Installation Guide

2011-2014 Ford F150 | 2011-2016 Ford F250-550
Select 2011-2019 Ford/Lincoln SUVs

KLEINN SKU # - RSFD1 (HCX)

Ford (Standard Key)									
Edge	11	12	13	14					
Expedition					15	16	17		
Explorer	11	12	13	14	15				
F-150	11	12	13	14					
F-250	11	12	13	14	15	16			
F-350	11	12	13	14	15	16			
F-450	11	12	13	14	15	16			
F-550	11	12	13	14	15	16			
Flex			13	14	15	16	17	18	19
Lincoln (Standard Key)									
MKX	11	12	13						

***Compatible with automatic transmission vehicles manufactured for sale in the US and Canada Only**

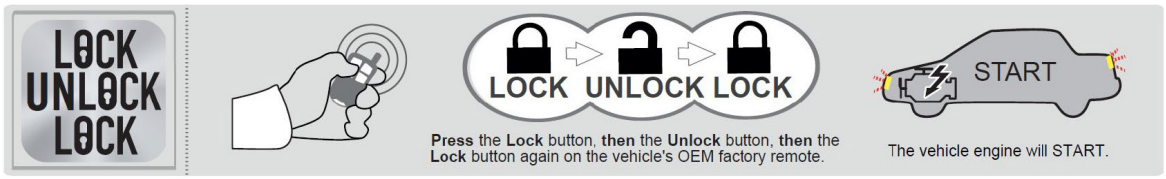
Introduction:

This guide covers multiple models that all have the same connectors. If the key barrel is located to the right of the dash on your model, that is where the ignition and PATS connector will be, the OBD will be in the same location on all models.

- **Pre-Flashed Module:** The correct firmware is installed on the remote start module. No programmer needed.
- **Activation**: Press the OEM Remote buttons Lock - Unlock - Lock to remote start the vehicle.
- **Disassembly** Step 2
- **System Wiring Overview** Step 2.1
- **Optional Wire to Wire Connections** Step 2.2
- **Programming:** Program the module to the vehicle, no PC or Flasher required. Step 3
- **Vehicle Take Over Procedure:** Enter vehicle while remote start is running and drive away. Step 4

Remote Start Activation from OEM Transmitter:

Remote Starter Activation: Press Lock>Unlock>Lock on your OEM remote to start the vehicle.



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

Click Here for Upgrade Options

Parts Required:

- Idatalink HCX Module Pre-Flashed with (RSA-FO1B) L-U-L Firmware
- Ford HCX-FO1-2DIODES-USBC (Diodes are only used if you want to wire locks to control Keyless Entry with aftermarket remotes or smartphone module, Keyless Entry on the OEM remote will work whether you wire the locks in or not.

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.

- **Firmware pre-loaded:** As part of the service Kleinn provides, we have already 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 is complete using Step 3.



Installation 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** utilizing custom T-Harnesses which eliminate the "wire-to-wire" connections typically required. The physical attachment of this product will require only plug-in connections unless RAP shutdown or Keyless Entry control from RF remotes or Smartphone upgrade kits are desired. Simply plug the T-Harness into the vehicle, then program the module and the remote starter will be ready for use.

- This Tip Sheet will provide the information you need for standard installation in this application. 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 for the optional RAP shutdown or other optional connections. Refer to the Wire Diagram for the locations that need to be accessed in the vehicle. Remember the order that you remove the panels.If Keyless entry control from an aftermarket remote kit or smartphone upgrade kit, reach out to Kleinn technical support for wiring schematics.
- 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.
- Avoid using a test light to probe wires. Test lights can set off airbags if you probe the wrong wire. If you must probe, use a digital multi-meter. They're inexpensive and won't set off airbags.
- Adding options such as keyless entry control from aftermarket remotes or smartphone devices, RAP Shut down is optional and requires cutting the door trigger wire at the BCM on the passenger side in order to turn accessories like the radio off at the same time as the remote starter times out to turn off, otherwise they will only stay on for a short time, not enough to drain a normal battery. If RAP Shutdown is desired, there are 2 wires coming out of the t-harness for that purpose.
- If Keyless entry control from an aftermarket remote kit or smartphone upgrade kit, reach out to Kleinn technical support for wiring schematics.
- Trim off any excess unused loose wires and tape the ends off when you make your connections, but leave some slack, this will allow you some flexibility when it comes time to stow the remote start after the installation is completed. Any wire that is not shown to connect in this tip sheet will not need to be connected. Tape up any extra wires or tuck them away with the T-harness and isolate them so they are not in the way.

How to Make Optional Wire-to-Wire Connections

Strip - Poke - Wrap and Tape method is the strongest 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. Do not solder wires unless you have experience to prevent causing damage.

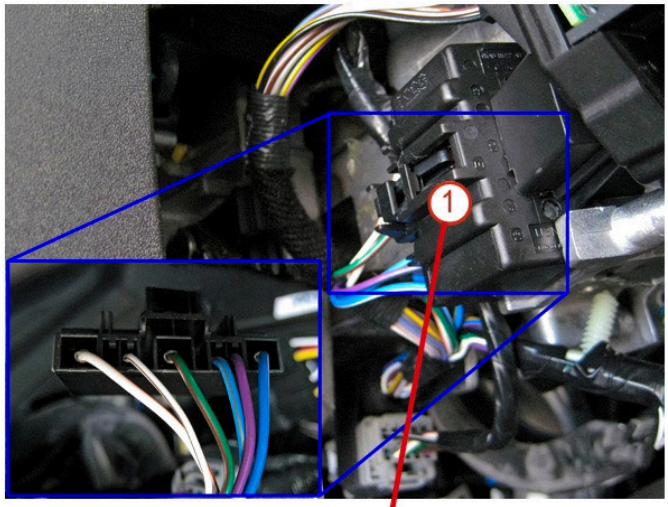
Click here for directions on how to Strip/Poke/Wrap/Tape the wires

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).

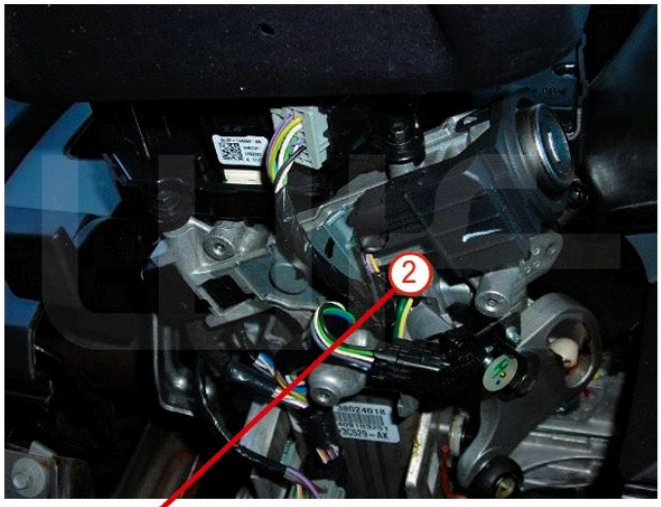
Click here for directions on how to use a T-Tap

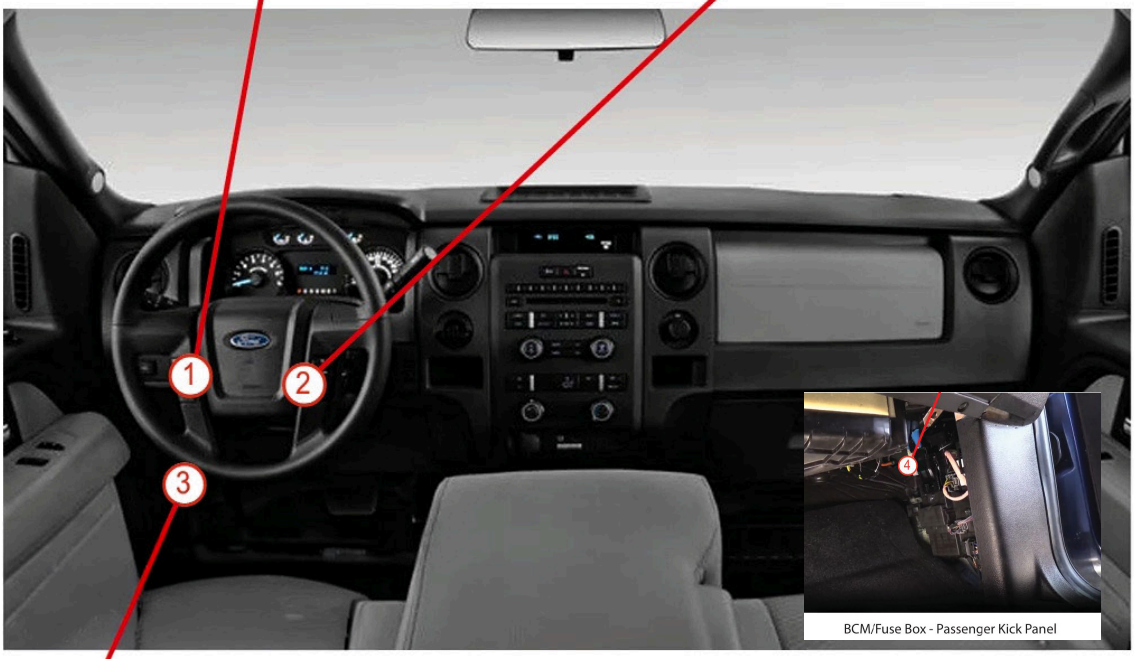
Location Images for 3 Connectors Ford Trucks & SUVs

Ignition Connector - Left side of Steering Column



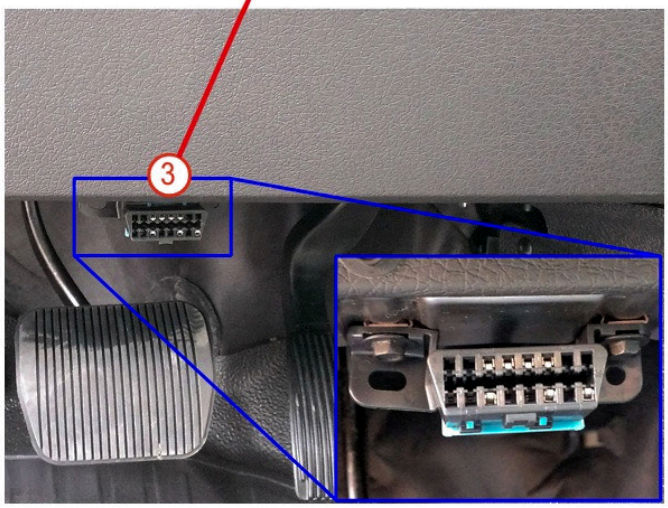
PATS Connector - Right side of Steering Column



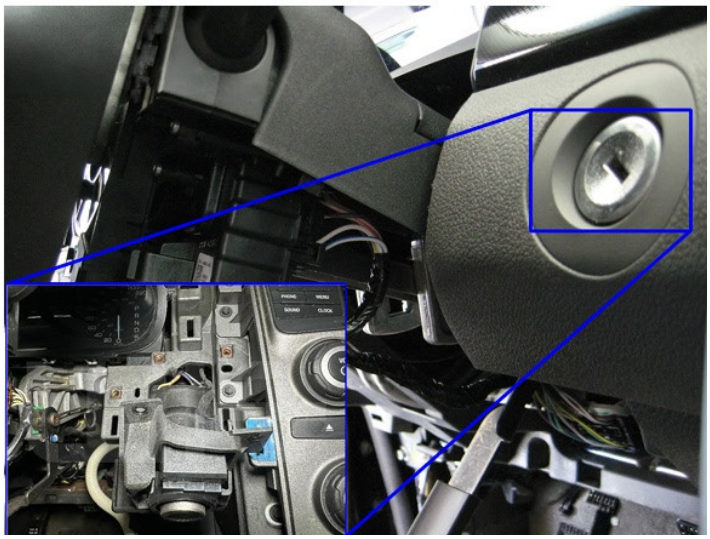


Ford Edge Connector Location

1 2 Ignition and PATS Connectors - Right of Steering Column



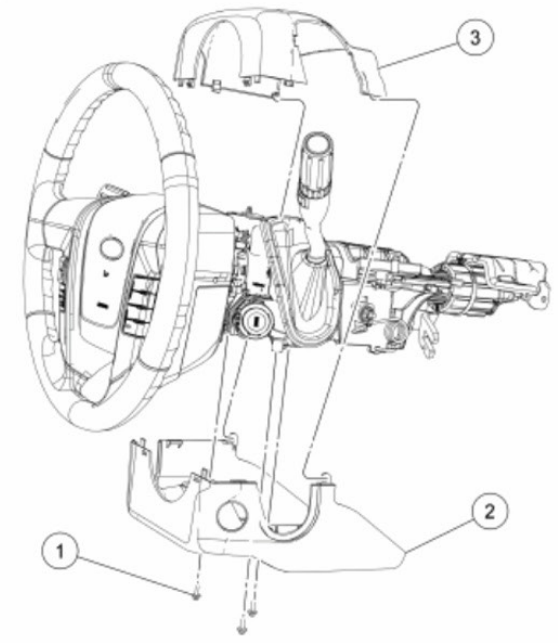
OBD2 Port - Bottom Edge of Drivers Side Dash



Step 2: Disassembly of Driver Side Panels to Access Connectors

Removing the Knee Bolster Trim Panel below the Steering Column isn't required but is fairly easy to do and there will be much better access for routng wires and mounting the control unit with it removed. Remove three (3x) bolts along the bottom edge of the panel and then pop the top clips free with the aid of a panel removal tool.

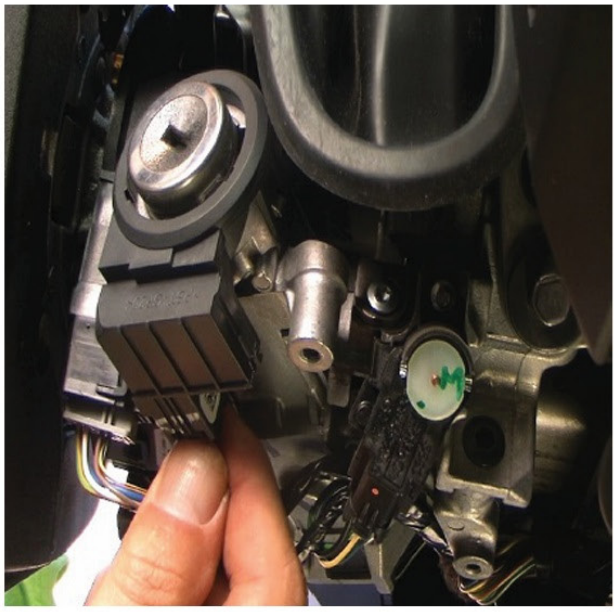




The Steering Column Shroud will need to be removed to access the Ignition and PATS Connectors. Remove three (3x) screws from the bottom of the Steering Column, then position the Steering Wheel in the most Low and Out position using the Tilt Lever. Pop the top column cover up and off starting from the backside, once free the Bottom Cover will be free. Take care to gently maneuver the cover over both the Key Cylinder and the Shifter (if present).

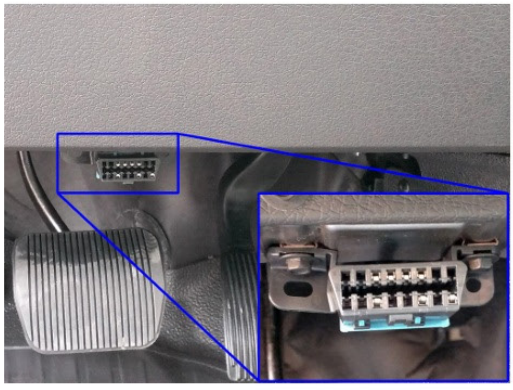


The Ignition Switch Connector is located on the Left Side of the Steering Column. Unplug the original connector and plug it into VS3 on the T-Harness, plug VS4 back into the Ignition Switch plug.



The PATS Connector is located on the Right Side of the Steering Column. Unplug the original connector and plug it into VS1 on the T-Harness, plug VS2 back into the PATS plug.

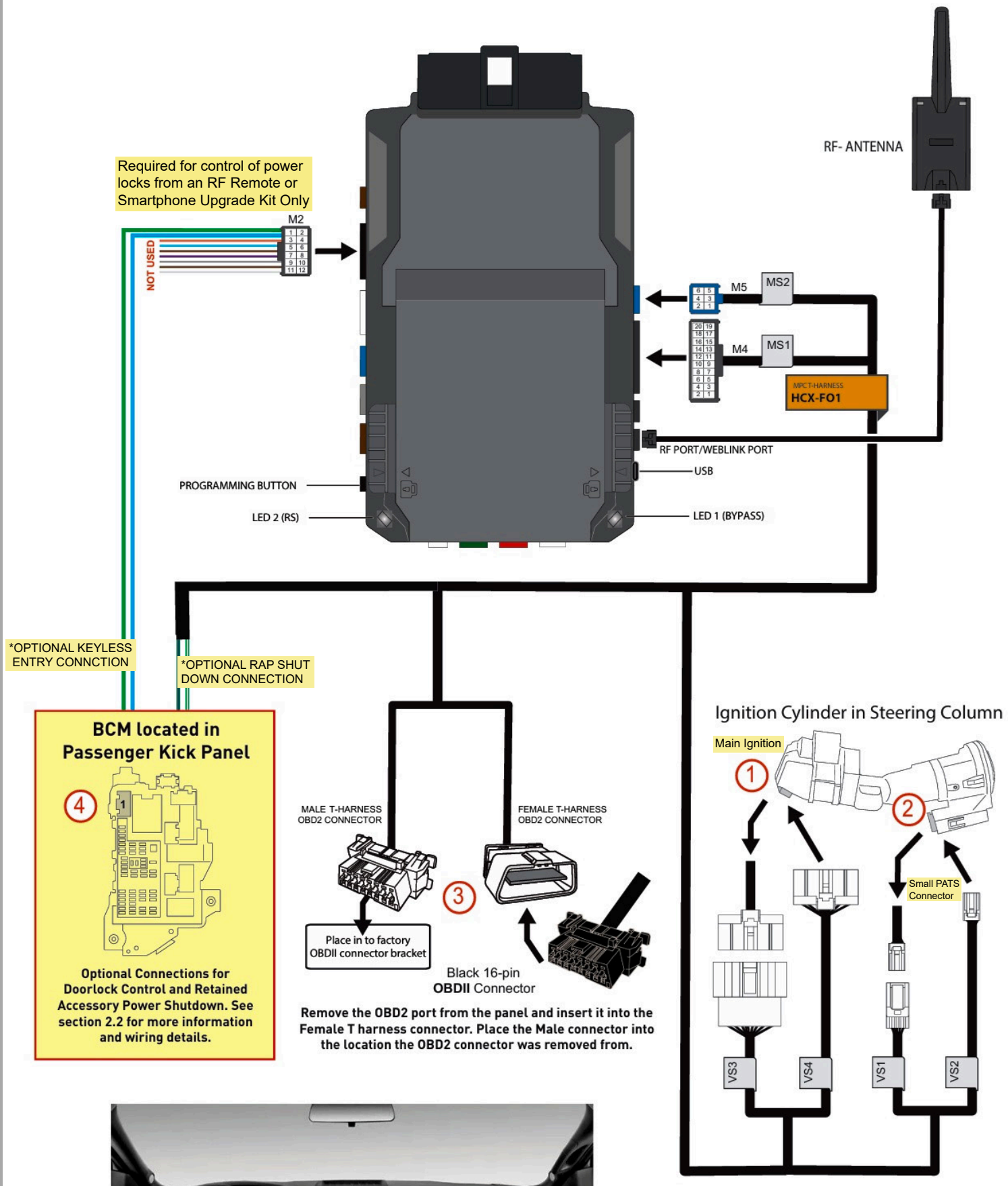
Remove the original OBD2 port from its mounting location and plug it into the Female connector on the T-Harness, put the Male connector from the T-Harness back into the original location of the OBD2 port.





Use the included mounting bracket if needed.

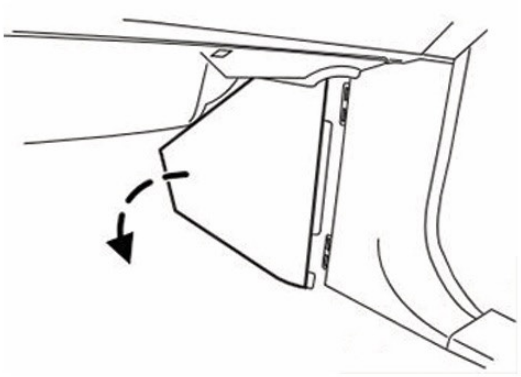
STEP 2.1: Ford Truck / SUV Wiring Schematic Overview





Optional Connections

The BCM is located in the Passenger Kick Panel behind the Fuse Panel Access Door. Pull the Front of the panel to open and remove the door which will give access to the connector needed for the optional connections if you choose to make them. If the vehicle is not equipped with Power Locks, connecting these wires will not add them.

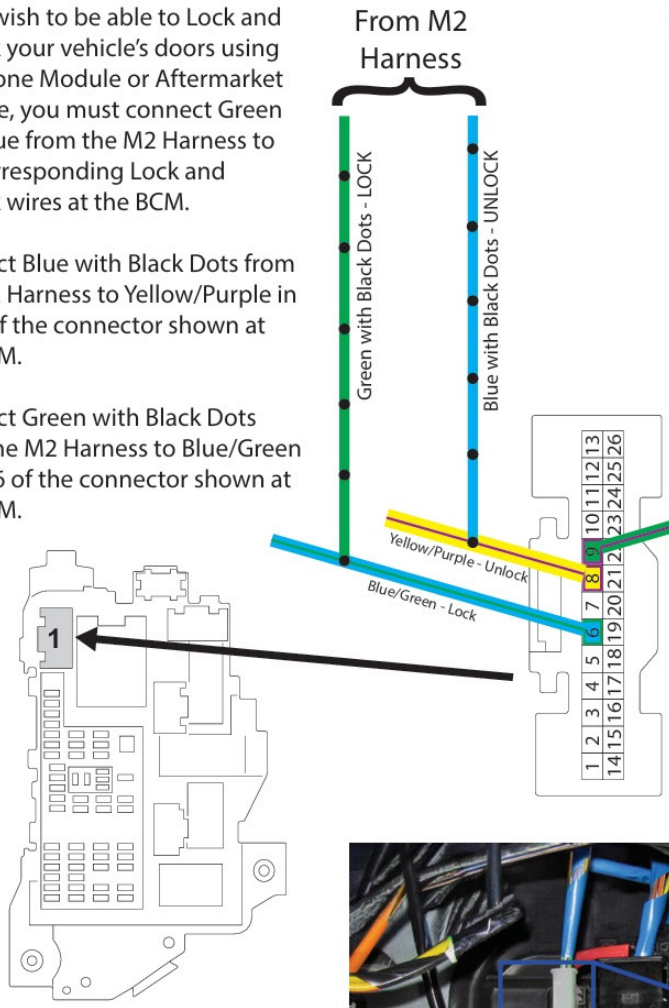


Power Lock and Unlock Control

If you wish to be able to Lock and Unlock your vehicle's doors using the Drone Module or Aftermarket Remote, you must connect Green and Blue from the M2 Harness to the corresponding Lock and Unlock wires at the BCM.

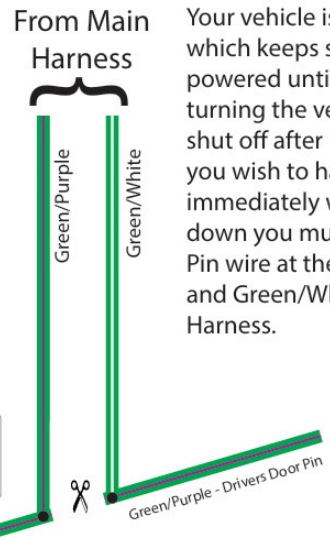
Connect Blue with Black Dots from the M2 Harness to Yellow/Purple in pin 8 of the connector shown at the BCM.

Connect Green with Black Dots from the M2 Harness to Blue/Green in pin 6 of the connector shown at the BCM.

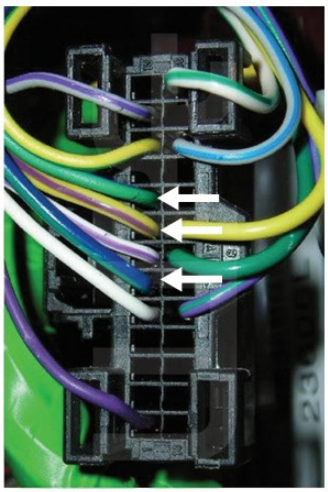


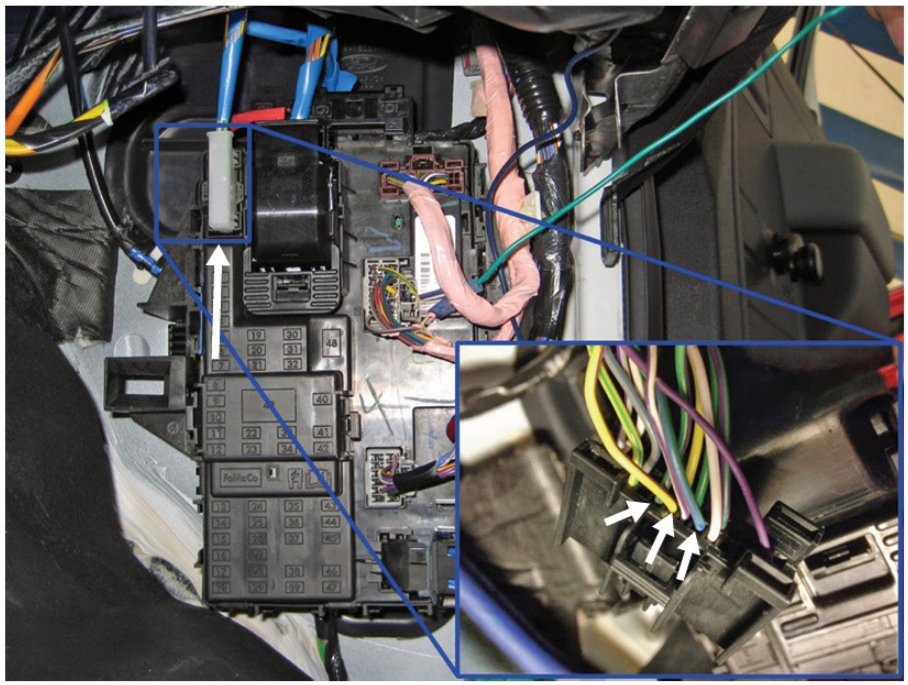
Retained Accessory Power (RAP) Shutdown

Your vehicle is equipped with a RAP circuit which keeps some accesories like the radio powered until a door is opened after turning the vehicle off. The RAP circuit will shut off after 10 minutes on it's own but if you wish to have the RAP circuit shut off immediately when the remote start is shut down you must interrupt the Drivers Door Pin wire at the BCM using the Green/Purple and Green/White wires from the Main Harness.



Cut the Green/Purple wire in pin 9 of the connector shown at the BCM. Attach Green/Purple from the Main Harness to the Connector Side of the cut wire, attach Green/White from the Main Harness to the side of the cut wire going Into the Vehicle.





STEP 3: Programming the Module in the Vehicle

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



Program the Remote Start Module

01 

Insert key 1 into ignition and turn to the ON (RUN) position.

NOTE: It may be possible to press inward with more pressure on some Ford trucks due to a known issue with the Key Sense mechanism.

02 
LED 1 will turn solid RED.



03 
Wait, LED 1 will flash GREEN rapidly.



04 

Turn key to OFF position and remove from the key cylinder.

05 
Wait, LED 1 will turn OFF. (This may take up to 30 seconds)



!!! 
TIME RESTRICTION.

Steps 6 to 14 must be completed in a timing sequence. Read through the steps to understand what needs to be done prior to beginning the sequence. Have both keys ready to use so it doesn't delay the process.

06 

Insert key 1 into ignition and turn to the ON (RUN) position.

07 
LED 1 will turn solid RED.



08 
TIME RESTRICTION. Complete steps 9-10 within 4 seconds after LED 1 turns OFF.



09 

Turn key 1 to OFF position and remove from the key cylinder.

10 

Insert key 2 into ignition and turn to the ON (RUN) position.

11 
LED 1 will turn solid RED.



12 
TIME RESTRICTION. Complete steps 13-14 within 4 seconds after LED 1 turns OFF.



13 

Turn key 2 to OFF position and remove from the key cylinder.

14 
Press and release programming button.

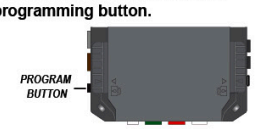
15 
Wait, LED 1 will turn solid RED then will turn solid GREEN for 2 seconds, then turn off.

16 

START vehicle for and allow it to idle for about 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 twice (2x) and then turn OFF.



Module Programming Procedure completed.

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.
- Test the system often when you are putting your vehicle back together.
- 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. If you used any T- Taps, make sure they are all attached correctly. Poorly made T-Tap connections are the #1 cause for tech support calls. Also, remember that T-Taps should never be used on data connections.

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. Older model Toyotas turn off when you open the door, these models will require that you restart normally when you enter.

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

02 

Press the Key ( ) button for 3 seconds on the 4-Button remote.

03  The vehicle engine will start.

04  Press Unlock on the 4-Button remote.

05  Open driver door and enter vehicle.

06  Close driver door.

07 

Turn key to ON position.

08  Press and release BRAKE pedal.

09  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

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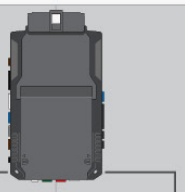
Troubleshooting Charts

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. 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. 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.