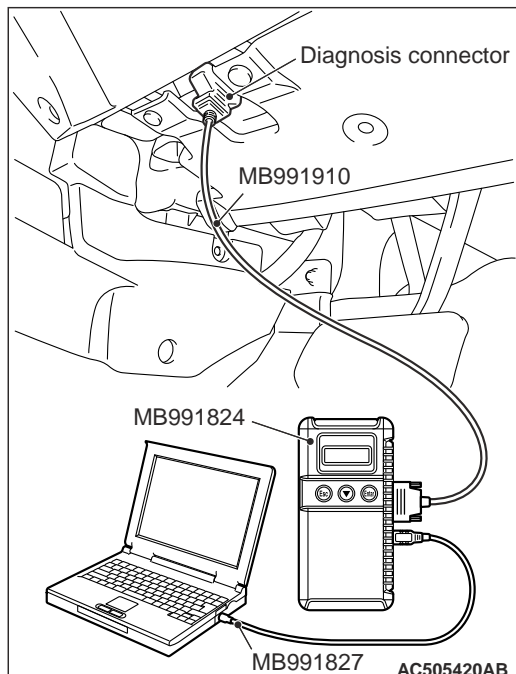


KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY

Full service key set	Handie lock service key set
 <p>AC703799</p> <p>Steering <Correct></p>	 <p>AC703800</p> <p><Incorrect></p>

CAUTION

Before connecting or disconnecting the M.U.T.-III, turn the ignition switch to the "LOCK" (OFF) position.

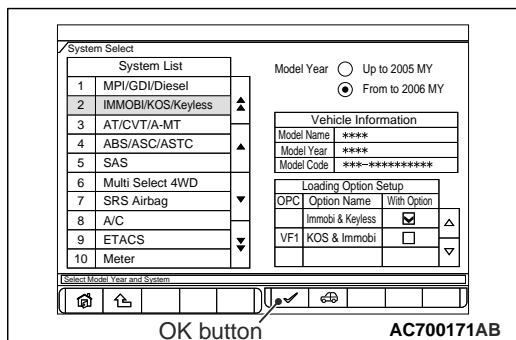


Connect the M.U.T.-III to the 16-pin diagnosis connector as follows.

NOTE: For details on how to use the M.U.T.-III, refer to the "M.U.T.-III User's Manual."

1. Start the M.U.T.-III system on the PC and turn the ignition switch to the "ON" position.

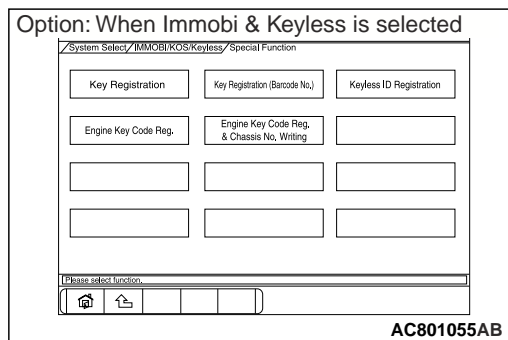
NOTE: Since the M.U.T.-III screen display changes according to the vehicle specifications, the illustrations for each item may differ from the actual screen display.



2. Select "IMMOBI/KOS/Keyless" button from the "System Select" screen. Then, select the applicable option code item and push the OK button.

- The display of "Special Function" screen changes, depending on the contents of the option. For vehicles with KOS, select "KOS&Immobi." For vehicles with WCM, select "Immobli&Keyless."

3. Select "Special Function" on the next screen.

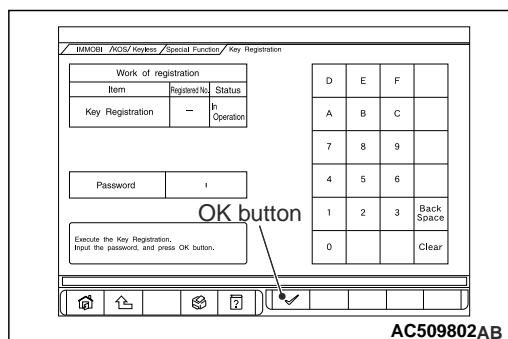


4. Select the button of the operation to be performed from the "Special Function" screen.

- "Key Registration": When the ignition key is replaced or added as a single unit and WCM is replaced.
- "Key Registration (Barcode No.)": When the ignition key is replaced by the full service key set or the handle lock service key set is replaced by the piece. **<Correct> steering**
- "Keyless ID Registration": When the ignition key (with transmitter) is replaced or added and WCM is replaced.
- "Engine Key Code Reg.": It doesn't used it.
- "Engine Key Code Reg. & Chassis No. Writing": When the engine-ECU is replaced

NOTE: For "Engine Key Code Reg. & Chassis No. Writing," refer to GROUP 00 -Precautions before Service P.00-44.

KEY REGISTRATION METHOD

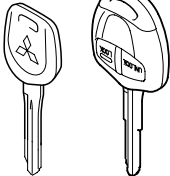
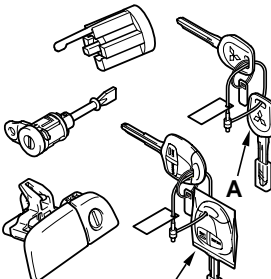
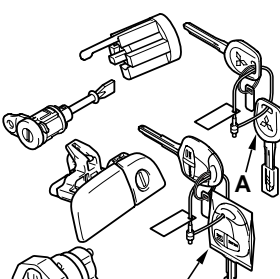
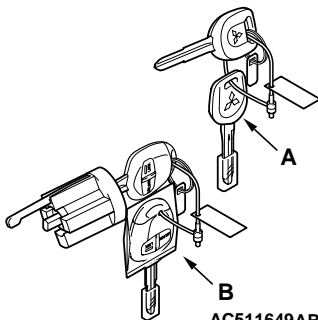
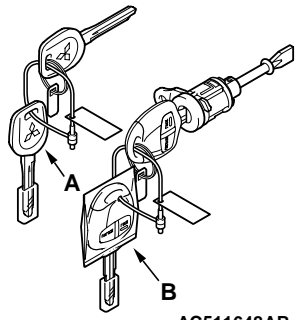
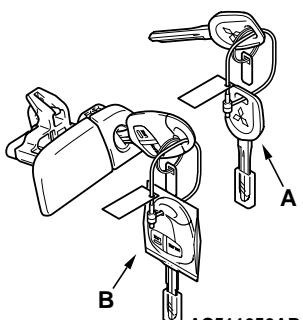
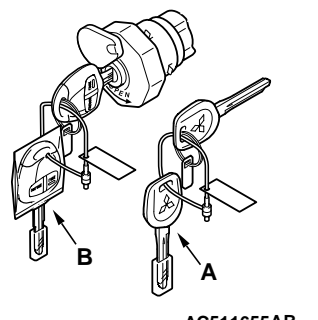


1. When "Key registration" screen is displayed, enter the password for the key registration and press the OK button. Then, "Executing!" is displayed and the registration process starts.

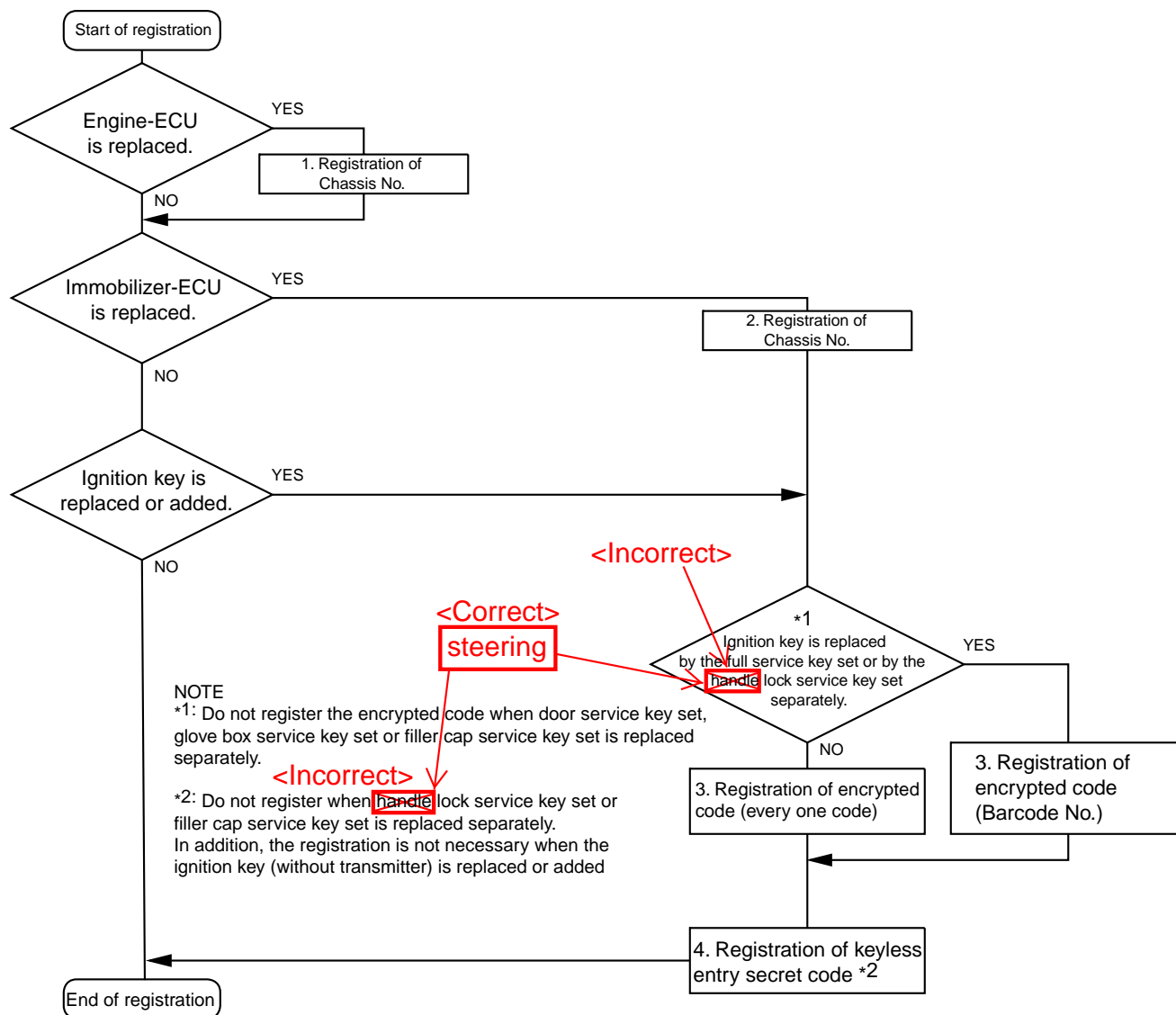
Item	Operation contents and procedure	Reference page for registration contents
When the engine-ECU is replaced	Write the Chassis No.	Write the Chassis No. [Refer to GROUP 00, How to perform chassis number (Chassis No.) writing P.00-23].
When the immobilizer-ECU is replaced	1. Write the Chassis No. 2. Register all ignition key encrypted code again.	<ul style="list-style-type: none"> Write the Chassis No. [Refer to GROUP 00, How to perform chassis number (Chassis No.) writing P.00-23]. Register the key (Refer to P.54A-34)
When the key ring antenna is replaced	Operation is not needed	—
When the ignition key is added separately.*	1. Register all ignition key encrypted code again. 2. Register all ignition key keyless entry secret code again (with transmitter only)	<ul style="list-style-type: none"> Register the key (Refer to P.54A-34) Register the keyless entry secret code (Refer to GROUP 42, Method of registering a secret code P.42-126).
When the ignition key is lost separately.	1. Register all ignition keys other than the lost ignition key again 2. Register all ignition key keyless entry secret codes other than the lost ignition key again	<ul style="list-style-type: none"> Register the key (Refer to P.54A-34) Register the keyless entry secret code (Refer to GROUP 42, Method of registering a secret code P.42-126).
When the ignition key is replaced by the full service key set or the handle lock service key set is replaced by the piece. <Incorrect>	1. Register all ignition keys again <Barcode No. input> 2. Register all ignition key keyless entry secret codes again (full service key set supply only)	<ul style="list-style-type: none"> Register the key (Barcode No.) (Refer to P.54A-34). Register the keyless entry secret code (Refer to GROUP 42, Method of registering a secret code P.42-126).
When the ignition key is added separately by the door service key set, glove box service key set, filler cap service key set assembly <Incorrect>	Register the replaced ignition key keyless entry secret code	Register the keyless entry secret code (Refer to GROUP 42, Method of registering a secret code P.42-126).

NOTE*: When available, key registration should be done beginning with a key that has been registered.

Supply unit chart

Ignition key <single unit> (A: without transmitter, B: with transmitter)	Full service key set (A: without transmitter, B: with transmitter) <Double cab>	Full service key set (A: without transmitter, B: with transmitter) <Single cab>	
<div><div><div>A</div><div>B</div></div><div></div><div>AC503862AB</div></div> <div><div><Incorrect></div><div><Correct> Steering</div></div>	<div></div> <div>AC511657AB</div>	<div></div> <div>AC511656AB</div>	
Handle lock service key set (A: without transmitter, B: with transmitter)	Door service key set (A: without transmitter, B: with transmitter)	Glove box service key set (A: without transmitter, B: with transmitter)	Filler cap service key set (A: without transmitter, B: with transmitter) <Single cab>
<div></div> <div>AC511649AB</div>	<div></div> <div>AC511648AB</div>	<div></div> <div>AC511650AB</div>	<div></div> <div>AC511655AB</div>

Registration flow chart



AC510135AC

ON-VEHICLE SERVICE

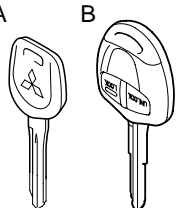
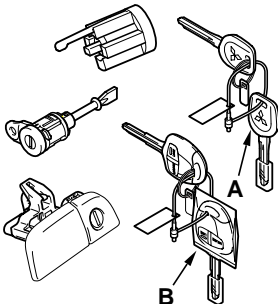
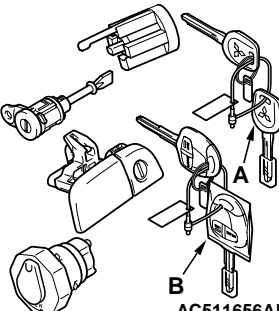
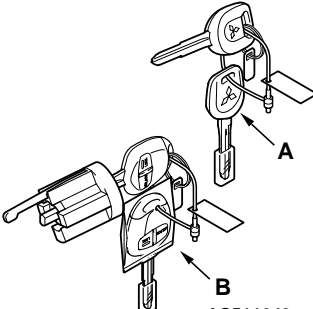
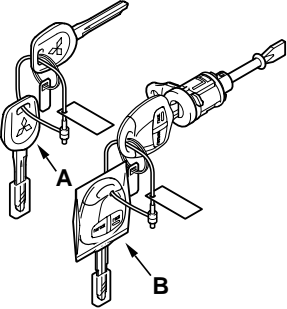
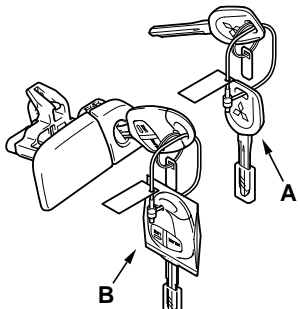
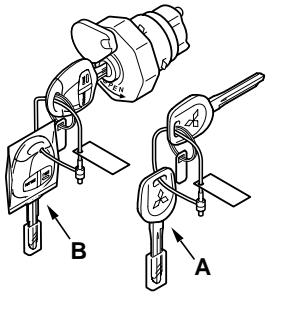
HOW TO REGISTER ENCRYPTED CODE

M1541104300037

CAUTION

- When the door service key set, glove box service key set, filler cap service key set is replaced separately, do not register the barcode No. attached to the ignition key. If the barcode No. is registered, the conventional key will not be able to start the engine. The new key will not be able to start the engine because it has a different key groove.
- If the ignition key with transmitter is added or replaced, register the key (encrypted code), and then register the secret code for keyless entry again. (Refer to GROUP 42 – Method of registering a secret code [P.42-126.](#))

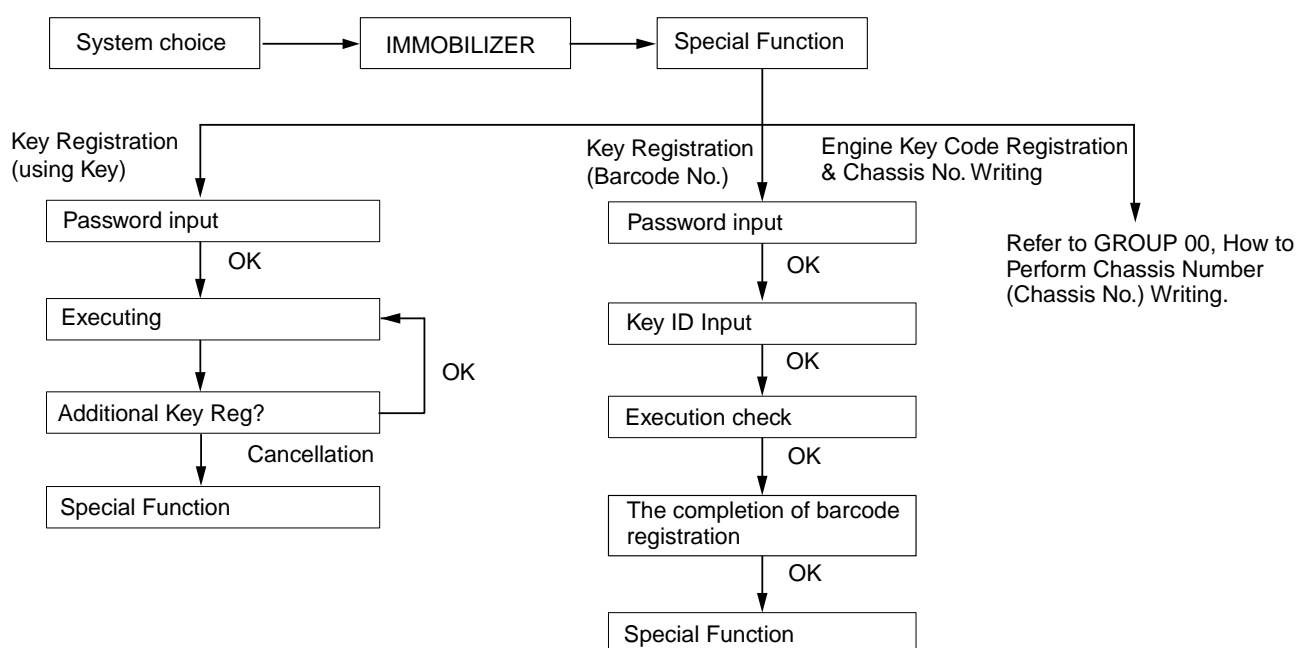
Supply unit chart

Ignition key <single unit> (A: without transmitter, B: with transmitter)	Full service key set (A: without transmitter, B: with transmitter) <Duble cab>	Full service key set (A: without transmitter, B: with transmitter) <Single cab>	
<div><div></div><div>AC503862AB</div><div><div><Incorrect></div><div><Correct> Steering</div></div></div>	<div></div> <div>AC511657AB</div>	<div></div> <div>AC511656AB</div>	
Handle lock service key set (A: without transmitter, B: with transmitter)	Door service key set (A: without transmitter, B: with transmitter)	Glove box service key set (A: without transmitter, B: with transmitter)	Filler cap service key set (A: without transmitter, B: with transmitter) <Single cab>
<div></div> <div>AC511649AB</div>	<div></div> <div>AC511648AB</div>	<div></div> <div>AC511650AB</div>	<div></div> <div>AC511655AB</div>

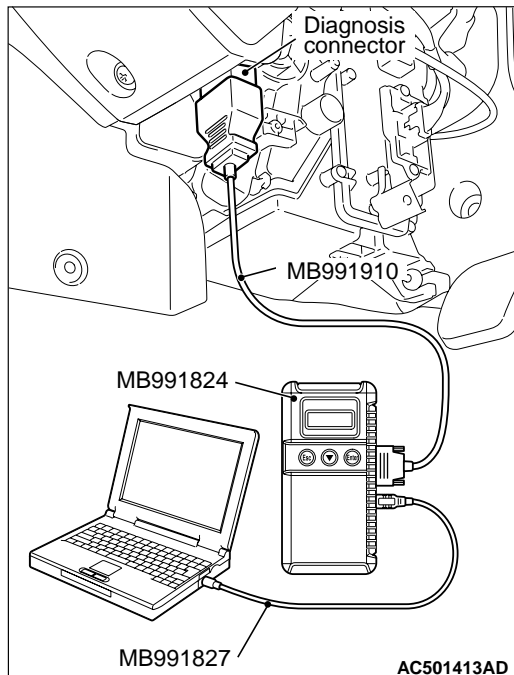
NOTE:

- When re-registering the key (encrypted code), all the keys (encrypted code) registered before must be re-registered because all of them will be erased.
- When the ignition key was replaced by the full service key set or when the ignition key was replaced by the handle lock service key set separately, register the key (encrypted code) using the Barcode No. attached to the key. **steering** <Correct>
- If the handle lock service key set, the door service key set, the glove box service key set, the filler cap service key set is replaced as a single unit, two kinds of keys are used (the key that starts the engine and the key that opens and closes the doors). To use only one key, replace the ignition key by the full service key set instead of replacing it by a single unit.
- After the key registration, check that the engine is started normally with all the ignition keys.

SCREEN FLOW OF M.U.T.-III



AC509565AC

CAUTION

To prevent damage to M.U.T.-III MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting M.U.T.-III MB991958.

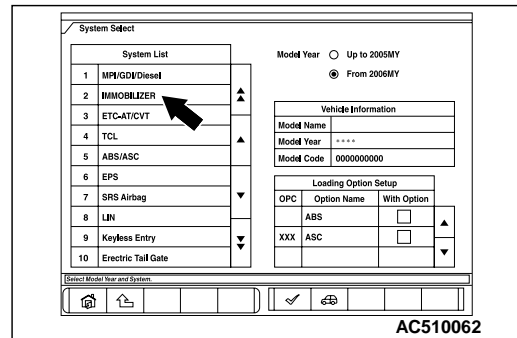
Connect the M.U.T.-III to the 16-pin diagnosis connector as follows.

NOTE: For details on how to use the M.U.T.-III, refer to the "M.U.T.-III operation manual."

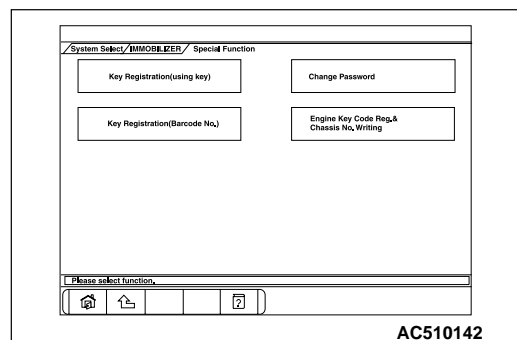
1. Ensure that the ignition switch is at the "LOCK" (OFF) position.
2. Start up the personal computer.
3. Connect USB cable MB991827 to special tool V.C.I. MB991824 and the personal computer.
4. Connect main wiring harness A (MB991910) to the V.C.I.
5. Connect M.U.T.-III main wiring harness A to the diagnosis connector.
6. Turn the V.C.I. power switch to the "ON" position.

NOTE: When the V.C.I. is energized, the V.C.I. indicator lamp will be illuminated in a green colour.

7. Start the M.U.T.-III system on the PC and turn the ignition switch to the "ON" position.



8. Select "IMMOBILIZER" button from the "System choice" screen, and select "Special Function" on the next screen.



9. Select the button of the operation to be performed from the "Special Function" screen.

- "Key Registration (using key)": When the ignition key is replaced or added by a single unit, when the immobilizer-ECU is replaced
- "Key Registration (Barcode No.)": When the ignition key is replaced by the full service key set or the **handle lock** service key set is replaced by the piece. **steering** **<Correct>**
- "Engine Key Code Reg. & Chassis No. Writing": When the engine-ECU is replaced

NOTE: For "Engine Key Code Reg. & Chassis No. Writing", refer to GROUP 00, Precautions before Service P.00-23.

ID CODES REGISTRATION CRITERIA TABLE <3200>

M1541106800276

⚠ CAUTION

Do not replace the engine-ECU and the immobilizer-ECU simultaneously. Always replace the ECU by ones when the multiple ECU is replaced, and then replace the next ECU after registering the necessary IDs.

The ignition key contains a transponder (small transmitter), which retains an unique key ID. Under any of the conditions described in the table below, the VIN and key ID should be registered in the immobilizer-ECU or engine-ECU again.

NOTE:

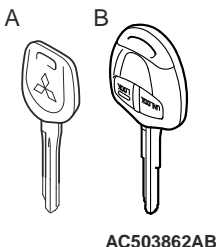

- In addition, the keyless entry encrypted code should be registered in the ignition key (with transmitter) and ETACS-ECU.
- The immobilizer-ECU can retain maximum eight different ignition key in the memory.

Component to be replaced	Engine ECU	Immobilizer-ECU	Ignition key
When engine-ECU is replaced	–	Should not be replaced	Should not be replaced
		Write the VIN ^{*1}	Should not be registered
When immobilizer-ECU is replace	Should not be replaced	–	Should not be replaced
	Write the VIN ^{*2}		All ignition keys should be registered again
When the key ring antenna is replaced	Should not be replaced	Should not be replaced	Should not be replaced
When the ignition key is added as a single unit ^{*4}	Should not be replaced	Should not be replaced	Should not be replaced
			All ignition keys should be registered again
When an ignition key is lost as a single unit <i><Correct></i> steering	Should not be replaced	Should not be replaced	Should not be replaced
			All the ignition keys other than the lost one should be registered again
When the ignition key is replaced by the full service key set or the handle lock service key set is replaced by the piece. <i><Incorrect></i>	Should not be replaced	Should not be replaced <i><Incorrect></i>	–
			All ignition keys should be registered again Barcode No input
When the key ^{*3} is replaced by the door service key set, glove box service key set or back door service key set is added by the piece	Should not be replaced	Should not be replaced	Should not be replaced (Barcode No. input) <i><Correct></i>

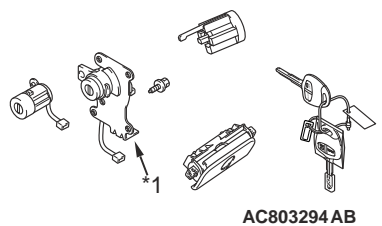
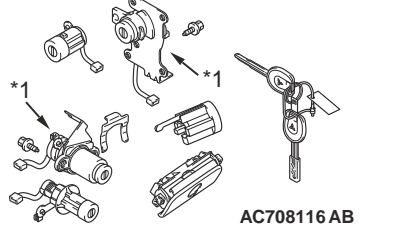
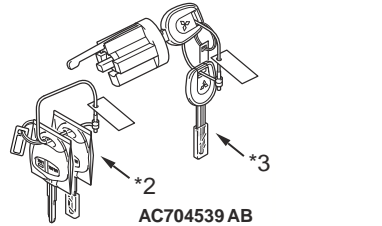
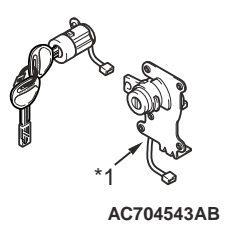

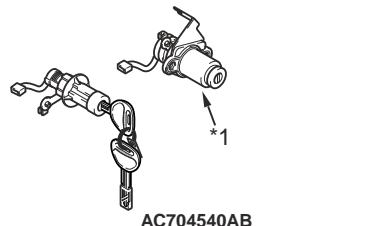
NOTE:

- ^{*1}: Indicates writing of the VIN to the engine-ECU.
- ^{*2}: Indicates writing of the VIN to the immobilizer-ECU.
- ^{*3}: Key (the key that can be used to lock/unlock the door, back door or glove box only)
- ^{*4}: When available, key registration be done beginning with a key that has been registered.

SUPPLY UNIT LIST FOR INDIVIDUAL KEY

Ignition key single unit (A: without transmitter, B: with transmitter)	NOTE: Key (It is the key that comes with the door service key set, glove box service key set, and the back door service key set. It can only be used for locking and unlocking, and it cannot start the engine.)
 <p>AC503862AB</p>	 <p>AC603779</p>

KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY ~~Incorrect~~ Steering <Correct>

Full service key set <vehicles with keyless entry system>	Full service key set <vehicles without keyless entry system>	Handle lock service key set
 <p>AC803294AB</p>	 <p>AC708116AB</p>	 <p>AC704539AB</p>
Door service key set	Glove box service key set	Back door service key set <vehicles without keyless entry system>
 <p>AC704543AB</p>	 <p>AC704541</p>	 <p>AC704540AB</p>

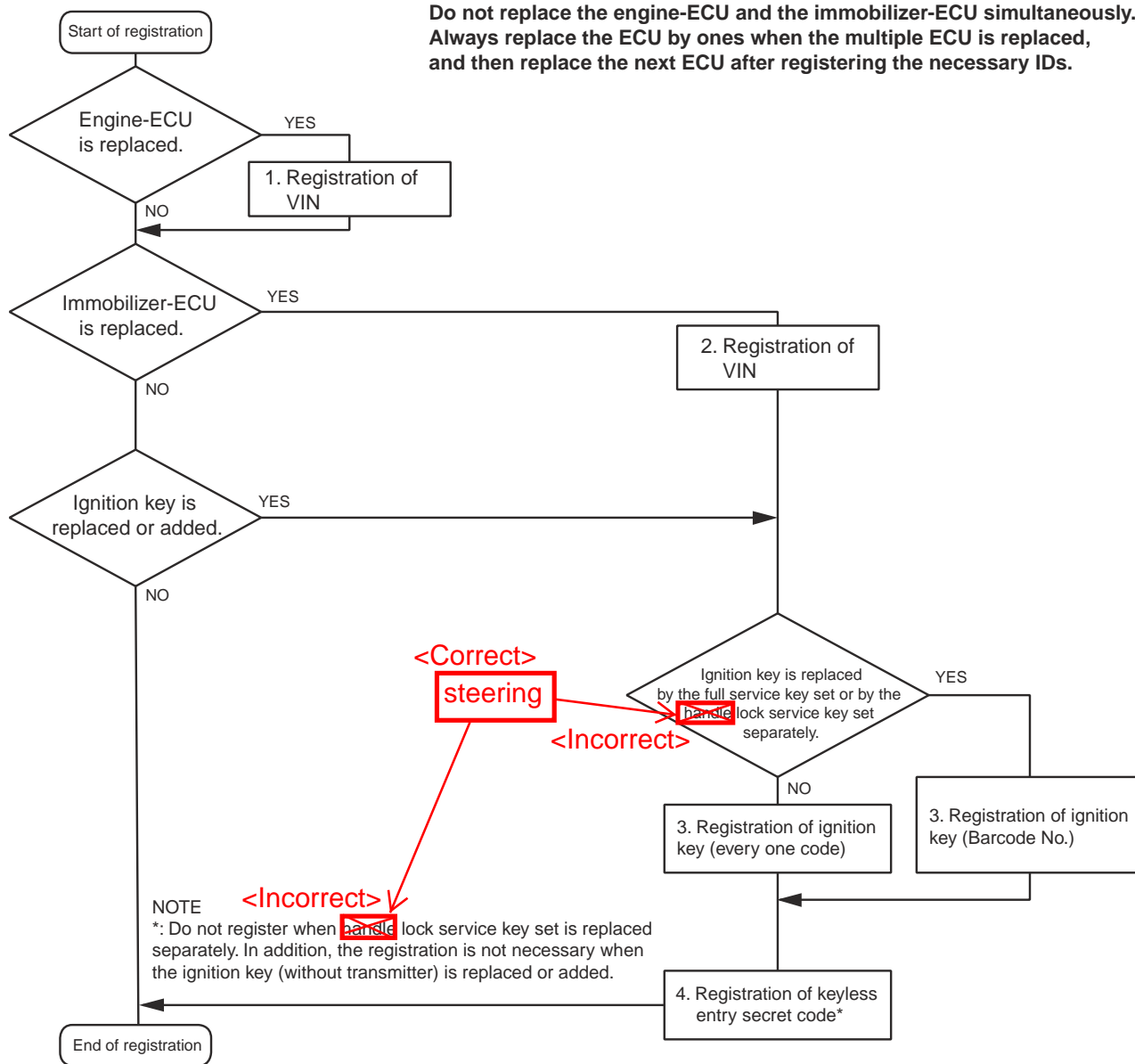
NOTE:

- *1: Vehicles with mechanical theft protection
- *2: vehicles with keyless entry system
- *3: vehicles without keyless entry system

Registration flow chart

Caution:

Do not replace the engine-ECU and the immobilizer-ECU simultaneously.
Always replace the ECU by ones when the multiple ECU is replaced,
and then replace the next ECU after registering the necessary IDs.



AC603806AE

ID CODES REGISTRATION CRITERIA TABLE <3800>

M1541106800287

The ignition key contains a transponder (small transmitter), which retains an unique key ID. Under any of the conditions below, the key ID should be registered in the immobilizer-ECU again.

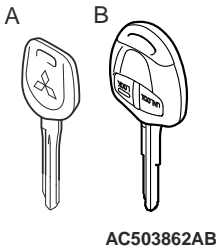

NOTE: In addition, the keyless entry encrypted code should be registered in the ignition key (with transmitter) and ETACS-ECU.

Component to be replaced	Engine-A/T-ECU	Immobilizer-ECU	Ignition key
When engine-A/T-ECU is replaced	—	Should be replaced	Should be replaced All ignition keys should be registered
When immobilizer-ECU is replace	Should not be replaced	—	Should not be replaced All ignition keys should be registered again
When ignition key is added*1	Should not be replaced	Should not be replaced	<ul style="list-style-type: none"> • Additional ignition key should be registered • All ignition keys should be registered again
When ignition key is lost steering <Correct>	Should not be replaced	Should not be replaced	All the ignition keys other than the lost one should be registered again
When the ignition key is replaced by the full service key set or the handle lock service key set is replaced by the piece. <Incorrect>	Should not be replaced	Should not be replaced	— All ignition keys should be registered again
When the key* is replaced by the door service key set, glove box service key set or back door service key set is added by the piece	Should not be replaced	Should not be replaced	Should not be replaced

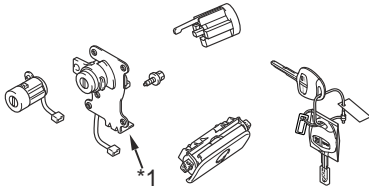
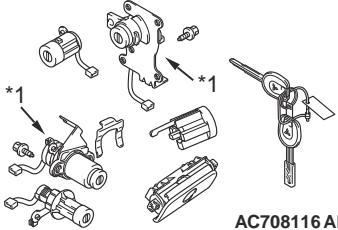
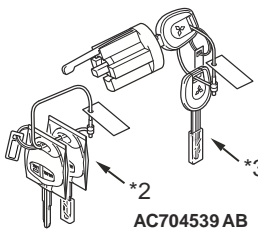
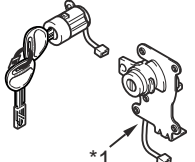

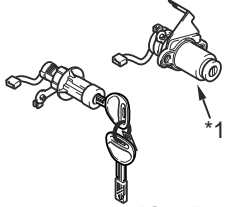
*NOTE: *: Key (the key that can be used to lock/unlock the door, back door or glove box only)*

*NOTE: *1: When available, key registration should be done beginning with a key that has been registered.*

SUPPLY UNIT LIST FOR INDIVIDUAL KEY

Ignition key single unit (A: without transmitter, B: with transmitter)	<i>NOTE: Key (It is the key that comes with the door service key set, glove box service key set, and the back door service key set. It can only be used for locking and unlocking, and it cannot start the engine.)</i>
 <p>AC503862AB</p>	 <p>AC603779</p>

KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY

Full service key set <vehicles with keyless entry system>	Full service key set <vehicles without keyless entry system>	Handle lock service key set <Incorrect>
 AC803294 AB	 AC708116 AB	 AC704539 AB
Door service key set	Glove box service key set	Back door service key set <vehicles without keyless entry system>
 AC704543 AB	 AC704541	 AC704540 AB

NOTE:

- *1: Vehicles with mechanical theft protection
- *2: Vehicles with keyless entry system
- *3: Vehicles without keyless entry system

DIAGNOSIS CODE CHART <3200>

M1541100400117

CAUTION

During diagnosis, a diagnosis code associated with other system may be set when the ignition switch is turned on with connector(s) disconnected. On completion, confirm all systems for diagnosis code(s). If diagnosis code(s) are set, erase them all.


Code No.	Diagnosis contents	Reference page
B1702	Reception error of key ID	P.54A-30
B1703	Key ID inconsistent	P.54A-31
B1722	Transponder antenna failure	P.54A-32
B1731	Communication error with the engine-ECU	P.54A-34
B1761	Chassis No. not recorded	P.54A-35
B1766	Transponder registered for other vehicle	P.54A-35
U1073	Bus off	P.54A-36

ITEM	OPERATION	REFERENCE PAGE
When the ignition key is lost as a single unit	<ol style="list-style-type: none">1. Register all the ignition keys except the lost ignition key again.2. Register all the transmitter except the lost ignition key again.	<ol style="list-style-type: none">1. Reregistration of the ignition key: Refer to encrypted code registration using ignition key P.54A-40.2. Reregistration of the transmitter: Refer to GROUP 42, How to Register Secret Code P.42-75.
When the ignition key is replaced by the full service key set or the handle lock service key set is replaced by the piece. <div style="text-align: center;"><div style="border: 1px solid red; padding: 2px; display: inline-block;">steering</div> <Correct></div>	<ol style="list-style-type: none">1. Register all the ignition keys according to the barcode tag on the key set.2. Register the transmitter for all the ignition keys again. <div style="text-align: center;"><div style="border: 1px solid red; padding: 2px; display: inline-block;">barcode</div> <Correct></div>	<ol style="list-style-type: none">1. Reregistration of the ignition key: Refer to encrypted code registration using barcode No. P.54A-40. <Incorrect>2. Reregistration of the transmitter: Refer to GROUP 42, How to Register Secret Code P.42-75.
When the ignition key is replaced by the door service key set is replaced by the piece . <Deleted>	Register the transmitter for all the ignition keys again.	Reregistration of the transmitter: Refer to GROUP 42, How to Register Secret Code P.42-75 .

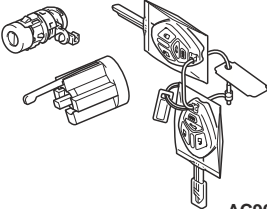
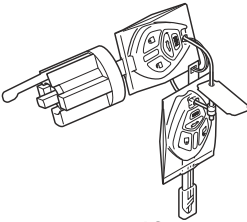
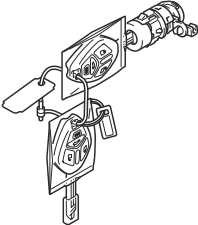
NOTE: The engine does not start until the matching has been completed.

NOTE: *1: When available, key registration be done beginning with a key that has been registered.

SUPPLY UNIT LIST FOR INDIVIDUAL KEY

Ignition key (with transmitter)
<div><p>AC901298</p></div>

KEY SUPPLY UNIT LIST FOR OTHER THAN INDIVIDUAL KEY

Full service key set	Handle lock service key set
<div><p>AC901299</p></div>	<div><p>AC901300</p></div>
<div><p>Door service key set</p><p><i>NOTE: It can only be used for locking and unlocking, and it cannot start the engine.</i></p><div><p>AC901301</p></div></div>	

<Incorrect>

Steering

<Correct>

IMMOBILIZER SYSTEM DIAGNOSIS

INTRODUCTION TO IMMOBILIZER SYSTEM DIAGNOSIS

M1543009901746

⚠ CAUTION

The encrypted code should always be re-registered when replacing the ETACS-ECU (immobilizer-ECU).

The immobilizer system consists of the ETACS-ECU (immobilizer-ECU), powertrain control module, ignition key and ignition key ring antenna. If the engine cannot be started by using a registered ignition key, one of these components may be defective. If the immobilizer system has immobilized the engine, MFI system DTC P0513 will be set. In this case, follow the immobilizer system troubleshooting.