Technical Service Bulletin

SUBJECT:			No: **TSB-18-54-010**
UNABLE TO RE-REGISTER IMMOBILIZER ID AFTER REPLACING ETACS ECU – REVISED			DATE: **October 2018**
			MODEL: **2014-2016 Outlander**

CIRCULATE TO:	[ ] GENERAL MANAGER	[**X**] PARTS MANAGER	[**X**] TECHNICIAN
[**X**] SERVICE ADVISOR	[**X**] SERVICE MANAGER	[**X**] WARRANTY PROCESSOR	[ ] SALES MANAGER

> *This bulletin supercedes TSB-16-54-005, issued October, 2016, to add replacement and registration of a new key set for cases where registration of the immobilizer ID still fails after performing the Immobilizer Registration Procedure in TSB-16-54-005. Revisions are italicized and indicated by ◄.*

PURPOSE

After replacing the ETACS ECU in vehicles without KOS, a "Key Error" message will be displayed on MUT-III SE when re-registration of the immobilizer ID fails.

This TSB provides dealers a revised procedure to re-register the immobilizer ID after replacing the ETACS ECU.

► *If re-registration of the immobilizer ID still fails after performing the registration instructions in "**C. IMMOBILIZER REGISTRATION PROCEDURE (VEHICLES WITHOUT KOS)**" in this TSB, then the key set must be replaced and re-registered using the Key Registration instructions (Barcode No. Method) in the ID Codes Registration Instructions on MDL.*

BACKGROUND

The failure of the ID re-registration may be caused by the Secret Key Code (SKC) value of the engine ECU being rewritten unexpectedly by the ETACS ECU. This results in unmatching SKC values between the engine ECU and ETACS ECU, which in turn causes failure of the ID re-registration of the immobilizer.

AFFECTED VEHICLES

2014-2016 Outlander vehicles without KOS, built **before** July 2016.

REQUIRED OPERATIONS

EQUIPMENT

The following equipment is needed to re-register the immobilizer ID after replacing an ETACS ECU.

- VCI (Vehicle Communication Interface) or VCI Lite - MB991824 or MB992744V.
- MEDIC Laptop/Tablet with A/C power adapter - MIT540031 or FZG1MK2.
- MUT-III main harness 'A' (blue connector at the DLC end) - MB992745V.
- USB 2.0 cable - RRAR1MBR108GL.
- For Standalone MUT-III units, MUT3-SE Reprogramming Database **N180701** or higher.

A. REGISTRATION FLOW CHART

Please note changes from original Service Manual instructions in **red**.

Start of Registration

Engine ECU Replaced? — YES → Registration of Key Code & Chassis No.
NO

ETACS ECU (Immobilizer ECU) Replaced? — YES →
NO

Changed from original Service Manual

With Old ETACS:
1. ENG Key Code Registration (Immobilizer)
2. Save Coding Data (ETACS)*1

Replace Old ETACS

With New ETACS:
1. Chassis No. Writing (ETACS)
2. On Vehicle Coding (ETACS)
3. Chassis No. Writing (Immobilizer)

Ignition Key Replaced or Added? — YES →
NO

Key Replaced with one in Full Service Key Set or Steering Lock Service Key Set? — YES → Registration of Key ID (with Barcode)
NO

Registration of Key ID (Start Re-registering with Registered Keys One by One)

Registration of Keyless ID*2

TPMS Transmitter Replaced or Registration of Additional Transmitters for tire set 2? — YES →
NO

Replaced ETACS? (Vehicles with TPMS) — YES → Registration of TPMS Sensors ID*3
NO

End of Registration

NOTES:
*1 In case of active DTC in ETACS, Save Coding Data (ETACS) is not possible. Please download coding file from website.

*2 No registration is necessary when vehicle is not equipped with a transmitter.

*3 You must enter the TPMS sensor ID when replacing a TPMS sensor, adding a second sensor set, or replacing the ETACS.
Select "Tyre PRS. Sensor ID Registration" to register the TPMS sensors in Set1.
Select "Tyre PRS. Sensor ID Reg (Set2)" to register the TPMS sensors in Set2.
If you register two sets of transmitters simultaneously, you must obtain two sets of transmitters.
You can switch "Set1" to "Set2" and vice versa with the combination meter.

B. PAIRING VEHICLE TO MUT–III SE

!! IMPORTANT !!	**Start the procedure with the old ETACS ECU installed in the vehicle.**

NOTE:	**VCI Stand-alone reprogramming is not available for this procedure. The laptop/tablet and the VCI must remain connected for the entire procedure.**

1. Connect the equipment as follows:

    NOTE: VCI Lite and MEDIC 4.0 Toughpad shown for illustration purposes only.
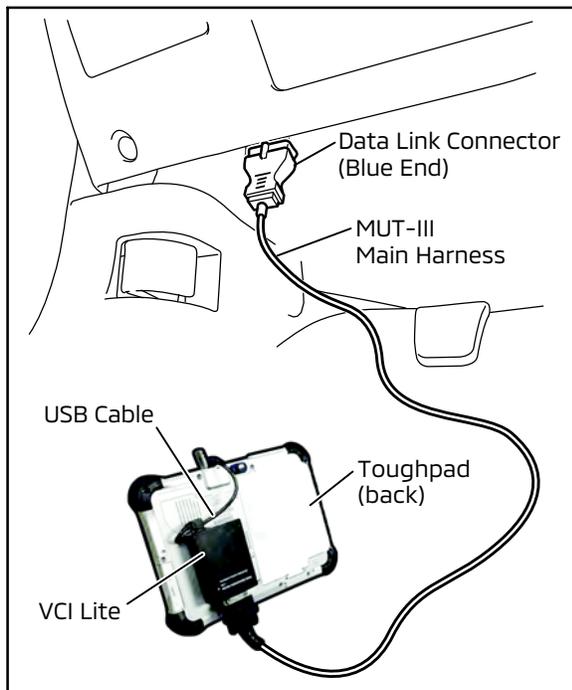
- Turn the MEDIC PC/tablet on. If the battery indicator in the lower right hand corner of the screen does not show a full charge, it is recommended that either the battery be charged prior to beginning, or be used with the A/C power adaptor connected.

- Connect the USB cable to the VCI/VCI Lite.

- When the laptop/tablet displays the MUT–III main screen, connect the USB cable to the device.

- Connect the MUT–III main harness with the blue DLC connection to the VCI/VCI Lite.

- Connect the blue connection of the MUT–III main harness to the vehicle's data link connector.

- For VCI only (p/n MB991824): Turn the VCI power switch ON. Verify that the indicator lamp in the upper right corner of the screen is green.

⚠ CAUTION

DO NOT DISTURB THE HARNESS CABLES OR CONNECTIONS DURING THE CODING PROCESS AS IT COULD CAUSE THE CONTROL UNIT TO LOSE DATA. IF THE USB CABLE IS DISCONNECTED DURING THIS PROCEDURE, A WARNING MESSAGE WILL DISPLAY.

2. Turn the ignition switch to the "ON" position.

3. Using MEDIC, from the main page, click the "MUT3-SE" icon at the top center of the screen to open MUT-III SE.

   Click the STV button.
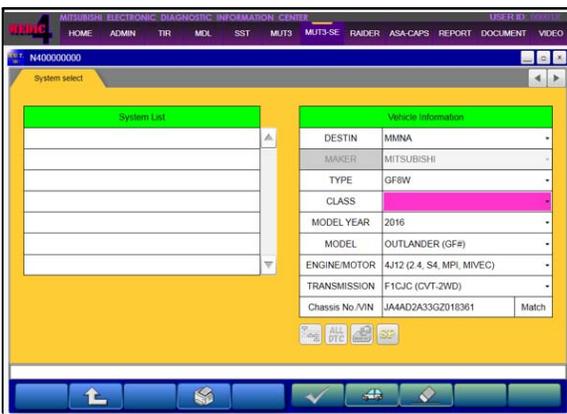
4. The System Select screen opens and populates with some basic information from the vehicle.
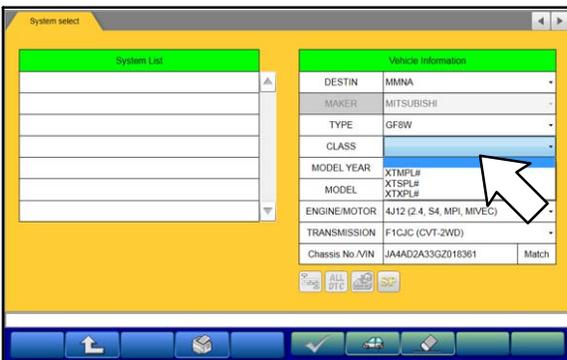
5. Look at the label on the passenger side B pillar to identify the appropriate class.

   Then select the correct class from the drop-down list.
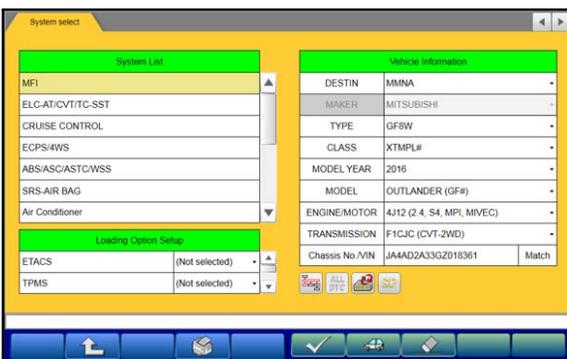
6. The System List should now populate with vehicle information.
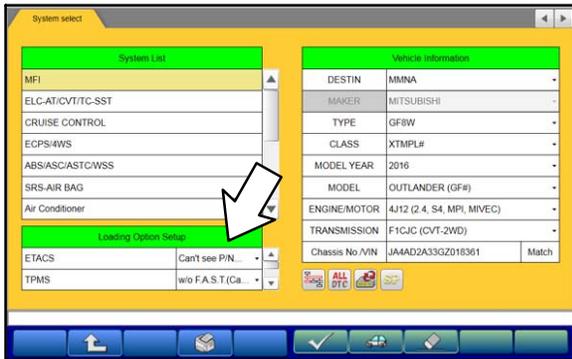
7. Under Loading Option Setup, make the following selections (scroll to see all options):

- ETACS: "Can't See P/N"

- TPMS: "w/o F.A.S.T."
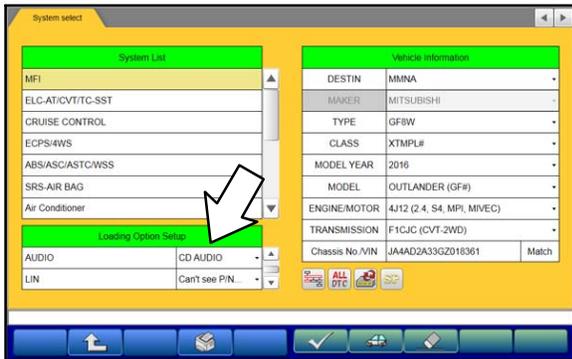
- AUDIO: (as equipped per vehicle)

- LIN: "Can't See P/N"
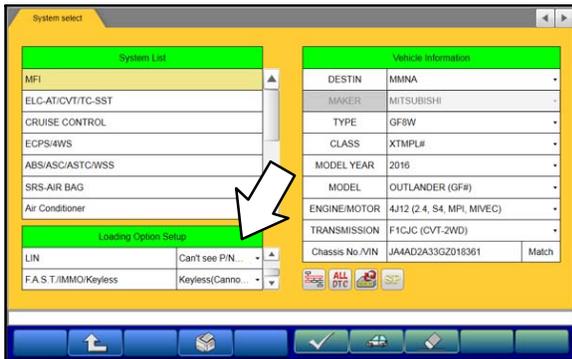
- F.A.S.T./IMMO/Keyless: "Keyless"

8. Obtain ETACS ECU part number for coding to the new ECU.

a. Under System List, select "ETACS" then click the check mark at the bottom of the screen.

b. In the ETACS menu, select "Data List."
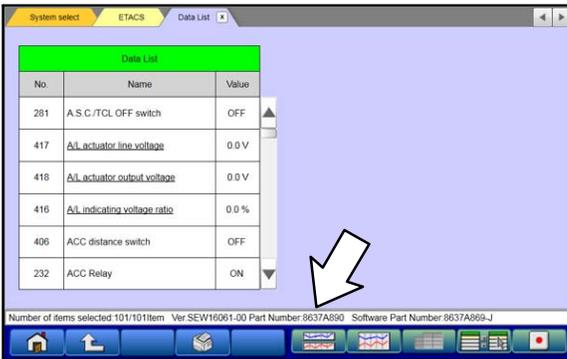
c. Read and record the part number located in the bottom of the screen.

   NOTE: This part number will be necessary, along with the VIN, to retrieve the correct coding file. Always use the original part number.

d. Click the Home icon to return to the main menu.

C. IMMOBILIZER REGISTRATION PROCEDURE (VEHICLES WITHOUT KOS)

!! IMPORTANT !! **Start the procedure with the old ETACS ECU.**

1. Perform ENG key code registration (Immobilizer).
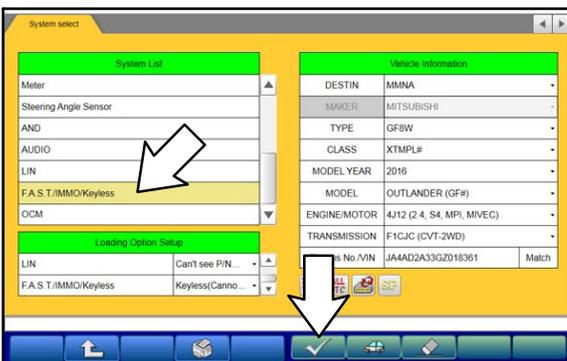
   a. From the System List, select "F.A.S.T./IMMO/Keyless" then click the check mark at the bottom of the screen.
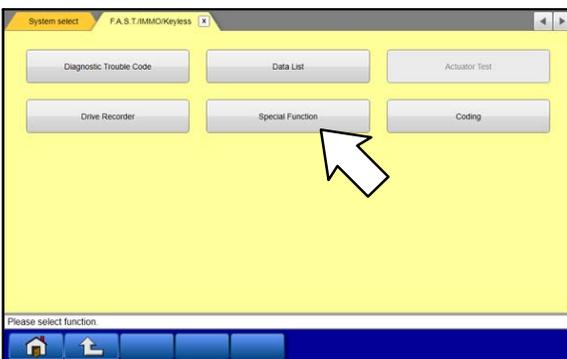
   b. Click "Special Function."
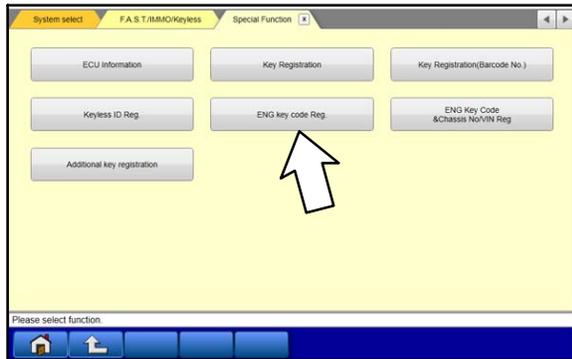
c. Click "ENG key code Reg."
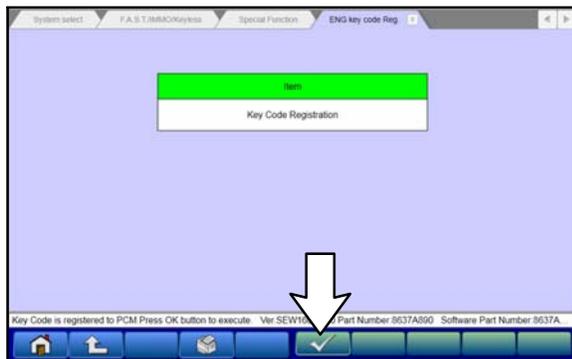
d. Click the check mark at the bottom of the page to execute the "Key Code Registration."

    NOTE: The Secret Key Code (SKC) will be newly copied from the ETACS immobilizer to the Engine ECU.
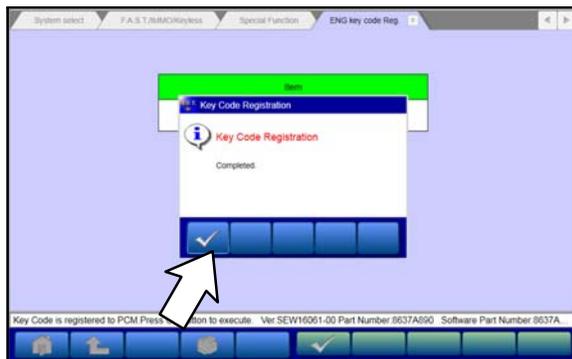
e. The "Completed" message will appear after the command is successfully executed.
    Click the check mark to continue.

    **NOTE: If a DTC is set in the ETACS, it is not possible to save the coding. In case of a DTC, download the Variant Coding file for ETACS from the MDL through MEDIC.
    After downloading the Variant coding file for ETACS, proceed to step 4, Chassis No./VIN Writing (ETACS).**

2. Save the ETACS Coding Data.
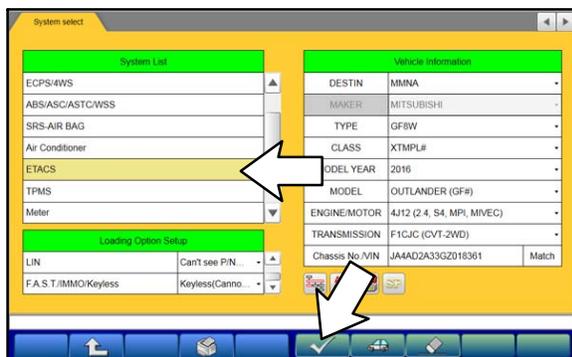
a. Select "ETACS" in the System List, then click the check mark at the bottom of the screen.
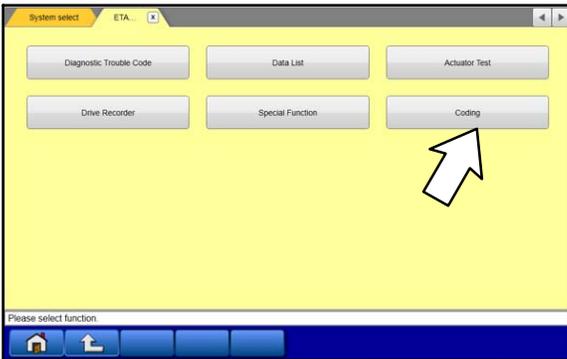
b. Select "Coding" in the ETACS system menu.
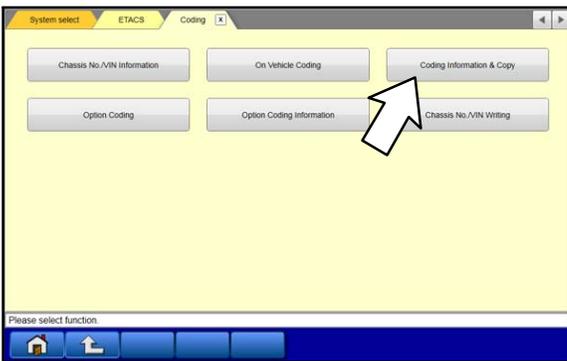
c. Select "Coding Information & Copy" in the ETACS Coding menu.

d. Click the Save button to save the ETACS coding data ".kon" file from the old ETACS to the MUT-III HDD.
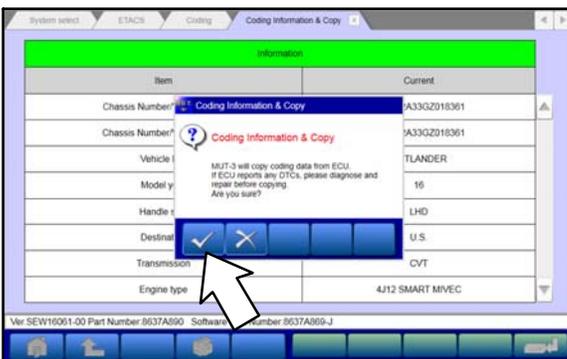
e. A "Coding Information & Copy" message will appear. Read the message, then click the check mark to confirm and save the coding data.
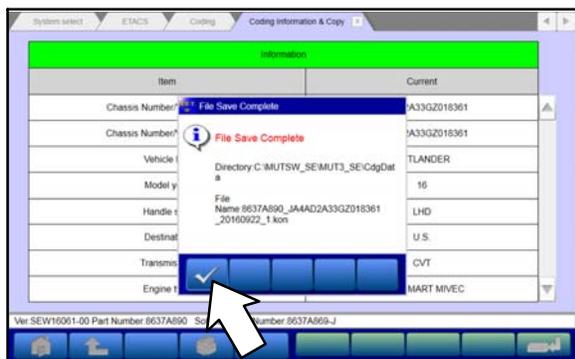
f. A "File Save Complete" message will appear. Click the check mark to confirm and exit.

3. Replace the old ETACS with the new ETACS.
    Follow procedures in the applicable Service Manual.

4. Perform Chassis No./VIN Writing (ETACS).
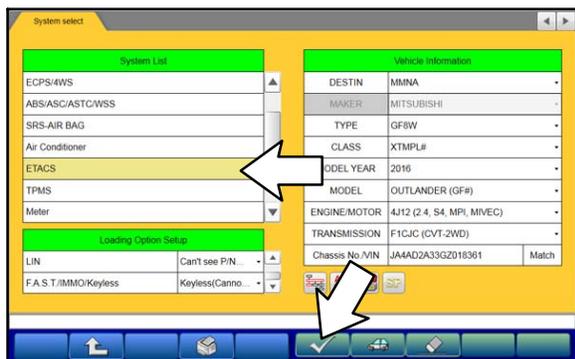
a. Go back to the System Select screen and select "ETACS" in the System List, then click the check mark at the bottom of the screen.

b. Click "Coding" in the ETACS system menu.
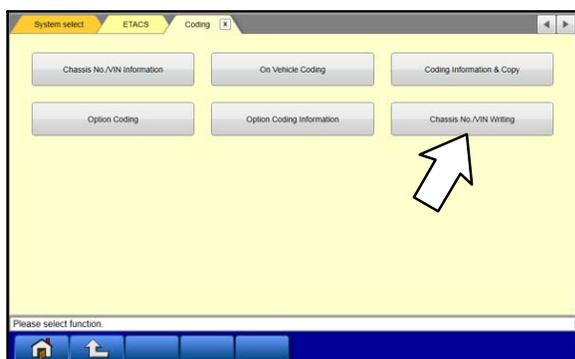
c. Click "Chassis No./VIN Writing" in the ETACS Coding menu.
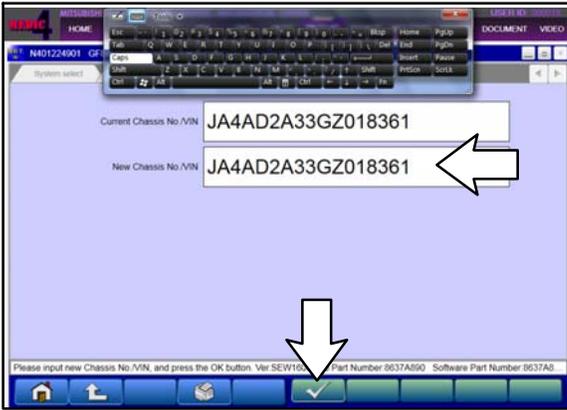
d. Enter the original VIN in the "New Chassis No./VIN" input field.

Click the check mark at the bottom of the screen to confirm.

NOTE: If using Toughpad, it may be necessary to activate the keyboard from upper left of the screen.

e. A message will appear "Chassis Number or VIN will not be changed. Are you sure?"

Click the check mark in the dialog box to confirm and execute the chassis number registration command.

5. Perform On Vehicle Coding (ETACS).
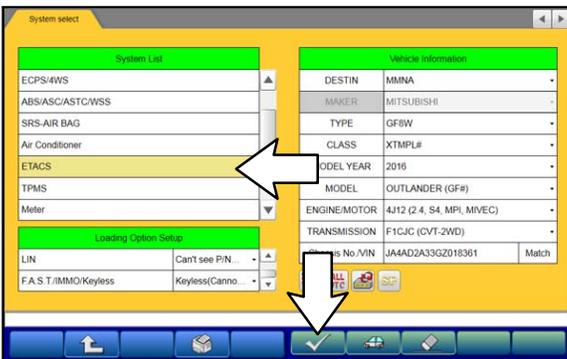
a. Go back to the System Select screen and select "ETACS" in the System List, then click the check mark at the bottom of the screen.
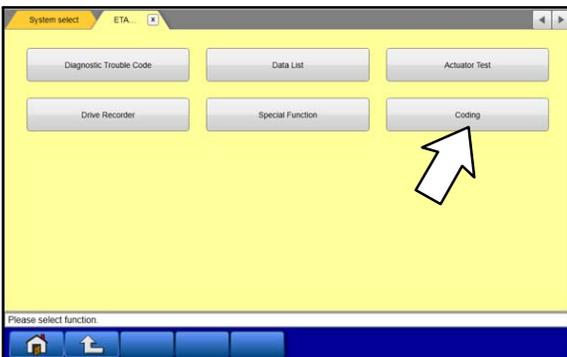
b. Click "Coding" in the ETACS system menu.
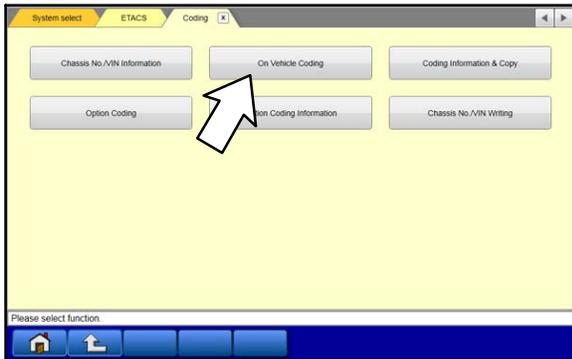
c. Click "On Vehicle Coding" in the ETACS Coding menu.
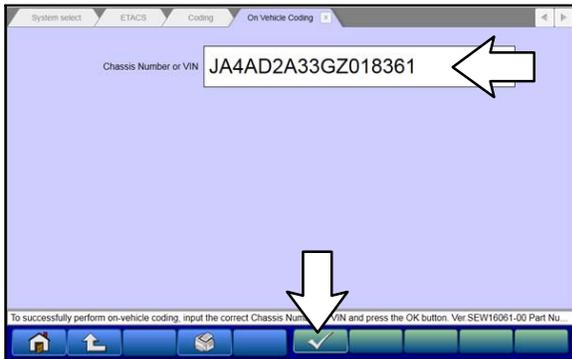
d. Enter the original VIN in the "Chassis Number or VIN" input field.

   Click the check mark to confirm.
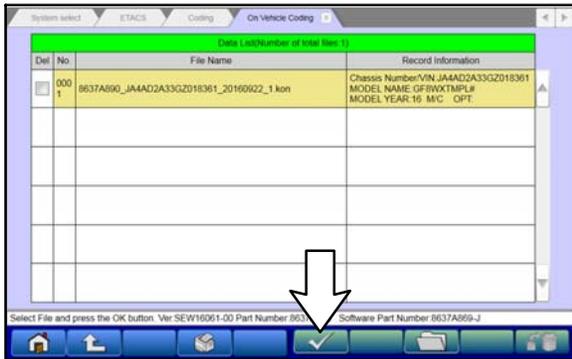
e. The coding ".kon" file is displayed in the Data List.

   Click the check mark at the bottom of the page to confirm.
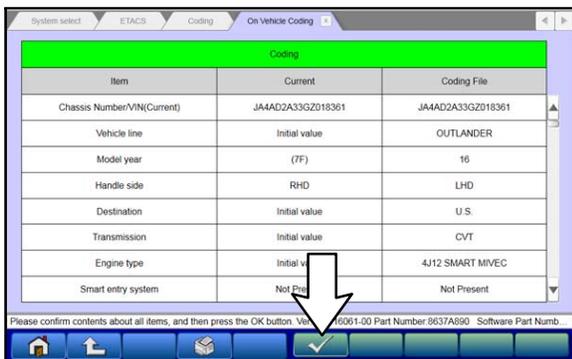
f. The current ETACS coding data and coding file data will be displayed.

   Click the check mark at the bottom of the page to confirm.
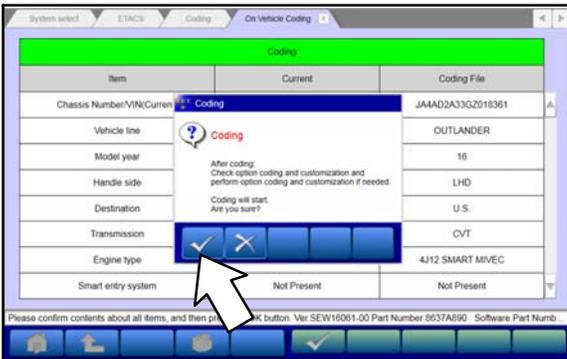
g. In the "On Vehicle Coding" dialog box, click the check mark to confirm and execute the ETACS variant coding.
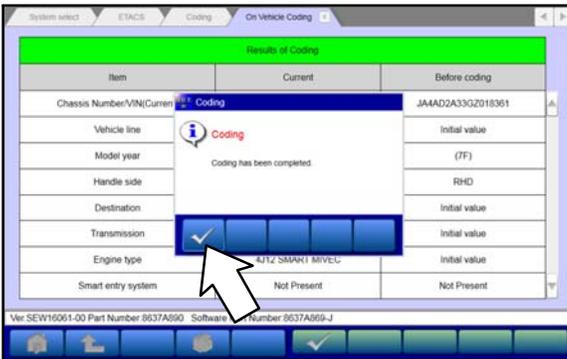
h. A "Coding has been completed." message appears in the dialog box.

   Click the check mark to display the new ETACS coding data.

6. Complete Chassis No./VIN Writing (Immobilizer).
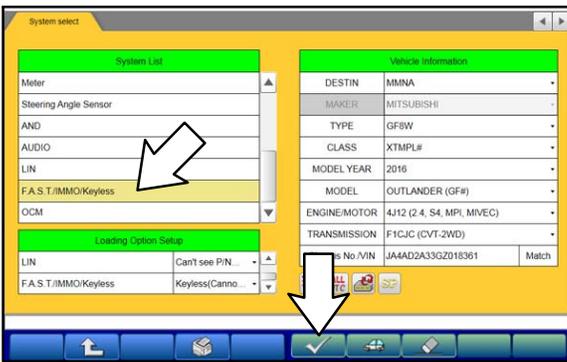
a. Click the home button to go back to the System Select menu. Select "F.A.S.T./IMMO/Keyless" from the System list, then click the check mark at the bottom of the screen.
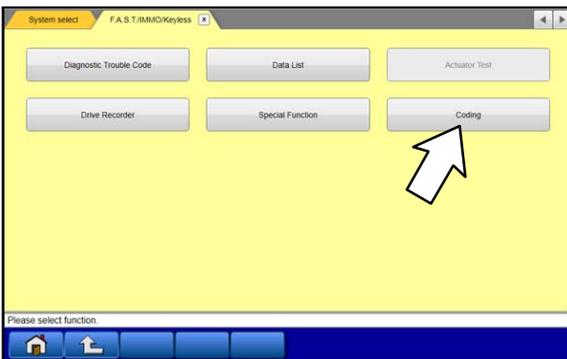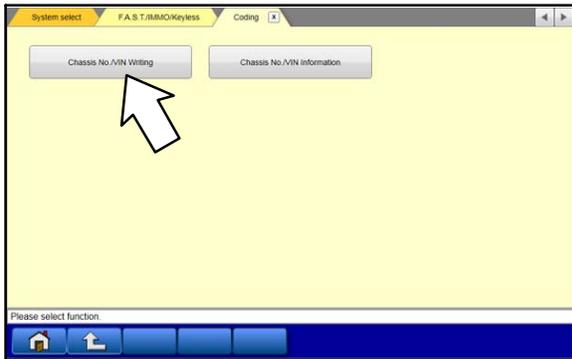
b. Click "Coding."

c. Click "Chassis No./VIN Writing" in the Coding menu.
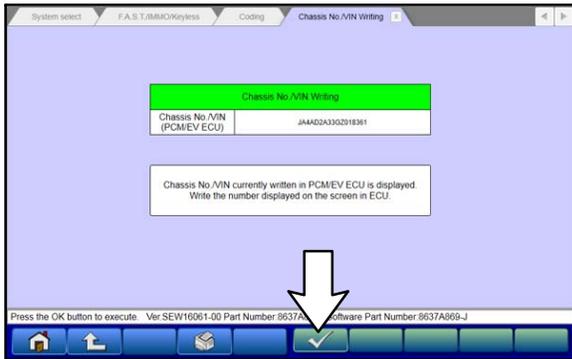
NOTE: It will take approximately 5 seconds before the VIN appears. This is the number which is programmed in the Engine ECU.

d. Click the check mark at the bottom of the screen to confirm.
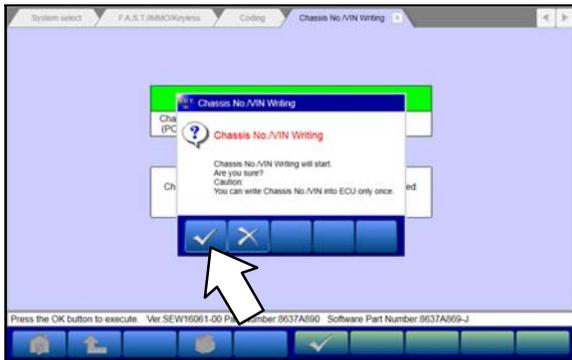
e. In the "Chassis No./VIN Writing" dialog box, click the check mark to confirm and execute the Immobilizer Chassis No. Writing.

At this point, the Secret Key Code and chassis number programmed in the Engine ECU are copied to the ETACS immobilizer.
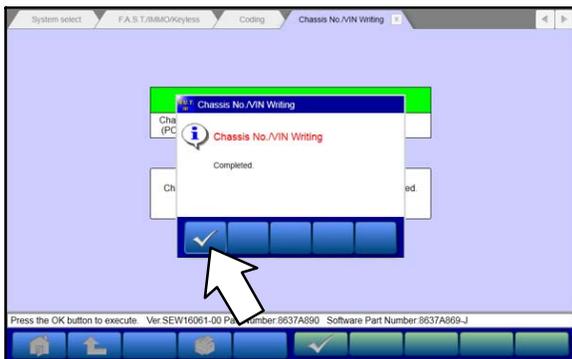
f. Click the check mark in the dialog box when it shows "Completed."

Now the Engine ECU, immobilizer, and original keys all contain the same Secret Key Code.

7. Complete key registration (Immobilizer).

a. Return to the Immobilizer menu and select "Special Function."
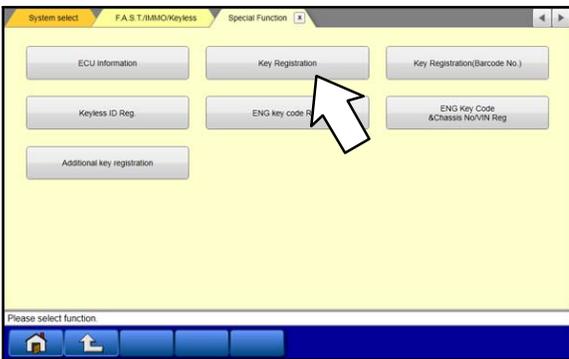
b. Click "Key Registration."
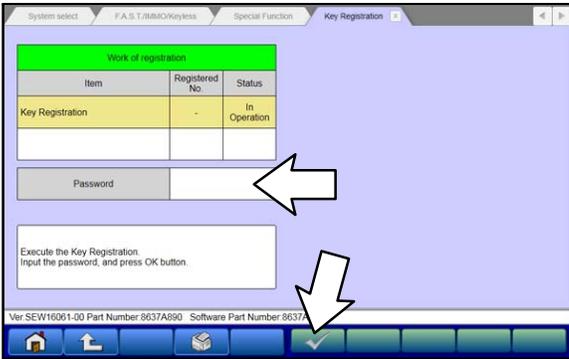
c. Enter the Immobilizer password for Outlander in the input field, then click the check mark to confirm and start registration of the original keys.

d. The Key Registration dialog box will show a "Completed" message when a key is successfully registered. Repeat the procedure shown in the message until all keys are registered.

Click the Cancel button (X mark) to stop the registration when all keys are registered.

8. Perform the RKE learning procedure for all keys registered to the vehicle.
    For detailed instructions, refer to the ID Codes Registration Instructions on MDL under
    parts‗service > service tech resources > Service Related Items > ID Codes Registration Instructions.

▶   *9. Go to "**E. AFTER IMMOBILIZER & KEY REGISTRATION.**"*

▶   ***NOTE: If key registration fails with the above instructions, the key set MUST be replaced and re-registered with the barcode method.   Go to "D. NEW KEY SET REGISTRATION: BARCODE METHOD."***

▶   *D. NEW KEY SET REGISTRATION: BARCODE METHOD (VEHICLES WITHOUT KOS)*

▶   ***NOTE: Follow this method <u>ONLY</u> if key registration fails with the previous ID code registration instructions.***

▶   *1. Order a new Lock Cylinder and Key Set.*

    ADDITIONAL PARTS for NEW KEY SET REPLACEMENT

▶   *New Key Cylinder Set w/Barcode Tag*
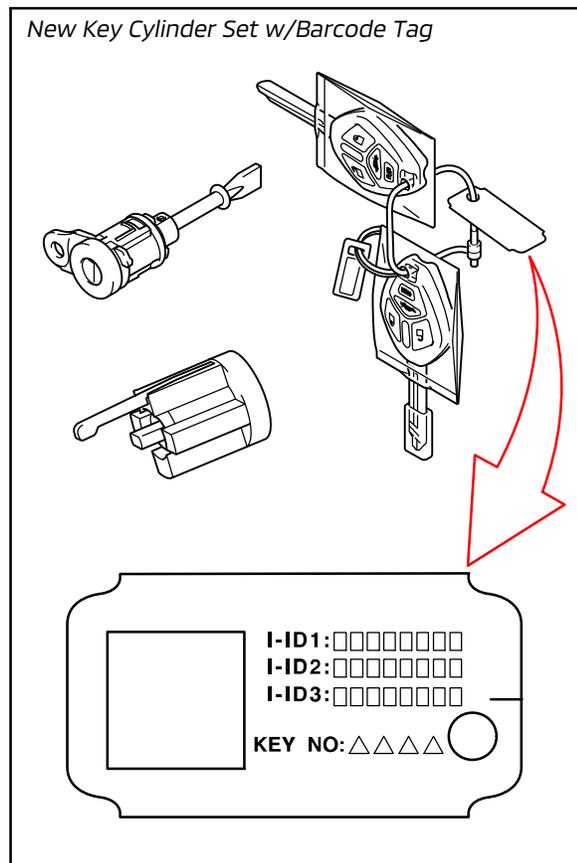
2. Replace the Lock Cylinder and Key Set with the new parts.

▶   *3. Register the NEW keys (Barcode Method) to the vehicle.*
    For detailed instructions, refer to the ID Codes Registration Instructions on MDL under
    parts‗service > service tech resources > Service Related Items > ID Codes Registration Instructions (Vehicles Without KOS).

▶   *4. Go to "**E. AFTER IMMOBILIZER & KEY REGISTRATION**."*

I-ID1:□□□□□□□□
I-ID2:□□□□□□□□
I-ID3:□□□□□□□□
KEY NO:△△△△○

► ***E. AFTER IMMOBILIZER & KEY REGISTRATION***

1. Perform TPMS registration for all tires.
   For detailed instructions, refer to the appropriate Service Manual.

2. Perform an Erase and Read All DTCs.
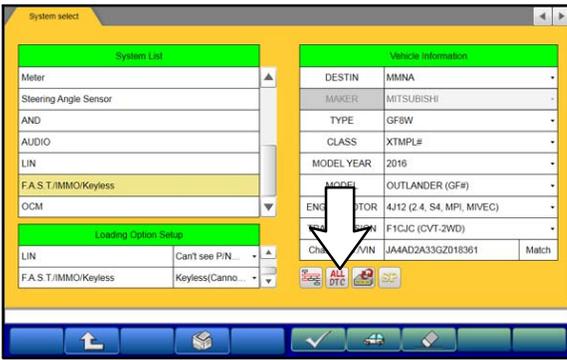
a. Click the home button to go back to the System Select menu.

   Click the "ALL DTC" button.
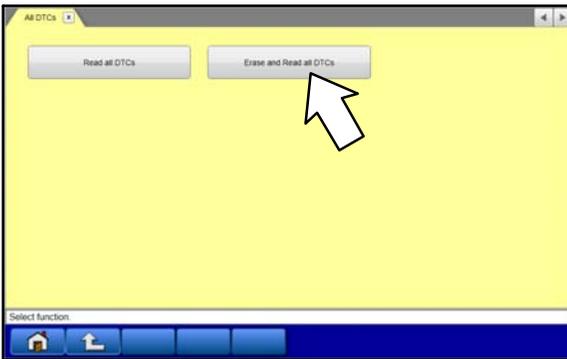
b. Select "Erase and Read All DTCs."
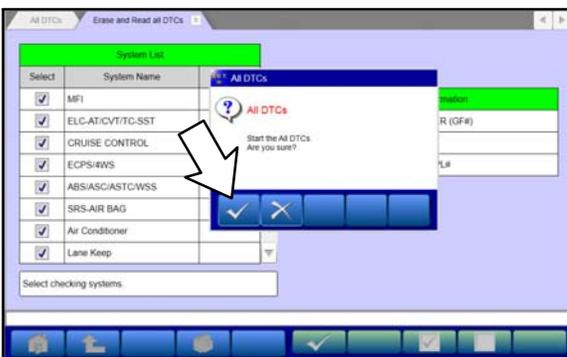
c. A window will pop up asking you to confirm DTC erasing. Click the check mark for DTC erasing and reading to begin.
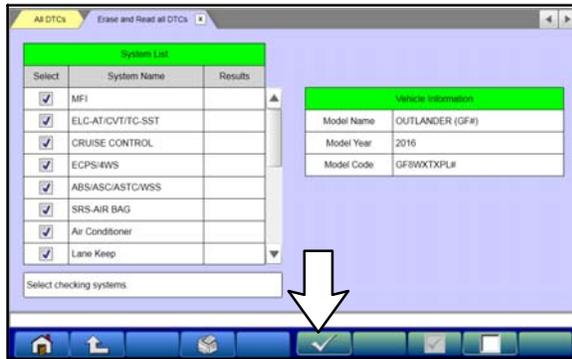
d. The "System List" on the left side of the screen will have all selections checked. <u>Do not</u> change these selections. DTCs may be set if the vehicle is equipped with options that are unchecked.

e. Click the check mark to continue.
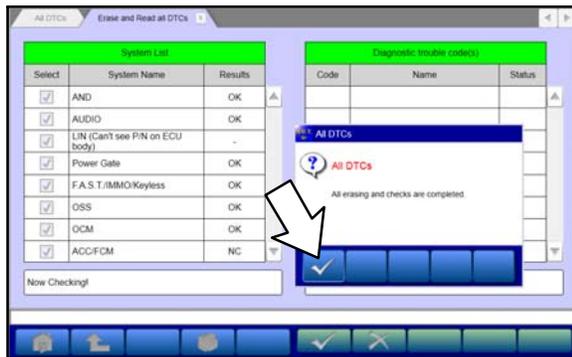
3. When DTC erasing is completed, click the check mark in the pop-up message that reads "All erasing and checks are completed."

   a. If DTCs return after reprogramming, click the check mark to clear the window. Diagnose and repair per the Service Manual.
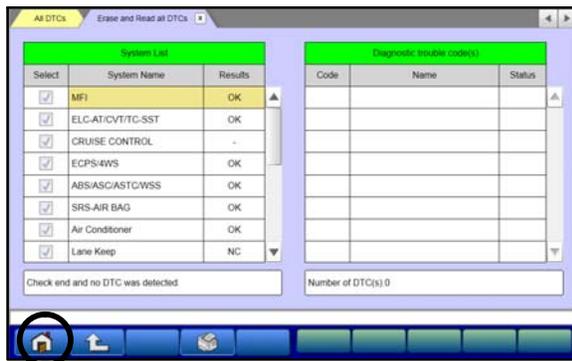
   b. If DTCs do not return, click the check mark to clear the window, then click the Home icon at the lower left of the screen to return to the main menu.

4. Turn off the ignition switch and disconnect the MUT-III.

PARTS INFORMATION

The following parts are listed for reference only. Order only the Genuine Mitsubishi Parts listed below if needed.

Description	Model	Model Year	Part Number	Quantity
ETACS ECU	Outlander	2014	8637A883	1
		2014-2015	8637A887	1
		2014-2016	8637A890	1

▶ *NOTE: Part numbers listed above may be superseded when ordered in ASA CAPS.*

▶ *ADDITIONAL PARTS for NEW KEY SET REPLACEMENT*

NOTE: Order this part ONLY if key registration failed after following the ID code registration instructions in "C. Immobilizer Registration Procedure."

▶

Description	Model	Model Year	Part Number	Quantity
Cylinder & Key Set, Lock	Outlander	2014-2016	6369A053	1

WARRANTY INFORMATION

This bulletin is supplied as technical information only and is not an authorization to repair. If an affected vehicle is reported with the described condition, diagnose the condition, repair as described in this bulletin and submit a normal warranty claim using the following information.

Operation	Labor Operation Code	Nature Code	Cause Code	Time Allowance
Re-register Immobilizer ID after Replacing ETACS ECU	548501PE	59D	990	0.9 hrs.

Warranty Coverage: 8 years / 80,000 miles; (Canada: 8 years / 130,000 kms)

▶ *ADDITIONAL WARRANTY INFORMATION for NEW KEY SET REPLACEMENT & REGISTRATION: BAR-CODE METHOD*

NOTE: Use the following Warranty information ONLY if key registration failed after following "C. Immobilizer Registration Procedure" and the Lock Cylinder and Key Set was replaced and registered.

▶

Operation	Labor Operation Code	Nature Code	Cause Code	Time Allowance
Replacement/Registration of New Key Set (Barcode Method)	547092UK	59D	990	1.0 hrs.

Warranty Coverage: 8 years / 80,000 miles; (Canada: 8 years / 130,000 kms)