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**Title**: **Programming Instructions for A26a Engine Swaps**

**Applies To**: **A26a (2017-2021 A26) Engine Swaps (both NEU and new)**

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# CHANGE LOG

**Please refer to the change log text box below for recent changes to this article:**

```
12/09/2025 - Added info about reman engines
9/12/2025 - Changed "A26" to "A26a" and added "2017-2021"
09/09/2025 - Added additional screenshot description
08/29/2025 - Changed process to reflect using SDS
07/09/2025 - Fixed broken iKnow Link
```
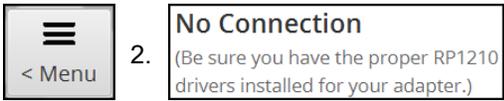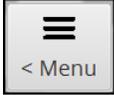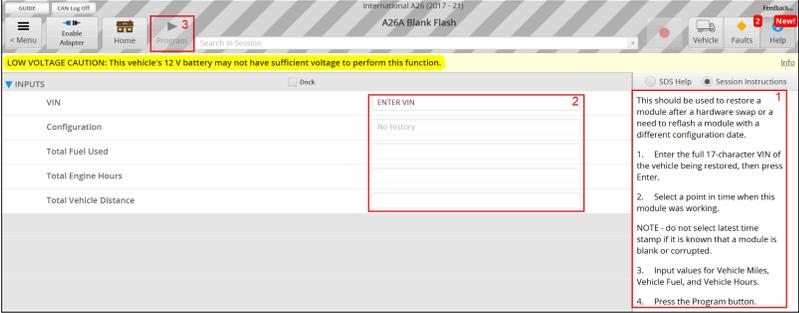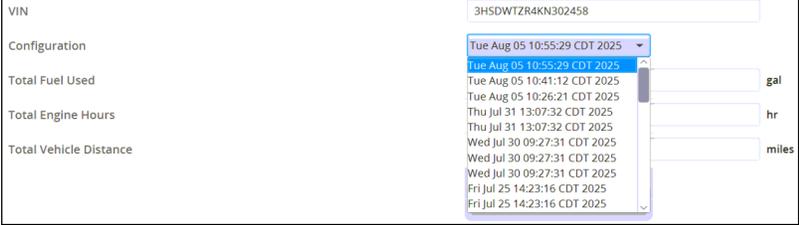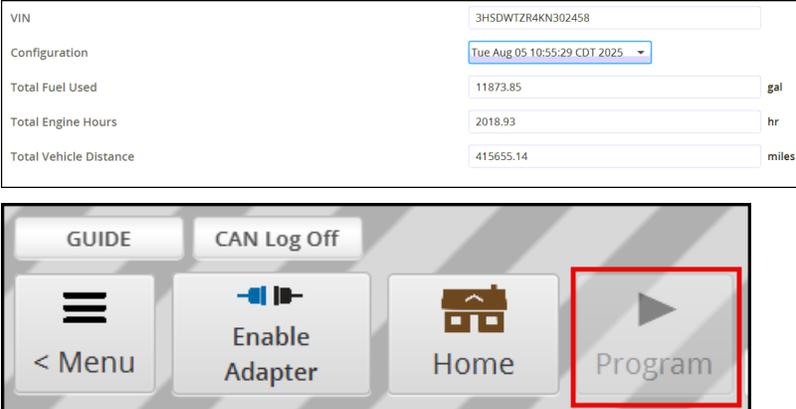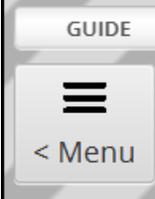
# DESCRIPTION

This document guides dealer technicians through the programming process for an A26a (2017-2021) engine swap (both NEU and new engines).

# PROCESS UPDATES

- This programming process has been rewritten because all A26a programming is now done through SDS (not NavKal).
- A26a engine swap case files should be submitted to the Powertrain group. The Vehicle Programming group can assist up on request from the dealer or Powertrain team.
- Normal A26a ESNs start with 124KM2Y. Reman A26a ESNs currently start with an "S". Do not update your ECM programming with reman ESNs as it will break the programming process.

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| PROGRAMMING STEPs | | | |
|---|---|---|---|
| 1. | Connect SDS to the old ECM on the old engine. Completing this step captures the parameters from the old ECM and will ensure you get the exact same programming into the new ECM. Connecting is all that is needed. | 1. ☰ < Menu    2. **No Connection** (Be sure you have the proper RP1210 drivers installed for your adapter.)    3. USB-Link 2, USB / USB-Link 2, Bluetooth / USB-Link 2, WiFi | |

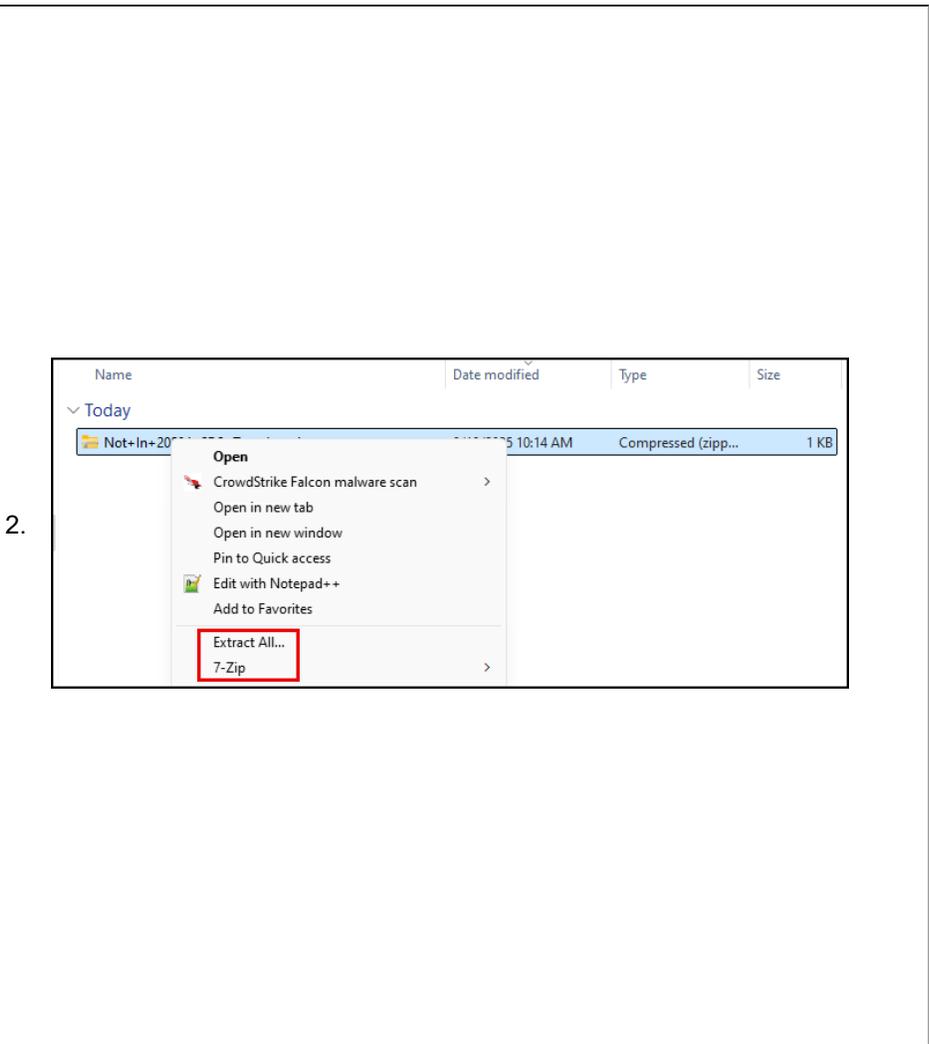| | | | |
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| 2. | Connect SDS to the new ECM.<br>　　1. Menu<br>　　2. Select Connection menu. If no connection has been selected previously, this menu item will show "No Connection".<br>　　3. Select Nexiq USB-Link 2 USB or Nexiq USB-Link 3 USB. **Only use a USB connection for Programming. Do not program via a wireless or bluetooth connection.** | 1. ☰ < Menu　2. **No Connection** (Be sure you have the proper RP1210 drivers installed for your adapter.) | 3. USB-Link 2, USB<br>USB-Link 2, Bluetooth<br>USB-Link 2, WiFi |
| 3. | Begin Programming Process<br>　　1. Menu<br>　　2. Programming<br>　　3. A26A Blank Flash | 1. ☰ < Menu　2. **Programming** | 3. **A26A Blank Flash** |
| 4. | Visual of programming screen<br>(click on picture to see full size pic)<br>　　1. Instructions<br>　　2. Data entry: VIN, Select Config Date, Miles/Hours/Fuel<br>　　3. Programming Button | International A26 (2017 - 21)<br>A26A Blank Flash<br>LOW VOLTAGE CAUTION: This vehicle's 12 V battery may not have sufficient voltage to perform this function.<br>INPUTS — VIN: ENTER VIN — Configuration: No History — Total Fuel Used — Total Engine Hours — Total Vehicle Distance<br>This should be used to restore a module after a hardware swap or a need to reflash a module with a different configuration date.<br>1. Enter the full 17-character VIN of the vehicle being restored, then press Enter.<br>2. Select a point in time when this module was working.<br>NOTE - do not select latest time stamp if it is known that a module is blank or corrupted.<br>3. Input values for Vehicle Miles, Vehicle Fuel, and Vehicle Hours.<br>4. Press the Program button. | |
| 5. | Enter VIN in "VIN" field, and wait for "Configuration" field to populate with a drop down menu full of options. | VIN: 3HTPCTZT9PN485845<br>Configuration: Contacting Server...<br>Total Fuel Used: Contacting Server...<br>Total Engine Hours: Contacting Server...<br>Total Vehicle Distance: Contacting Server... | |
| 6. | Per the SDS programming instructions (shown in step 4 screenshot), select a point in time when this module was working. In most cases, it would be the date representing the connection to the previous module on the previous engine. | VIN: 3HSDWTZR4KN302458<br>Configuration: Tue Aug 05 10:55:29 CDT 2025<br>Tue Aug 05 10:55:29 CDT 2025<br>Tue Aug 05 10:41:12 CDT 2025<br>Tue Aug 05 10:26:21 CDT 2025<br>Thu Jul 31 13:07:32 CDT 2025<br>Thu Jul 31 13:07:32 CDT 2025<br>Wed Jul 30 09:27:31 CDT 2025<br>Wed Jul 30 09:27:31 CDT 2025<br>Wed Jul 30 09:27:31 CDT 2025<br>Fri Jul 25 14:23:16 CDT 2025<br>Fri Jul 25 14:23:16 CDT 2025 — Total Fuel Used: gal, Total Engine Hours: hr, Total Vehicle Distance: miles | |
| 7. | Program:<br>　　1. Once all fields are populated with the correct info,<br>　　2. Click "Program" button | 1. VIN: 3HSDWTZR4KN302458<br>Configuration: Tue Aug 05 10:55:29 CDT 2025<br>Total Fuel Used: 11873.85 gal<br>Total Engine Hours: 2018.93 hr<br>Total Vehicle Distance: 415655.14 miles<br><br>2. GUIDE　CAN Log Off　☰ < Menu　Enable Adapter　Home　Program | |

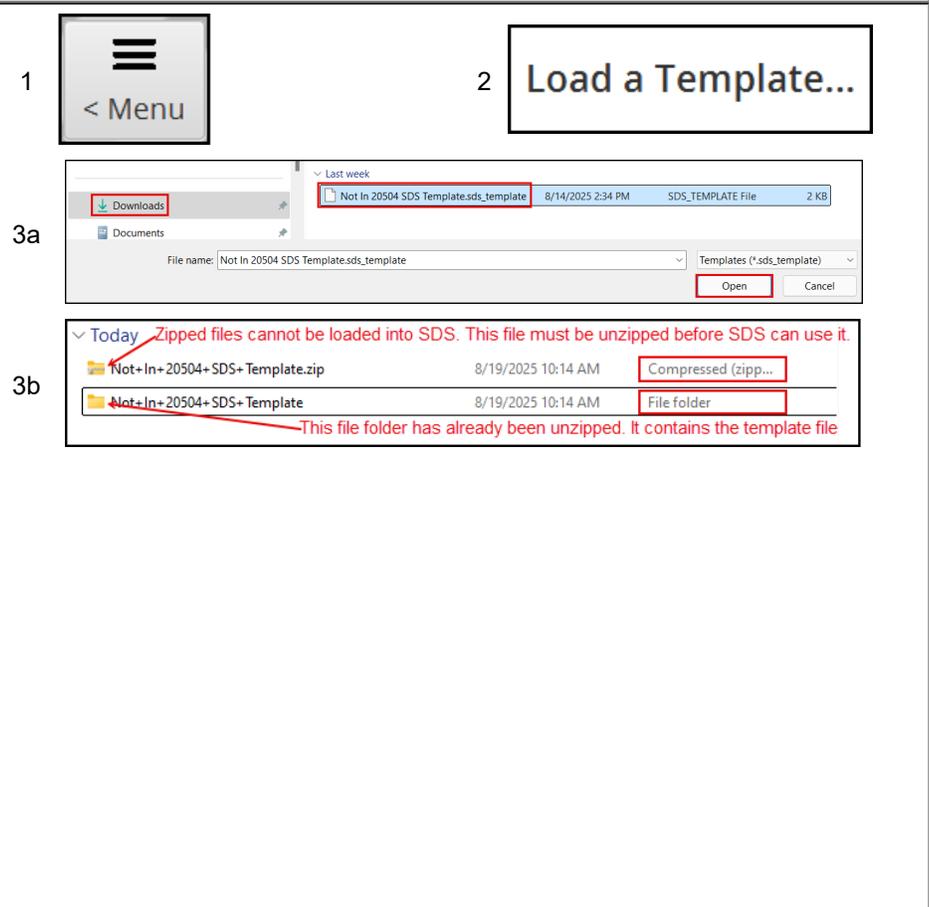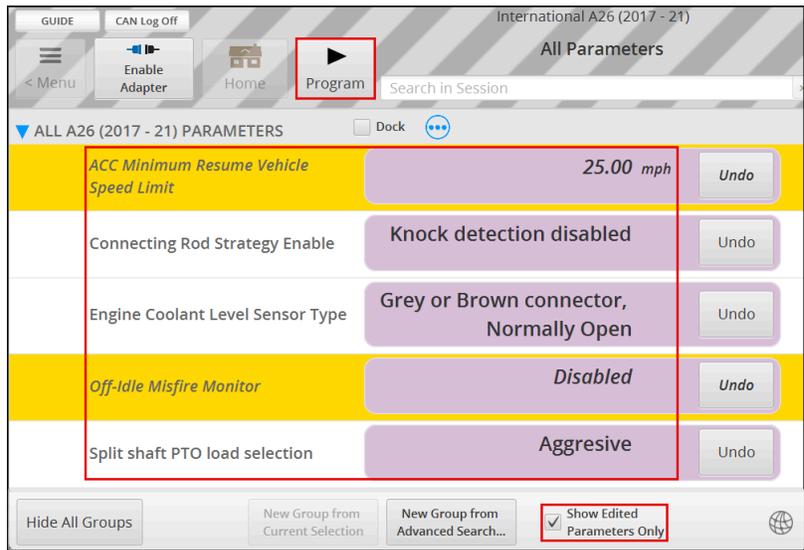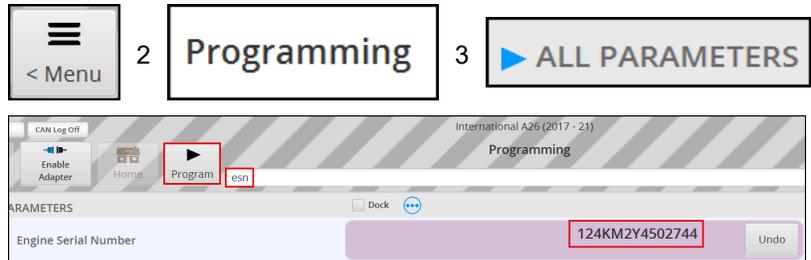| | | |
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| 8. | Getting Template:<br>　　1. Download Template: "[Not In 20504 SDS Template](#)"<br>　　2. Unzip Template: There are various ways to unzip a file.<br>　　　　a. Start by right clicking on the downloaded file,<br>　　　　b. then select an option that provides unzip functionality. The screenshot to the right shows 2 of the options you might see. (Some of the other options are: "Winzip", "Extract", "Extract To Here", or possibly other options.)<br>　　　　c. If you need assistance with this step, you can:<br>　　　　　　1. work with a coworker<br>　　　　　　2. work with your service manager/advisor<br>　　　　　　3. or, submit a case file to the EZ Tech support team (click [here](#) for Case File Opening Best Practices) | 2. |  |
| 9. | Loading "Not in 20504 SDS Template" into SDS<br>　　1. Menu<br>　　2. Load a Template<br>　　3a. Select unzipped template file<br>　　3b. SDS cannot use zipped files. After downloading, you must unzip the template file. See step 8 (above) for details.<br>　　4. Programming Screen<br>　　　　a. check box "Show Edited Parameters Only" (bottom of screenshot)<br>　　　　b. large red box shows parameters contained in template, and their values<br>　　　　c. click "Program" button<br><span style="color:red">note: screenshot 4 shows 3 parameters colored in white and 2 parameters colored in yellow. Yellow parameters are only available to users that have engineering access. Dealer</span> | 1<br><br>3a<br><br>3b | <br><br><br> |

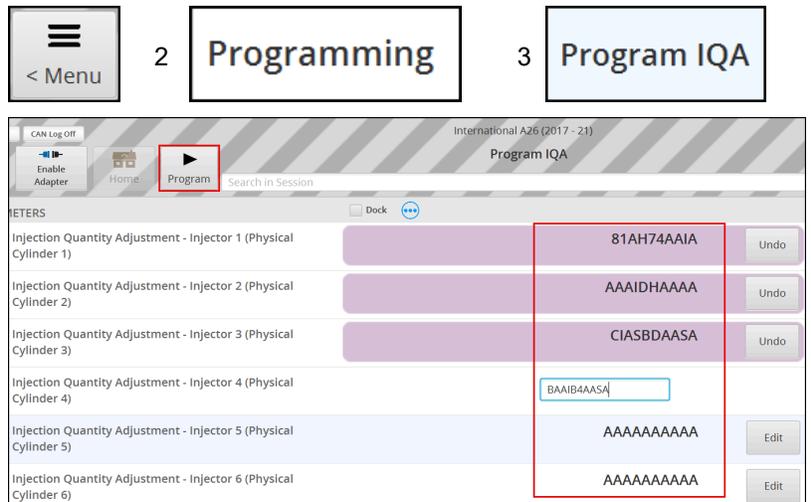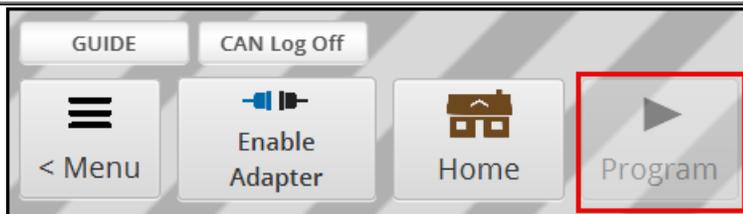| | | | |
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| | technicians will not see those parameters or their values when logged into SDS. As long as the white parameters from screenshot 4 show correctly in your SDS, you can trust that the other 2 that you cannot see are also correct. | 4 |  |
| 10. | Change ESN: (Normal A26a ESNs start with 124KM2Y. Reman A26a ESNs currently start with an "S". Do not update your ECM programming with reman ESNs as it will break the programming process.)<br>1. Menu<br>2. Programming<br>3. All Parameters<br>4. Programming Screen<br>   A. Search for "ESN"<br>   B. Enter new ESN<br>   C. Click "Program" button | |  |
| 11. | Change IQAs - there are 2 different processes depending on the type of A26a engine being installed (NEU vs new):<br>1. NEU (New Exchange Unit) engine. This type of engine has an "R" in the ESN (ie 124KM2R1234567): get IQAs from paper provided with engine.<br>2. New engine. This type of engine has a "Y" in the ESN (ie 124KM2Y1234567): get IQAs from Vehicle Programming Group via case file.<br>3. Reman engine. This type of engine has an ESN that begins with an "S". Get IQAs from the injectors. | |  |
| 12. | Click "Program" button | |  |

| | | |
|---|---|---|
| 13. | Check to see if the miles in the cluster odometer are accurate (they might have doubled). If miles are not accurate, use DLB to update the body controller and cluster to the latest software version. Then use DLB to "set odometer". You can find that option in DLB under the "Tools" menu. | **Tools** Diagnostics  Help<br><br>↤ Activate Com Link     F6<br>Select Com Link     ❯<br><br>🔓 Get Data     ❯<br>**Set Odometer...** |

# OTHER RESOURCES

[Master Service Information Site](#)

[RC2600001 - Vehicle Programming Resource Center](#)

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