

This service program replaces SP 431-021 dated 4.2013.

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| 8.2013 | <b>431</b> | <b>021</b> | <b>02</b> | 1(6) |

Transmission ECU Programming  
OBD2013, D11H, D13H, D16H  
VHD, VN

## **SP 431-021, Transmission ECU Programming**

(August 2013)

### **Information**

Software updates with enhancements are available for the transmission electronic control unit (TECU). **This software update has been released to resolve issues for loss of calibration and the ability to enable single PTO functionality.**

### **Required Tools**

Premium Tech Tool version 2.02.41 or higher

Diagnostic Connector 88890304

Communication Interface 88890300 with firmware 1.12.0.2 or higher

### **Procedure**



#### **DANGER**

Do not attempt to repair or service this vehicle without having sufficient training, the correct service literature and the proper tools. Failure to follow this could make the vehicle unsafe and lead to serious personal injury or death.

- 1 Verify service program eligibility by checking service program status in eWarranty.
- 2 Connect Premium Tech Tool (PTT) to the vehicle diagnostics connector using the 16 pin OBD cable 88890304 and Communication Interface 88890300. Connect the PC to a functional LAN or modem connection and a 120 Volt AC source (do not use intermediate storage).
- 3 Turn the ignition switch "ON" and Identify Vehicle is displayed.

- 4 Once the vehicle has been identified, enter the Work Order Number information, then click Start Work.

**Work Order Number**

Enter a work order number or select a recently used work order number in the list.

**Enter work order number:**

**Select a recently used work order:**

| Work Order No | User ID | Date |
|---------------|---------|------|
|---------------|---------|------|

**Enter Notes:**

Start Work Cancel

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- 5 From the Main Menu select Program and **then** Program Electronic Control Unit 1700-08-03-39. Then click Start.

Tech Tool

Tech Tool Links Help

**Product** **Product History** **Diagnose** **Test** **Calibrate** **Program** **Impact**

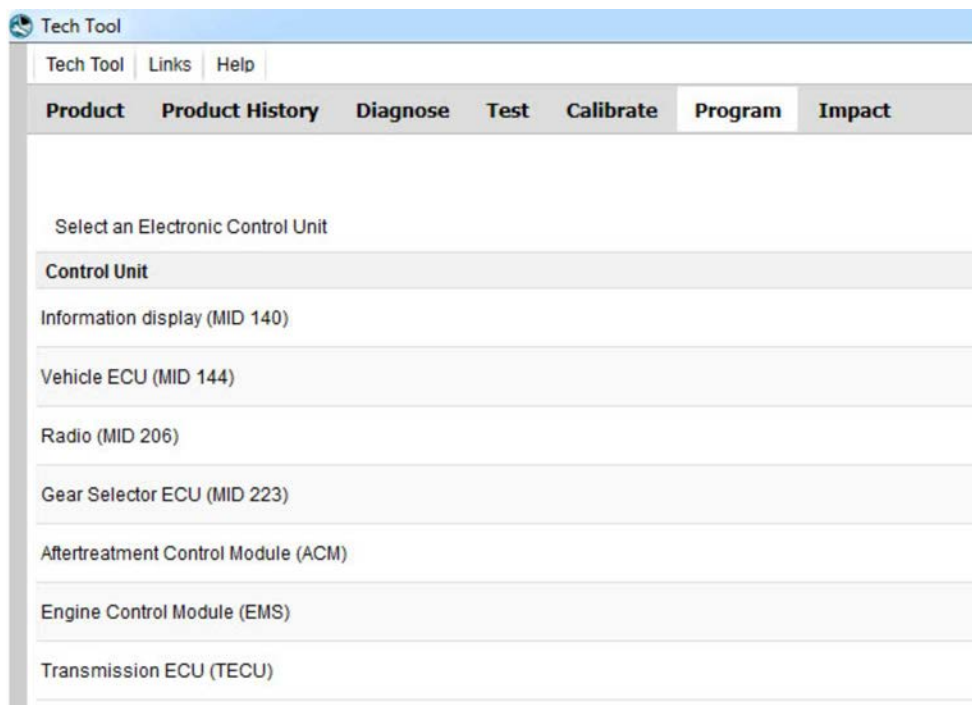
**Program**

Select an operation and click Start

- 1700-08-03-39 Program Electronic Control Unit
- 1700-22-03-03 Parameter, programming
- 1700-22-03-28 Accessory Kit
- 1700-22-03-12 Replace Electronic Control Unit
- 1700-22-03-13 Program with Stored Software
- 1700-08-03-40 Handle Component
- 2841-22-03-04 Create Engine Label
- 3810-22-03-10 Change Language

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6 Select Transmission ECU (TECU) from the list.



The screenshot shows the 'Tech Tool' application window. The 'Program' tab is selected in the top navigation bar. Below the navigation bar, there is a section titled 'Select an Electronic Control Unit'. A list of control units is displayed, each in a separate row with a light gray background. The units listed are: Information display (MID 140), Vehicle ECU (MID 144), Radio (MID 206), Gear Selector ECU (MID 223), Aftertreatment Control Module (ACM), Engine Control Module (EMS), and Transmission ECU (TECU). The 'Transmission ECU (TECU)' is the last item in the list.

| Control Unit                        |
|-------------------------------------|
| Information display (MID 140)       |
| Vehicle ECU (MID 144)               |
| Radio (MID 206)                     |
| Gear Selector ECU (MID 223)         |
| Aftertreatment Control Module (ACM) |
| Engine Control Module (EMS)         |
| Transmission ECU (TECU)             |

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7 Select Program to update the electronic control unit with the latest software.

1700-08-03-39 Program Electronic Control Unit

Programming Options

☒ Update Electronic Control Unit with latest software

☐ Reload Electronic Control Unit with existing software

☐ Program software for development products

Program >

Cancel

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8 Certain conditions must be met to continue with programming: battery voltage above 10v, parking brake applied, and ignition key in ON position with engine not running. When all conditions have been met, click Continue to proceed with programming.

1

> 10 V

12.7 V

2

(P)

(P)

(P)

3

On

= 0 rpm

On

0 rpm

1700-08-03-39 Program control unit - Update software

Automatically checked conditions

1 Battery voltage above 10 V

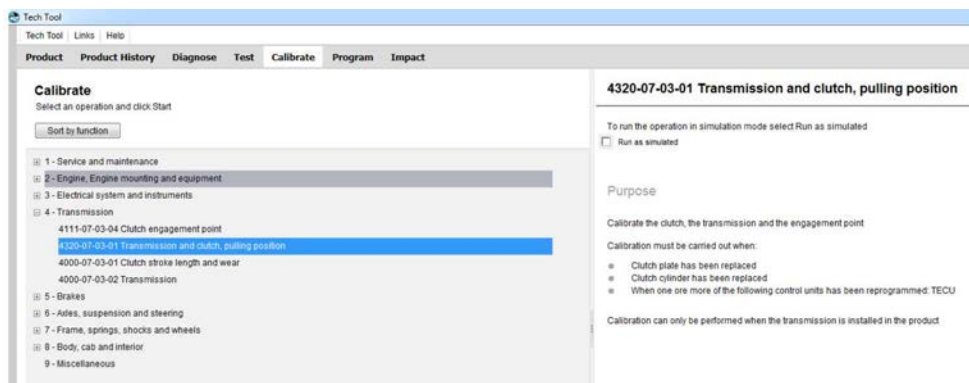
2 Parking brake applied

3 Ignition key in ON position. Engine not running

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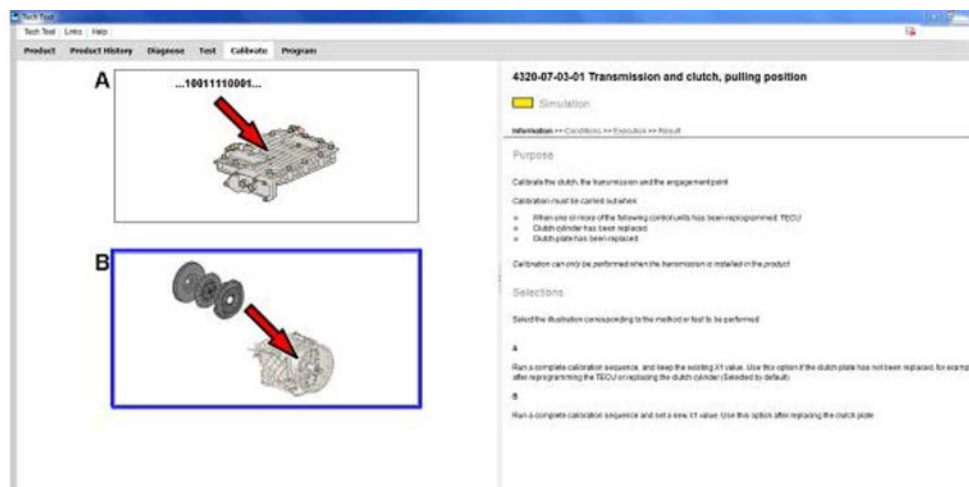
9 When programming is complete, click Exit to return to Main Menu.

- 10 Once TECU programming is complete, select Calibrate from the Main Menu. Select 4320-07-03-01 Transmission and clutch, pulling position and click on Start



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- 11 If the calibration fails, it is due to a missing X1 value (P1AOB) in VDA. Run calibration again by selecting option "B" to set new X1 value.



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- 12 When calibration is complete, clear any diagnostic trouble codes and Finish Work.

**Reimbursement**

|                                                                                                                                  |                                   |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| <b>This repair is covered by an authorized Service Program. Reimbursement is obtained via the normal claim handling process.</b> |                                   |
| <b>Claim Type (used only when uploading from the Dealer Bus. Sys.)</b>                                                           | B                                 |
| <b>Recall Status</b>                                                                                                             |                                   |
| Vehicle inspected, repair not required                                                                                           | 1- Inspected<br>OK                |
| Vehicle repaired per instruction                                                                                                 | 2- Modified<br>per<br>instruction |
| <b>Labor Code</b>                                                                                                                |                                   |
| Primary Labor Code                                                                                                               | 43122-0-02<br>— 0.4 hrs.          |
| Time to take charge and determine campaign status                                                                                | 17003-0-0<br>— 0.3 hrs.           |
| <b>Causal Part</b>                                                                                                               | 3092515                           |
| <b>Authorization Number</b>                                                                                                      | SP431021                          |
| <b>Expiration Date</b>                                                                                                           | 31-DEC-<br>2013                   |

**Note:** Take Charge Time is not included in the Labor Code for this operation. Take charge may be eligible but can only be used once per repair visit. If vehicle is having other warranty repairs performed, take charge should be charged to the warranty repair, otherwise take charge can be charged to this service program.