# Installation Guide

**Select 2019-2024 RAM 1500**
**Push-to-Start Trucks**

## Kleinn SKU # - RSRAM72

| Years | RAM (Push-to-Start) | | | | | | |
|---|---|---|---|---|---|---|---|
| 2019-2024 | 1500 | 19 | 20 | 21 | 22 | 23 | 24 |
| | | | | | | | |

**Automatic transmission vehicles manufactured for sale in the US and Canada.Only**

## Introduction:

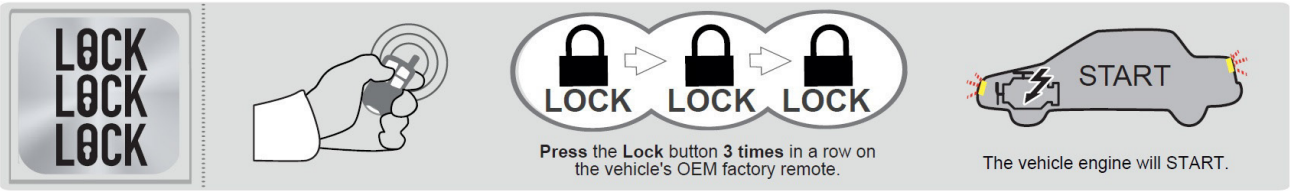
- This is a pre-wired plug and play kit and all the required connections have been made within the harness.
- We have already loaded the correct firmware into the remote start module. You will need to pair the module to your vehicle when the installation is complete. Programming Instructions begin at Step 3.
- This remote start will monitor the vehicle lock circuit and use the pulses generated by pressing lock 3 times on your OEM remote to start the vehicle.

## Disclaimer:

Neither the manufacturer nor the distributor of these components are responsible for damages of any kind either indirectly or directly caused by the components, except for the replacement of the components in case of manufacturing defects. This guide is subject to change without notice. Refresh your browser cache or use different browser (Edge, Chrome, Firefox, etc.) to view the latest update.

## Remote Start Activation:

**Remote Starter Activation:** Press Lock>Lock>Lock on your OEM remote to start the vehicle.
(If your Ram is not equipped with keyless entry or for increased activation range, you can upgrade to the Kleinn RFKIT, RFKIT2W, RFKIT4, or MOBILE2W Smart Phone kits)




**Check out our extended range RF Remote or Smartphone Control upgrade kits**

**Click Here for Upgrade Options**

- **Firmware pre-loaded:** As part of the service Kleinn provides, we have pre-flashed the compatible firmware version and options into your **HCX** module for you so you are ready to begin the installation in the vehicle. You will need to program the module to the vehicle when the installation




## Parts Required:

- Idatalink HCX Module Pre-Flashed (RSA CH13) Firmware
- T-Harness HCX-CH12A-CH12B-USBC

## Overview

### There are 5 basic steps to this remote start installation:

1. Preparation
2. Wiring
3. Programming
4. Testing the system
5. Finishing up!

## STEP 1: Preparation

This remote start kit is a **PLUG & PLAY INSTALLATION TYPE**. This kit uses a plug-in T-Harness which eliminates any hardwired "wire-to-wire" connections that are typically required. The physical attachment of this product will require only plug-in connections. Simply plug the T-Harness into the vehicle, then program the module and the remote starter will be ready for use.

- Any vehicle panels required to gain access to the needed plugs outlined in this Tip Sheet will need to be removed. The bulk of the installation typically takes place in the driver's side under dash area. You may need to access the passenger side under dash area for some vehicles. Refer to the Wire Diagram for the locations that need to be accessed in the vehicle. Remember the order that you remove the panels.
- Wait to mount the remote start component(s) in the vehicle until after you have completed the wiring and have tested the system. Keep in mind where you plan to mount the component(s) when routing your wires to avoid having to unplug after programming. The component(s) can be mounted to a rigid wire bundle under the dash using zip ties. Look for an open and convenient location in the vehicle that will fit the component(s). Pay attention to moving parts like the pedals, e-brake and steering column. Be sure to route your wiring away from those areas. It is best to route your wires along with the vehicles factory wires, as this is typically a safe location and it keeps the install neat.
- If your T-harness has loose wires with no plugs at the end they will not be needed for standard installation in this application. Tape up any extra wires or tuck them away with the T-harness and isolate them so they are not in the way. Adding options may require additional wiring connections.

**Download WEBLINK KLON Programming Software for Later**

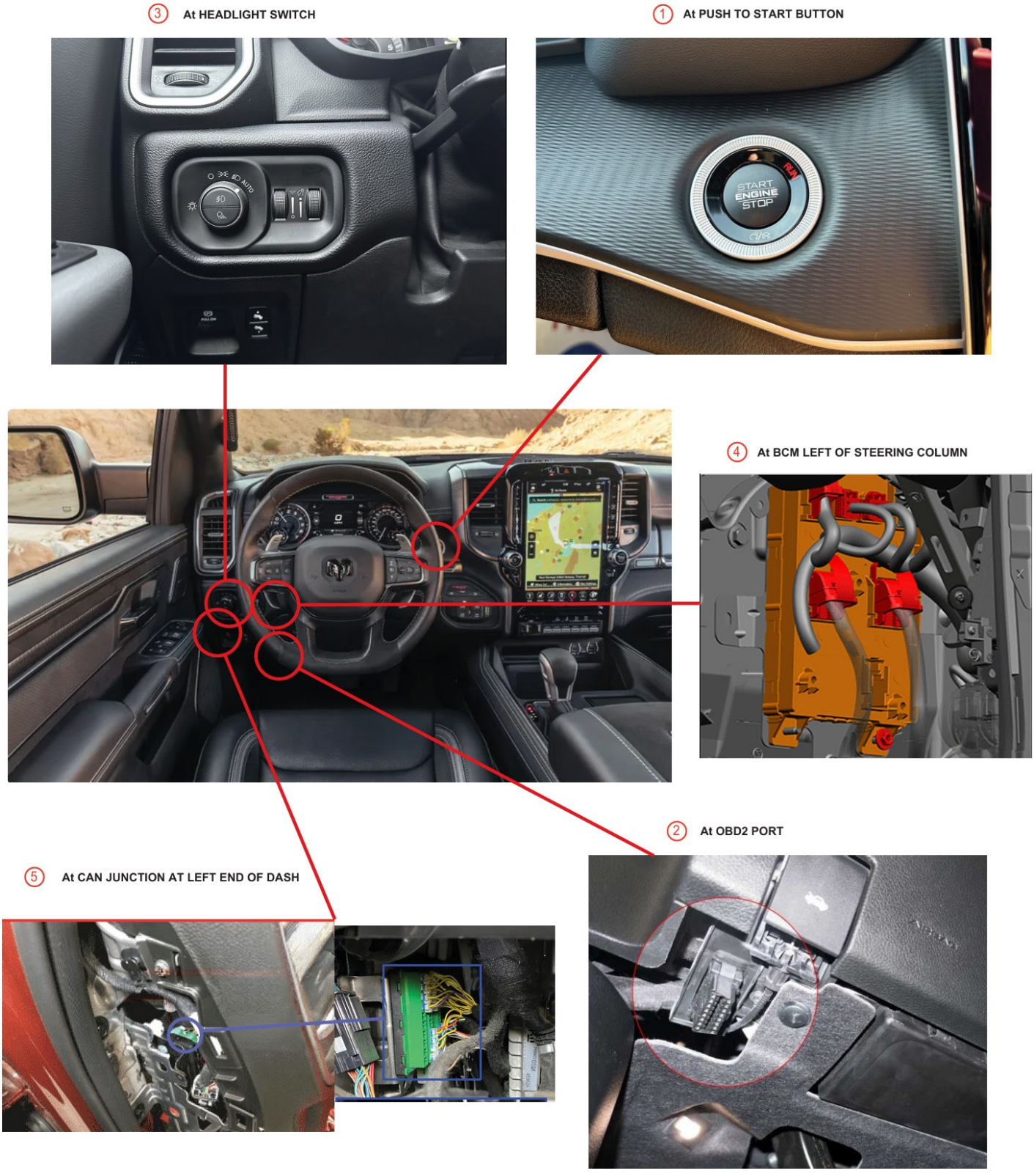
We have preloaded the correct firmware and settings to make your system work, but the type of anti-theft system in your vehicle requires a final “KLON” programming process that can only be done after the installation is complete and the Remote Start has read your key code. You will need to download, install, and save this program to your PC to do this. It requires a Windows or MAC computer with internet access and a USB port. Download it in preparation for KLON steps shown after Step 3 is complete.

**Click Here for Weblink Software**

Login with this username: **flash@mypushcart.com**

Use this password: **MPCflash2025!**

# RAM PUSH TO START TRUCKS CONNECTION LOCATION




**How to Make Wire to Wire Connections**

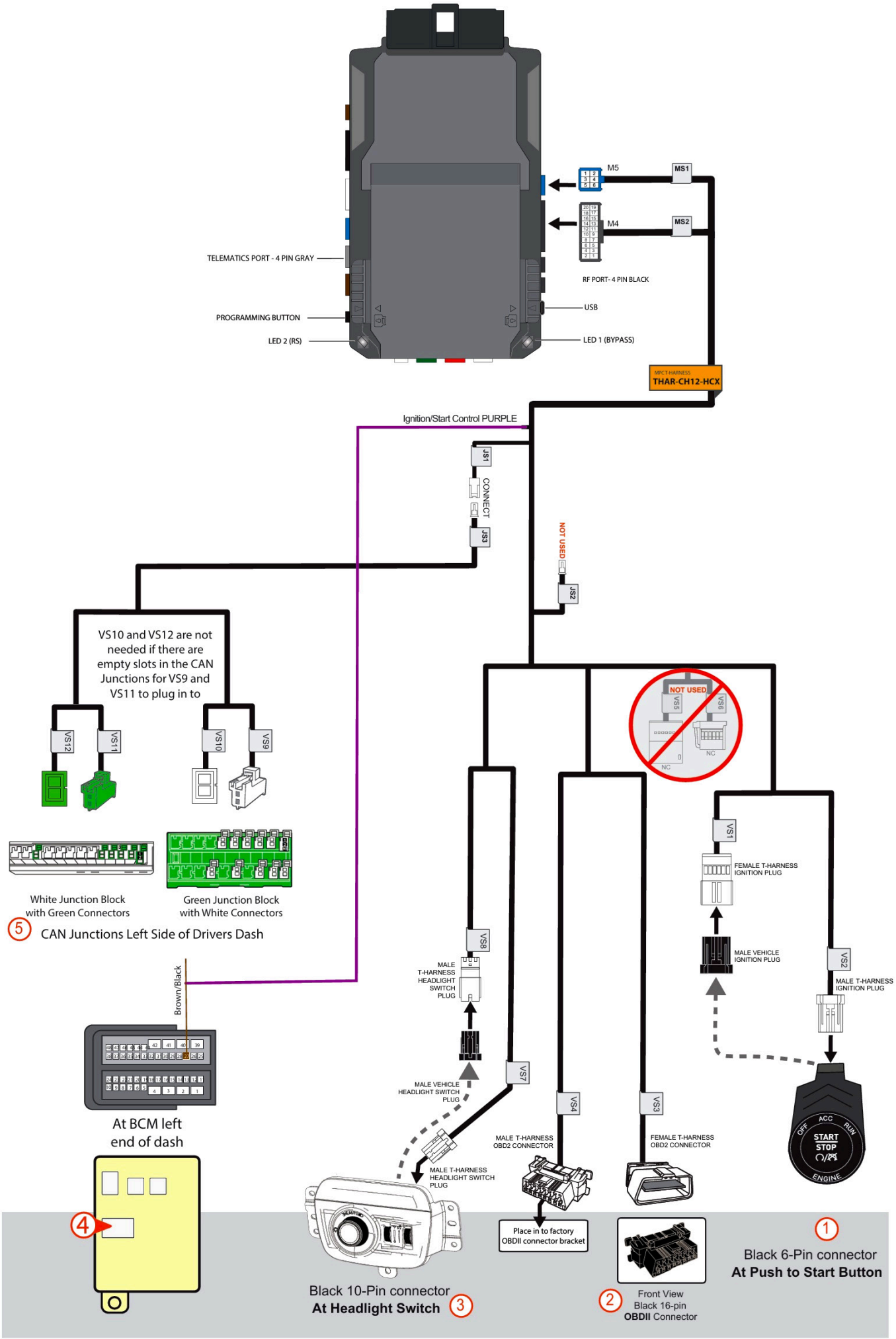
Strip - Poke - Wrap and Tape method is the best wire connection that you can make. You MUST use this method for any data wire connection(s). T-Taps should never be used on data connections. If required for your installation, data connections may be labeled: CAN HIGH, CAN LOW, IMMO, IMI, IMO, RX, TX, or Passlock. Do not solder unless you know how to do it really well.

**Click here for directions on how to Strip/Poke/Wrap/Tape the wires**

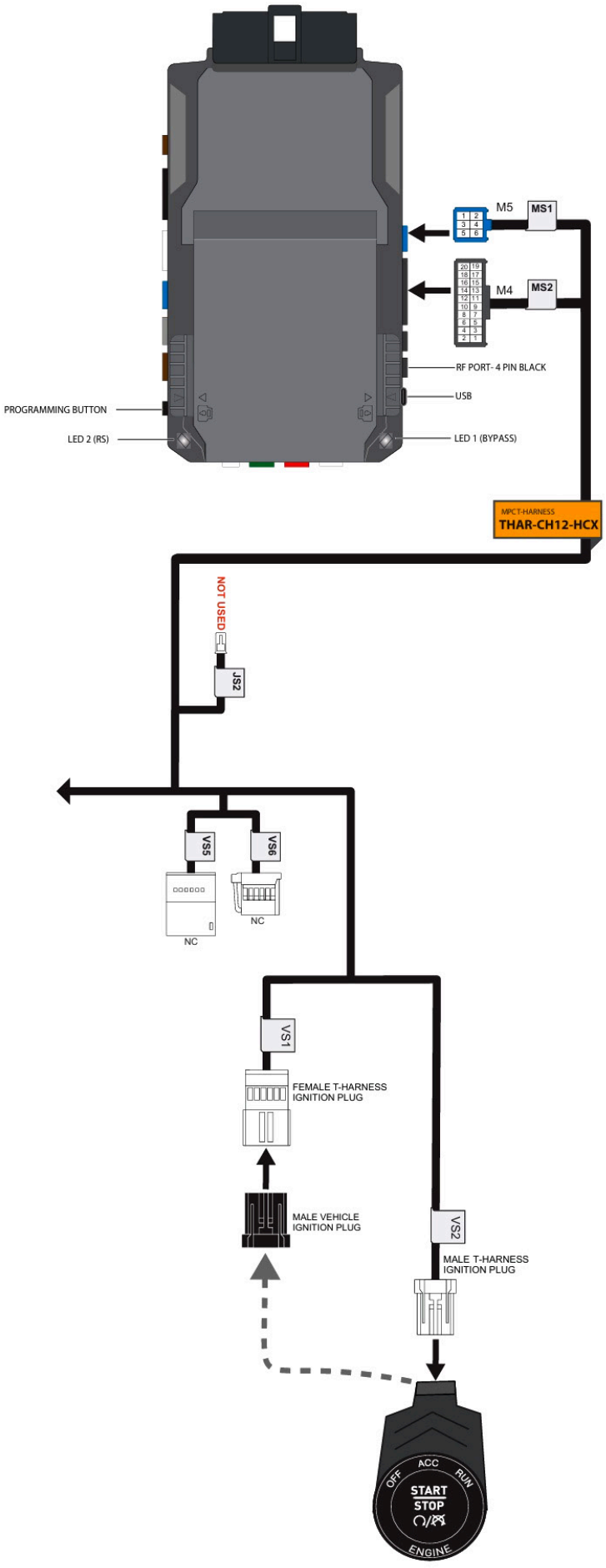
The recommended Strip - Poke - Wrap and Tape method shown above is the most reliable for remote start installations. Your kit may include T-Tap connectors that can make your connections easier, and still perform reliably when used correctly. T-taps can be used on any connections except for the Data wire connection(s).

**Click here for directions on how to use a T-Tap**

# Steering Column Disassembly



# Steering Column Disassembly




1. Locate the Black 6-pin connector at the back of the Push to Start button. (see photos)

2. Unplug the #1 Black factory 6-pin connector from the back of PTS button and plug it in to the the female VS1 16-pin plug from the T-Harness. Plug in the male VS2 16-pin plug from the T-Harness into the back of factory PTS button. Make sure it snaps into place.

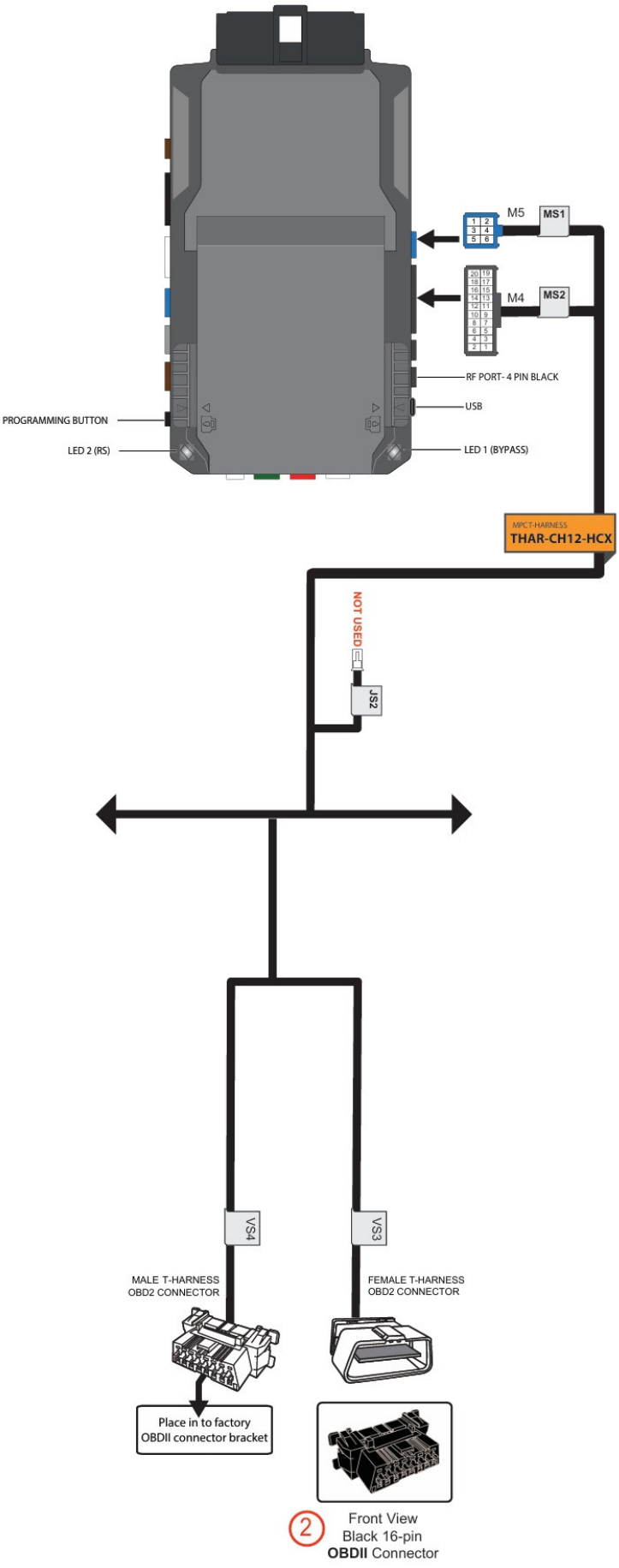


① At Push to Start Button



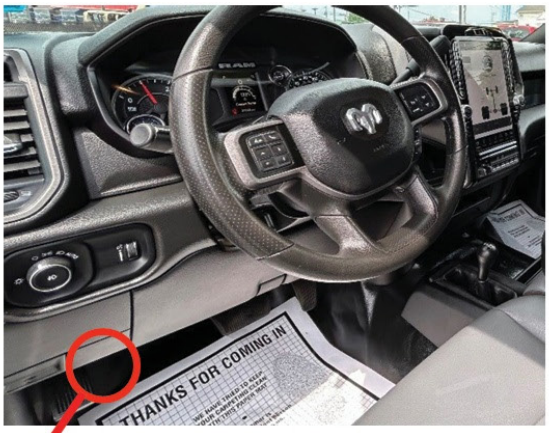



## STEP 2: Wiring Connections Overview




1. Locate the Black 16-pin OBD2 port at the lower left bottom of the Dash panel. (see photos)

2. Remove the factory OBD2 connector from the factory bracket. Plug it in to the the female VS3 16-pin plug from the T-Harness. Place in the male VS4 16-pin plug from the T-Harness into factory bracket.




**2 At OBD2 Port**

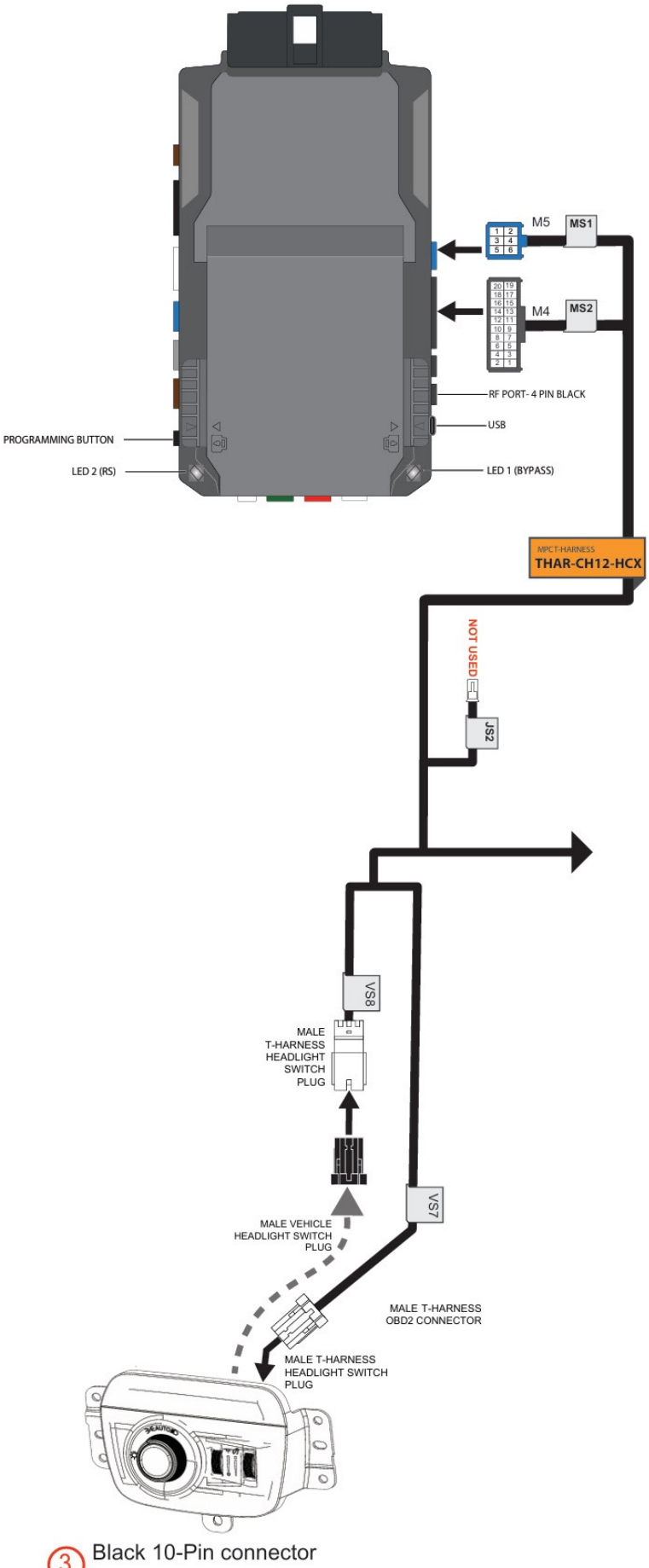





## STEP 2.1: Connect the T-harness

1. Locate the Black 10-pin connector at the back of the Headlight switch. (see photos)

2. Remove the factory 10-pin connector from the Headlight switch. Plug it in to the the female VS8 10-pin plug from the T-Harness. Place in the male VS7 10-pin plug from the T-Harness into factory Headlight switch.




③ Black 10-Pin connector
**At Headlight Switch**




③ **At Headlight Switch**





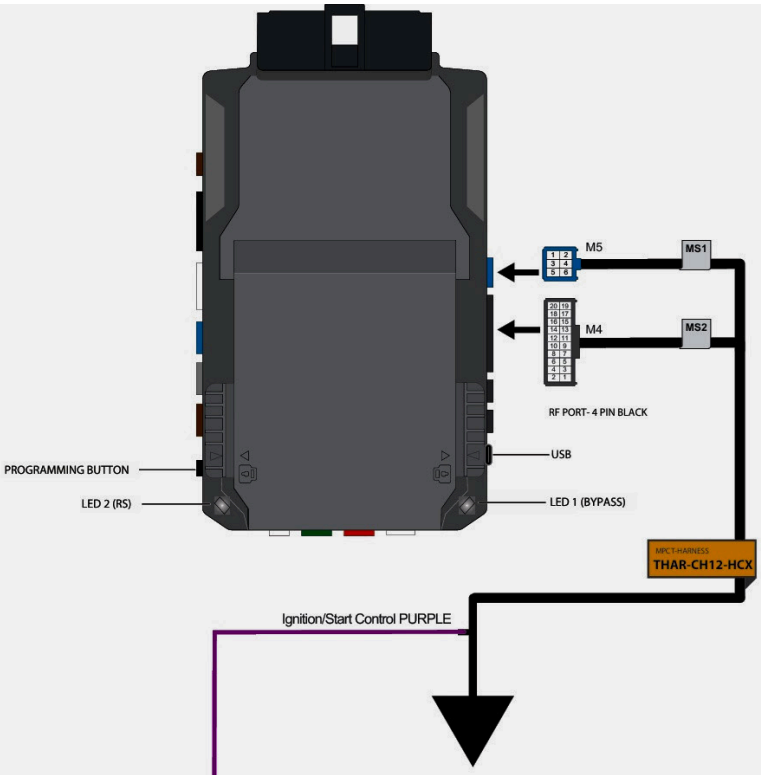
# Ignition Wire to Wire Connection REQUIRED

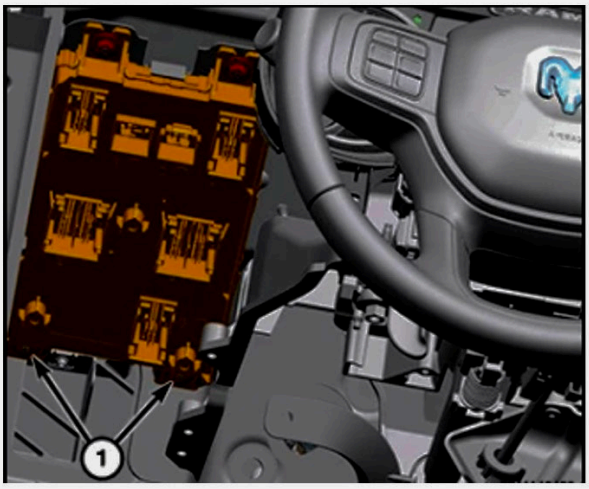
## Connecting the T-Harness

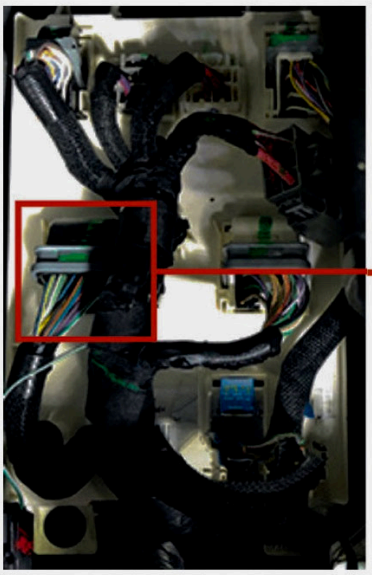
Locate the Body Control Module (BCM) on the Drivers Side of the vehicle, to the Left of the Steering Column behind the Dash.

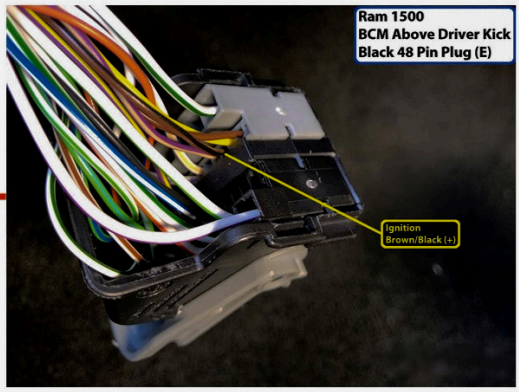
Locate the 48 pin Connector E on the Middle/Left section of the BCM. Locate a Brown/Black wire in position 27 of the Connector.

Locate the loose Purple wire from the T-Harness and connect it to the Brown/Black pin 27 in the connector on the BCM.

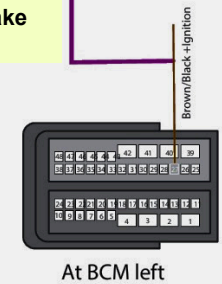


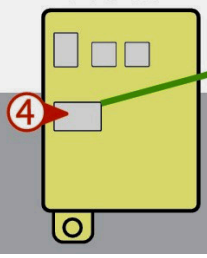



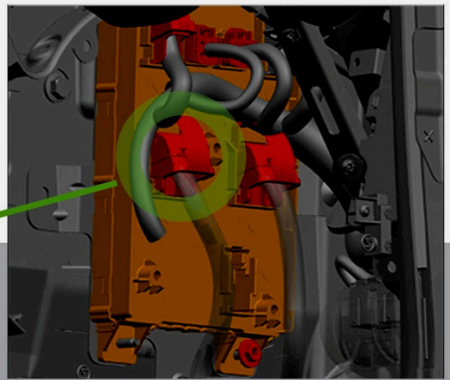



**Ignition Wire May also be found in a Pink/Lt Green in a 4 or 10-Pin Gray Connector at the Trailer Brake Module**

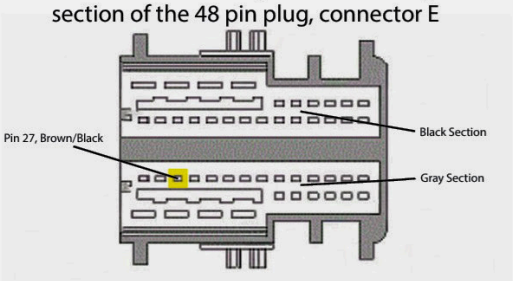



At BCM left end of dash



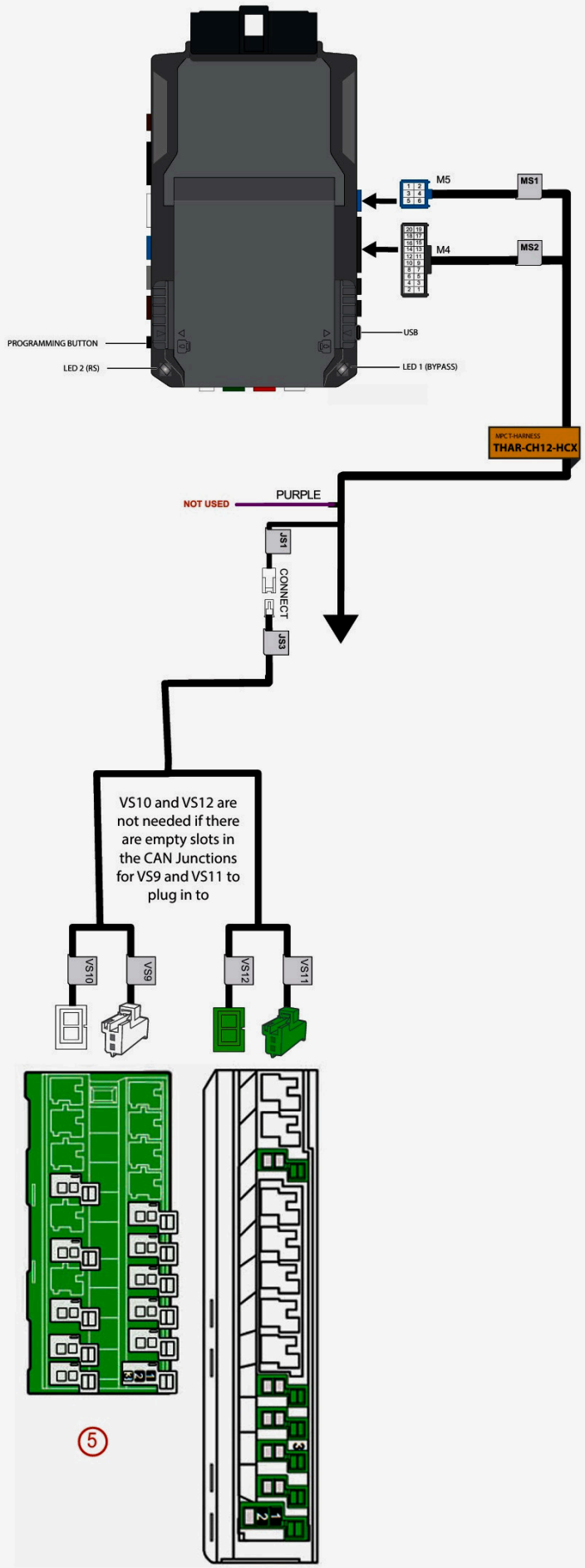



Brown/Black wire in pin 27 of the Gray section of the 48 pin plug, connector E



# CAN Bus T-Harness Connection REQUIRED

## CONNECTING THE T-HARNESS




Locate the 2 CAN Junction blocks on the left end of the dash behind the headlight switch, one will be Green and have 2 rows of 10 White connectors and the other junction is White and will have 1 row of 13 Green connectors.

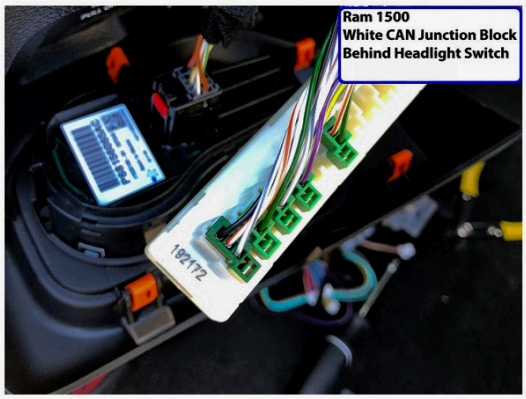
If there are empty slots on the Green CAN Junction block with White connectors, simply plug in the VS9 connector to any empty slot and leave VS10 disconnected

If all the slots on the Green CAN Junction block with White connectors are taken, unplug any 2 pin connector and plug it into VS10 and then plug in VS9 to the slot it was unplugged from.

Repeat the steps above for the White CAN Junction block with a single row of Green connectors using connectors VS11 and VS12.



The Junctions can be removed from their mounting location and pulled through the opening for the headlight switch to give you better access to the connectors if needed.



## Step3: Program the Module

Your Remote Start module now needs to be paired to your vehicle. Before starting the programming sequence, make sure that all of the connectors are plugged into the module. Instructions for programming the Remote Start are below. Here are two important tips to help you avoid common mistakes:

- Follow the programming instructions for the LED1 and LED2 descriptions to monitor flashes.




**MODULE PROGRAMMING PROCEDURE - 1 OF 1**

**01** Close driver door. Re-open drivers door to wake up data bus.

**02** Press Unlock on OEM remote. If the vehicle is not equipped with an OEM remote, press and hold the module programming button until the LED flashes GREEN/RED (this takes approximately 10 seconds).

**03** Wait, LED 1 will flash GREEN once [1x]. If LED 1 does not flash GREEN, repeat step 2.




**04** Press Start/Stop button 1x to set ignition to ON position.

**05** Wait,if LED 1 turns solid RED proceed to step 6. If LED 1 flashes GREEN rapidly, proceed to step 10.

**06** Press Start/Stop button 1x to set ignition to OFF position.

**07** Repeat steps 4 to 6, eight times [8x].

**08** Press Start/Stop button 1x to set ignition to ON position.

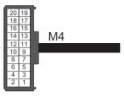
**09** Wait, LED 1 will flash rapidly.




**10** Press Start/Stop button 1x to set ignition to OFF position.

**11** WARNING: Unplug module from vehicle. Disconnect power last when disconnecting module from vehicle.

Disconnect M4 20-pin connector last.

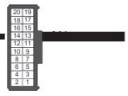



**12** Connect module to computer with USB cable and proceed with KLON extended programming.

*NOTE: See download and programming in KLON steps below. Continue to Step 13 once KLON programming is completed.*

**13** Connect power first when reconnecting module to vehicle.

Connect M4 20-pin connector first.



**14** Press Start/Stop button 1x to set ignition to ON position.

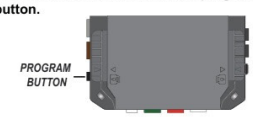
**15** Wait, LED 1 will turn solid GREEN for 2 seconds.




**16** START vehicle for 15 seconds.

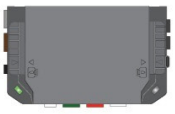
**17** Press and hold the brake pedal.

**18** Press and release the module's programming button.




**19** Release the brake pedal.

**20** Wait, LED 2 will flash GREEN.




**21** Module Programming Procedure completed.

**Module Programming Complete**

# KLON Required Key Transponder Integration Programming Instructions




**WARNING: Disconnect power last when disconnecting module from vehicle.**

**Disconnect** all connectors first, then the M4 20-pin.
Or the M1 8-Pin (Main-Harness).

**Click Here for Weblink Software**

Login with this User Name: **flash@mypushcart.com**

Use This Password: **MPCFlash2025**!



**Download WEBLINK updater Program**
You will need to download this program to do the KLON. It requires a Windows pc or MAC with USB
weblinkupdater.com/weblinkdesktop/en

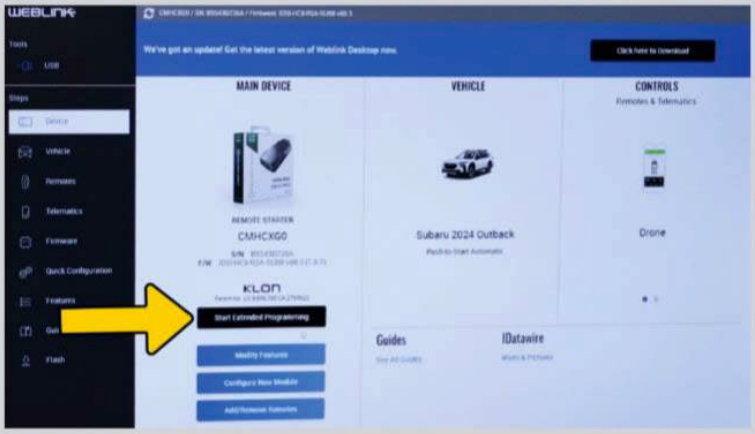






Install and Login in to WEBLINK Updater. Select Weblink RS Flash remote Starter.

# KLON Programming Continued




Once the device loads, select Start Extended Programming.




Select Continue Extended Programming.




Wait while KLON program processes.




Once Flash is Completed Sucessfully, select OK.

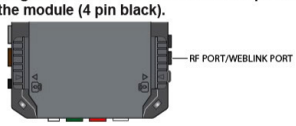
# KLON Programming Complete, Install the module back in the Vehicle




# Programming Add on RF Remote Upgrade Kits RFKIT1-2W-4

>> 

Plug the antenna into the RF/Weblink port of the module (4 pin black).




01 

WARNING: Complete the module programming procedure and tach programming the remotes. A maximum of four [4x] aftermarket remotes per system.

02 


Set ignition to ON position.

03 

Press and release the antenna button, then press and hold the antenna button. The antenna's LEDs will turn ON solid.

04 

Parking Light will flash once [1x]. The HCX brain will click [1x].

05 

While holding the antenna button, press once [1x] on the START button of each aftermarket remote

06 

The antenna's LEDs will flash once [1x] for each successful pairing.

07 

Release the antenna button. The antenna's LEDs will turn OFF.

08 


Set ignition to OFF position.

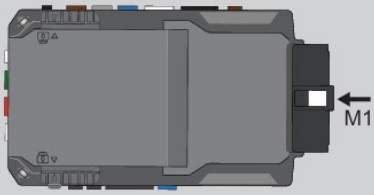
09 

Remote Programming Procedure completed.

# DIESEL DELAY SETTING FOR DIESEL ONLY PART 1

***This setting is an option to delay start on Diesel Trucks.**



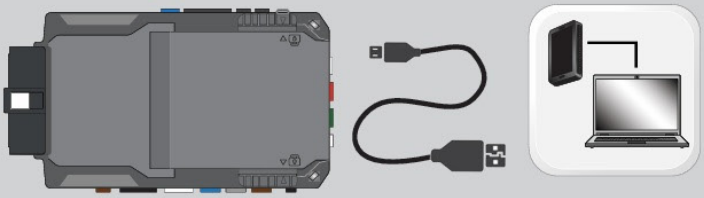



**Warning: Disconnect the power connector last when unplugging from the vehicle. Unplug all the connectors first then unplug the M1 8-Pin Main Wiring Harness and bring to your PC or Laptop.**

## Click Here for WEBLINK Software

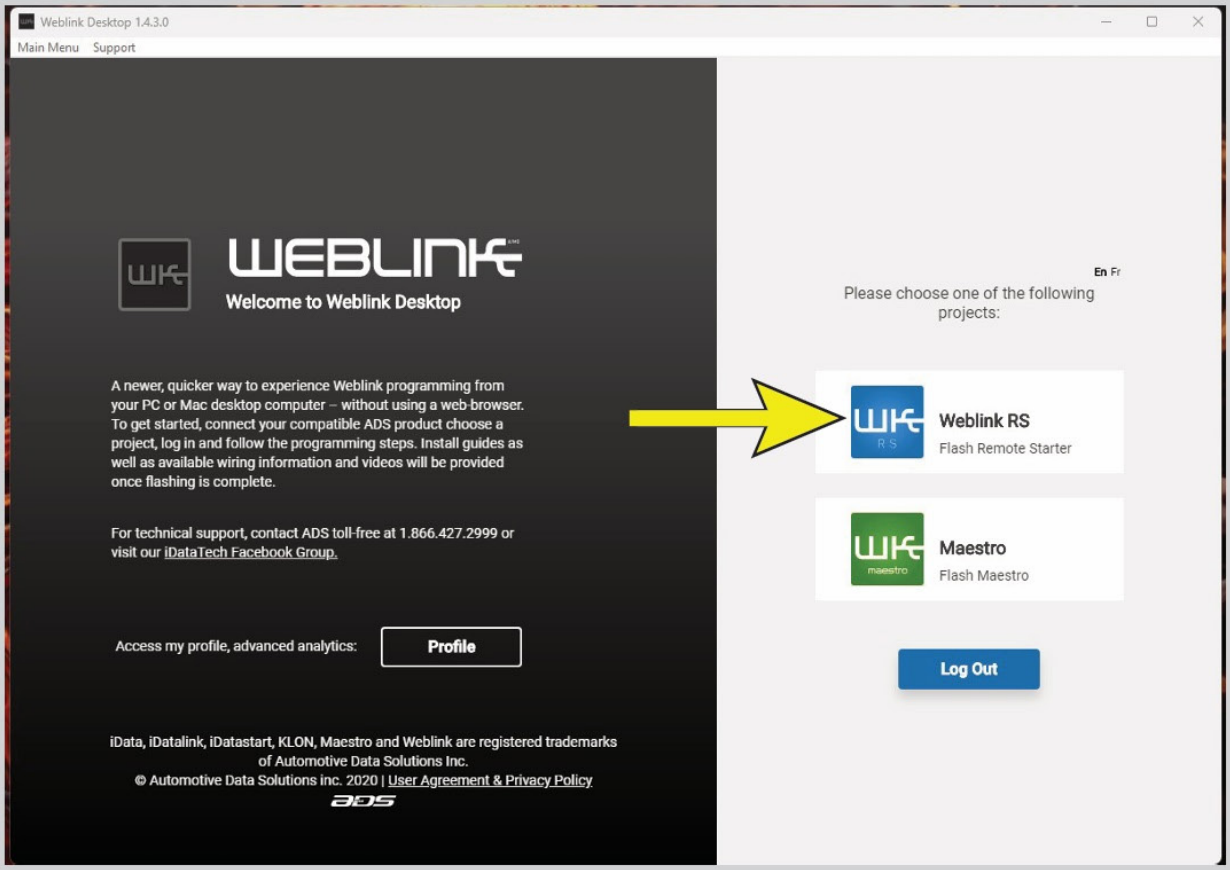
Login with this User Name: **flash@mypushcart.com**

Use This Password: **MPCFlash2025**!



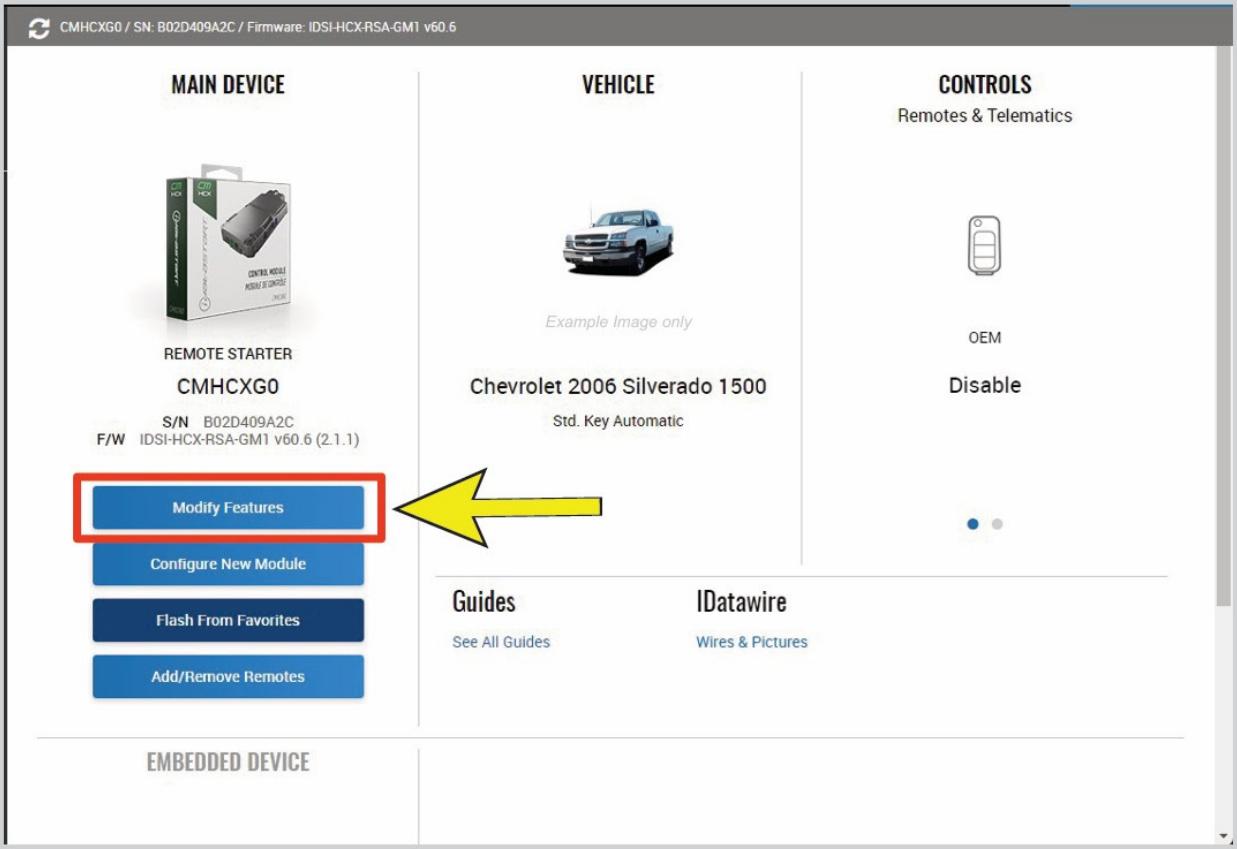
**Download WEBLINK updater program then save it to your Windows or MAC computer. Plug the module into the USB port of your computer using a USBA to USBC cable.**

weblinkupdater.com/weblinkdesktop/en

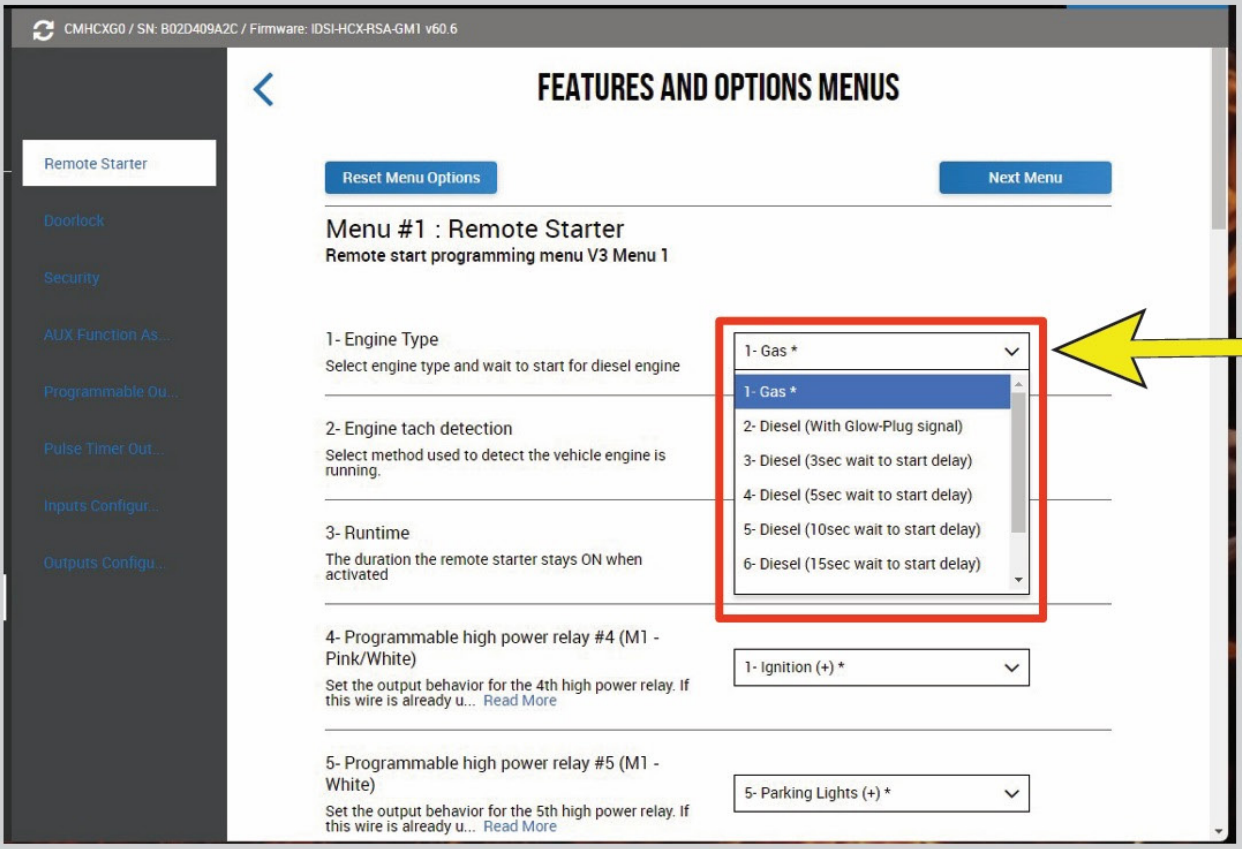



Install and Login in to WEBLINK Updater. Select Weblink RS Flash remote Starter.

# DIESEL DELAY SETTING FOR DIESEL ONLY PART 2



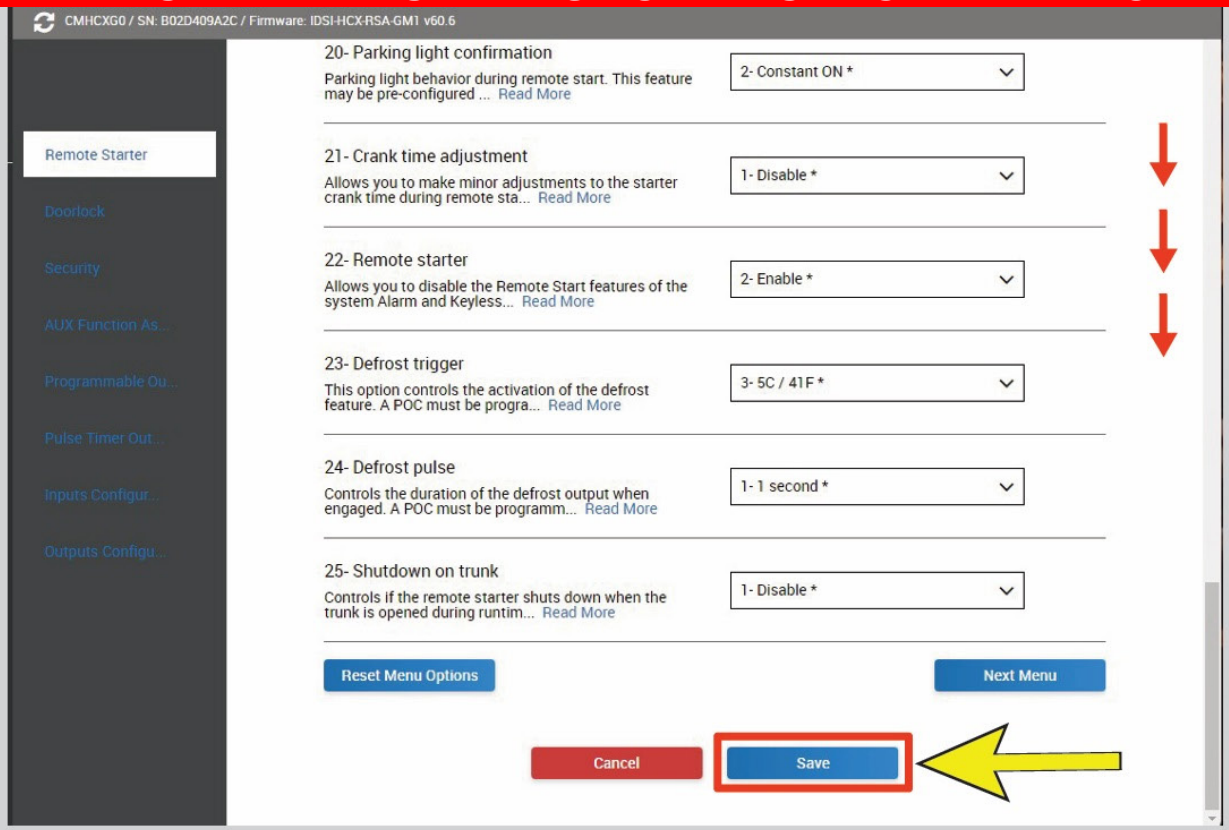

Once the device loads, select Modify Features.



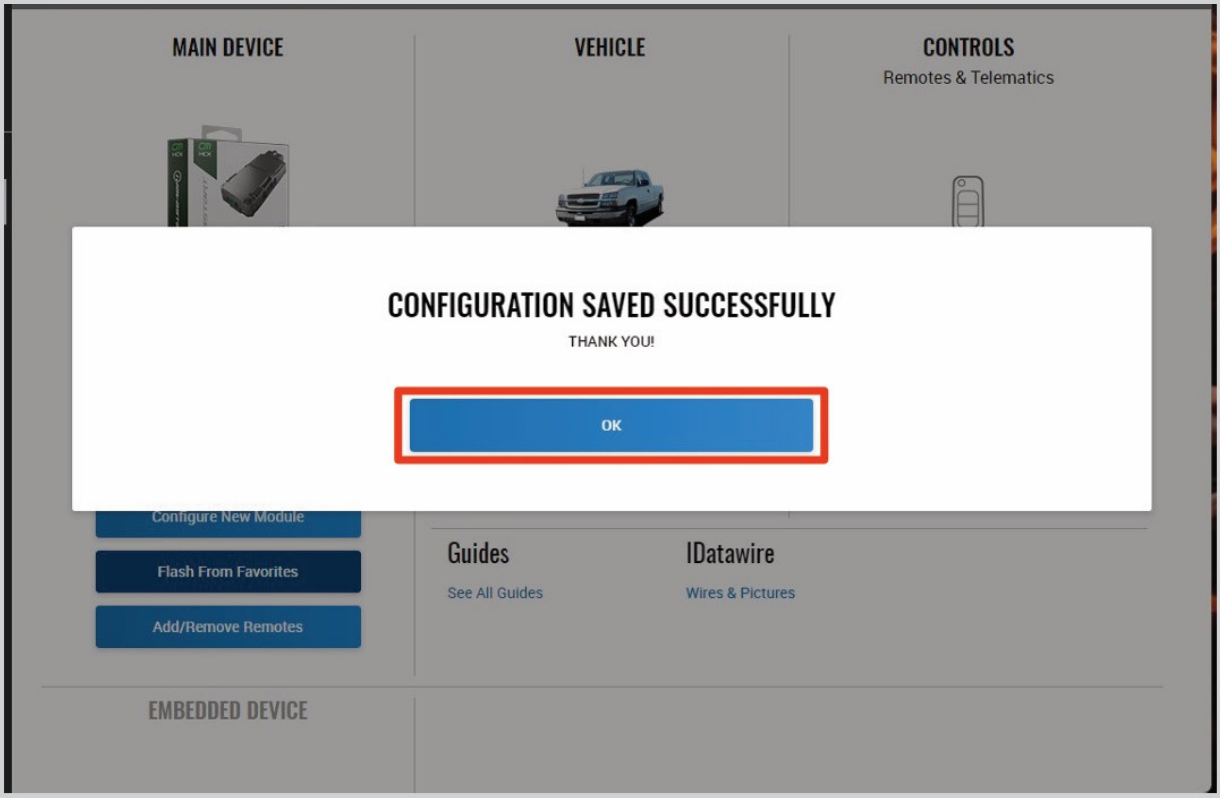

Select 1-Enigine Type drop down menu. Select your desired Diesel delay option.

*Option #2 Diesel (with Glow-Plug Signal) reads the signal over data and will crank as soon as the Wait-to-Start light shuts off.*
*Options #3 to #8 are preset Wait-to-Start times.*

# DIESEL DELAY SETTING FOR DIESEL ONLY PART 3

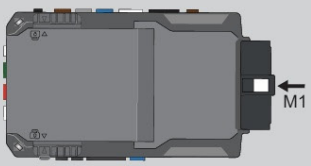



Scroll to the bottom of the page and select Save..




Once Configuration is Saved Sucessfully, select OK.

When programming is complete take the module back to vehicle. Connect the M1 8-Pin (Main-Harness).
Then the rest of the connectors.
After all connections have been made, continue with testing the remote start.






Install back in to the Vehicle

## Step 4: Finishing up!

After confirming that everything works properly, cap off or tape the ends of any wires you're not using to avoid grounding or other contacts.

- Now gather up all the wiring and neatly bundle it together using zip ties or electrical tape to prevent the wires from interfering with any of the moving parts under the dash.
- Find a secure place to put the remote start module and use zip ties to secure it. Be careful not to zip tie near your connections as it may create a bad connection.
- Replace any interior vehicle panels that were removed to gain access to the needed wires, in reverse order that they were removed.
- Test the system as you reinstall the panels in your vehicle to make sure you do not pull something loose or pinch a wire. Be careful not to run a screw through a wire or pinch a wire while reinstalling panels.
- If your test was unsuccessful, go back and re-check your wiring and programming. Make sure the connections are tight with no bent pins or pulled wires and follow the programming steps again closely.

## Vehicle Take Over Procedure

This system will run for 15 minutes then turn off. If you approach the vehicle while it is still running, unlock the doors, enter the vehicle and close the door, within 45 seconds, press the brake pedal and hold it down for 3 seconds, you will hear a click from the remote starter turning off and you can drive away.

**01**



**All vehicle doors must be closed and locked prior to remote start sequence.**

**02**




**Press the Lock button 3 times on the vehicles OEM factory remote.**

**03**



**The vehicle engine will start.**

**04**



**Press unlock on the OEM remote or request switch.**

**Enter the vehicle with the OEM keyfob and close the door.**

**05**



**Time rescriction. Complete Step 6 within 45 seconds of unlocking the vehicle.**

**06**



**Press the BRAKE pedal for about 3 seconds and release.**

**07**



**The vehicle can now be put in to gear and driven..**

**>>**



**failure to follow procedure will result in no take over and vehicle engine will shutdown.**

If you have any installation questions or problems, you can create a support ticket for help at:

**install.kleinn.com/support**

**Kleinn Automotive Accessories**

**520-579-1531**

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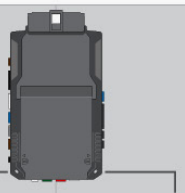
# Troubleshooting Charts

When the system receives an activation command and you hear clicks from the HCX remote start module brain but the vehicle fails to start, Parking lights flash and HCX brain will click 3x times followed by a number of flashes and clicks for the diagnostics code. The second number of flashes/clicks corresponds to a remote start diagnostic error code. This will tell you why the remote starter is failing to start. The codes are as follows:

| REMOTE STARTER ERROR CODES: NOTES | PARKING LIGHT FLASHES | DIAGNOSTIC |
|---|---|---|
| I WARNING: The following applies only when the parking lights are connected and supported by the system.<br><br>II After a remote starter failure, the parking lights will flash three [3x] times followed by the error code. See table. | 3 + 1 | Tach is not programmed OR engine is already running. |
| | 3 + 2 | Key is in ignition ON position. |
| | 3 + 3 | Door is open. |
| | 3 + 4 | Trunk is open. |
| | 3 + 5 | Foot brake is ON. |
| | 3 + 6 | Hood is open. |
| | 3 + 7 | Loop is not cut. |
| | 3 + 8 | Vehicle failed to remote start. |
| | 3 + 9 | Vehicle movement detected (VSS). |
| | 3 + 10 | System is in Valet Mode. |
| | 3 + 11 | CAN communication failure |
| | 3 + 12 | RS not synchronized. Start vehicle with OEM key for 15 sec before trying a new RS sequence. |
| | 3 + 13 | Bypass problem. |
| | 3 + 14 | Idle mode or takeover is not available on this vehicle. |
| | 3 + 15 | Overheat protection. |

| REMOTE STARTER SHUTDOWN ERROR CODES: NOTES | PARKING LIGHT FLASHES | DIAGNOSTIC |
|---|---|---|
| I WARNING: The following applies only when the parking lights are connected and supported by the system.<br><br>II If the engine shuts down after a remote starter sequence use the query command from a compatible aftermarket remote to display the shutdown error code. The parking lights will flash four [4x] times followed by the error code. See table. | 4 + 1 | Engine tach signal was lost. |
| | 4 + 2 | Emergency brake signal was lost. |
| | 4 + 3 | Foot brake ON detected. |
| | 4 + 4 | Hood open detected. |
| | 4 + 5 | Tach over rev detected. |
| | 4 + 6 | Glow plug timeout error. |
| | 4 + 7 | Vehicle movement detected (VSS). |
| | 4 + 8 | Check engine light ON. |
| | 4 + 9 | Low fuel level. |
| | 4 + 10 | Open door detected. |
| | 4 + 11 | CAN communication failure during RS sequence. |
| | 4 + 12 | RS not synchronized. Start vehicle with OEM key for 15 sec before trying a new RS sequence. |
| | 4 + 13 | Bypass problem. |
| | 4 + 14 | Idle mode or takeover is not available on this vehicle. |
| | 4 + 15 | Overheat protection. |

| MODULE STATUS DURING: |  LED 2* | LED 1** | LED STATUS | DIAGNOSTIC |
|---|---|---|---|---|
| REMOTE START SEQUENCE | ● | | Flashing rapid RED | Remote start shutdown sequence. |
| | ● | | Flashing slow RED | Remote start shutdown error code. Contact technical support. |
| | ● | | Solid RED | Remote start crank delay. |
| | ● | | Flashing rapid GREEN | Remote start cycle in progress. Working correctly. |
| | ● | | 1 GREEN flash | Remote start initiated successfully. |
| | ● | | 3 GREEN flashes | Idle mode cycle in progress. |
| | ● | | 4 GREEN flashes | Turbo mode cycle in progress. |
| | | ● | Flashing GREEN | Remote start cycle in progress. Displays vehicle platform during runtime. |
| | | ● | Rapid GREEN flashing | Secure takeover initiated. Waiting to complete takeover after brake press. |
| TRANSMITTER PROGRAMMING | ● | | Solid RED | Remote programming in progress, waiting for remote pairing. |
| | ● | | 1 GREEN flash | Remote programmed. |
| | ● | | 4 RED flashes | Shutdown remote starter before attempting remote programming. |
| | ● | | 5 RED flashes | Engine must be off before attempting remote programming. |
| | ● | | 6 RED flashes | System must be unlocked/disarmed before attempting remote programming. |
| | ● | | 7 RED flashes | Module must be learned to the vehicle before attempting remote programming. |

* LED 2 (RS) displays generic diagnostic codes specific to the remote start module. Orange LED flashes may appear red.
** LED 1 (Bypass) displays diagnostic codes specific to the firmware loaded on the module.
Visit the programming diagnostics page for more information.