Splicing Procedures

NOTE:

Refer to applicable wiring diagrams for circuit information.

NOTE:

This procedure contains multiple splicing techniques.

NOTE:

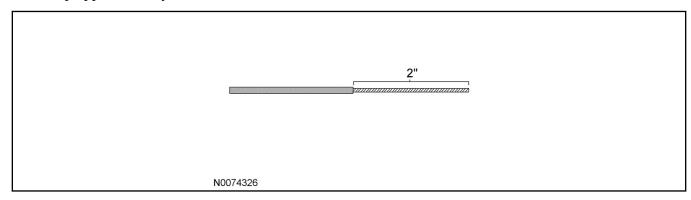
Review splicing procedures prior to performing any cutting/soldering/splicing.

2-Wire Solder "Center Splice" With No Wire Cutting

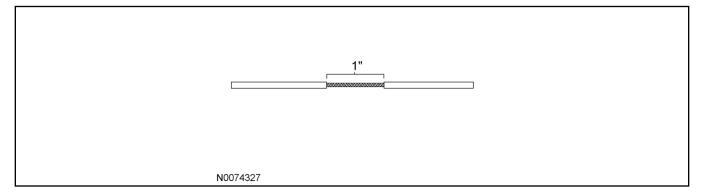
NOTE:

Follow this procedure when a wire can be spliced without cutting the wire in half.

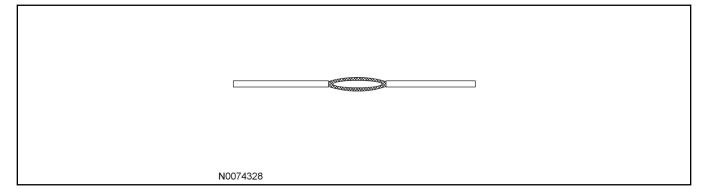
1. Strip approximately two inches of insulation from the wire to be installed in the vehicle.



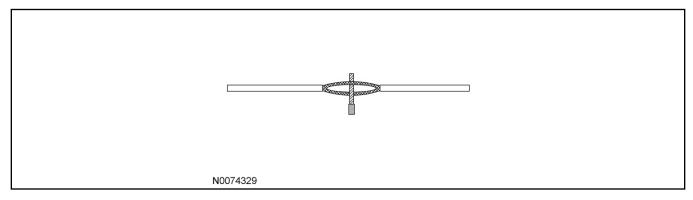
2. On the vehicle wire to be spliced into, strip one inch of insulation from the wire.



3. On the vehicle wire to be spliced into, separate the strands to allow the new wire to be placed.



4. Insert the new wire between the parted strands. If more than one wire is being spliced, wrap them in opposite directions.



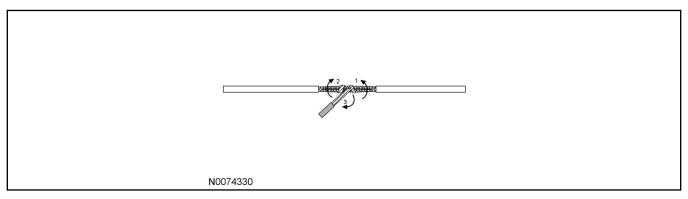
NOTE:

Use Rosin Core Mildly-Activated (RMA) Solder. Do not use Acid Core Solder.

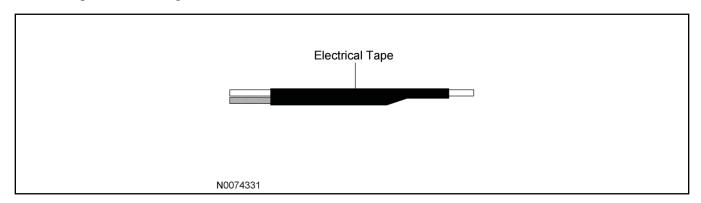
NOTE:

Wait for solder to cool before moving wires.

- 5. Wrap the new wire around one side of the split strands, then wrap it around the other side.
 - Solder the connection.



- 6. Wrap the connection with electrical tape so the tape covers the wires approximately two inches on either side of the connection.
 - Tape the wires together as shown in the illustration.



2-Wire Solder Splice/Ratcheting Crimp Tool Splice Procedure

NOTE:

For 10-14 AWG Use The following "Ratcheting Crimp Tool Splice Procedure".

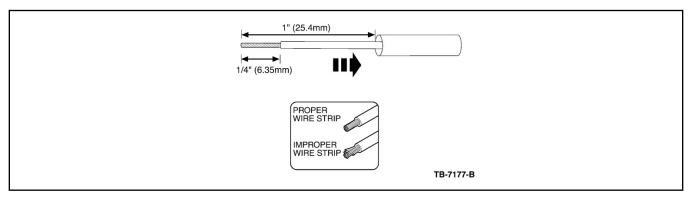
NOTE:

For Splicing Procedure Use Wire Splice Tool Kit (164-R5903).

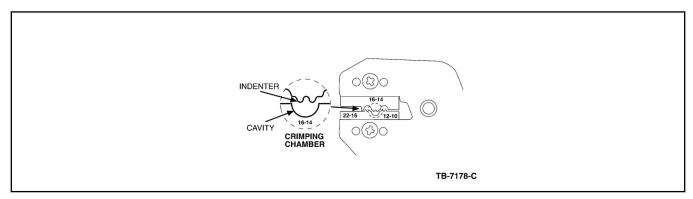
7. **NOTE:**

The strip length will vary depending on the butt splice and wire in harness. Longer strip lengths are required when the wire needs to be folded to mate with the butt splice. Refer to chart for strip lengths and folding techniques.

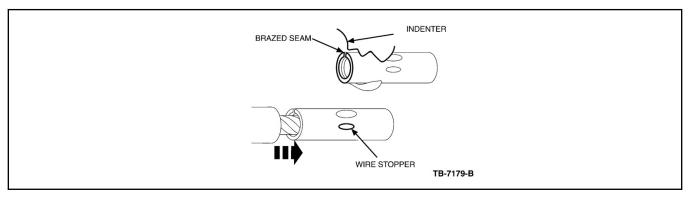
Strip 1/4" (6.35 mm) of insulation from pigtail wire end once the wire lengths are sized so repairs can be staggered. Take care not to nick or cut wire strands. Pull wire straight from stripper. If wire is pulled at an angle, wire strands may be cut off. If more than one (1) strand is cut off during stripping, cut off the end and re-strip. Slide heat shrink tubing onto one (1) of the wire ends to be crimped, must be at least 1" (25.4mm) away from the stripped end.



8. Identify the appropriate crimping chamber of the Rotunda 164-R5901 Pro-Crimper (or equivalent) by matching the wire size on the dies with the wire size stamped on the butt splice. Hold the crimping tool so the identified wire sizes are facing you. Squeeze tool handles together until the ratchet releases, then allow the jaws of the tool to open fully.



9. Center one (1) end of the butt splice on the appropriate crimping chamber. If visible, be sure to place the brazed seam of the butt splice toward the indenter. Hold the butt splice in place and squeeze the tool handles together until the ratchet engages sufficiently to hold the butt splice in position (typically one (1) or two (2) clicks). DO NOT deform the butt splice. Insert stripped wire into the butt splice, making sure the insulation on wire does not enter the butt splice.

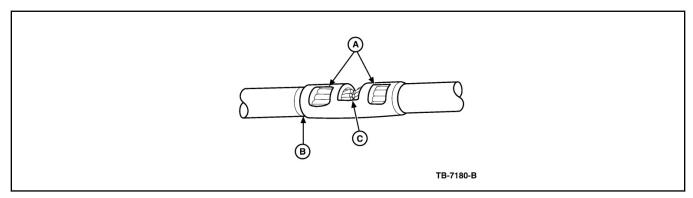


10. Holding the wire in place, squeeze tool handles together until ratchet releases. Allow tool handles to open, then remove crimped butt splice.

To crimp the other half of the splice, reposition the un-crimped wire barrel in the same crimping chamber, and repeat the crimping procedure. If splice cannot be turned for crimping the other half, turn the tool around.

Check for acceptable crimp.

- Crimp should be centered on each end of the butt splice. It is acceptable for crimp to be slightly off center, but not off the end of the butt splice (A).
- Wire insulation does not enter butt splice. Wire is flush with or extends slightly beyond end of butt splice (B).
- Wire is visible through inspection hole of splices (C).



Overlap heat shrink tubing on both wires.

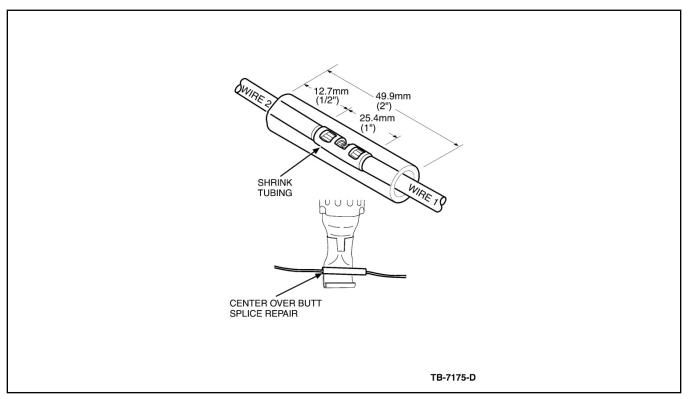
NOTE:

The hot melt forms an adhesive seal between the wire insulation and the heat shrink tubing, which prevents air and moisture from entering the solder point.

NOTE:

Durability of a heat shrink tubing splice is dependent on the hot melt that will appear from both ends of the tube.

Evenly position heat shrink tubing over wire repair. Use a shielded heat gun to heat the entire length of the heat shrink tubing until the hot melt appears from both ends of the tubing.

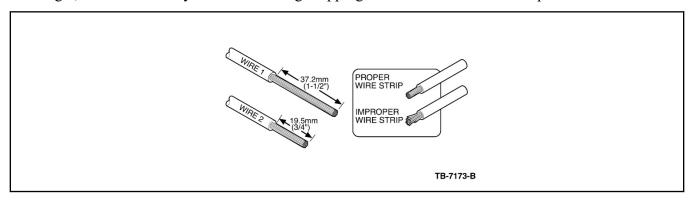


Wire Gauge Size 16 18 20 1/4" 1/4" 1/4" 22-18 1/4" 1/4" 5/8" 1" strip, strip, strip, strip, no strip, no strip, no strip, fold 3x Butt Splice as stamped cut 9 fold fold 2x cut 2 fold fold dia. strands strands dia. ☐ Pigtail Only 1/4" 16-14 1/4" 1/4" 5/8" 1 1/4" 1" strip, Both Pigtal and strip, strip, no fold 3x strip, no strip, no strip, strip, Wire Harness fold 2x fold fold fold dia. fold 4x cut 7 strands dia. 12-10 1/4" 1/4" 5/8" 1" strip, 1 1/4' strip, no strip, fold 3x strip, strip, no fold fold fold 2x dia. fold 4x dia. dia. **4X CROSS SECTION** 2X CROSS SECTION **3X CROSS SECTION ←**1-1/4"**→** ← 5/8"

Wire Stripping Lengths and Application Techniques.

For 16-22 AWG wire use either the above "Ratcheting Crimp Procedure" or the following "2 Wire Solder Splice Procedure".

12. Strip 1 1/2" (37.2 mm) of insulation from Wire #1 and 3/4" (19.5mm) of insulation from Wire #2, taking care not to nick or cut wire strands. Pull wire straight from stripper. If wire is pulled at an angle, wire strands may be cut off during stripping. Cut off the end and re-strip.



TB-7176 -C

Use rosin core mildly activated (RMS) solder. do not use acid core solder for wire repair.

NOTE:

Overlap tubing on both wires and wait for solder to cool before moving the wires.

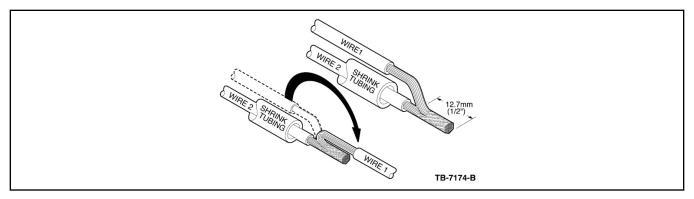
NOTE:

Durability of a heat shrink tubing splice is dependent on the hot melt that will appear from both ends of the tube.

NOTE:

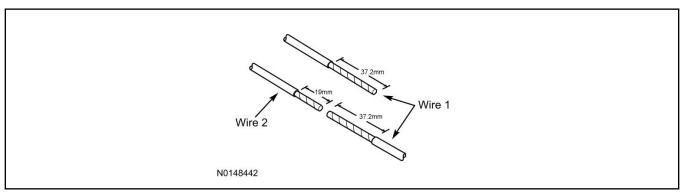
The hot melt forms an adhesive seal between the wire insulation and the heat shrink tubing, which prevents air and moisture from entering the solder point.

Install heat shrink tubing at least 1" (26 mm) away from one of the stripped ends being spliced. Twist the wires together. Solder wires together. Bend Wire #1 back in a straight line for sealing. Inspect solder joint bond. Evenly position heat shrink tubing over wire repair. Use a shielded heat gun to heat the entire length of the heat shrink tubing until the hot melt appears from both ends of the tubing.



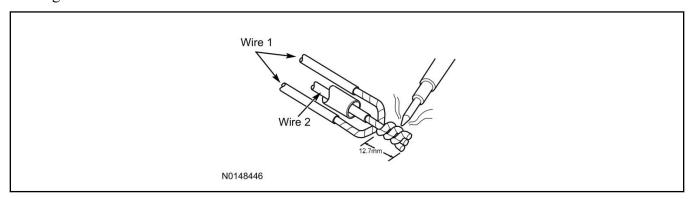
3-Wire Solder Splice Procedure

14. Strip 1 1/2" (37.2 mm) of insulation from both sides of Wire #1 and 3/4" (19 mm) of insulation from Wire #2, taking care not to nick or cut wire strands. Pull wire straight from stripper. If wire is pulled at an angle, wire strands may be cut off during stripping. Cut off the end and re-strip.

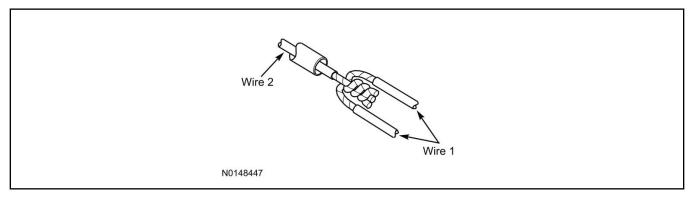


Wait for solder to cool before moving wires.

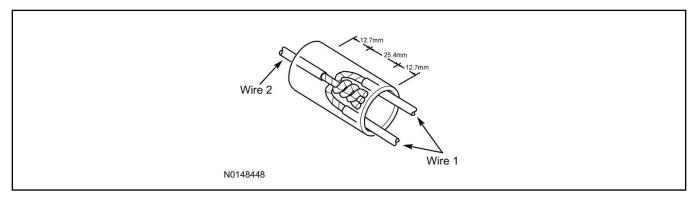
Apply heat shrink tubing to Wire #2. Twist both ends of Wire #1 around Wire #2. Solder wires together.



16. Bend Wire #1 back over the twisted wires for sealing. Inspect solder joint bond.



17. Evenly position heat shrink tubing over wire repair.

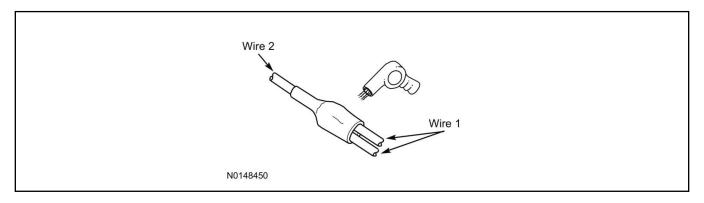


Durability of a heat shrink tubing splice is dependent on the hot melt that will appear from both ends of the tube.

NOTE:

The hot melt forms an adhesive seal between the wire insulation and the heat shrink tubing, which prevents air and moisture from entering the solder point.

Use a shielded heat gun to heat the entire length of the heat shrink tubing until the hot melt appears from both ends of the tubing.



Vehicle Security / Remote Start / Remote Access System Installation

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VEHICLE PREPARATION

Hood Switch Installation

INSTALLATION

VSS Module Installation

Security Indicator LED Mounting

RMST Kit Antenna Installation

RMU Module Installation

GENERAL PROCEDURES

Learn VSS to vehicle

Shock Sensor Sensitivity Adjustment

Standard Remote Start Activation

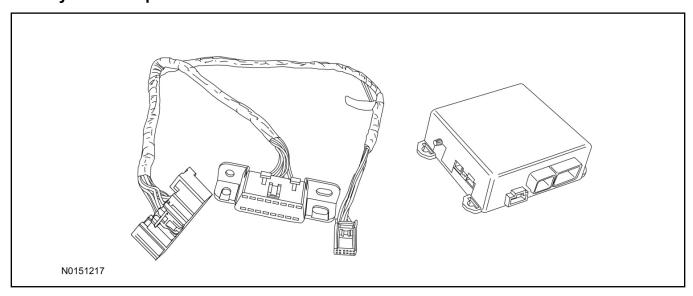
RMU Remote Start Activation

RMU Activation

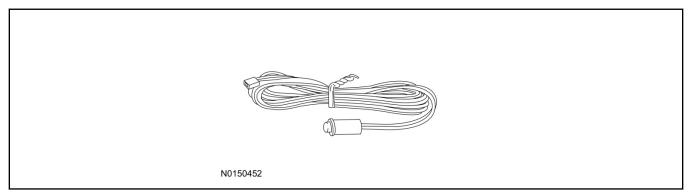
Proper Wire Splicing Techniques

INSTALLATION

Vehicle Security / Remote Start / Remote Access - Explorer VSS System Components



Security Indicator LED (19D596) "Optional"



Explorer

1. Verify correct kit number.

Review VSS Kit Contents

NOTE:

Kits are vehicle specific and are not interchangeable.

2. Review the VSS kit contents.

Vehicle Security System (VSS) Kit

| QUANTITY | DESCRIPTION |
|----------|-------------|
| 1 | VSS Module |
| 1 | T-harness |

| Vahicla 9 | Security | System | (1221/ | Kit | (Continued) | |
|-------------|----------|--------|----------------|-----|-------------|--|
| verificie 3 | Security | System | (v 33) | KIL | (Continued) | |

| 6 | Tie-straps |
|---|----------------|
| 1 | Owner's Manual |

Security Indicator LED Kit Contents "Optional"

3. Review the Security Indicator LED kit contents.

Security Indicator LED Kit

| QUANTITY | DESCRIPTION |
|----------|------------------------|
| 1 | Security Indicator LED |

I. VSS System Installation

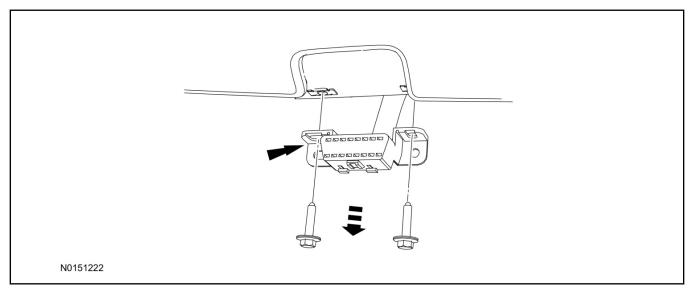
^CAUTION:

Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

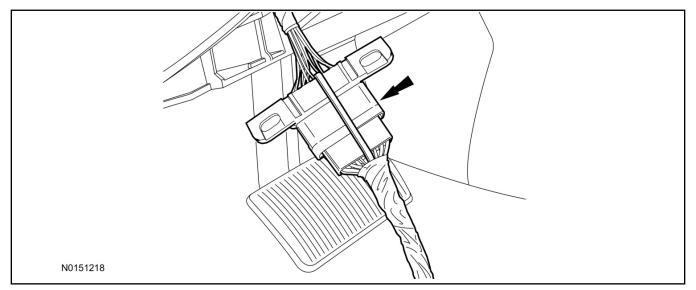
NOTE:

If the VSS kit was installed previously and the vehicle is being upgraded, proceed to the "RMST" or "RMU" upgrade section(s).

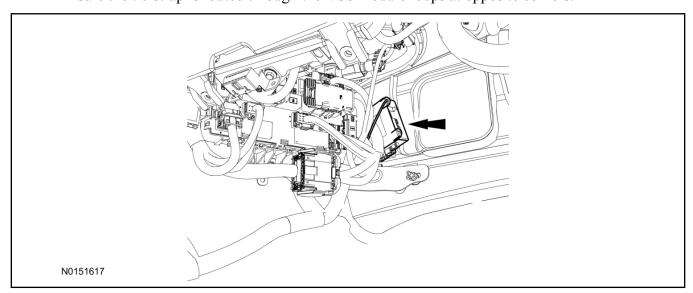
4. Remove the 2 bolts and remove the OBD II port from the IP frame.



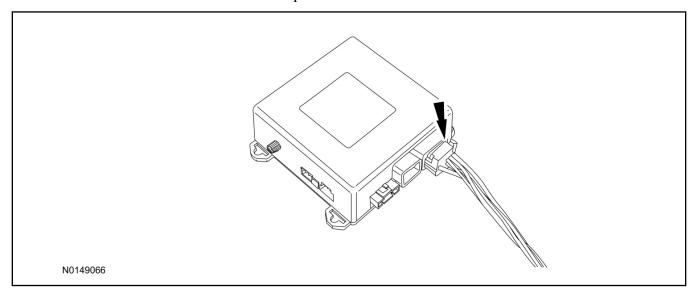
- 5. Connect the VSS T-harness to the OBD II port.
 - Secure the T-harness to the OBD II port using a tie-strap.



- 6. Position the VSS harness inside the IP being careful to avoid sharp edges and moving parts.
- 7. Install the new VSS harness OBD II port to the IP frame and install the bolts.
 - Do not over tighten.
- 8. Position the VSS module on top of the Body Control Module (BCM) and secure to wire harness with tie-straps.
 - Ensure the VSS module is positioned so the shock sensor adjustment knob can be accessed for later use.
 - Ensure the tie-strap is routed through the VSS module loops at opposite corners.



- 9. Connect the VSS harness to the VSS module.
 - Secure the VSS harness with tie-straps.



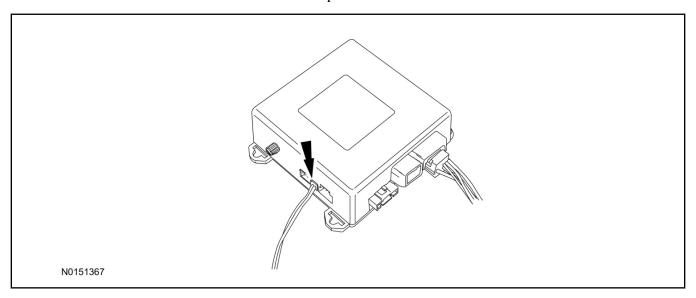
Optional Security Indicator LED Mounting



Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

- 10. Keep the following points in mind when routing or positioning the LED for mounting:
 - Have at least 3/4" clearance behind trim panels for the wiring harness to be routed.
 - The LED should be clearly visible from the driver's side window when mounted.
 - Do not mount the LED on trim panels that cover air bags.
- 11. Mount the LED at an appropriate location on the upper steering column shroud, using the guidelines listed above.
 - Drill a 9/32" hole into the selected location, for the LED to mount in.
- 12. Route the LED wire harness to the VSS module.

- 13. Connect the LED wire harness to the VSS module 2-pin white connector.
 - Secure the LED wire harness with tie-straps.



Learn VSS to Vehicle (Key Start Vehicles Only)

NOTE:

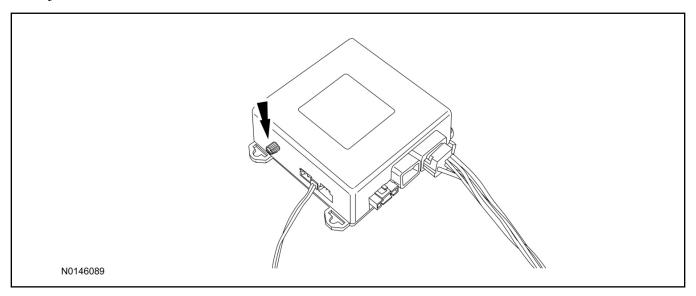
Make sure the brake pedal is not depressed during this sequence.

- 14. Press the vehicle's unlock button located on the driver's door. Make sure all doors are unlocked.
- 15. Put the key in the ignition.
- 16. Cycle eight times rapidly (within 10 seconds) between the 1 (OFF/LOCK) position and 3 (ON) position.
 - The eighth turn must end in the 3 (ON) position. The doors will lock, then unlock, to confirm that the programming mode has been activated.
- 17. Wait for 10 seconds and the remote start module will program itself to the system.
 - After 20 seconds, you will automatically exit the programming mode. The doors will lock, then unlock, to confirm that the programming mode has been exited.

Shock Sensor Sensitivity Adjustment

NOTE:

The VSS module is equipped with an internal dual zone Shock Sensor. The VSS system will activate a single horn honk/single light flash anytime a light to moderate impact is detected, and a "panic" type 30 second horn honk/light flash sequence when a heavy impact is detected while the VSS system is armed. Adjustment of both zones is accomplished through a single adjustment knob on the VSS module. Rotating the knob clockwise will increase sensitivity and rotating the knob counter-clockwise will decrease sensitivity. Sensitivity adjustment must be completed with the module securely mounted and the adjustment knob accessible.



- 18. Starting with the adjustment knob in approximately the halfway position, lower the driver's window and exit the vehicle.
- 19. Press the LOCK button on the vehicle's RKE fob to arm the VSS system. The LED will light solid for 20 seconds and then begin to flash a steady on/off sequence to indicate the system is armed.
- 20. Using a closed fist, impact the steering wheel with moderate force to simulate a light impact on the vehicle. If the impact is detected, the horn will honk and the lights will flash 1 time to indicate the warning impact was detected.
- 21. Using a closed fist, impact the steering wheel with heavy force to simulate a hard impact (i.e. glass breakage) on the vehicle. If the impact is detected, the horn will honk and the lights will flash a steady on off sequence to indicate the heavy or full shock trigger was detected.
- 22. Increase (rotate clockwise) or decrease (rotate counter-clockwise) the adjustment knob as necessary to achieve desired sensitivity, repeat the previous steps to test, and verify adjustment.

VSS Functional Test

NOTE:

If installed, observe the LED while performing these tests.

23. Lower the driver's door window, then close all doors, hood, and trunk/hatch and press lock on the keyfob. The LED should stay lit for 20 seconds while the VSS system pre-arms, after which it will flash every 3-4 seconds in fully armed mode.

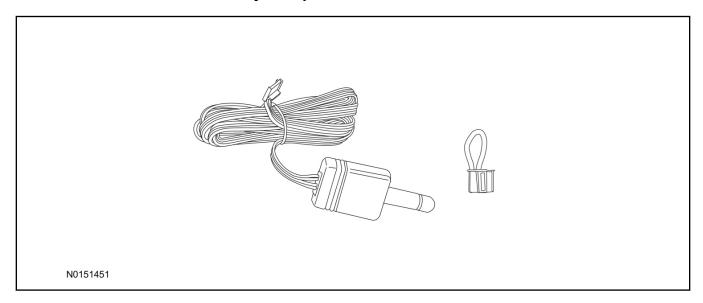
- 24. Reach inside the window hit the door unlock trim switch. The LED should continue to flash, indicating that the vehicle is still armed. Use the inside driver's door handle to open the door. The alarm should sound, indicating perimeter breach. Turn the alarm off by turning the ignition to "On".
 - If equipped with OE perimeter security, there will be a 12 second interior chime prior to alarm sounding. For vehicles not equipped with OE perimeter security, there will be a 12 second delay with no interior chime prior to alarm sounding.
 - For push button start vehicles, the Intelligent Access (IA) key must be away from the vehicle, otherwise the security system may disarm immediately upon trigger.
- 25. Exit the vehicle and arm it again, this time leaving the driver's door open. The vehicle should arm itself, ignoring the open door but monitoring the rest. Once the vehicle is armed, shut the driver's door and reopen it after a few seconds. The alarm should sound. Turn the alarm off by hitting unlock on the keyfob.
 - For push button start vehicles, the Intelligent Access (IA) key must be away from the vehicle, otherwise the security system may disarm immediately upon trigger.
- 26. Test all other vehicle doors, the hood and the trunk in the same manner, by setting off the alarm and disarming with the keyfob.
- 27. Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.
- II. Remote Start (RMST) Upgrade Antenna Kit "Sold Separately"

CAUTION:

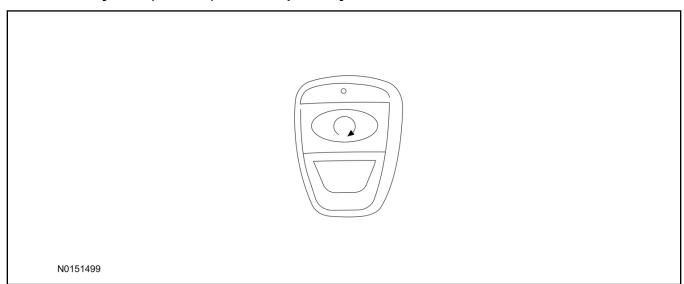
Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

NOTE:

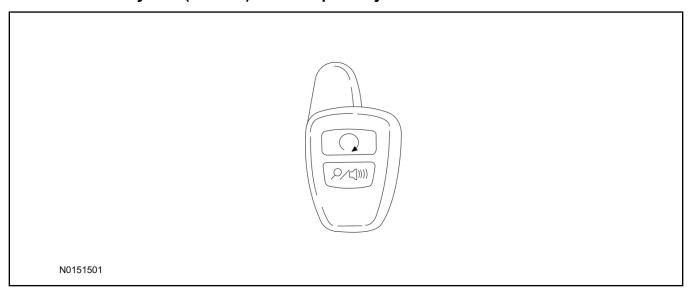
Verify that the vehicle has a hood switch Installed. If the vehicle is not equipped with a hood switch refer to "Hood Switch Kit - Sold Separately".



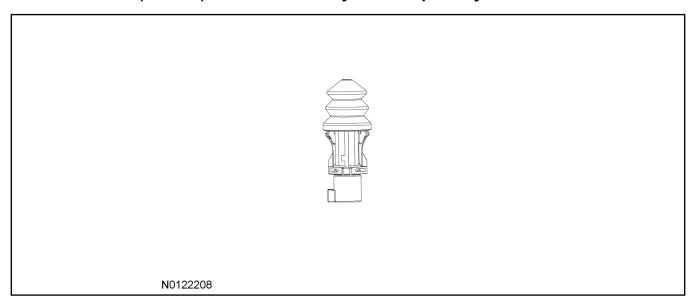
Standard Key Fob (15K601) "Sold Separately"



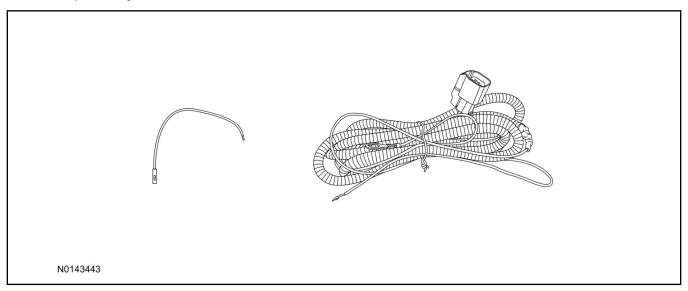
Bi-directional Key Fob (15K601) "Sold Separately"



Hood Switch Kit (19G366) - SE Vehicles Only "Sold Separately"



Optional Components - Hood Switch Wire Harness Kit (14B504) - SE Vehicles Only "Sold Separately"



Optional RMST Upgrade Components "Sold Separately"

28. Review the RMST Upgrade components.

Remote Start (RMST) Upgrade - Antenna Kit "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|------------------------------|
| 1 | Bi-directional Antenna (TBD) |
| 1 | Security Jumper (TBD) |

Standard Key Fob (15K601) "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|---------------------------|
| 1 | Standard Key Fob (15K601) |

Bi-directional Key Fob (15K601) "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|---------------------------------|
| 1 | Bi-directional Key Fob (15K601) |

Hood Switch Kit Contents (if required) "Sold Separately"

29. Review the Hood Switch kit contents.

Hood Switch Kit "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|----------------------|
| 1 | Hood Switch Assembly |

Review Hood Switch Wire Harness Kit Contents (if required) "Sold Separately"

30. Review the Hood Switch kit contents.

Hood Switch Wire Harness Kit "Sold Separately"

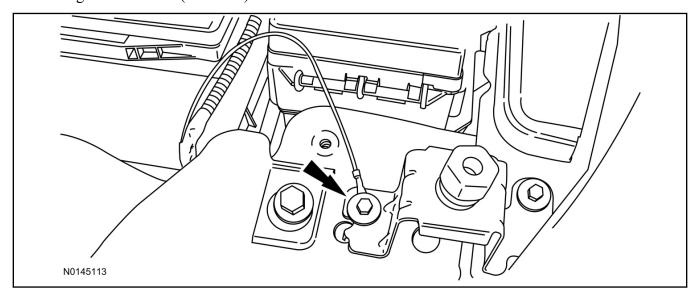
| QUANTITY | DESCRIPTION |
|----------|---|
| 1 | Body Control Module (BCM) Terminal Wire |
| 1 | Hood Switch Wire Harness |

Hood Switch Kit - "Sold Separately"

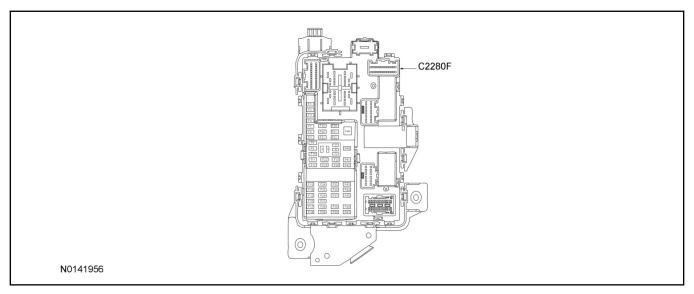
NOTE:

Hood switch installation is optional for VSS installation and required if the vehicle is being upgraded to RMST/RMU and is not currently equipped with a hood switch.

- 31. Remove the fender bolt and install the hood switch ground wire, using the previously removed bolt.
 - Tighten to 12 Nm (106 lb-in).



- 32. Route the hood switch wire harness into the vehicle through the bulkhead grommet.
 - Secure the hood switch wire harness with zip-ties.
- 33. Disconnect Body Control Module (BCM) connector C2280F.



- 34. If equipped, remove the pin plug from BCM connector C2280F Pin 2.
 - If the vehicle is not equipped with a hood switch wire harness from the factory C2280F will not have a wire at the Pin 2 location.

35. *NOTICE*:

Check that the all wire pins are attached firmly and properly positioned/secured within the connector shell, after performing this step.

Insert the BCM terminal wire from the hood switch wire harness kit into BCM connector C2280F Pin 2.

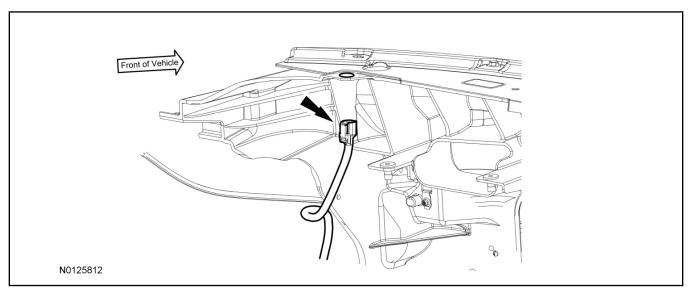
- Some disassembly of BCM connector C2280F may be required to perform this step.
- 36. Connect BCM connector C2280F.

NOTICE:

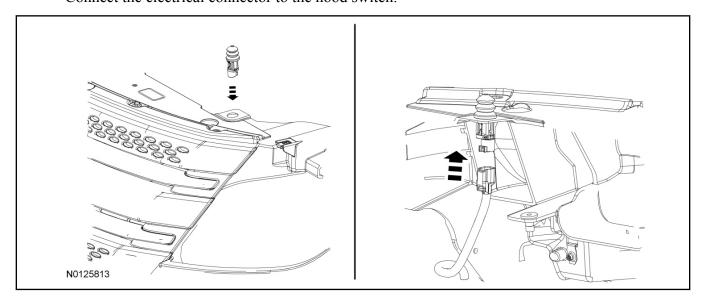
Refer to "Proper Wire Splicing Techniques" before proceeding.

- 37. Connect the hood switch wire harness wire to the BCM Terminal Wire.
 - Secure the wire harness assembly with zip-ties.

- 38. Locate the vehicle's existing "OE" hood switch wire harness, located on the LH side of the vehicle below the radiator core support.
 - If required remove the vehicle's air cleaner assembly, to access the vehicles "OE" hood switch wire harness. For additional information, refer to Workshop Manual (WSM), Section 303-12.

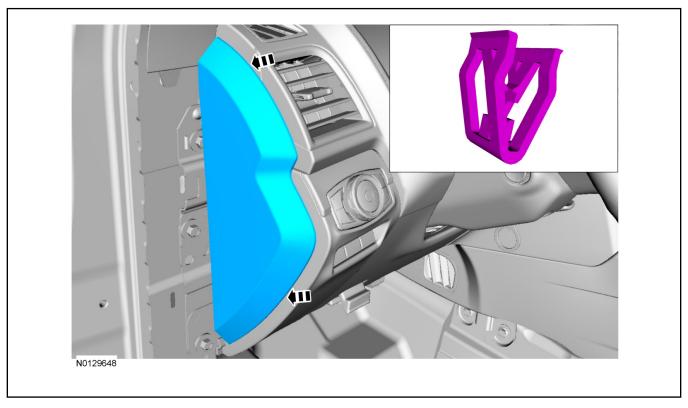


- 39. Install the OE hood switch assembly to the existing hood switch mounting location, on the LH side of the upper radiator core support as shown.
 - If equipped, remove the dummy plug from the upper radiator core support.
 - Position the flat spot on the hood switch to the flat spot on the radiator core support.
 - Connect the electrical connector to the hood switch.



RMST Kit Antenna Installation

40. Remove the LH IP side finish panel.



41. Clean the antenna mounting surface using an alcohol base solution and a clean cloth.

42. **NOTE:**

Do not touch the adhesive, reduced adhesion may result.

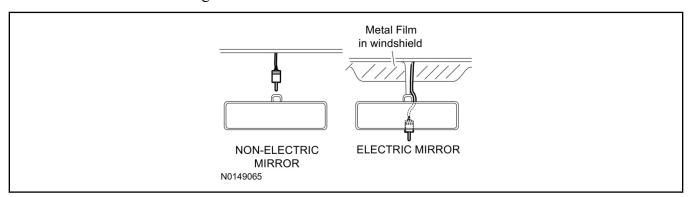
NOTE:

Make sure that the long wire on the antenna is pointing towards the top of the windshield since this wire will be routed along the headliner.

NOTE:

The wire will be attached to the control module later in this procedure.

Remove the protective backing from the adhesive on the antenna and firmly press the body of the antenna onto the mounting surface.

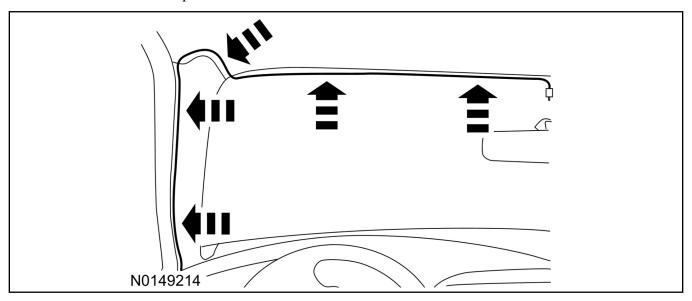


43. If necessary, position the LH A-pillar trim slightly outward to provide access to route the antenna wire.

NOTE:

Do not route the antenna wire over the top of air bags.

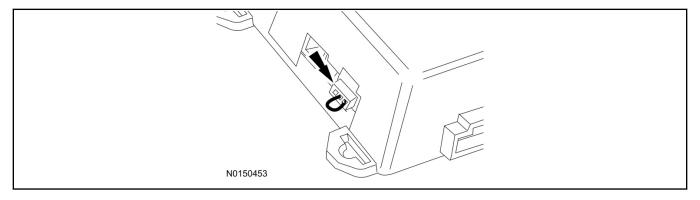
- 44. Route the antenna cable along the headliner and down the LH A-pillar towards the floor. Continue routing the wire Into the IP towards the VSS module.
 - Secure with tie-straps.



- 45. Connect the antenna connector to the VSS module.
- 46. Reposition the A-pillar trim panel back, if necessary.
- 47. Install the LH IP side finish panel.

VSS Module - Optional Vehicle Security Features

- 48. Enable/Disable Vehicle Security Features: Locate the security jumper supplied in the kit.
 - Install the jumper to the VSS module if the vehicle security features are to be **disabled**.
 - Not installing and/or removing the jumper from the VSS module will keep the vehicle security features **enabled**.



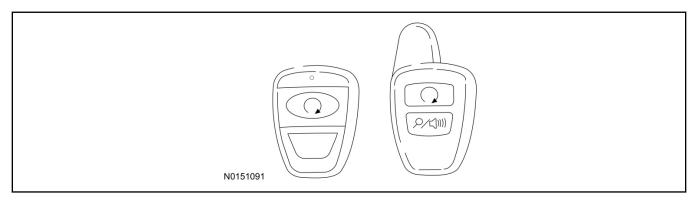
RMST Activation - Key Start Only

NOTE:

For vehicles equipped with push button start, proceed to Step 55 within the "Programming Key Fobs" section of this manual.

- 49. Verify that the IDS is updated to the most current version.
- 50. Connect IDS.
 - Follow the prompts to select new vehicle session.
 - Enter VIN.
- 51. Activate the remote start using the IDS.
 - Select the Tool Box icon.
 - · Select Body.
 - · Select Security.
 - Select Remote Start.
 - Verify that the information on the IDS screen is correct and all procedures have been followed.
 - Select Yes. This will enable the remote start function on the vehicle.
- 52. For vehicles equipped with standard message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Convenience.
 - Select Remote Start.
 - · Select System.
 - Verify that the remote start system is checked.
- 53. For vehicles equipped with advanced message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Vehicle Settings.
 - · Select Vehicle.
 - Select Remote Start System.
 - Verify that the remote start system is enabled.

Programming Key Fobs



54. Key Start Vehicles:

NOTE:

These steps must be performed with the VSS module security jumper removed if previously installed. For additional information refer to "VSS Module - Optional Vehicle Security Features".

- 1 Start with doors unlocked
- 2 Driver's door open (remaining open throughout)
- 3 Verify that the gearshift lever is in the "PARK" position.
- 4 Depress and hold brake pedal.
- 5 Start with ignition key OFF.
- 6 Cycle ignition key to the ON then OFF position 5 times, then back to the ON position a 6th time.
 - The horn will honk 3 times to indicate transmitter learn mode access.
- 7 Press the START button on each transmitter you wish to program. The horn will honk 1 time each time the START button is pressed to indicated the transmitter has been learned.
- 8 Cycle ignition key to the OFF position to exit transmitter learn mode.

9 **NOTE**:

If the security jumper is installed the vehicle security features are disabled.

If previously removed, reinstall the VSS module security jumper. For additional information, refer to "VSS Module - Optional Vehicle Security Features".

55. Push Button Start Vehicles:

NOTE:

These steps must be performed with the VSS module security jumper removed if previously installed. For additional information refer to "VSS Module - Optional Vehicle Security Features".

- 1 Enter the vehicle with the vehicle key(s) and key fobs you wish to program.
- 2 Depress and hold brake pedal.
- 3 Press the start/stop button.
- 4 After the vehicle starts press the start/stop button to shut down.
- 5 Repeat steps 3 and 4 an additional four times, ending in ignition on, engine off.
- 6 Release the brake pedal.
- 7 Press the vehicle start/stop button twice to turn ignition on.
 - The horn will honk 3 times to indicate transmitter learn mode access.
- 8 Press the start stop button on each fob you wish to program.
- 9 Cycle ignition to the OFF position to exit transmitter learn mode.

10 **NOTE**:

If the security jumper is installed the vehicle security features are disabled.

If previously removed, reinstall the VSS module security jumper. For additional information, refer to "VSS Module - Optional Vehicle Security Features".

RMST Functional Test

NOTE:

Do not put a key in the ignition for the following steps.

- 56. Make sure the shift lever is in PARK and the ignition is in the OFF position. Remove all keys from the vehicle.
- 57. Close the hood.
- 58. Close all of the vehicle doors.
- 59. Start the vehicle by pressing the remote start button twice on the remote start key fob.
- 60. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
- 61. Open the hood.

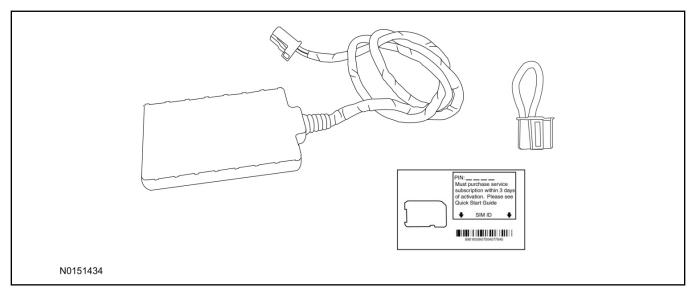
62. **NOTE:**

Vehicle doors should be closed while performing this step.

Confirm that the vehicle will not start with the hood open.

Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

III. Remote Access (RMU) Upgrade "Sold Separately"



63. Review the RMU upgrade components.

Optional Components — Remote Access (RMU) Upgrade "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|-----------------------------|
| 1 | Remote Messaging Unit (RMU) |
| 1 | SIM Card Carrier |
| 1 | Security Jumper |

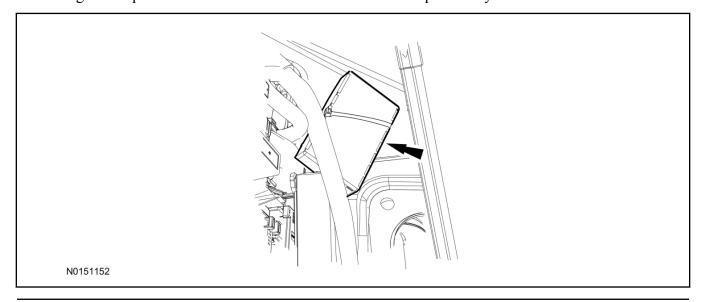
^CAUTION:

Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

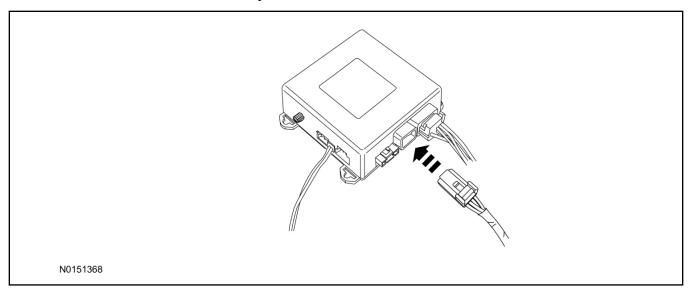
NOTE:

For proper range of operation, the RMU must be installed as shown in the diagram below.

64. Using tie-straps secure the RMU to the IP harness near the previously installed VSS module.

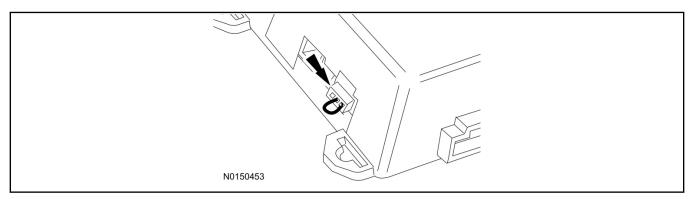


- 65. Connect the RMU electrical connector to the VSS module.
 - Secure the harness with tie-straps.



VSS Module - Optional Vehicle Security Features

- 66. Enable/Disable Vehicle Security Features: Locate the security jumper supplied in the kit.
 - Install the jumper to the VSS module if the vehicle security features are to be **disabled**.
 - Not installing and/or removing the jumper from the VSS module will keep the vehicle security features **enabled**.



Remote Start Activation - Key Start Vehicles (Without Factory Remote Start)

- 67. Verify that the IDS is updated to the most current version.
- 68. Connect IDS.
 - Follow the prompts to select new vehicle session.
 - Enter VIN.

- 69. Activate the remote start using the IDS.
 - Select the Tool Box icon.
 - · Select Body.
 - · Select Security.
 - · Select Remote Start.
 - Verify that the information on the IDS screen is correct and all procedures have been followed.
 - Select Yes. This will enable the remote start function on the vehicle.
- 70. For vehicles equipped with standard message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Convenience.
 - Select Remote Start.
 - Select System.
 - Verify that the remote start system is checked.
- 71. For vehicles equipped with advanced message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Vehicle Settings.
 - Select Vehicle.
 - Select Remote Start System.
 - Verify that the remote start system is enabled.

RMU Activation

NOTE:

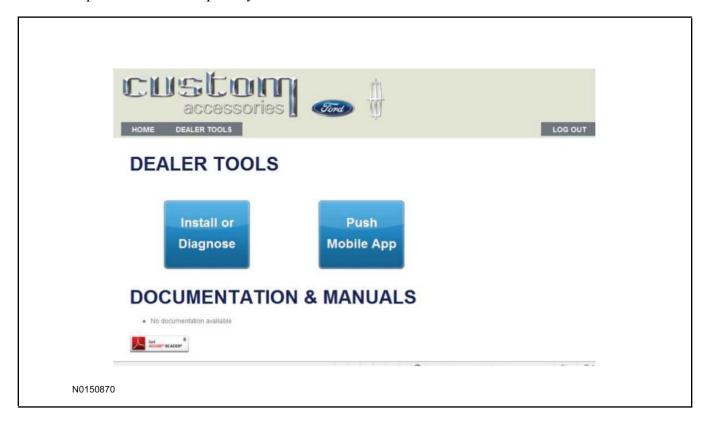
Please note that the Remote Access application that is used to start the vehicle for this RMST kit will only work with iPhone and Android phones.

- 72. For RMU activation the following information from the customer is recommended to provide them with electronic notification for app retrieval:
 - 1 Email Address
 - 2 Cell Phone Number
 - 3 Cell Phone Carrier Company

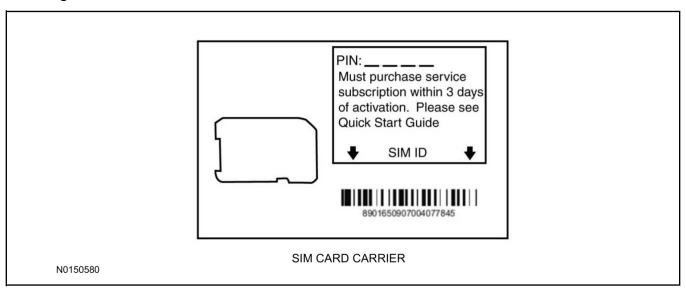
- 73. Log on to your Professional Technician Society (PTS) account and enter the vehicle information.
 - 1 Select "Vehicle Id".
 - 2 Select "By Year & Model"
 - 3 Choose the year & model of the vehicle and then select "GO".
 - 4 Hover over the "Workshop" tab.
 - 5 Select the "Accessory Installation" menu item.
 - 6 Under the "Electrical" heading, select the "Remote Access Activation" link (first time users will need to agree to terms & conditions).
 - 7 Select the "Install or Diagnose" link.

NOTE:

If you are not directed to the screen shown below (or user agreement screen for first time users), make sure your internet browser zone settings are set to medium. This setting can be found in your browsers "internet options" under the "privacy" tab.



74. Once on the "Install" page, enter the SIM ID code that was provided with the RMST kit. Select "Begin or Continue Installation".



75. Click on the "On screen steps 1-6", and follow the on screen instructions to complete the installation.

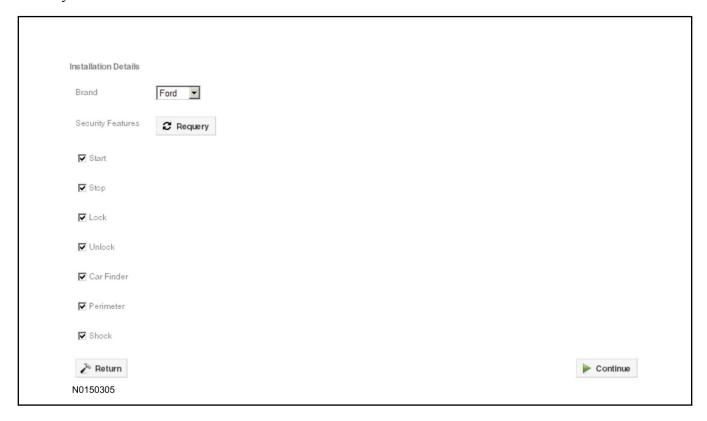


NOTE:

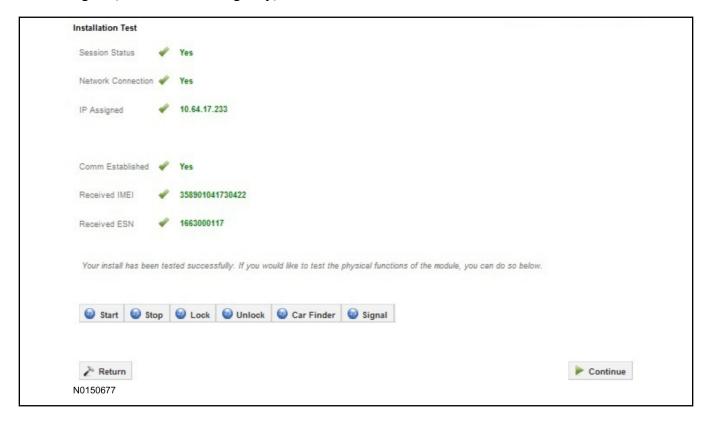
The following step will complete the activation process, when you are directed to a screen similar to the one below ensure the correct vehicle brand is selected and that all applicable features are enabled.

NOTE:

The "perimeter" and "shock" settings below are optional features and should only be selected when security features are enabled.



- 76. Perform a functional check of the system by testing each of the available features.
 - Start/Stop function
 - Lock/Unlock function
 - · Car finder
 - Signal (for troubleshooting only)



NOTE:

All tests above must be completed in order to move to the next step. If any of the listed functions fail, move the vehicle to an outside location and retest.

Key Start Vehicles Only

NOTE:

In the event start or stop fail, refer to the "Remote Start Activation" section in this manual.

NOTE:

In the event lock/unlock or car find fail, refer to the "Learn Remote Start System to Vehicle" section in this manual.

All Vehicles

- 77. Once the hardware installation and RMU activation process is complete, record the 4-digit PIN on the SIM card carrier. Provide the SIM card carrier to the customer so they can add this system to their Remote Access Account. Customer must have both the 4-digit PIN and SIM ID to activate/add their vehicle to their Remote Access Account.
- 78. If the customer agrees, you may push the mobile application to the customer. You will need the customer's phone number and cellular carrier. If the customer opts to install the application themselves, they can locate it in their mobile app store.

Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

Vehicle Security / Remote Start / Remote Access System Installation

CONTENTS

VEHICLE PREPARATION

Hood Switch Installation

INSTALLATION

VSS Module Installation

Security Indicator LED Mounting

TPM Antenna Kit Installation

RMST Kit Antenna Installation

RMU Module Installation

GENERAL PROCEDURES

Learn VSS to vehicle

Shock Sensor Sensitivity Adjustment

Standard Remote Start Activation

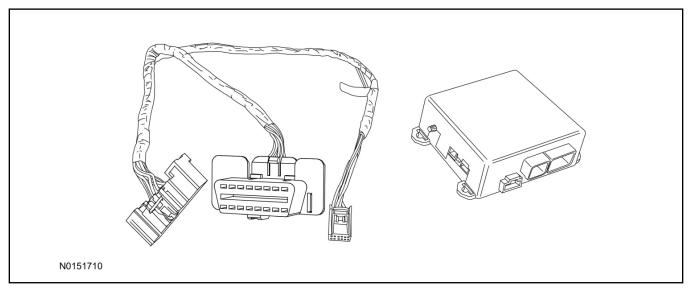
RMU Remote Start Activation

RMU Activation

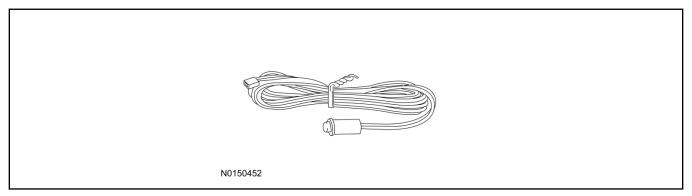
INSTALLATION

Vehicle Security / Remote Start / Remote Access - Edge/MKX

VSS System Components



Security Indicator LED (19D596) "Optional"



Edge/MKX

1. Verify correct kit number.

Review VSS Kit Contents

NOTE:

Kits are vehicle specific and are not interchangeable.

2. Review the VSS kit contents.

Vehicle Security System (VSS) Kit

| QUANTITY | DESCRIPTION | |
|----------|-------------|--|
| 1 | VSS Module | |
| 1 | T-harness | |

| Vehicle | Security | System | (VSS) | Kit(Continued) | |
|---------|----------|--------|-------|----------------|--|
| | _ | - | | | |

| 6 | Tie-straps | |
|---|----------------|--|
| 1 | Owner's Manual | |

Security Indicator LED Kit Contents "Optional"

3. Review the Security Indicator LED kit contents.

Security Indicator LED Kit

| QUANTITY | DESCRIPTION |
|----------|------------------------|
| 1 | Security Indicator LED |

I. VSS System Installation

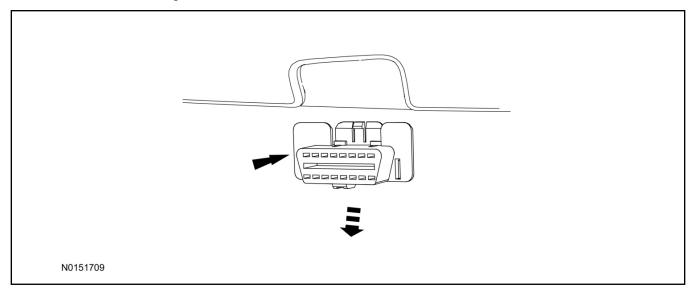


Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

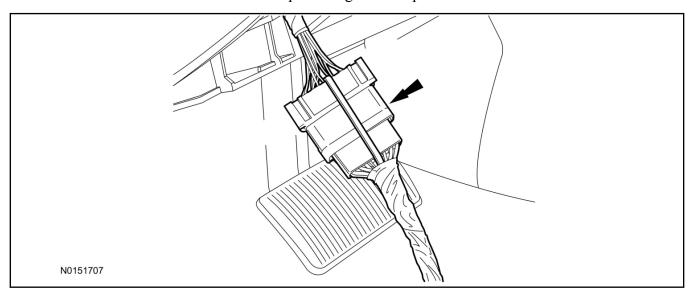
NOTE:

If the VSS kit was installed previously and the vehicle is being upgraded, proceed to the "RMST" or "RMU" upgrade section(s).

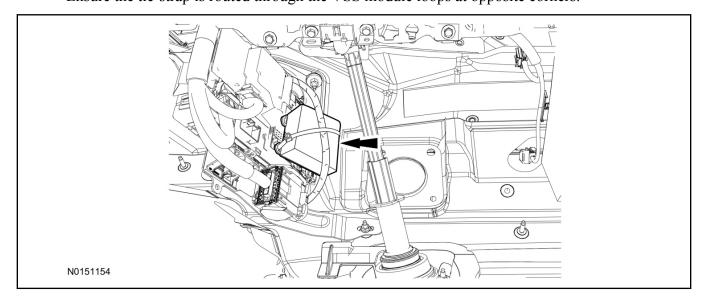
4. Remove the OBD II port from the IP frame.



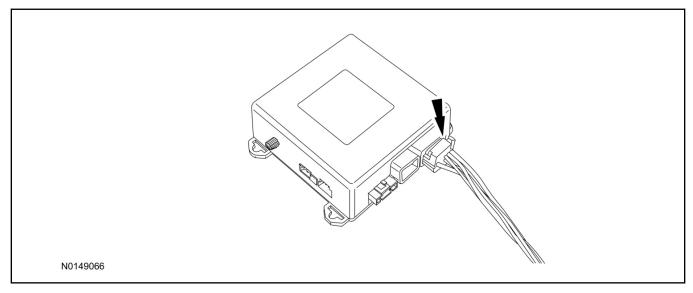
- 5. Connect the VSS T-harness to the OBD II port.
 - Secure the T-harness to the OBD II port using a tie-strap.



- 6. Position the VSS harness inside the IP being careful to avoid sharp edges and moving parts.
- 7. Install the new VSS harness OBD II port to the IP frame.
- 8. Position the VSS module on top of the Body Control Module (BCM) and secure to wire harness with tie-straps.
 - Ensure the VSS module is positioned so the shock sensor adjustment knob can be accessed for later use.
 - Ensure the tie-strap is routed through the VSS module loops at opposite corners.



- 9. Connect the VSS harness to the VSS module.
 - Secure the VSS harness with tie-straps.



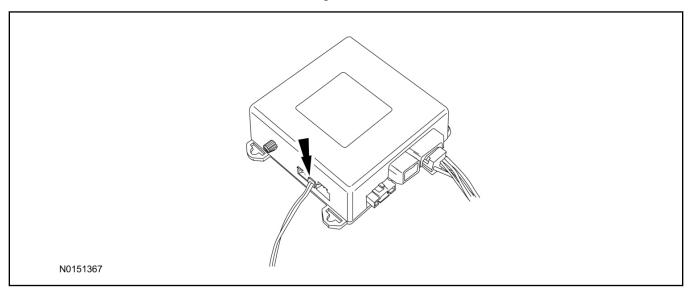
Optional Security Indicator LED Mounting



Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

- 10. Keep the following points in mind when routing or positioning the LED for mounting:
 - Have at least 3/4" clearance behind trim panels for the wiring harness to be routed.
 - The LED should be clearly visible from the driver's side window when mounted.
 - Do not mount the LED on trim panels that cover air bags.
- 11. Mount the LED at an appropriate location on the upper steering column shroud, using the guidelines listed above.
 - Drill a 9/32" hole into the selected location, for the LED to mount in.
- 12. Route the LED wire harness to the VSS module.

- 13. Connect the LED wire harness to the VSS module 2-pin white connector.
 - Secure the LED wire harness with tie-straps.



Learn VSS to Vehicle (Key Start Vehicles Only)

NOTE:

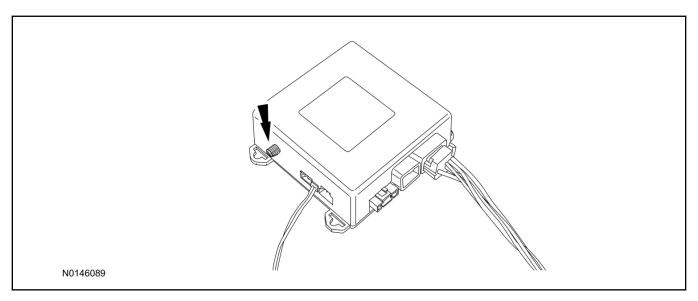
Make sure the brake pedal is not depressed during this sequence.

- 14. Press the vehicle's unlock button located on the driver's door. Make sure all doors are unlocked.
- 15. Put the key in the ignition.
- 16. Cycle eight times rapidly (within 10 seconds) between the 1 (OFF/LOCK) position and 3 (ON) position.
 - The eighth turn must end in the 3 (ON) position. The doors will lock, then unlock, to confirm that the programming mode has been activated.
- 17. Wait for 10 seconds and the remote start module will program itself to the system.
 - After 20 seconds, you will automatically exit the programming mode. The doors will lock, then unlock, to confirm that the programming mode has been exited.

Shock Sensor Sensitivity Adjustment

NOTE:

The VSS module is equipped with an internal dual zone Shock Sensor. The VSS system will activate a single horn honk/single light flash anytime a light to moderate impact is detected, and a "panic" type 30 second horn honk/light flash sequence when a heavy impact is detected while the VSS system is armed. Adjustment of both zones is accomplished through a single adjustment knob on the VSS module. Rotating the knob clockwise will increase sensitivity and rotating the knob counter-clockwise will decrease sensitivity. Sensitivity adjustment must be completed with the module securely mounted and the adjustment knob accessible.



- 18. Starting with the adjustment knob in approximately the halfway position, lower the driver's window and exit the vehicle.
- 19. Press the LOCK button on the vehicle's RKE fob to arm the VSS system. The LED will light solid for 20 seconds and then begin to flash a steady on/off sequence to indicate the system is armed.
- 20. Using a closed fist, impact the steering wheel with moderate force to simulate a light impact on the vehicle. If the impact is detected, the horn will honk and the lights will flash 1 time to indicate the warning impact was detected.
- 21. Using a closed fist, impact the steering wheel with heavy force to simulate a hard impact (i.e. glass breakage) on the vehicle. If the impact is detected, the horn will honk and the lights will flash a steady on off sequence to indicate the heavy or full shock trigger was detected.
- 22. Increase (rotate clockwise) or decrease (rotate counter-clockwise) the adjustment knob as necessary to achieve desired sensitivity, repeat the previous steps to test, and verify adjustment.

VSS Functional Test

NOTE:

If installed, observe the LED while performing these tests.

- 23. Lower the driver's door window, then close all doors, hood, and trunk/hatch and press lock on the keyfob. The LED should stay lit for 20 seconds while the VSS system pre-arms, after which it will flash every 3-4 seconds in fully armed mode.
- 24. Reach inside the window hit the door unlock trim switch. The LED should continue to flash, indicating that the vehicle is still armed. Use the inside driver's door handle to open the door. The alarm should sound, indicating perimeter breach. Turn the alarm off by turning the ignition to "On".
 - If equipped with OE perimeter security, there will be a 12 second interior chime prior to alarm sounding. For vehicles not equipped with OE perimeter security, there will be a 12 second delay with no interior chime prior to alarm sounding.
 - For push button start vehicles, the Intelligent Access (IA) key must be away from the vehicle, otherwise the security system may disarm immediately upon trigger.

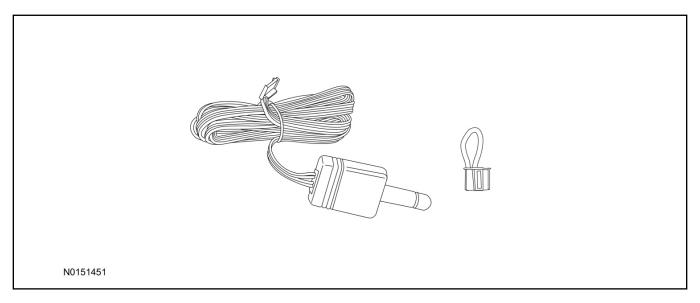
- 25. Exit the vehicle and arm it again, this time leaving the driver's door open. The vehicle should arm itself, ignoring the open door but monitoring the rest. Once the vehicle is armed, shut the driver's door and reopen it after a few seconds. The alarm should sound. Turn the alarm off by hitting unlock on the keyfob.
 - For push button start vehicles, the Intelligent Access (IA) key must be away from the vehicle, otherwise the security system may disarm immediately upon trigger.
- 26. Test all other vehicle doors, the hood and the trunk in the same manner, by setting off the alarm and disarming with the keyfob.
- 27. Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.
- II. Remote Start (RMST) Upgrade Antenna Kit "Sold Separately"



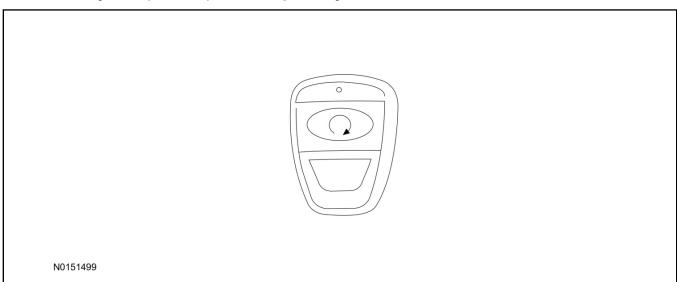
Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

NOTE:

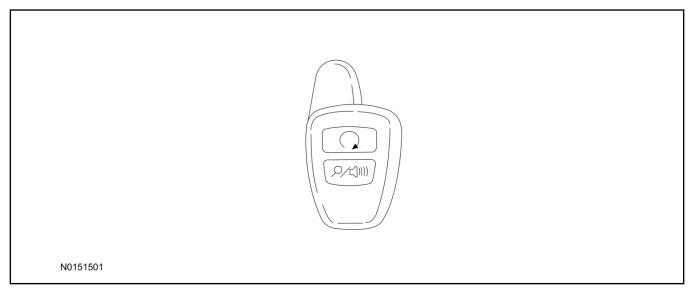
Verify that the vehicle has a hood switch Installed. If the vehicle is not equipped with a hood switch refer to "Hood Switch Kit - Sold Separately".



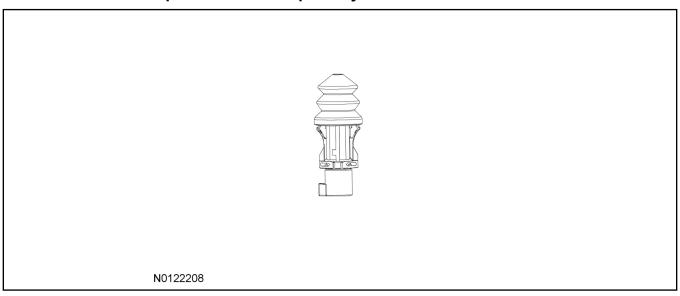
Standard Key Fob (15K601) "Sold Separately"



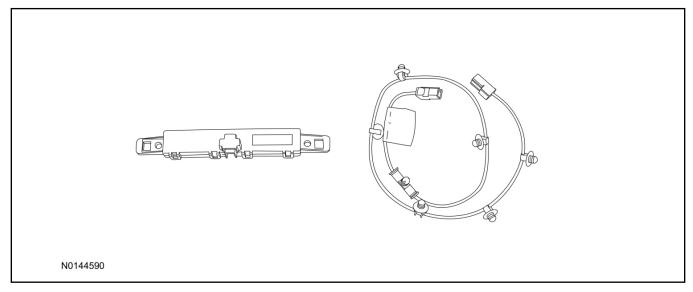
Bi-directional Key Fob (15K601) "Sold Separately"



Hood Switch Kit Components "Sold Separately"



TPM Antenna Kit Components "Sold Separately"



Optional RMST Upgrade Components "Sold Separately"

28. Review the RMST Upgrade components.

Remote Start (RMST) Upgrade - Antenna Kit "Sold Separately"

| QUANTITY | DESCRIPTION | |
|----------|------------------------------|--|
| 1 | Bi-directional Antenna (TBD) | |
| 1 | Security Jumper (TBD) | |

Standard Key Fob (15K601) "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|---------------------------|
| 1 | Standard Key Fob (15K601) |

Bi-directional Key Fob (15K601) "Sold Separately"

| QUANTITY | DESCRIPTION | |
|----------|---------------------------------|--|
| 1 | Bi-directional Key Fob (15K601) | |

Review Hood Switch Kit Contents "Sold Separately"

29. Review the Hood Switch kit contents.

Hood Switch Kit

| QUANTITY | DESCRIPTION | |
|----------|----------------------|--|
| 1 | Hood Switch Assembly | |

TPM Antenna Kit Components "Sold Separately"

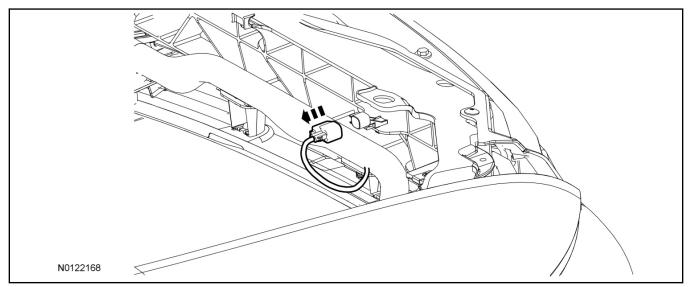
30. Review the TPM antenna kit contents.

TPM Antenna Kit

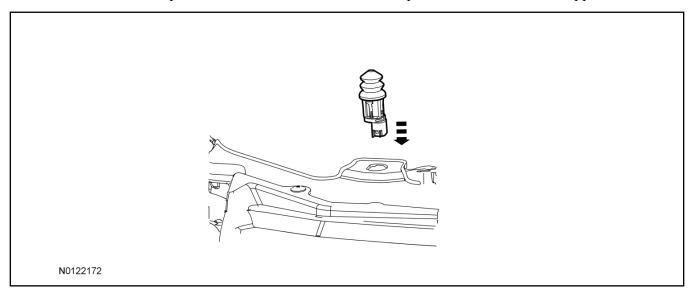
| QUANTITY | DESCRIPTION | |
|----------|--------------------------|--|
| 1 | Antenna Module | |
| 1 | Antenna Jumper Wire | |
| 1 | 2-sided Tape (not shown) | |

Hood Switch Installation

31. Disconnect the existing hood switch electrical connector from the insulator cap, located on the RH side of the radiator core support.



- 32. Install the OE hood switch assembly to the existing hood switch mounting location, on the upper radiator core support as shown.
 - Position the flat spot on the hood switch with the flat spot on the radiator core support.



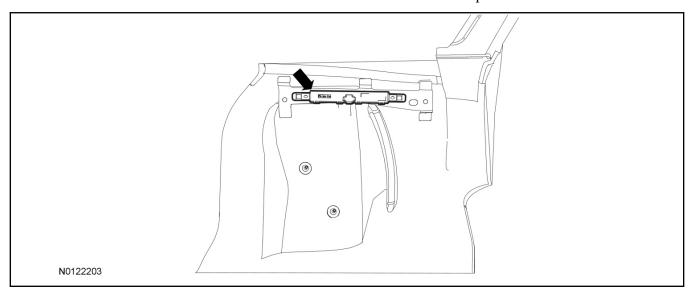
33. Connect the electrical connector to the hood switch.

TPM Antenna Kit Installation

NOTE:

The TPM Antenna Kit is only required if the vehicle is not equipped with factory remote start.

- 34. Remove the rear LH quarter trim panel. For additional information, refer to Workshop Manual (WSM) Section 501-05.
- 35. Position the antenna module into the vehicle and secure with tie straps.

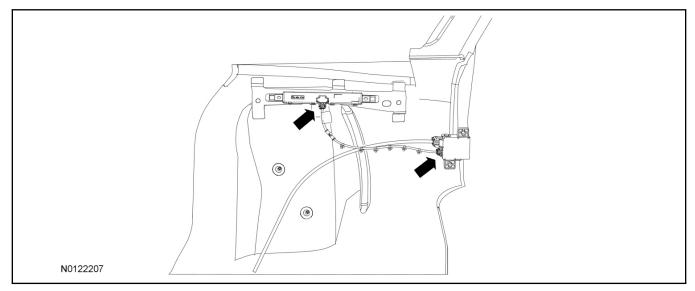


36. **NOTE:**

LH quarter trim panel removed for clarity.

Install the antenna jumper wire to the vehicle.

- Connect to the antenna module and to the TPM module.
- Secure with tie straps.
- The push pins on the antenna jumper wire are not used for this application.



37. Install the rear LH quarter trim panel. For additional information, refer to WSM Section 501-05.

RMST Kit Antenna Installation

- 38. Remove the LH IP side trim panel.
- 39. Clean the antenna mounting surface using an alcohol base solution and a clean cloth.

40. **NOTE:**

Do not touch the adhesive, reduced adhesion may result.

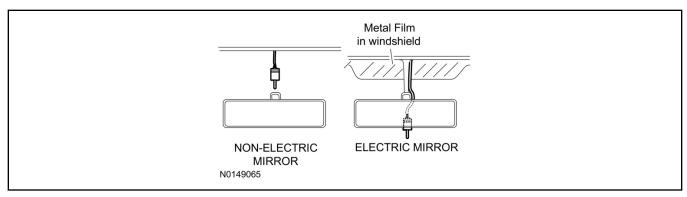
NOTE:

Make sure that the long wire on the antenna is pointing towards the top of the windshield since this wire will be routed along the headliner.

NOTE:

The wire will be attached to the control module later in this procedure.

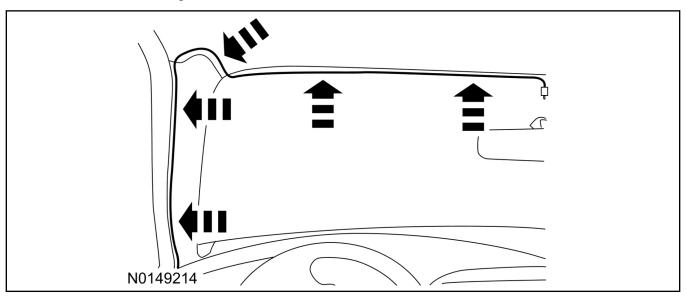
Remove the protective backing from the adhesive on the antenna and firmly press the body of the antenna onto the mounting surface.



NOTE:

Do not route the antenna wire over the top of air bags.

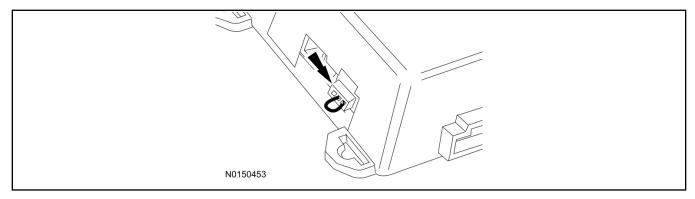
- 41. Route the antenna cable along the headliner and down the LH A-pillar towards the floor. Continue routing the wire into the IP towards the VSS module.
 - Secure with tie-straps.



- 42. Connect the antenna connector to the VSS module.
- 43. Install the LH IP side trim panel.

VSS Module - Optional Vehicle Security Features

- 44. Enable/Disable Vehicle Security Features: Locate the security jumper supplied in the kit.
 - Install the jumper to the VSS module if the vehicle security features are to be **disabled**.
 - Not installing and/or removing the jumper from the VSS module will keep the vehicle security features **enabled**.



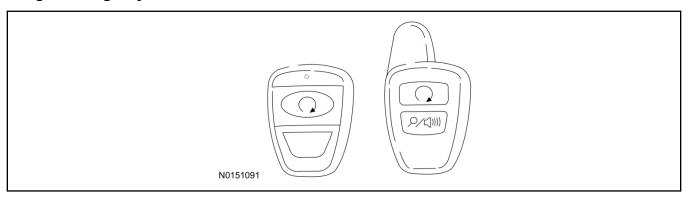
RMST Activation - Key Start Only

NOTE:

For vehicles equipped with push button start, proceed to Step 51 within the "Programming Key Fobs" section of this manual.

- 45. Verify that the IDS is updated to the most current version.
- 46. Connect IDS.
 - Follow the prompts to select new vehicle session.
 - Enter VIN
- 47. Activate the remote start using the IDS.
 - Select the Tool Box icon.
 - Select Body.
 - Select Security.
 - Select Remote Start.
 - Verify that the information on the IDS screen is correct and all procedures have been followed.
 - Select Yes. This will enable the remote start function on the vehicle.
- 48. For vehicles equipped with standard message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - · Select Convenience.
 - Select Remote Start.
 - Select System.
 - Verify that the remote start system is checked.
- 49. For vehicles equipped with advanced message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Vehicle Settings.
 - Select Vehicle.
 - Select Remote Start System.
 - Verify that the remote start system is enabled.

Programming Key Fobs



50. Key Start Vehicles:

NOTE:

These steps must be performed with the VSS module security jumper removed if previously installed. For additional information refer to "VSS Module - Optional Vehicle Security Features".

- 1 Start with doors unlocked
- 2 Driver's door open (remaining open throughout)
- 3 Verify that the gearshift lever is in the "PARK" position.
- 4 Depress and hold brake pedal.
- 5 Start with ignition key OFF.
- 6 Cycle ignition key to the ON then OFF position 5 times, then back to the ON position a 6th time.
 - The horn will honk 3 times to indicate transmitter learn mode access.
- 7 Press the START button on each transmitter you wish to program. The horn will honk 1 time each time the START button is pressed to indicated the transmitter has been learned.
- 8 Cycle ignition key to the OFF position to exit transmitter learn mode.

9 **NOTE**:

If the security jumper is installed the vehicle security features are disabled.

If previously removed, reinstall the VSS module security jumper. For additional information, refer to "VSS Module - Optional Vehicle Security Features".

51. Push Button Start Vehicles:

NOTE:

These steps must be performed with the VSS module security jumper removed if previously installed. For additional information refer to "VSS Module - Optional Vehicle Security Features".

- 1 Enter the vehicle with the vehicle key(s) and key fobs you wish to program.
- 2 Depress and hold brake pedal.
- 3 Press the start/stop button.
- 4 After the vehicle starts press the start/stop button to shut down.
- 5 Repeat steps 3 and 4 an additional four times, ending in ignition on, engine off.
- 6 Release the brake pedal.
- 7 Press the vehicle start/stop button twice to turn ignition on.
 - The horn will honk 3 times to indicate transmitter learn mode access.
- 8 Press the start stop button on each fob you wish to program.
- 9 Cycle ignition to the OFF position to exit transmitter learn mode.

10 **NOTE**:

If the security jumper is installed the vehicle security features are disabled.

If previously removed, reinstall the VSS module security jumper. For additional information, refer to "VSS Module - Optional Vehicle Security Features".

RMST Functional Test

NOTE:

Do not put a key in the ignition for the following steps.

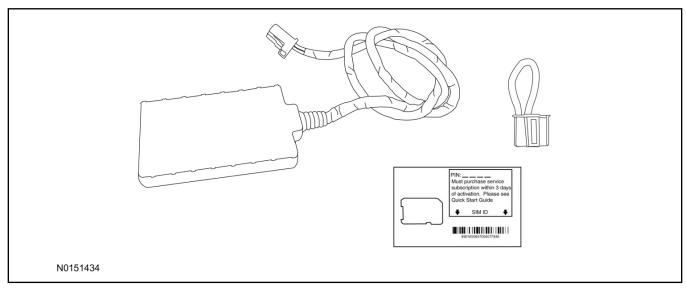
- 52. Make sure the shift lever is in PARK and the ignition is in the OFF position. Remove all keys from the vehicle.
- 53. Close the hood.
- 54. Close all of the vehicle doors.
- 55. Start the vehicle by pressing the remote start button twice on the remote start key fob.
- 56. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
- 57. Open the hood.
- 58. **NOTE:**

Vehicle doors should be closed while performing this step.

Confirm that the vehicle will not start with the hood open.

Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

III. Remote Access (RMU) Upgrade "Sold Separately"



59. Review the RMU upgrade components.

Optional Components — Remote Access (RMU) Upgrade "Sold Separately"

| QUANTITY | DESCRIPTION | |
|----------|-----------------------------|--|
| 1 | Remote Messaging Unit (RMU) | |
| 1 | SIM Card Carrier | |
| 1 | Security Jumper | |

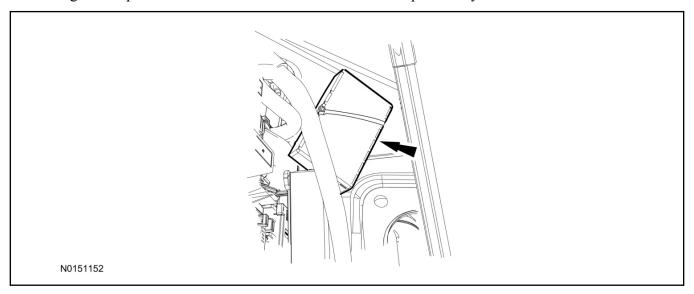
CAUTION:

Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

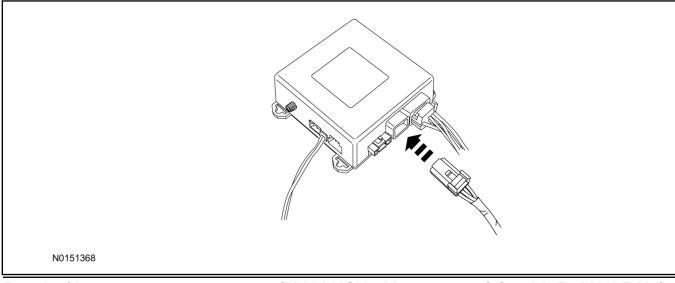
NOTE:

For proper range of operation, the RMU must be installed as shown in the diagram below.

60. Using tie-straps secure the RMU to the harness above the previously installed VSS module.

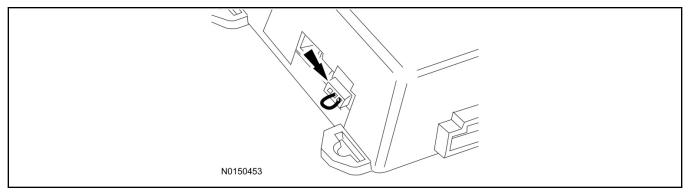


- 61. Connect the RMU electrical connector to the VSS module.
 - Secure the harness with tie-straps.



VSS Module - Optional Vehicle Security Features

- 62. Enable/Disable Vehicle Security Features: Locate the security jumper supplied in the kit.
 - Install the jumper to the VSS module if the vehicle security features are to be **disabled**.
 - Not installing and/or removing the jumper from the VSS module will keep the vehicle security features **enabled**.



Remote Start Activation - Key Start Vehicles (Without Factory Remote Start)

- 63. Verify that the IDS is updated to the most current version.
- 64. Connect IDS.
 - Follow the prompts to select new vehicle session.
 - Enter VIN.
- 65. Activate the remote start using the IDS.
 - Select the Tool Box icon.
 - Select Body.
 - Select Security.
 - Select Remote Start.
 - Verify that the information on the IDS screen is correct and all procedures have been followed.
 - Select Yes. This will enable the remote start function on the vehicle.
- 66. For vehicles equipped with standard message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Convenience.
 - · Select Remote Start.
 - Select System.
 - Verify that the remote start system is checked.

- 67. For vehicles equipped with advanced message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Vehicle Settings.
 - · Select Vehicle.
 - Select Remote Start System.
 - Verify that the remote start system is enabled.

RMU Activation

NOTE:

Please note that the Remote Access application that is used to start the vehicle for this RMST kit will only work with iPhone and Android phones.

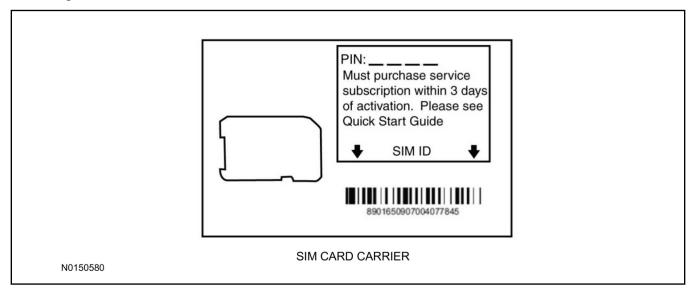
- 68. For RMU activation the following information from the customer is recommended to provide them with electronic notification for app retrieval:
 - 1 Email Address
 - 2 Cell Phone Number
 - 3 Cell Phone Carrier Company
- 69. Log on to your Professional Technician Society (PTS) account and enter the vehicle information.
 - 1 Select "Vehicle Id"
 - 2 Select "By Year & Model"
 - 3 Choose the year & model of the vehicle and then select "GO".
 - 4 Hover over the "Workshop" tab.
 - 5 Select the "Accessory Installation" menu item.
 - 6 Under the "Electrical" heading, select the "Remote Access Activation" link (first time users will need to agree to terms & conditions).
 - 7 Select the "Install or Diagnose" link.

NOTE:

If you are not directed to the screen shown below (or user agreement screen for first time users), make sure your internet browser zone settings are set to medium. This setting can be found in your browsers "internet options" under the "privacy" tab.



70. Once on the "Install" page, enter the SIM ID code that was provided with the RMST kit. Select "Begin or Continue Installation".



71. Click on the "On screen steps 1-6", and follow the on screen instructions to complete the installation.

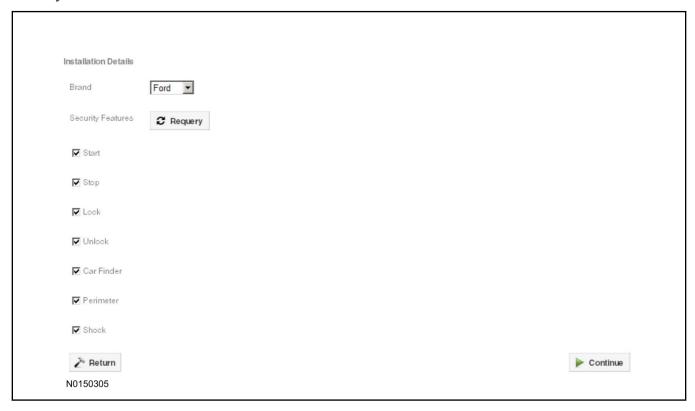


NOTE:

The following step will complete the activation process, when you are directed to a screen similar to the one below ensure the correct vehicle brand is selected and that all applicable features are enabled.

NOTE:

The "perimeter" and "shock" settings below are optional features and should only be selected when security features are enabled.



- 72. Perform a functional check of the system by testing each of the available features.
 - Start/Stop function
 - Lock/Unlock function
 - Car finder
 - Signal (for troubleshooting only)



NOTE:

All tests above must be completed in order to move to the next step. If any of the listed functions fail, move the vehicle to an outside location and retest.

Key Start Vehicles Only

NOTE:

In the event start or stop fail, refer to the "Remote Start Activation" section in this manual.

NOTE:

In the event lock/unlock or car find fail, refer to the "Learn Remote Start System to Vehicle" section in this manual.

All Vehicles

- 73. Once the hardware installation and RMU activation process is complete, record the 4-digit PIN on the SIM card carrier. Provide the SIM card carrier to the customer so they can add this system to their Remote Access Account. Customer must have both the 4-digit PIN and SIM ID to activate/add their vehicle to their Remote Access Account.
- 74. If the customer agrees, you may push the mobile application to the customer. You will need the customer's phone number and cellular carrier. If the customer opts to install the application themselves, they can locate it in their mobile app store.

Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

Vehicle Security / Remote Start / Remote Access System Installation

CONTENTS

INSTALLATION

VSS Module Installation

Security Indicator LED Mounting

TPM Antenna Kit Installation

RMST Kit Antenna Installation

RMU Module Installation

GENERAL PROCEDURES

Learn VSS to vehicle

Shock Sensor Sensitivity Adjustment

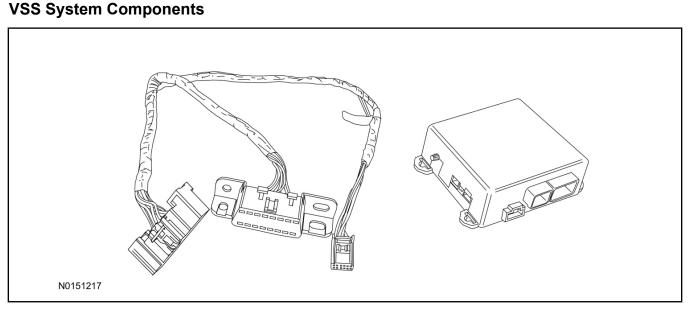
Standard Remote Start Activation

RMU Remote Start Activation

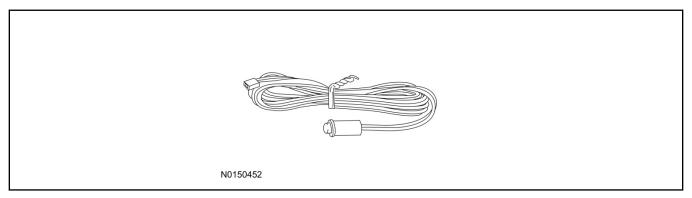
RMU Activation

INSTALLATION

Vehicle Security / Remote Start / Remote Access - Flex



Security Indicator LED (19D596) "Optional"



Flex

1. Verify correct kit number.

Review VSS Kit Contents

NOTE:

Kits are vehicle specific and are not interchangeable.

2. Review the VSS kit contents.

Vehicle Security System (VSS) Kit

| QUANTITY | DESCRIPTION | |
|----------|-------------|--|
| 1 | VSS Module | |
| 1 | T-harness | |

| Vehicle Secu | rity System | (VSS) Kit | (Continued) |
|---------------|-------------|-------------|-------------|
| Vernicie decu | ity Cystein | (* 00) 111 | (Continued) |

| 6 | Tie-straps |
|---|----------------|
| 1 | Owner's Manual |

Security Indicator LED Kit Contents "Optional"

3. Review the Security Indicator LED kit contents.

Security Indicator LED Kit

| QUANTITY | DESCRIPTION |
|----------|------------------------|
| 1 | Security Indicator LED |

I. VSS System Installation

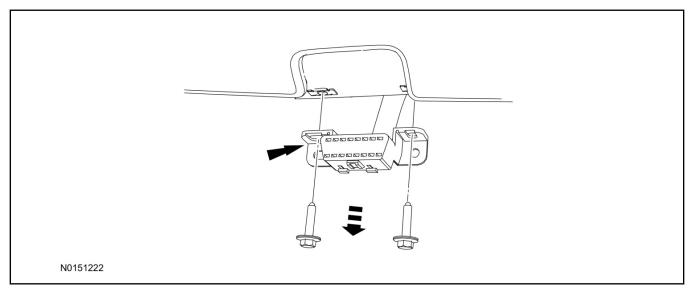
^CAUTION:

Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

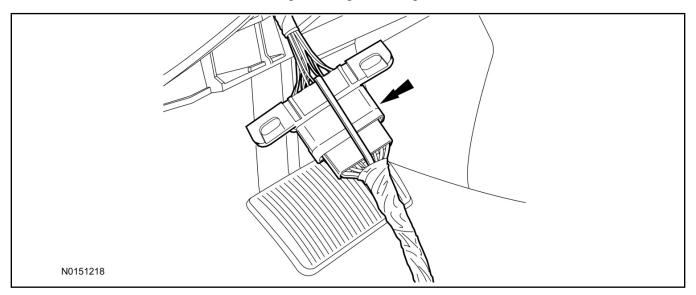
NOTE:

If the VSS kit was installed previously and the vehicle is being upgraded, proceed to the "RMST" or "RMU" upgrade section(s).

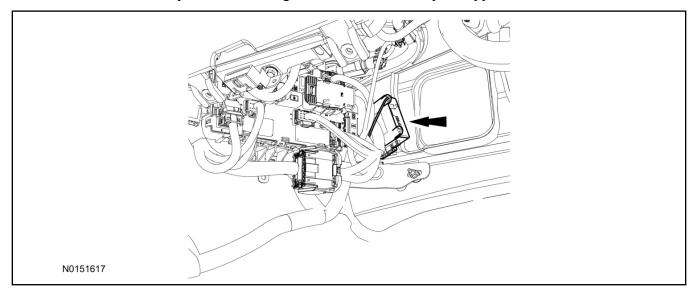
4. Remove the 2 bolts and remove the OBD II port from the IP frame.



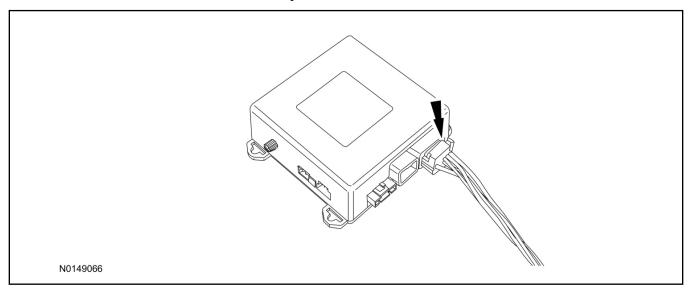
- 5. Connect the VSS T-harness to the OBD II port.
 - Secure the T-harness to the OBD II port using a tie-strap.



- 6. Position the VSS harness inside the IP being careful to avoid sharp edges and moving parts.
- 7. Install the new VSS harness OBD II port to the IP frame and install the bolts.
 - Do not over tighten.
- 8. Position the VSS module on top of the Body Control Module (BCM) and secure to wire harness with tie-straps.
 - Ensure the VSS module is positioned so the shock sensor adjustment knob can be accessed for later use.
 - Ensure the tie-strap is routed through the VSS module loops at opposite corners.



- 9. Connect the VSS harness to the VSS module.
 - Secure the VSS harness with tie-straps.



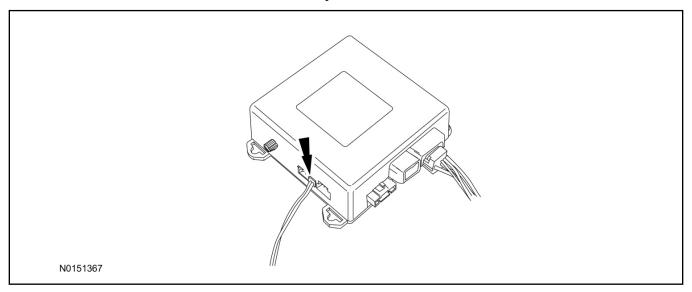
Optional Security Indicator LED Mounting

CAUTION:

Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

- 10. Keep the following points in mind when routing or positioning the LED for mounting:
 - Have at least 3/4" clearance behind trim panels for the wiring harness to be routed.
 - The LED should be clearly visible from the driver's side window when mounted.
 - Do not mount the LED on trim panels that cover air bags.
- 11. Mount the LED at an appropriate location on the upper steering column shroud, using the guidelines listed above.
 - Drill a 9/32" hole into the selected location, for the LED to mount in.
- 12. Route the LED wire harness to the VSS module.

- 13. Connect the LED wire harness to the VSS module 2-pin white connector.
 - Secure the LED wire harness with tie-straps.



Learn VSS to Vehicle (Key Start Vehicles Only)

NOTE:

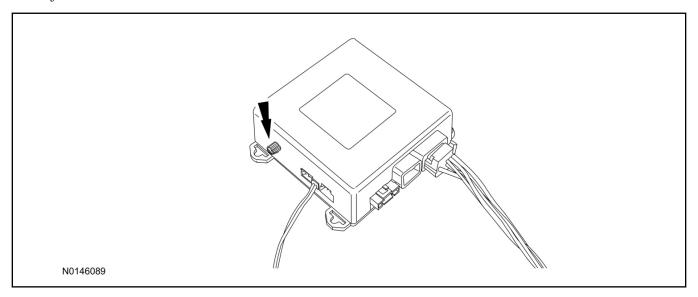
Make sure the brake pedal is not depressed during this sequence.

- 14. Press the vehicle's unlock button located on the driver's door. Make sure all doors are unlocked.
- 15. Put the key in the ignition.
- 16. Cycle eight times rapidly (within 10 seconds) between the 1 (OFF/LOCK) position and 3 (ON) position.
 - The eighth turn must end in the 3 (ON) position. The doors will lock, then unlock, to confirm that the programming mode has been activated.
- 17. Wait for 10 seconds and the remote start module will program itself to the system.
 - After 20 seconds, you will automatically exit the programming mode. The doors will lock, then unlock, to confirm that the programming mode has been exited.

Shock Sensor Sensitivity Adjustment

NOTE:

The VSS module is equipped with an internal dual zone Shock Sensor. The VSS system will activate a single horn honk/single light flash anytime a light to moderate impact is detected, and a "panic" type 30 second horn honk/light flash sequence when a heavy impact is detected while the VSS system is armed. Adjustment of both zones is accomplished through a single adjustment knob on the VSS module. Rotating the knob clockwise will increase sensitivity and rotating the knob counter-clockwise will decrease sensitivity. Sensitivity adjustment must be completed with the module securely mounted and the adjustment knob accessible.



- 18. Starting with the adjustment knob in approximately the halfway position, lower the driver's window and exit the vehicle.
- 19. Press the LOCK button on the vehicle's RKE fob to arm the VSS system. The LED will light solid for 20 seconds and then begin to flash a steady on/off sequence to indicate the system is armed.
- 20. Using a closed fist, impact the steering wheel with moderate force to simulate a light impact on the vehicle. If the impact is detected, the horn will honk and the lights will flash 1 time to indicate the warning impact was detected.
- 21. Using a closed fist, impact the steering wheel with heavy force to simulate a hard impact (i.e. glass breakage) on the vehicle. If the impact is detected, the horn will honk and the lights will flash a steady on off sequence to indicate the heavy or full shock trigger was detected.
- 22. Increase (rotate clockwise) or decrease (rotate counter-clockwise) the adjustment knob as necessary to achieve desired sensitivity, repeat the previous steps to test, and verify adjustment.

VSS Functional Test

NOTE:

If installed, observe the LED while performing these tests.

23. Lower the driver's door window, then close all doors, hood, and trunk/hatch and press lock on the keyfob. The LED should stay lit for 20 seconds while the VSS system pre-arms, after which it will flash every 3-4 seconds in fully armed mode.

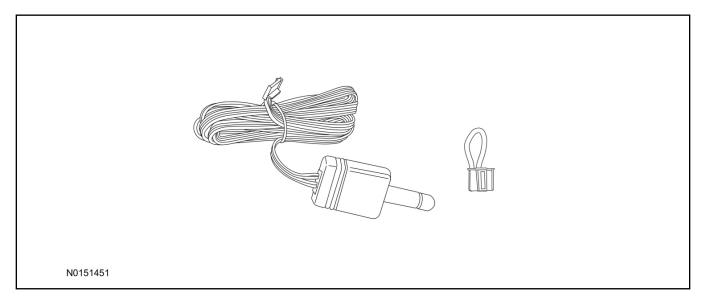
- 24. Reach inside the window hit the door unlock trim switch. The LED should continue to flash, indicating that the vehicle is still armed. Use the inside driver's door handle to open the door. The alarm should sound, indicating perimeter breach. Turn the alarm off by turning the ignition to "On".
 - If equipped with OE perimeter security, there will be a 12 second interior chime prior to alarm sounding. For vehicles not equipped with OE perimeter security, there will be a 12 second delay with no interior chime prior to alarm sounding.
 - For push button start vehicles, the Intelligent Access (IA) key must be away from the vehicle, otherwise the security system may disarm immediately upon trigger.
- 25. Exit the vehicle and arm it again, this time leaving the driver's door open. The vehicle should arm itself, ignoring the open door but monitoring the rest. Once the vehicle is armed, shut the driver's door and reopen it after a few seconds. The alarm should sound. Turn the alarm off by hitting unlock on the keyfob.
 - For push button start vehicles, the Intelligent Access (IA) key must be away from the vehicle, otherwise the security system may disarm immediately upon trigger.
- 26. Test all other vehicle doors, the hood and the trunk in the same manner, by setting off the alarm and disarming with the keyfob.
- 27. Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.
- II. Remote Start (RMST) Upgrade Antenna Kit "Sold Separately"

\triangle CAUTION:

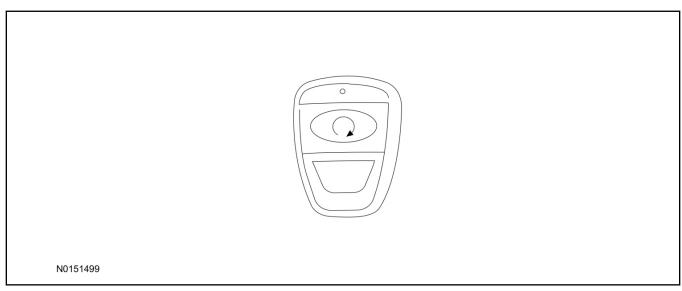
Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

NOTE:

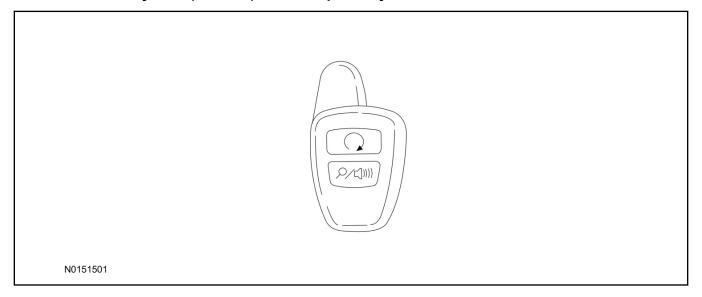
Verify that the vehicle has a hood switch Installed. If the vehicle is not equipped with a hood switch refer to "Hood Switch Kit - Sold Separately".



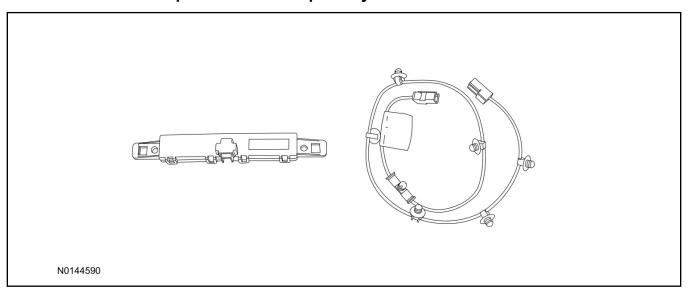
Standard Key Fob (15K601) "Sold Separately"



Bi-directional Key Fob (15K601) "Sold Separately"



TPM Antenna Kit Components "Sold Separately"



Optional RMST Upgrade Components "Sold Separately"

28. Review the RMST Upgrade components.

Remote Start (RMST) Upgrade - Antenna Kit "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|------------------------------|
| 1 | Bi-directional Antenna (TBD) |
| 1 | Security Jumper (TBD) |

Standard Key Fob (15K601) "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|---------------------------|
| 1 | Standard Key Fob (15K601) |

Bi-directional Key Fob (15K601) "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|---------------------------------|
| 1 | Bi-directional Key Fob (15K601) |

TPM Antenna Kit Components "Sold Separately"

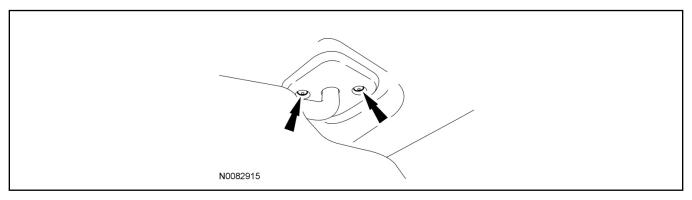
29. Review the TPM antenna kit contents.

TPM Antenna Kit

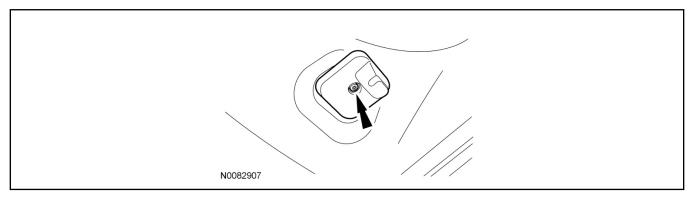
| QUANTITY | DESCRIPTION |
|----------|--------------------------|
| 1 | Antenna Module |
| 1 | Antenna Jumper Wire |
| 1 | 2-sided Tape (not shown) |

Trim Removal

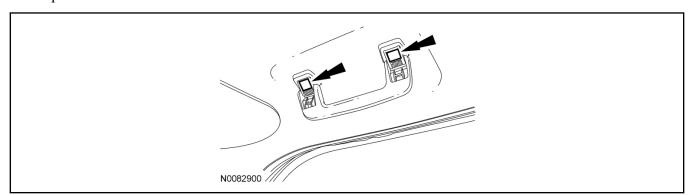
- 30. Remove the RH A-Pillar and RH B-pillar trim panels. For additional information, refer to Workshop Manual (WSM), Section 501-05.
- 31. If equipped, remove the DVD entertainment system. For additional information, refer to WSM, Section 415-00.
- 32. Remove the RH sun visor retainer screws and lower the RH sun visor.



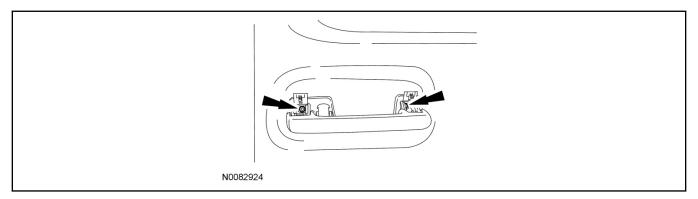
33. Remove the RH sun visor clip retainer screws and remove the sun visor clip.



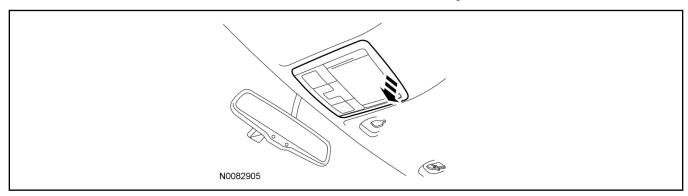
34. Open the RH front assist handle screw covers.



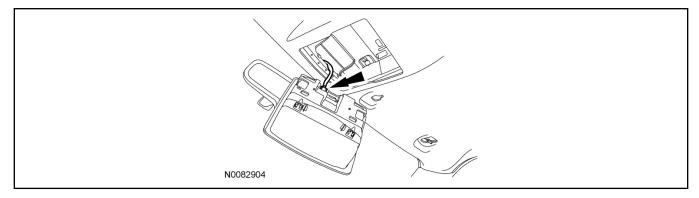
- 35. Remove the RH front assist handle screws and remove the front assist handle.
 - If equipped, disconnect the assist handle lamp electrical connector.



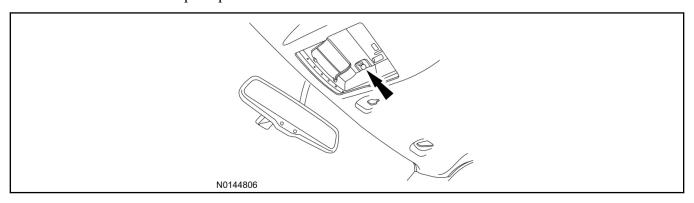
36. Pull downward on the overhead console to release the retainer clips.



37. Disconnect the overhead console electrical connector(s) and remove the overhead console.



38. Remove the headliner push pin retainer.

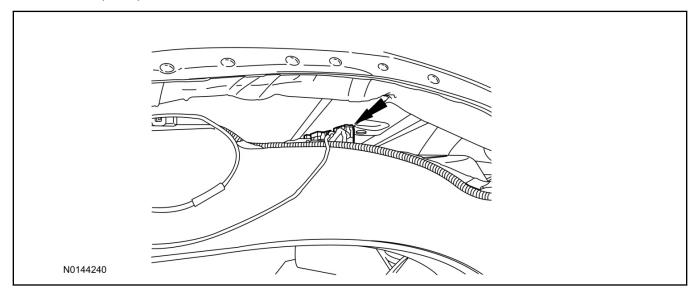


TPM Antenna Kit Installation

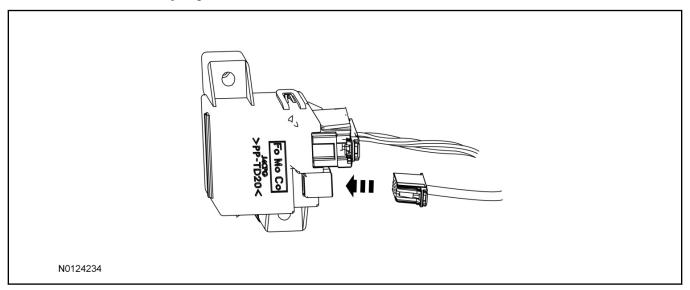
39. *NOTICE*:

Use caution not to over extend the headliner as creases and/or damage to the headliner may occur.

Position the RH front portion of the headliner downward slightly to access the Tire Pressure Monitor (TPM) module.



40. Connect the antenna jumper wire to the TPM module.



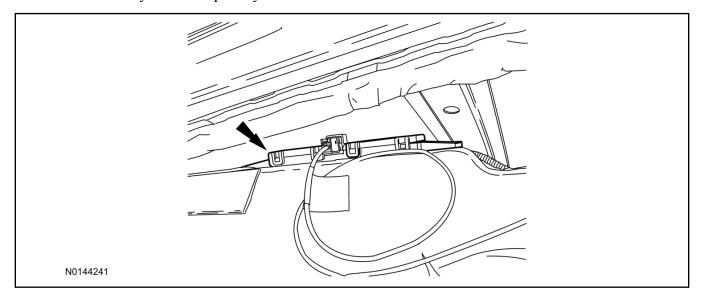
- 41. Connect the antenna jumper wire connector to the antenna module.
 - The push pins on the antenna jumper wire are not used for this application.

42. **NOTE:**

View is top of headliner.

Secure the antenna module to the headliner using a suitable adhesive.

• Alternatively 2-sided tape may be used to secure the antenna module to the headliner.



RMST Kit Antenna Installation

- 43. Remove the LH IP side trim panel.
- 44. Clean the antenna mounting surface using an alcohol base solution and a clean cloth.

45. **NOTE:**

Do not touch the adhesive, reduced adhesion may result.

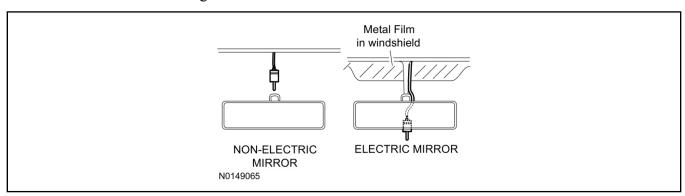
NOTE:

Make sure that the long wire on the antenna is pointing towards the top of the windshield since this wire will be routed along the headliner.

NOTE:

The wire will be attached to the control module later in this procedure.

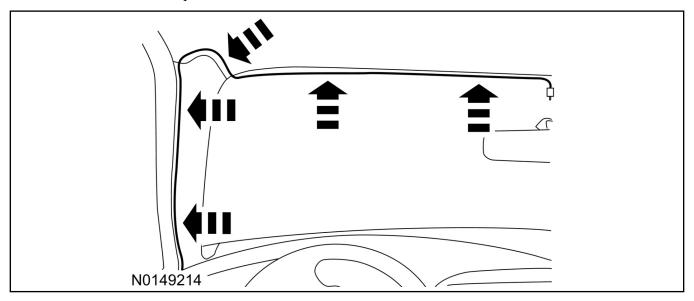
Remove the protective backing from the adhesive on the antenna and firmly press the body of the antenna onto the mounting surface.



NOTE:

Do not route the antenna wire over the top of air bags.

- 46. Route the antenna cable along the headliner and down the LH A-pillar towards the floor. Continue routing the wire into the IP towards the VSS module.
 - Secure with tie-straps.



- 47. Connect the antenna connector to the VSS module.
- 48. If the RMST kit will not be upgraded to RMU functions at this time, install the LH IP side trim panel.

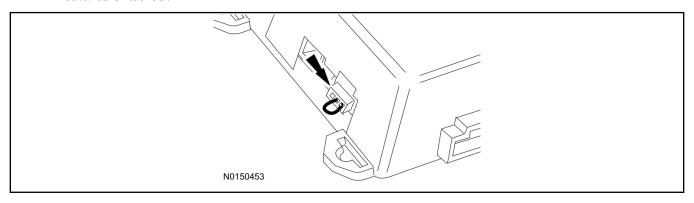
Trim Installation

- 49. Install the headliner push pin retainer.
- 50. Connect the overhead console electrical connector(s) and install the overhead console.
- 51. Install the RH front assist handle and screws.
 - If equipped, connect the assist handle lamp electrical connector.
- 52. Close the assist handle screw covers.
- 53. Install the sun visor clips and the sun visor clip retainer screws.
- 54. Position the RH sun visor and install the retainer screws.
- 55. Install the RH A-Pillar and RH B-pillar trim panels. For additional information, refer to WSM, Section 501-05.
- 56. If equipped, install the DVD entertainment system. For additional information, refer to WSM, Section 415-00.

VSS Module - Optional Vehicle Security Features

- 57. Enable/Disable Vehicle Security Features:

 Locate the security jumper supplied in the kit.
 - Install the jumper to the VSS module if the vehicle security features are to be **disabled**.
 - Not installing and/or removing the jumper from the VSS module will keep the vehicle security features **enabled**.



RMST Activation - Key Start Only

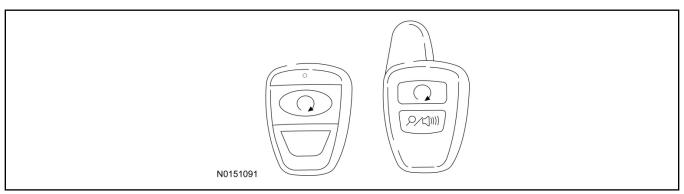
NOTE:

For vehicles equipped with push button start, proceed to Step 64 within the "Programming Key Fobs" section of this manual.

- 58. Verify that the IDS is updated to the most current version.
- 59. Connect IDS.
 - Follow the prompts to select new vehicle session.
 - Enter VIN.
- 60. Activate the remote start using the IDS.
 - Select the Tool Box icon.
 - · Select Body.
 - Select Security.
 - Select Remote Start.
 - Verify that the information on the IDS screen is correct and all procedures have been followed.
 - Select Yes. This will enable the remote start function on the vehicle.
- 61. For vehicles equipped with standard message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Convenience.
 - · Select Remote Start.
 - Select System.
 - Verify that the remote start system is checked.

- 62. For vehicles equipped with advanced message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Vehicle Settings.
 - · Select Vehicle.
 - Select Remote Start System.
 - Verify that the remote start system is enabled.

Programming Key Fobs



63. Key Start Vehicles:

NOTE:

These steps must be performed with the VSS module security jumper removed if previously installed. For additional information refer to "VSS Module - Optional Vehicle Security Features".

- 1 Start with doors unlocked
- 2 Driver's door open (remaining open throughout)
- 3 Verify that the gearshift lever is in the "PARK" position.
- 4 Depress and hold brake pedal.
- 5 Start with ignition key OFF.
- 6 Cycle ignition key to the ON then OFF position 5 times, then back to the ON position a 6th time.
 - The horn will honk 3 times to indicate transmitter learn mode access.
- 7 Press the START button on each transmitter you wish to program. The horn will honk 1 time each time the START button is pressed to indicated the transmitter has been learned.
- 8 Cycle ignition key to the OFF position to exit transmitter learn mode.

9 **NOTE**:

If the security jumper is installed the vehicle security features are disabled.

If previously removed, reinstall the VSS module security jumper. For additional information, refer to "VSS Module - Optional Vehicle Security Features".

64. Push Button Start Vehicles:

NOTE:

These steps must be performed with the VSS module security jumper removed if previously installed. For additional information refer to "VSS Module - Optional Vehicle Security Features".

- 1 Enter the vehicle with the vehicle key(s) and key fobs you wish to program.
- 2 Depress and hold brake pedal.
- 3 Press the start/stop button.
- 4 After the vehicle starts press the start/stop button to shut down.
- 5 Repeat steps 3 and 4 an additional four times, ending in ignition on, engine off.
- 6 Release the brake pedal.
- 7 Press the vehicle start/stop button twice to turn ignition on.
 - The horn will honk 3 times to indicate transmitter learn mode access.
- 8 Press the start stop button on each fob you wish to program.
- 9 Cycle ignition to the OFF position to exit transmitter learn mode.

10 **NOTE**:

If the security jumper is installed the vehicle security features are disabled.

If previously removed, reinstall the VSS module security jumper. For additional information, refer to "VSS Module - Optional Vehicle Security Features".

RMST Functional Test

NOTE:

Do not put a key in the ignition for the following steps.

- 65. Make sure the shift lever is in PARK and the ignition is in the OFF position. Remove all keys from the vehicle.
- 66. Close the hood.
- 67. Close all of the vehicle doors.
- 68. Start the vehicle by pressing the remote start button twice on the remote start key fob.
- 69. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
- 70. Open the hood.

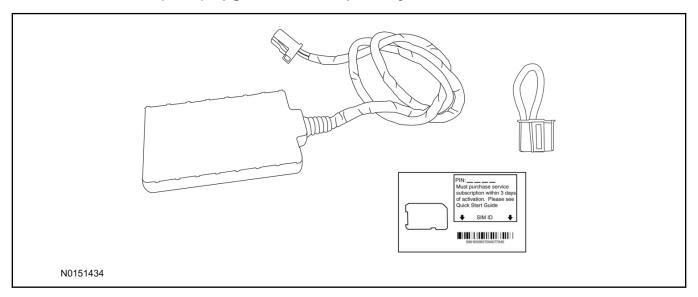
71. **NOTE:**

Vehicle doors should be closed while performing this step.

Confirm that the vehicle will not start with the hood open.

Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

III. Remote Access (RMU) Upgrade "Sold Separately"



72. Review the RMU upgrade components.

Optional Components — Remote Access (RMU) Upgrade "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|-----------------------------|
| 1 | Remote Messaging Unit (RMU) |
| 1 | SIM Card Carrier |
| 1 | Security Jumper |

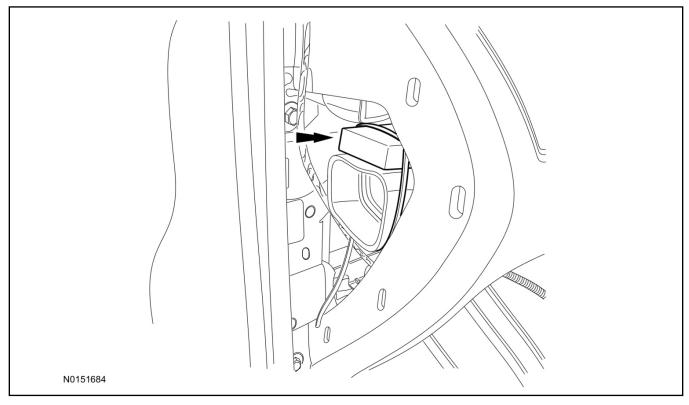
\triangle CAUTION:

Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

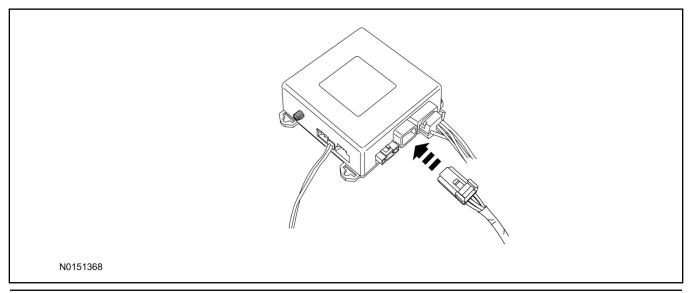
NOTE:

For proper range of operation, the RMU must be installed as shown in the diagram below.

- 73. If previously installed, remove the LH IP side trim panel.
- 74. Using tie-straps secure the RMU to the A/C duct near the LH IP side trim panel opening.



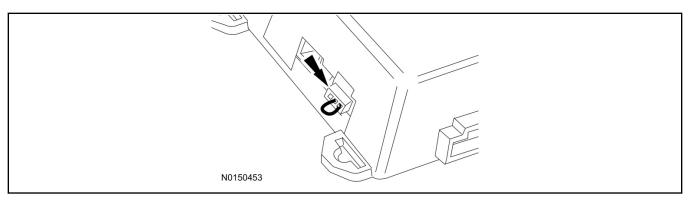
- 75. Connect the RMU electrical connector to the VSS module.
 - Secure the harness with tie-straps.



76. Install the LH IP side trim panel.

VSS Module - Optional Vehicle Security Features

- 77. Enable/Disable Vehicle Security Features: Locate the security jumper supplied in the kit.
 - Install the jumper to the VSS module if the vehicle security features are to be **disabled**.
 - Not installing and/or removing the jumper from the VSS module will keep the vehicle security features **enabled**.



Remote Start Activation - Key Start Vehicles (Without Factory Remote Start)

- 78. Verify that the IDS is updated to the most current version.
- 79. Connect IDS.
 - Follow the prompts to select new vehicle session.
 - Enter VIN.
- 80. Activate the remote start using the IDS.
 - Select the Tool Box icon.
 - · Select Body.
 - · Select Security.
 - · Select Remote Start.
 - Verify that the information on the IDS screen is correct and all procedures have been followed.
 - Select Yes. This will enable the remote start function on the vehicle.
- 81. For vehicles equipped with standard message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Convenience.
 - · Select Remote Start.
 - · Select System.
 - Verify that the remote start system is checked.

- 82. For vehicles equipped with advanced message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Vehicle Settings.
 - Select Vehicle.
 - Select Remote Start System.
 - Verify that the remote start system is enabled.

RMU Activation

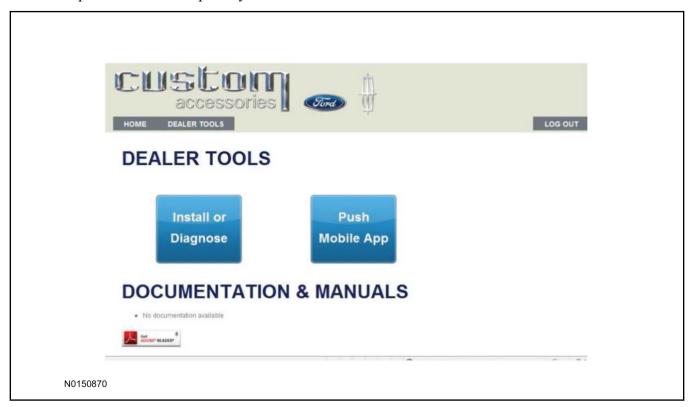
NOTE:

Please note that the Remote Access application that is used to start the vehicle for this RMST kit will only work with iPhone and Android phones.

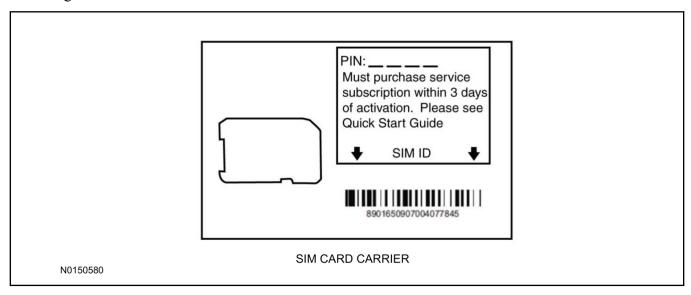
- 83. For RMU activation the following information from the customer is recommended to provide them with electronic notification for app retrieval:
 - 1 Email Address
 - 2 Cell Phone Number
 - 3 Cell Phone Carrier Company
- 84. Log on to your Professional Technician Society (PTS) account and enter the vehicle information.
 - 1 Select "Vehicle Id".
 - 2 Select "By Year & Model"
 - 3 Choose the year & model of the vehicle and then select "GO".
 - 4 Hover over the "Workshop" tab.
 - 5 Select the "Accessory Installation" menu item.
 - 6 Under the "Electrical" heading, select the "Remote Access Activation" link (first time users will need to agree to terms & conditions).
 - 7 Select the "Install or Diagnose" link.

NOTE:

If you are not directed to the screen shown below (or user agreement screen for first time users), make sure your internet browser zone settings are set to medium. This setting can be found in your browsers "internet options" under the "privacy" tab.



85. Once on the "Install" page, enter the SIM ID code that was provided with the RMST kit. Select "Begin or Continue Installation".



86. Click on the "On screen steps 1-6", and follow the on screen instructions to complete the installation.

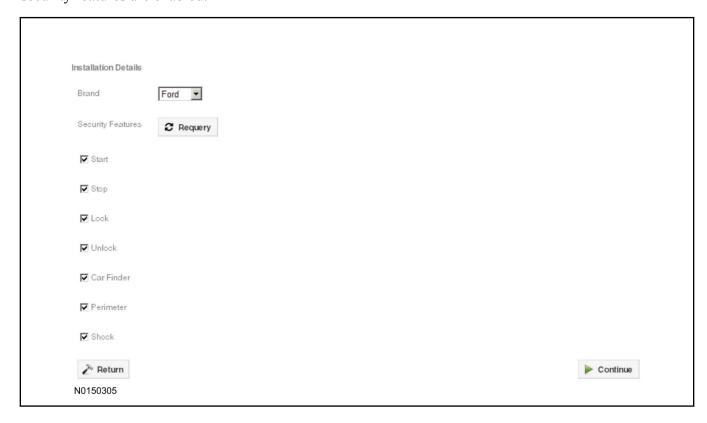


NOTE:

The following step will complete the activation process, when you are directed to a screen similar to the one below ensure the correct vehicle brand is selected and that all applicable features are enabled.

NOTE:

The "perimeter" and "shock" settings below are optional features and should only be selected when security features are enabled.



- 87. Perform a functional check of the system by testing each of the available features.
 - Start/Stop function
 - Lock/Unlock function
 - · Car finder
 - Signal (for troubleshooting only)



NOTE:

All tests above must be completed in order to move to the next step. If any of the listed functions fail, move the vehicle to an outside location and retest.

Key Start Vehicles Only

NOTE:

In the event start or stop fail, refer to the "Remote Start Activation" section in this manual.

NOTE:

In the event lock/unlock or car find fail, refer to the "Learn Remote Start System to Vehicle" section in this manual.

All Vehicles

- 88. Once the hardware installation and RMU activation process is complete, record the 4-digit PIN on the SIM card carrier. Provide the SIM card carrier to the customer so they can add this system to their Remote Access Account. Customer must have both the 4-digit PIN and SIM ID to activate/add their vehicle to their Remote Access Account.
- 89. If the customer agrees, you may push the mobile application to the customer. You will need the customer's phone number and cellular carrier. If the customer opts to install the application themselves, they can locate it in their mobile app store.

Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

Vehicle Security / Remote Start / Remote Access System Installation

CONTENTS

VEHICLE PREPARATION

Hood Switch Installation

INSTALLATION

VSS Module Installation

Security Indicator LED Mounting

TPM Antenna Kit Installation

RMST Kit Antenna Installation

RMU Module Installation

GENERAL PROCEDURES

Learn VSS to vehicle

Shock Sensor Sensitivity Adjustment

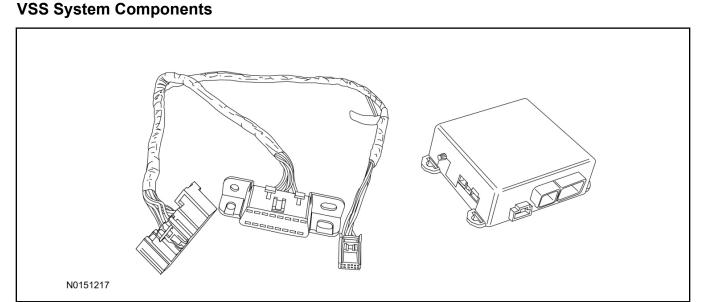
Standard Remote Start Activation

RMU Remote Start Activation

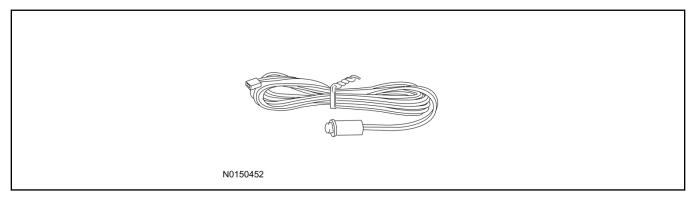
RMU Activation

INSTALLATION

Vehicle Security / Remote Start / Remote Access - F-150



Security Indicator LED (19D596) "Optional"



F-150

1. Verify correct kit number.

Review VSS Kit Contents

NOTE:

Kits are vehicle specific and are not interchangeable.

2. Review the VSS kit contents.

Vehicle Security System (VSS) Kit

| QUANTITY | DESCRIPTION |
|----------|-------------|
| 1 | VSS Module |
| 1 | T-harness |

| Vehicle | Security | System | (VSS) | Kit | (Continued) | ١ |
|----------|----------|---------|--------|-----------|-------------|---|
| A CHICLE | Occurry | Cystein | 1 4 00 | 1 1 1 1 1 | Continued | , |

| 6 | Tie-straps |
|---|----------------|
| 1 | Owner's Manual |

Security Indicator LED Kit Contents "Optional"

3. Review the Security Indicator LED kit contents.

Security Indicator LED Kit

| QUANTITY | DESCRIPTION |
|----------|------------------------|
| 1 | Security Indicator LED |

I. VSS System Installation

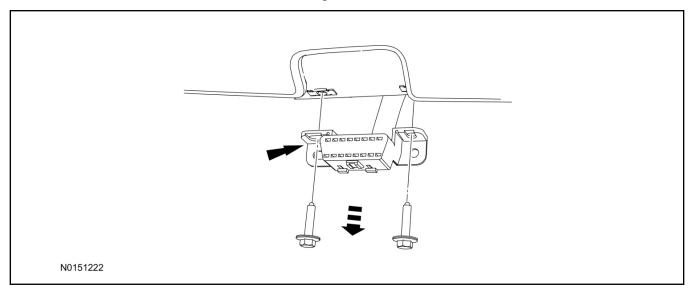


Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

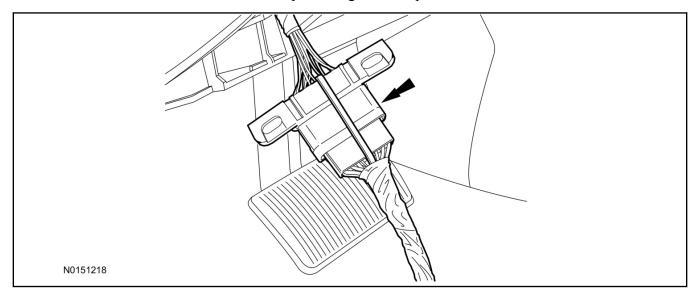
NOTE:

If the VSS kit was installed previously and the vehicle is being upgraded, proceed to the "RMST" or "RMU" upgrade section(s).

4. Remove the 2 bolts and remove the OBD II port from the IP frame.

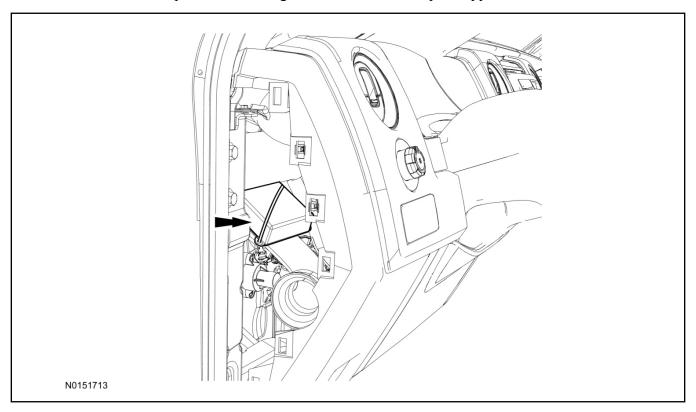


- 5. Connect the VSS T-harness to the OBD II port.
 - Secure the T-harness to the OBD II port using a tie-strap.

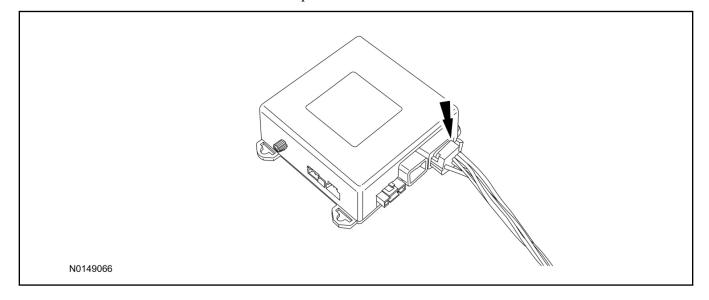


- 6. Position the VSS harness inside the IP being careful to avoid sharp edges and moving parts.
- 7. Install the new VSS harness OBD II port to the IP frame and install the bolts.
 - Do not over tighten.
- 8. Remove the LH Instrument Panel (IP) side finish panel.

- 9. Position the VSS module on top of the A/C duct located behind the LH IP side finish panel and secure with a tie-strap.
 - Ensure the VSS module is positioned so the shock sensor adjustment knob can be accessed for later use
 - Ensure the tie-strap is routed through the VSS module loops at opposite corners.



- 10. Connect the VSS harness to the VSS module.
 - Secure the VSS harness with tie-straps.

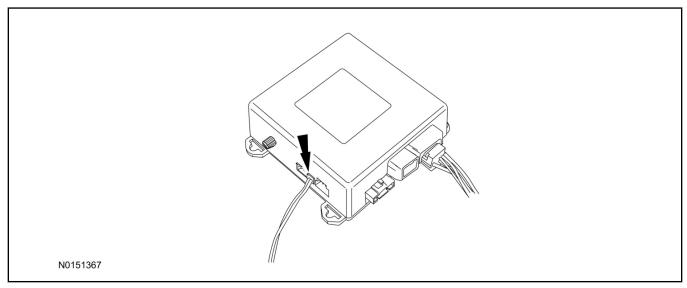


Optional Security Indicator LED Mounting

^CAUTION:

Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

- 11. Keep the following points in mind when routing or positioning the LED for mounting:
 - Have at least 3/4" clearance behind trim panels for the wiring harness to be routed.
 - The LED should be clearly visible from the driver's side window when mounted.
 - Do not mount the LED on trim panels that cover air bags.
- 12. Mount the LED at an appropriate location on the upper steering column shroud, using the guidelines listed above.
 - Drill a 9/32" hole into the selected location, for the LED to mount in.
- 13. Route the LED wire harness to the VSS module.
- 14. Connect the LED wire harness to the VSS module 2-pin white connector.
 - Secure the LED wire harness with tie-straps.



Learn VSS to Vehicle (Key Start Vehicles Only)

NOTE:

Make sure the brake pedal is not depressed during this sequence.

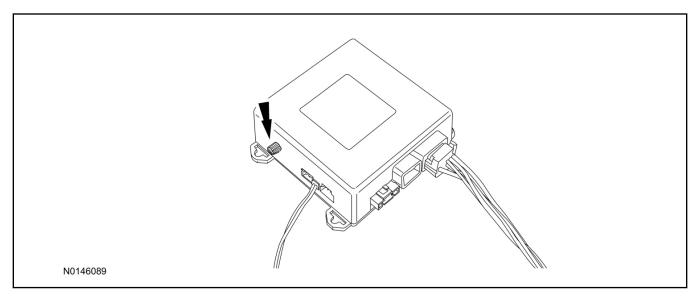
- 15. Press the vehicle's unlock button located on the driver's door. Make sure all doors are unlocked.
- 16. Put the key in the ignition.
- 17. Cycle eight times rapidly (within 10 seconds) between the 1 (OFF/LOCK) position and 3 (ON) position.
 - The eighth turn must end in the 3 (ON) position. The doors will lock, then unlock, to confirm that the programming mode has been activated.

- 18. Wait for 10 seconds and the remote start module will program itself to the system.
 - After 20 seconds, you will automatically exit the programming mode. The doors will lock, then unlock, to confirm that the programming mode has been exited.

Shock Sensor Sensitivity Adjustment

NOTE:

The VSS module is equipped with an internal dual zone Shock Sensor. The VSS system will activate a single horn honk/single light flash anytime a light to moderate impact is detected, and a "panic" type 30 second horn honk/light flash sequence when a heavy impact is detected while the VSS system is armed. Adjustment of both zones is accomplished through a single adjustment knob on the VSS module. Rotating the knob clockwise will increase sensitivity and rotating the knob counter-clockwise will decrease sensitivity. Sensitivity adjustment must be completed with the module securely mounted and the adjustment knob accessible.



- 19. Starting with the adjustment knob in approximately the halfway position, lower the driver's window and exit the vehicle.
- 20. Press the LOCK button on the vehicle's RKE fob to arm the VSS system. The LED will light solid for 20 seconds and then begin to flash a steady on/off sequence to indicate the system is armed.
- 21. Using a closed fist, impact the steering wheel with moderate force to simulate a light impact on the vehicle. If the impact is detected, the horn will honk and the lights will flash 1 time to indicate the warning impact was detected.
- 22. Using a closed fist, impact the steering wheel with heavy force to simulate a hard impact (i.e. glass breakage) on the vehicle. If the impact is detected, the horn will honk and the lights will flash a steady on off sequence to indicate the heavy or full shock trigger was detected.
- 23. Increase (rotate clockwise) or decrease (rotate counter-clockwise) the adjustment knob as necessary to achieve desired sensitivity, repeat the previous steps to test, and verify adjustment.
- 24. If vehicle will not be upgraded to Remote Start or Remote Access functions at this time, install the LH Instrument Panel (IP) side finish panel.

VSS Functional Test

NOTE:

If installed, observe the LED while performing these tests.

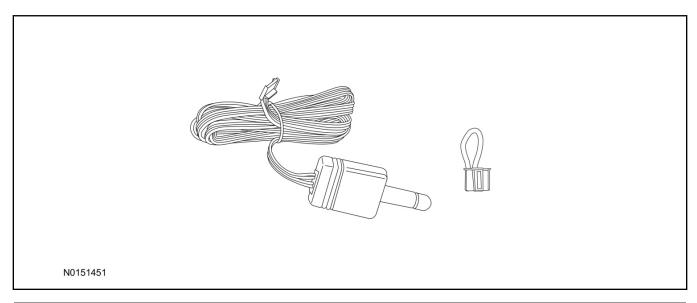
- 25. Lower the driver's door window, then close all doors, hood, and trunk/hatch and press lock on the keyfob. The LED should stay lit for 20 seconds while the VSS system pre-arms, after which it will flash every 3-4 seconds in fully armed mode.
- 26. Reach inside the window hit the door unlock trim switch. The LED should continue to flash, indicating that the vehicle is still armed. Use the inside driver's door handle to open the door. The alarm should sound, indicating perimeter breach. Turn the alarm off by turning the ignition to "On".
 - If equipped with OE perimeter security, there will be a 12 second interior chime prior to alarm sounding. For vehicles not equipped with OE perimeter security, there will be a 12 second delay with no interior chime prior to alarm sounding.
- 27. Exit the vehicle and arm it again, this time leaving the driver's door open. The vehicle should arm itself, ignoring the open door but monitoring the rest. Once the vehicle is armed, shut the driver's door and reopen it after a few seconds. The alarm should sound. Turn the alarm off by hitting unlock on the keyfob.
- 28. Test all other vehicle doors, the hood and the trunk in the same manner, by setting off the alarm and disarming with the keyfob.
- 29. Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.
- II. Remote Start (RMST) Upgrade Antenna Kit "Sold Separately"



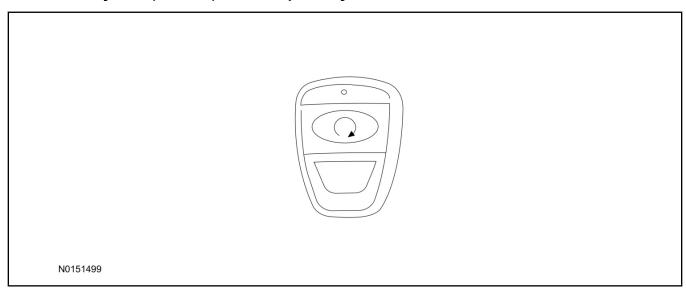
Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

NOTE:

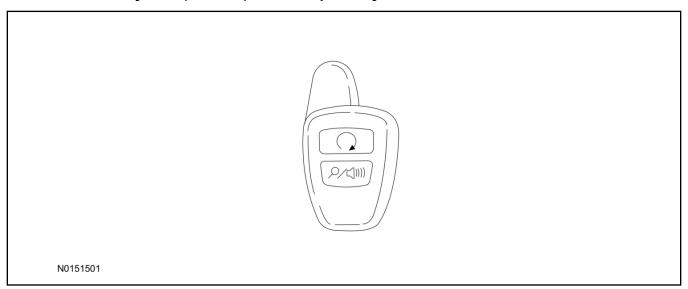
Verify that the vehicle has a hood switch Installed. If the vehicle is not equipped with a hood switch refer to "Hood Switch Kit - Sold Separately".



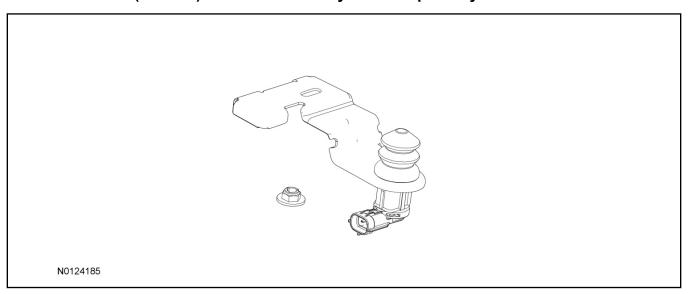
Standard Key Fob (15K601) "Sold Separately"



Bi-directional Key Fob (15K601) "Sold Separately"



Hood Switch Kit (19G366) - SE Vehicles Only "Sold Separately"



Optional RMST Upgrade Components "Sold Separately"

30. Review the RMST Upgrade components.

Remote Start (RMST) Upgrade - Antenna Kit "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|------------------------------|
| 1 | Bi-directional Antenna (TBD) |
| 1 | Security Jumper (TBD) |

Standard Key Fob (15K601) "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|---------------------------|
| 1 | Standard Key Fob (15K601) |

Bi-directional Key Fob (15K601) "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|---------------------------------|
| 1 | Bi-directional Key Fob (15K601) |

Hood Switch Kit Contents (if required) "Sold Separately"

31. Review the Hood Switch kit contents.

Hood Switch Kit "Sold Separately"

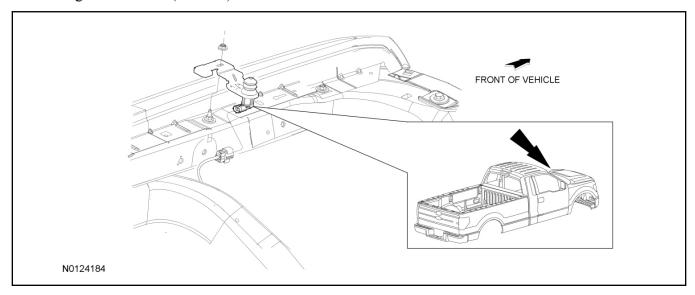
| QUANTITY | DESCRIPTION |
|----------|----------------------|
| 1 | Nut |
| 1 | Hood Switch Assembly |

Hood Switch Kit - "Sold Separately"

NOTE:

Hood switch installation is optional for VSS installation and required if the vehicle is being upgraded to RMST/RMU and is not currently equipped with a hood switch.

- 32. Locate the hood switch electrical connector located on the coolant reservoir.
 - Disconnect the hood switch electrical connector from the coolant reservoir retainer plug.
- 33. Install the Hood switch assembly.
 - Install the nut.
 - Tighten to 6 Nm (53 lb-in).



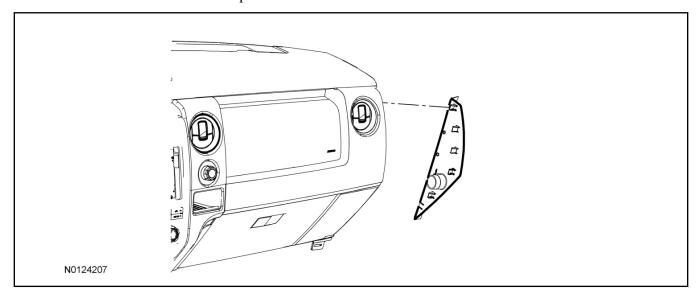
34. Connect the electrical connector to the hood switch.

TPM Antenna Kit Installation

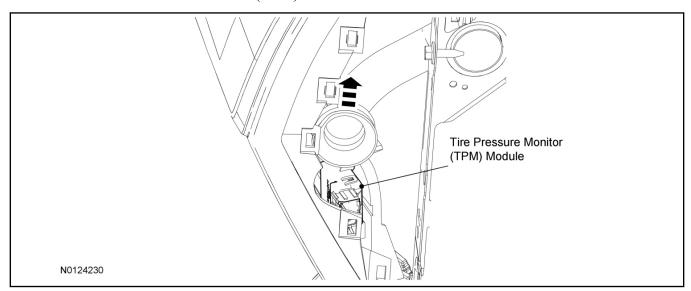
NOTE:

The TPM Antenna Kit is only required if the vehicle is not equipped with Factory remote start.

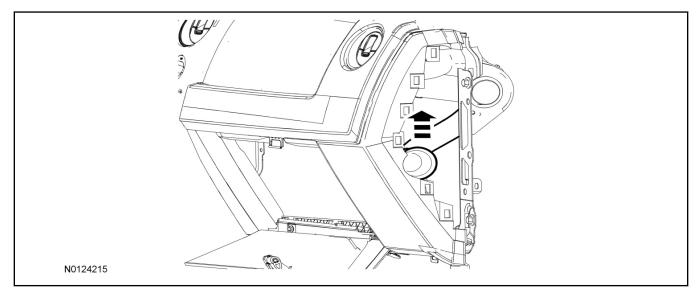
35. Remove the RH IP side finish panel.



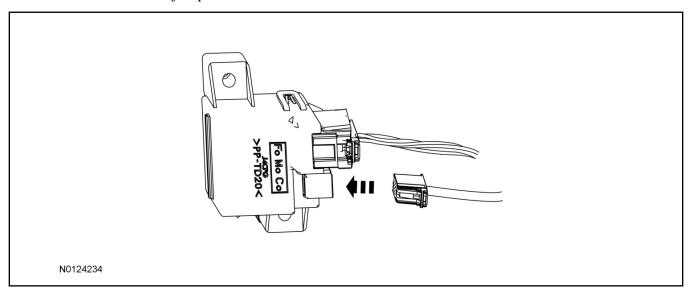
- 36. Open the glove compartment.
- 37. Push in the 2 side tabs and fully lower the glove compartment.
- 38. Locate the Tire Pressure Monitor (TPM) Module.



39. Position the A/C duct to access the TPM module electrical connectors.



40. Connect the antenna jumper wire to the TPM module.

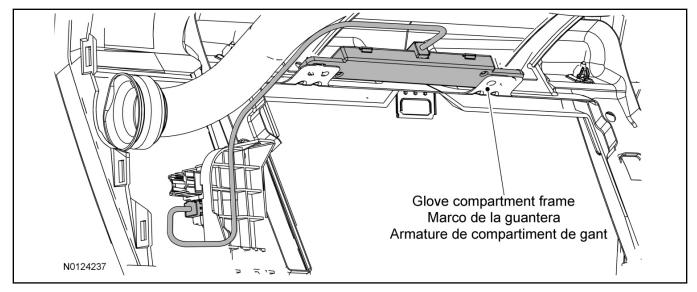


41. **NOTE:**

View is from inside the instrument panel glove box area.

Secure the antenna module to the glove box frame on top of the existing antenna module brackets.

• Secure the antenna module with tie straps though the existing bracket holes.



- 42. Connect the antenna jumper wire connector to the antenna module.
 - Secure with tie straps.
 - The push pins on the antenna jumper wire are not used for this application.
- 45. Position the A/C duct back to its original position.

44. *NOTICE*:

While closing the glove compartment make sure that the TPM harness and antenna harness do not come in contact with the glove compartment door.

Close the glove compartment.

45. Install the RH IP side finish panel.

RMST Kit Antenna Installation

- 46. If previously installed, remove the LH IP side finish panel.
- 47. Clean the antenna mounting surface using an alcohol base solution and a clean cloth.

48. **NOTE:**

Do not touch the adhesive, reduced adhesion may result.

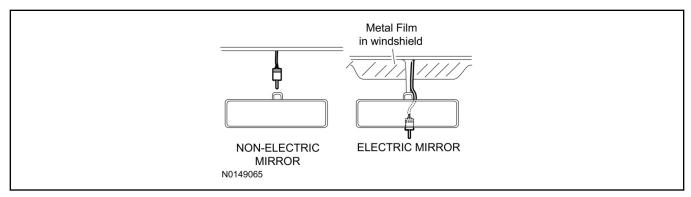
NOTE:

Make sure that the long wire on the antenna is pointing towards the top of the windshield since this wire will be routed along the headliner.

NOTE:

The wire will be attached to the control module later in this procedure.

Remove the protective backing from the adhesive on the antenna and firmly press the body of the antenna onto the mounting surface.

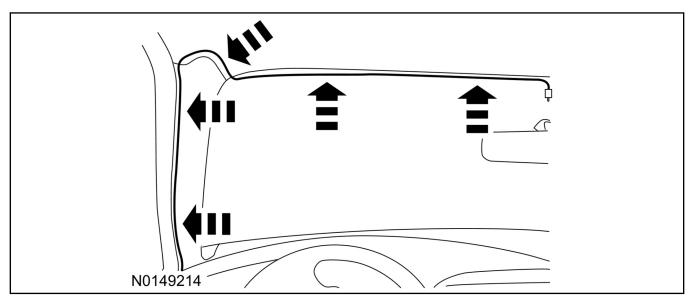


49. If necessary, position the A-pillar trim slightly outward to provide access to route the antenna wire. For additional information, refer to Workshop Manual (WSM) Section 501-05.

NOTE:

Do not route the antenna wire over the top of air bags.

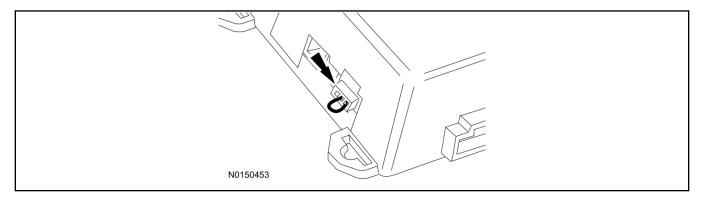
- 50. Route the antenna cable along the headliner and down the A-pillar towards the floor. Continue routing the wire into the IP towards the VSS module.
 - Secure with tie-straps.



- 51. Connect the antenna connector to the VSS module.
- 52. Reposition the A-pillar trim panel back, if necessary. For additional information, refer to WSM Section 501-05.
- 53. If the RMST kit will not be upgraded to Remote Access functions at this time, install the LH IP side finish panel.

VSS Module - Optional Vehicle Security Features

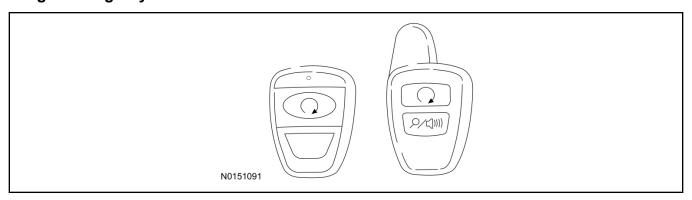
- 54. Enable/Disable Vehicle Security Features: Locate the security jumper supplied in the kit.
 - Install the jumper to the VSS module if the vehicle security features are to be **disabled**.
 - Not installing and/or removing the jumper from the VSS module will keep the vehicle security features **enabled**.



RMST Activation

- 55. Verify that the IDS is updated to the most current version.
- 56. Connect IDS.
 - Follow the prompts to select new vehicle session.
 - Enter VIN.
- 57. Activate the remote start using the IDS.
 - Select the Tool Box icon.
 - · Select Body.
 - · Select Security.
 - · Select Remote Start.
 - Verify that the information on the IDS screen is correct and all procedures have been followed.
 - Select Yes. This will enable the remote start function on the vehicle.
- 58. For vehicles equipped with standard message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - · Select Convenience.
 - Select Remote Start.
 - Select System.
 - Verify that the remote start system is checked.
- 59. For vehicles equipped with advanced message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Vehicle Settings.
 - · Select Vehicle.
 - Select Remote Start System.
 - Verify that the remote start system is enabled.

Programming Key Fobs



60. **NOTE:**

These steps must be performed with the VSS module security jumper removed if previously installed. For additional information refer to "VSS Module - Optional Vehicle Security Features".

- 1 Start with doors unlocked
- 2 Driver's door open (remaining open throughout)
- 3 Verify that the gearshift lever is in the "PARK" position.
- 4 Depress and hold brake pedal.
- 5 Start with ignition key OFF.
- 6 Cycle ignition key to the ON then OFF position 5 times, then back to the ON position a 6th time.
 - The horn will honk 3 times to indicate transmitter learn mode access.
- 7 Press the START button on each transmitter you wish to program. The horn will honk 1 time each time the START button is pressed to indicated the transmitter has been learned.
- 8 Cycle ignition key to the OFF position to exit transmitter learn mode.

9 NOTE:

If the security jumper is installed the vehicle security features are disabled.

If previously removed, reinstall the VSS module security jumper. For additional information, refer to "VSS Module - Optional Vehicle Security Features".

RMST Functional Test

NOTE:

Do not put a key in the ignition for the following steps.

- 61. Make sure the shift lever is in PARK and the ignition is in the OFF position. Remove all keys from the vehicle.
- 62. Close the hood.
- 63. Close all of the vehicle doors.
- 64. Start the vehicle by pressing the remote start button twice on the remote start key fob.
- 65. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
- 66. Open the hood.

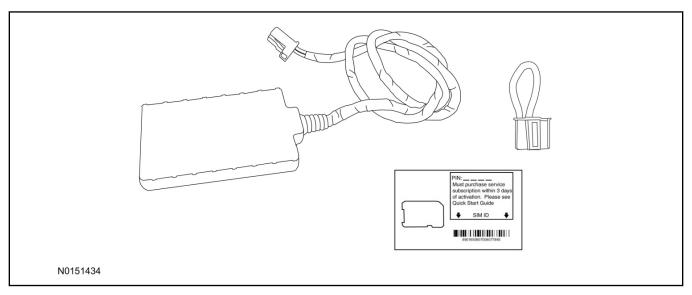
67. **NOTE:**

Vehicle doors should be closed while performing this step.

Confirm that the vehicle will not start with the hood open.

Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

III. Remote Access (RMU) Upgrade "Sold Separately"



68. Review the RMU upgrade components.

Optional Components — Remote Access (RMU) Upgrade "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|-----------------------------|
| 1 | Remote Messaging Unit (RMU) |
| 1 | SIM Card Carrier |
| 1 | Security Jumper |

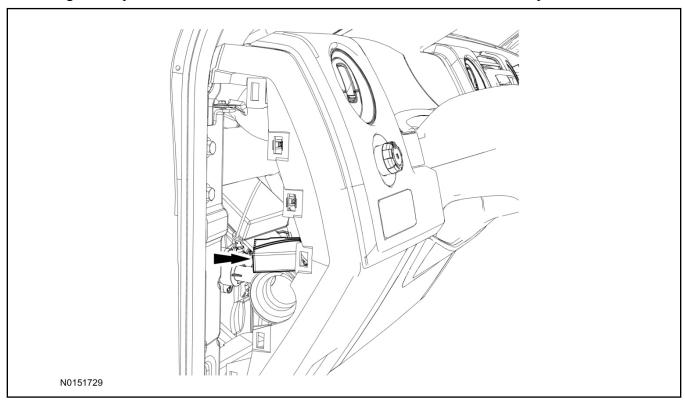
\triangle CAUTION:

Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

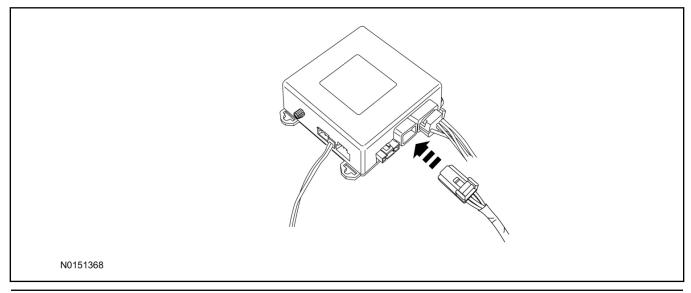
NOTE:

For proper range of operation, the RMU must be installed as shown in the diagram below.

- 69. If previously installed, remove the LH IP side finish panel.
- 70. Using tie-straps secure the RMU to the A/C duct behind the LH IP side finish panel.

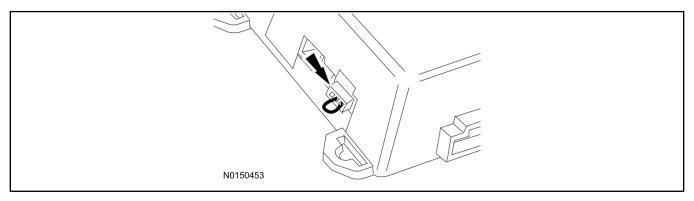


- 71. Connect the RMU electrical connector to the VSS module.
 - Secure the harness with tie-straps.



VSS Module - Optional Vehicle Security Features

- 72. Enable/Disable Vehicle Security Features: Locate the security jumper supplied in the kit.
 - Install the jumper to the VSS module if the vehicle security features are to be **disabled**.
 - Not installing and/or removing the jumper from the VSS module will keep the vehicle security features enabled.



73. Install the LH IP side finish panel.

Remote Start Activation - (Without Factory Remote Start)

- 74. Verify that the IDS is updated to the most current version.
- 75. Connect IDS.
 - Follow the prompts to select new vehicle session.
 - Enter VIN.
- 76. Activate the remote start using the IDS.
 - Select the Tool Box icon.
 - Select Body.
 - Select Security.
 - Select Remote Start
 - Verify that the information on the IDS screen is correct and all procedures have been followed.
 - Select Yes. This will enable the remote start function on the vehicle.
- 77. For vehicles equipped with standard message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - · Select Convenience.
 - Select Remote Start.
 - Select System.
 - Verify that the remote start system is checked.

- 78. For vehicles equipped with advanced message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Vehicle Settings.
 - · Select Vehicle.
 - Select Remote Start System.
 - Verify that the remote start system is enabled.

RMU Activation

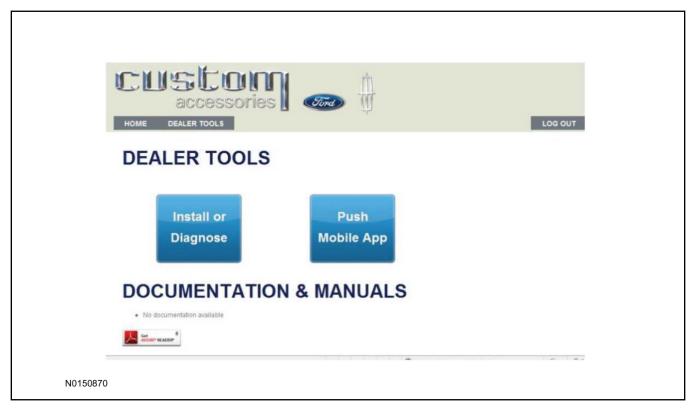
NOTE:

Please note that the Remote Access application that is used to start the vehicle for this RMST kit will only work with iPhone and Android phones.

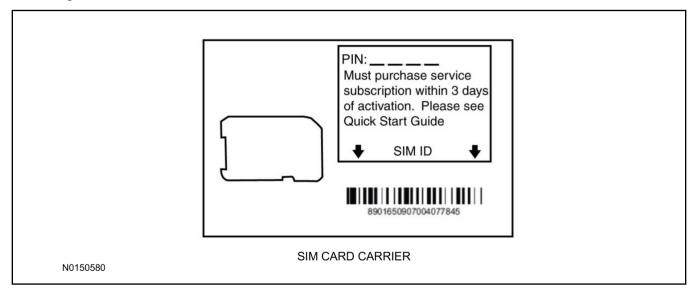
- 79. For RMU activation the following information from the customer is recommended to provide them with electronic notification for app retrieval:
 - 1 Email Address
 - 2 Cell Phone Number
 - 3 Cell Phone Carrier Company
- 80. Log on to your Professional Technician Society (PTS) account and enter the vehicle information.
 - 1 Select "Vehicle Id".
 - 2 Select "By Year & Model"
 - 3 Choose the year & model of the vehicle and then select "GO".
 - 4 Hover over the "Workshop" tab.
 - 5 Select the "Accessory Installation" menu item.
 - 6 Under the "Electrical" heading, select the "Remote Access Activation" link (first time users will need to agree to terms & conditions).
 - 7 Select the "Install or Diagnose" link.

NOTE:

If you are not directed to the screen shown below (or user agreement screen for first time users), make sure your internet browser zone settings are set to medium. This setting can be found in your browsers "internet options" under the "privacy" tab.



81. Once on the "Install" page, enter the SIM ID code that was provided with the RMST kit. Select "Begin or Continue Installation".



82. Click on the "On screen steps 1-6", and follow the on screen instructions to complete the installation.

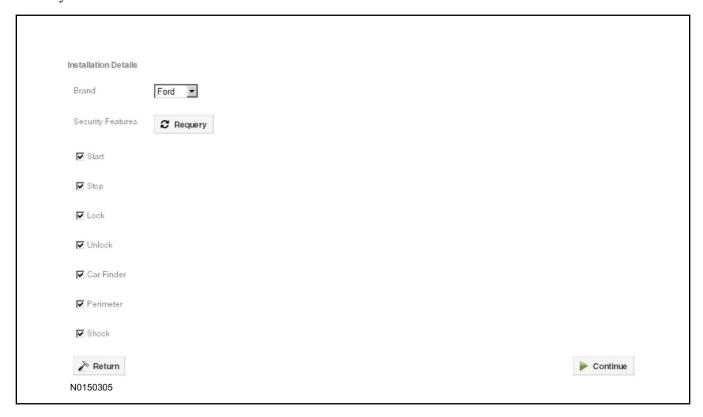


NOTE:

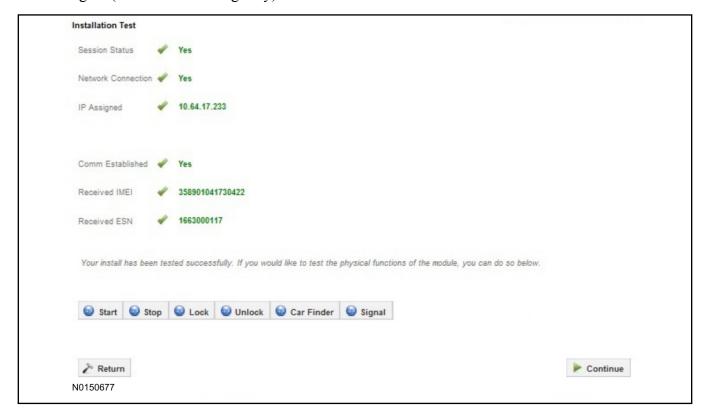
The following step will complete the activation process, when you are directed to a screen similar to the one below ensure the correct vehicle brand is selected and that all applicable features are enabled.

NOTE:

The "perimeter" and "shock" settings below are optional features and should only be selected when security features are enabled.



- 83. Perform a functional check of the system by testing each of the available features.
 - Start/Stop function
 - Lock/Unlock function
 - Car finder
 - Signal (for troubleshooting only)



NOTE:

All tests above must be completed in order to move to the next step. If any of the listed functions fail, move the vehicle to an outside location and retest.

NOTE:

In the event start or stop fail, refer to the "Remote Start Activation" section in this manual.

NOTE

In the event lock/unlock or car find fail, refer to the "Learn Remote Start System to Vehicle" section in this manual.

- 84. Once the hardware installation and RMU activation process is complete, record the 4-digit PIN on the SIM card carrier. Provide the SIM card carrier to the customer so they can add this system to their Remote Access Account. Customer must have both the 4-digit PIN and SIM ID to activate/add their vehicle to their Remote Access Account.
- 85. If the customer agrees, you may push the mobile application to the customer. You will need the customer's phone number and cellular carrier. If the customer opts to install the application themselves, they can locate it in their mobile app store.

Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

Vehicle Security / Remote Start / Remote Access System Installation

CONTENTS

INSTALLATION

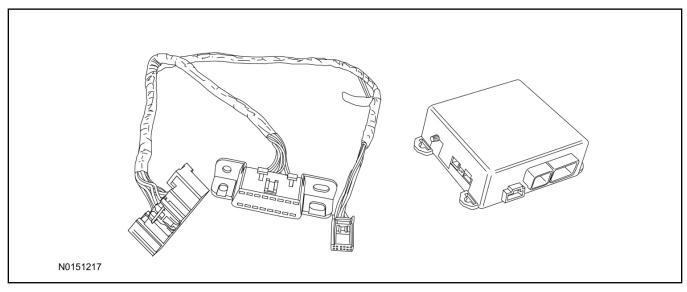
VSS Module Installation Security Indicator LED Mounting RMST Kit Antenna Installation

RMU Module Installation GENERAL PROCEDURES

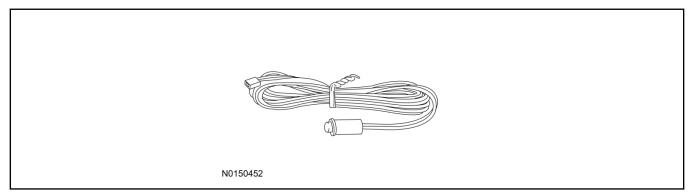
Shock Sensor Sensitivity Adjustment RMU Activation

INSTALLATION

Vehicle Security / Remote Start / Remote Access - MKT VSS System Components



Security Indicator LED (19D596) "Optional"



MKT

1. Verify correct kit number.

Review VSS Kit Contents

NOTE:

Kits are vehicle specific and are not interchangeable.

2. Review the VSS kit contents.

Vehicle Security System (VSS) Kit

| QUANTITY | DESCRIPTION |
|----------|-------------|
| 1 | VSS Module |
| 1 | T-harness |

Vehicle Security System (VSS) Kit(Continued)

| 6 | Tie-straps |
|---|----------------|
| 1 | Owner's Manual |

Security Indicator LED Kit Contents "Optional"

3. Review the Security Indicator LED kit contents.

Security Indicator LED Kit

| QUANTITY | DESCRIPTION |
|----------|------------------------|
| 1 | Security Indicator LED |

I. VSS System Installation

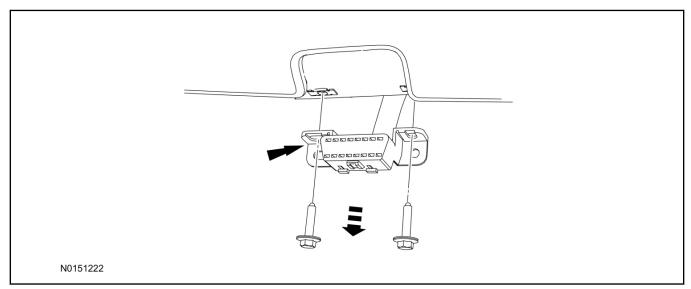
CAUTION:

Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

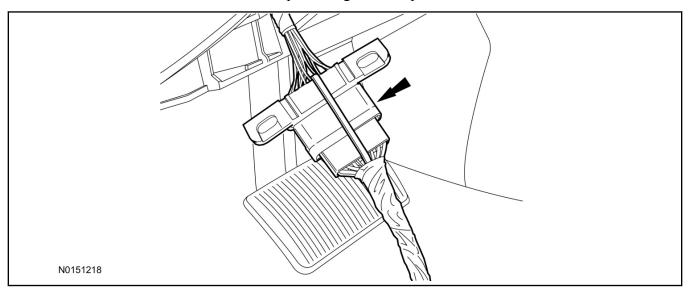
NOTE:

If the VSS kit was installed previously and the vehicle is being upgraded, proceed to the "RMST" or "RMU" upgrade section(s).

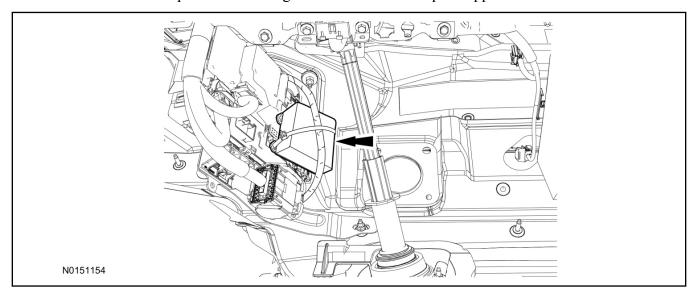
- 4. Remove the LH lower Instrument Panel (IP) insulator.
- 5. Remove the 2 bolts and remove the OBD II port from the IP frame.



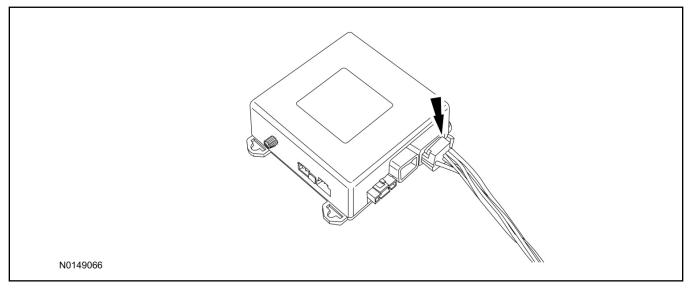
- 6. Connect the VSS T-harness to the OBD II port.
 - Secure the T-harness to the OBD II port using a tie-strap.



- 7. Position the VSS harness inside the IP being careful to avoid sharp edges and moving parts.
- 8. Install the new VSS harness OBD II port to the IP frame and install the bolts.
 - Do not over tighten.
- 9. Position the VSS module on top of the Body Control Module (BCM) and secure to wire harness with tie-straps.
 - Ensure the VSS module is positioned so the shock sensor adjustment knob can be accessed for later use.
 - Ensure the tie-strap is routed through the VSS module loops at opposite corners.



- 10. Connect the VSS harness to the VSS module.
 - Secure the VSS harness with tie-straps.



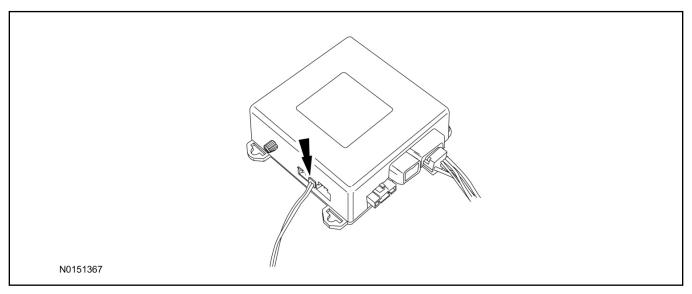
Optional Security Indicator LED Mounting

\triangle CAUTION:

Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

- 11. Keep the following points in mind when routing or positioning the LED for mounting:
 - Have at least 3/4" clearance behind trim panels for the wiring harness to be routed.
 - The LED should be clearly visible from the driver's side window when mounted.
 - Do not mount the LED on trim panels that cover air bags.
- 12. Mount the LED at an appropriate location on the upper steering column shroud, using the guidelines listed above.
 - Drill a 9/32" hole into the selected location, for the LED to mount in.
- 13. Route the LED wire harness to the VSS module.

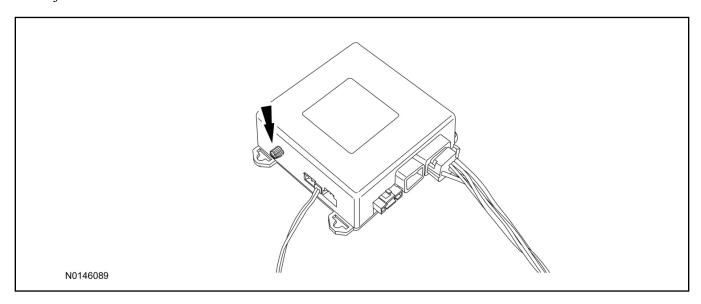
- 14. Connect the LED wire harness to the VSS module 2-pin white connector.
 - Secure the LED wire harness with tie-straps.



Shock Sensor Sensitivity Adjustment

NOTE:

The VSS module is equipped with an internal dual zone Shock Sensor. The VSS system will activate a single horn honk/single light flash anytime a light to moderate impact is detected, and a "panic" type 30 second horn honk/light flash sequence when a heavy impact is detected while the VSS system is armed. Adjustment of both zones is accomplished through a single adjustment knob on the VSS module. Rotating the knob clockwise will increase sensitivity and rotating the knob counter-clockwise will decrease sensitivity. Sensitivity adjustment must be completed with the module securely mounted and the adjustment knob accessible.



- 15. Starting with the adjustment knob in approximately the halfway position, lower the driver's window and exit the vehicle.
- 16. Press the LOCK button on the vehicle's RKE fob to arm the VSS system. The LED will light solid for 20 seconds and then begin to flash a steady on/off sequence to indicate the system is armed.
- 17. Using a closed fist, impact the steering wheel with moderate force to simulate a light impact on the vehicle. If the impact is detected, the horn will honk and the lights will flash 1 time to indicate the warning impact was detected.
- 18. Using a closed fist, impact the steering wheel with heavy force to simulate a hard impact (i.e. glass breakage) on the vehicle. If the impact is detected, the horn will honk and the lights will flash a steady on off sequence to indicate the heavy or full shock trigger was detected.
- 19. Increase (rotate clockwise) or decrease (rotate counter-clockwise) the adjustment knob as necessary to achieve desired sensitivity, repeat the previous steps to test, and verify adjustment.

VSS Functional Test

NOTE:

If installed, observe the LED while performing these tests.

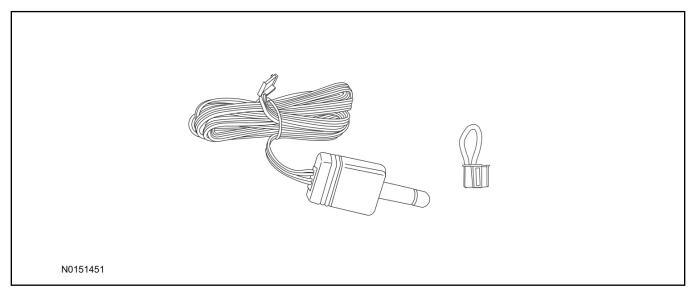
- 20. Lower the driver's door window, then close all doors, hood, and trunk/hatch and press lock on the keyfob. The LED should stay lit for 20 seconds while the VSS system pre-arms, after which it will flash every 3-4 seconds in fully armed mode.
- 21. Reach inside the window hit the door unlock trim switch. The LED should continue to flash, indicating that the vehicle is still armed. Use the inside driver's door handle to open the door. The alarm should sound, indicating perimeter breach. Turn the alarm off by turning the ignition to "On".
 - If equipped with OE perimeter security, there will be a 12 second interior chime prior to alarm sounding. For vehicles not equipped with OE perimeter security, there will be a 12 second delay with no interior chime prior to alarm sounding.
 - For push button start vehicles, the Intelligent Access (IA) key must be away from the vehicle, otherwise the security system may disarm immediately upon trigger.
- 22. Exit the vehicle and arm it again, this time leaving the driver's door open. The vehicle should arm itself, ignoring the open door but monitoring the rest. Once the vehicle is armed, shut the driver's door and reopen it after a few seconds. The alarm should sound. Turn the alarm off by hitting unlock on the keyfob.
 - For push button start vehicles, the Intelligent Access (IA) key must be away from the vehicle, otherwise the security system may disarm immediately upon trigger.
- 23. Test all other vehicle doors, the hood and the trunk in the same manner, by setting off the alarm and disarming with the keyfob.
- 24. If the VSS kit will not be upgraded to RMST/RMU functions at this time, install the LH lower IP insulator.

Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

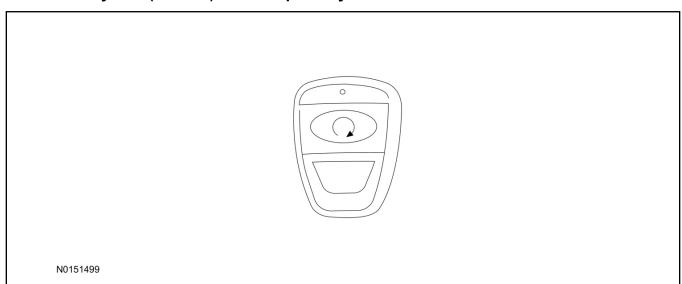
II. Remote Start (RMST) Upgrade - Antenna Kit "Sold Separately"

^CAUTION:

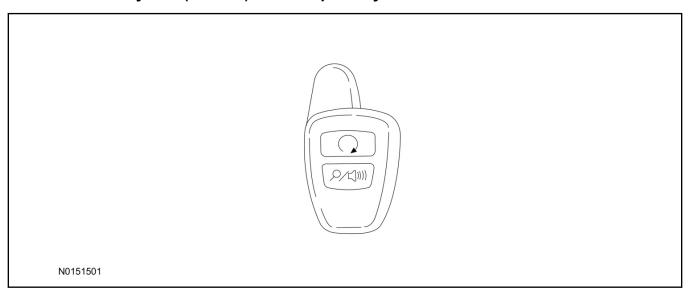
Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.



Standard Key Fob (15K601) "Sold Separately"



Bi-directional Key Fob (15K601) "Sold Separately"



Optional RMST Upgrade Components "Sold Separately"

25. Review the RMST Upgrade components.

Remote Start (RMST) Upgrade - Antenna Kit "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|------------------------------|
| 1 | Bi-directional Antenna (TBD) |
| 1 | Security Jumper (TBD) |

Standard Key Fob (15K601) "Sold Separately"

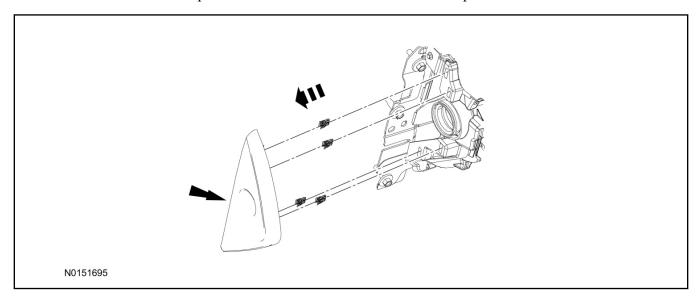
| QUANTITY | DESCRIPTION |
|----------|---------------------------|
| 1 | Standard Key Fob (15K601) |

Bi-directional Key Fob (15K601) "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|---------------------------------|
| 1 | Bi-directional Key Fob (15K601) |

RMST Kit Antenna Installation

- 26. If previously installed, remove the LH lower IP insulator.
- 27. Position the weather strip aside and remove the LH IP side finish panel.



28. Clean the antenna mounting surface using an alcohol base solution and a clean cloth.

29. **NOTE:**

Do not touch the adhesive, reduced adhesion may result.

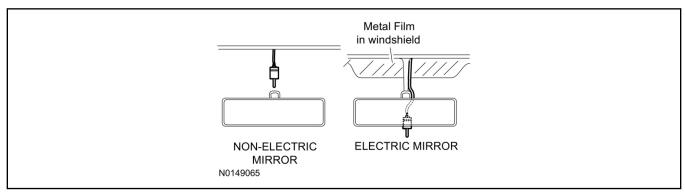
NOTE:

Make sure that the long wire on the antenna is pointing towards the top of the windshield since this wire will be routed along the headliner.

NOTE:

The wire will be attached to the control module later in this procedure.

Remove the protective backing from the adhesive on the antenna and firmly press the body of the antenna onto the mounting surface.

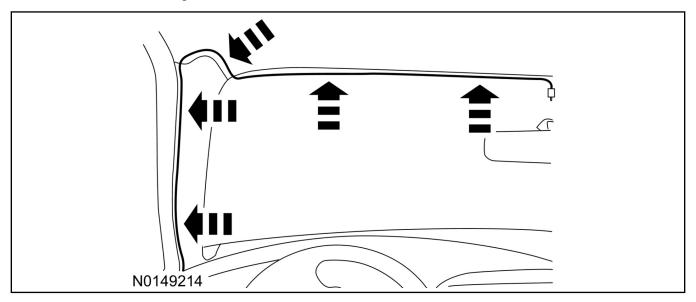


30. If necessary, position the A-pillar trim slightly outward to provide access to route the antenna wire.

NOTE:

Do not route the antenna wire over the top of air bags.

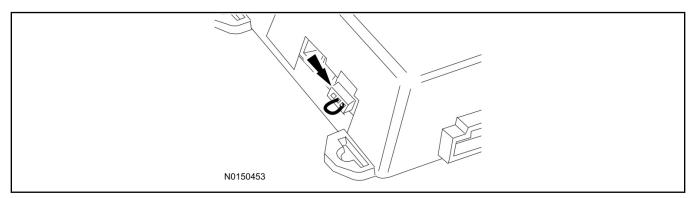
- 31. Route the antenna cable along the headliner and down the A-pillar towards the floor. Continue routing the wire into the IP towards the VSS module.
 - Secure with tie-straps.



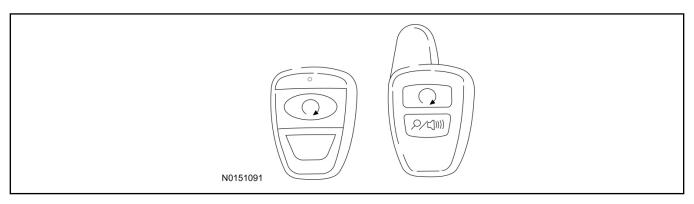
- 32. Connect the antenna connector to the VSS module.
- 33. Reposition the A-pillar trim panel back, if necessary.
- 34. Install the LH IP side finish panel and position the weatherstrip back.

VSS Module - Optional Vehicle Security Features

- 35. Enable/Disable Vehicle Security Features: Locate the security jumper supplied in the kit.
 - Install the jumper to the VSS module if the vehicle security features are to be **disabled**.
 - Not installing and/or removing the jumper from the VSS module will keep the vehicle security features **enabled**.



Programming Key Fobs



36. **NOTE:**

These steps must be performed with the VSS module security jumper removed if previously installed. For additional information refer to "VSS Module - Optional Vehicle Security Features".

- 1 Enter the vehicle with the vehicle key(s) and key fobs you wish to program.
- 2 Depress and hold brake pedal.
- 3 Press the start/stop button.
- 4 After the vehicle starts press the start/stop button to shut down.
- 5 Repeat steps 3 and 4 an additional four times, ending in ignition on, engine off.
- 6 Release the brake pedal.
- 7 Press the vehicle start/stop button twice to turn ignition on.
 - The horn will honk 3 times to indicate transmitter learn mode access.
- 8 Press the start stop button on each fob you wish to program.
- 9 Cycle ignition to the OFF position to exit transmitter learn mode.

10 **NOTE**:

If the security jumper is installed the vehicle security features are disabled.

If previously removed, reinstall the VSS module security jumper. For additional information, refer to "VSS Module - Optional Vehicle Security Features".

37. If the RMST kit will not be upgraded to RMU functions at this time, install the LH lower IP insulator.

RMST Functional Test

NOTE:

Do not put a key in the ignition for the following steps.

- 38. Make sure the shift lever is in PARK and the ignition is in the OFF position. Remove all keys from the vehicle.
- 39. Close the hood.

- 40. Close all of the vehicle doors.
- 41. Start the vehicle by pressing the remote start button twice on the remote start key fob.
- 42. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
- 43. Open the hood.

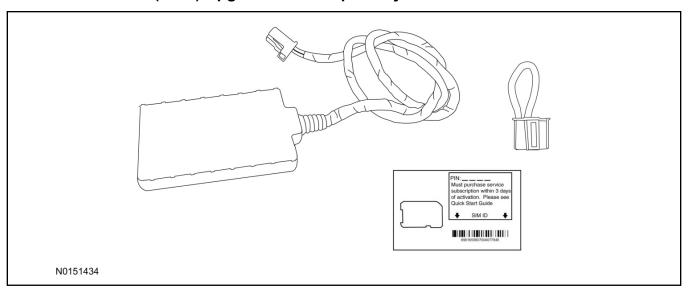
44. **NOTE:**

Vehicle doors should be closed while performing this step.

Confirm that the vehicle will not start with the hood open.

Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

III. Remote Access (RMU) Upgrade "Sold Separately"



45. Review the RMU upgrade components.

Optional Components — Remote Access (RMU) Upgrade "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|-----------------------------|
| 1 | Remote Messaging Unit (RMU) |
| 1 | SIM Card Carrier |
| 1 | Security Jumper |

46. If previously installed, remove the LH lower IP insulator.

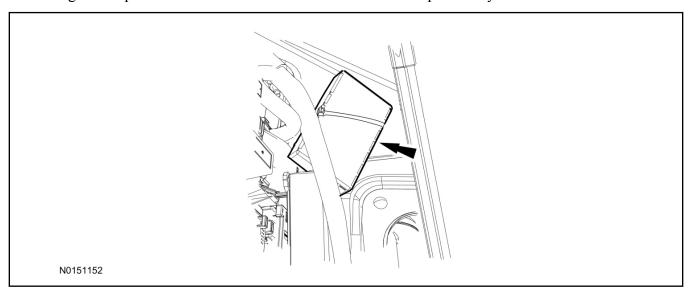


Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

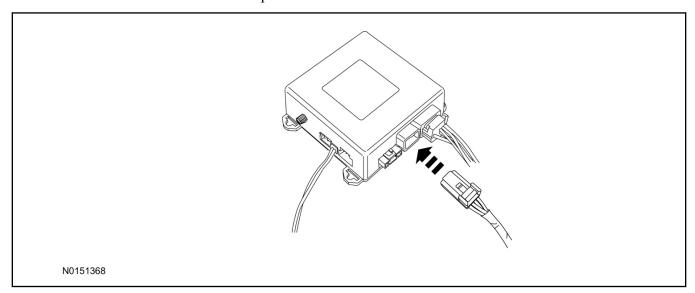
NOTE:

For proper range of operation, the RMU must be installed as shown in the diagram below.

47. Using tie-straps secure the RMU to the IP harness above the previously installed VSS module.

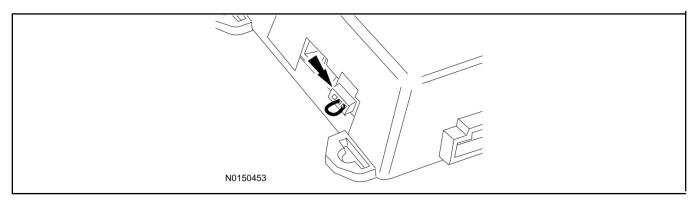


- 48. Connect the RMU electrical connector to the VSS module.
 - Secure the harness with tie-straps.



VSS Module - Optional Vehicle Security Features

- 49. Enable/Disable Vehicle Security Features: Locate the security jumper supplied in the kit.
 - Install the jumper to the VSS module if the vehicle security features are to be **disabled**.
 - Not installing and/or removing the jumper from the VSS module will keep the vehicle security features enabled.



50. Install the LH lower IP insulator.

RMU Activation

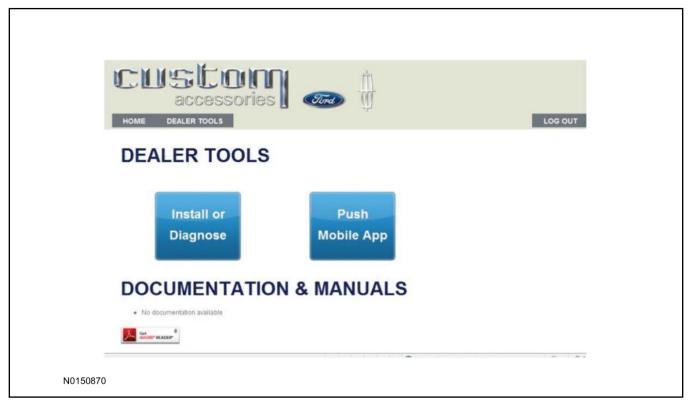
NOTE:

Please note that the Remote Access application that is used to start the vehicle for this RMST kit will only work with iPhone and Android phones.

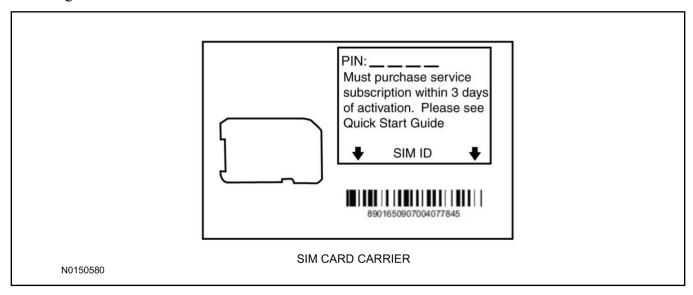
- 51. For RMU activation the following information from the customer is recommended to provide them with electronic notification for app retrieval:
 - 1 Email Address
 - 2 Cell Phone Number
 - 3 Cell Phone Carrier Company
- 52. Log on to your Professional Technician Society (PTS) account and enter the vehicle information.
 - 1 Select "Vehicle Id".
 - 2 Select "By Year & Model"
 - 3 Choose the year & model of the vehicle and then select "GO".
 - 4 Hover over the "Workshop" tab.
 - 5 Select the "Accessory Installation" menu item.
 - 6 Under the "Electrical" heading, select the "Remote Access Activation" link (first time users will need to agree to terms & conditions).
 - 7 Select the "Install or Diagnose" link.

NOTE:

If you are not directed to the screen shown below (or user agreement screen for first time users), make sure your internet browser zone settings are set to medium. This setting can be found in your browsers "internet options" under the "privacy" tab.



53. Once on the "Install" page, enter the SIM ID code that was provided with the RMST kit. Select "Begin or Continue Installation".



54. Click on the "On screen steps 1-6", and follow the on screen instructions to complete the installation.

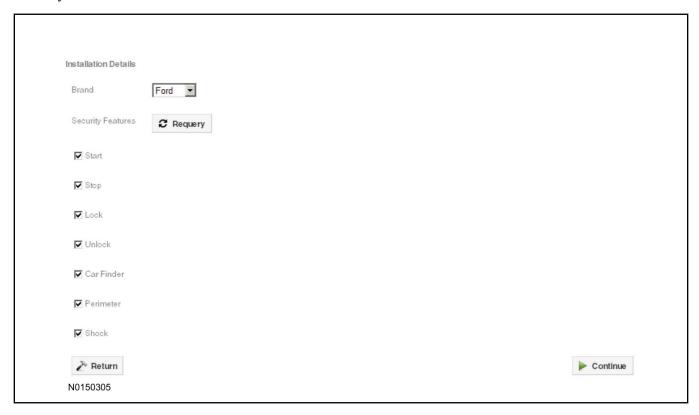


NOTE:

The following step will complete the activation process, when you are directed to a screen similar to the one below ensure the correct vehicle brand is selected and that all applicable features are enabled.

NOTE:

The "perimeter" and "shock" settings below are optional features and should only be selected when security features are enabled.



- 55. Perform a functional check of the system by testing each of the available features.
 - Start/Stop function
 - Lock/Unlock function
 - Car finder
 - Signal (for troubleshooting only)



NOTE:

All tests above must be completed in order to move to the next step. If any of the listed functions fail, move the vehicle to an outside location and retest

- 56. Once the hardware installation and RMU activation process is complete, record the 4-digit PIN on the SIM card carrier. Provide the SIM card carrier to the customer so they can add this system to their Remote Access Account. Customer must have both the 4-digit PIN and SIM ID to activate/add their vehicle to their Remote Access Account.
- 57. If the customer agrees, you may push the mobile application to the customer. You will need the customer's phone number and cellular carrier. If the customer opts to install the application themselves, they can locate it in their mobile app store.

Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

Vehicle Security / Remote Start / Remote Access System Installation

CONTENTS

VEHICLE PREPARATION

Hood Switch Installation

INSTALLATION

VSS Module Installation

Security Indicator LED Mounting

TPM Antenna Kit Installation

RMST Kit Antenna Installation

RMU Module Installation

GENERAL PROCEDURES

Learn VSS to vehicle

Shock Sensor Sensitivity Adjustment

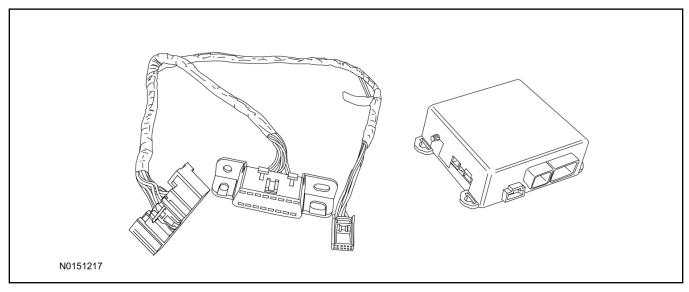
Standard Remote Start Activation

RMU Remote Start Activation

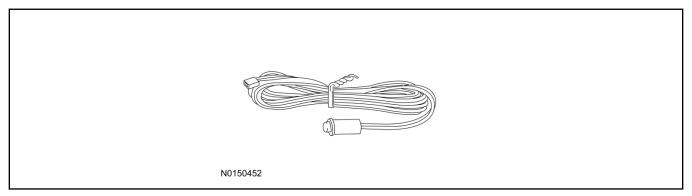
RMU Activation

INSTALLATION

Vehicle Security / Remote Start / Remote Access - Super Duty VSS System Components



Security Indicator LED (19D596) "Optional"



Super Duty

1. Verify correct kit number.

Review VSS Kit Contents

NOTE:

Kits are vehicle specific and are not interchangeable.

2. Review the VSS kit contents.

Vehicle Security System (VSS) Kit

| QUANTITY | DESCRIPTION |
|----------|-------------|
| 1 | VSS Module |
| 1 | T-harness |

| 6 | Tie-straps |
|---|----------------|
| 1 | Owner's Manual |

Security Indicator LED Kit Contents "Optional"

3. Review the Security Indicator LED kit contents.

Security Indicator LED Kit

| QUANTITY | DESCRIPTION |
|----------|------------------------|
| 1 | Security Indicator LED |

I. VSS System Installation

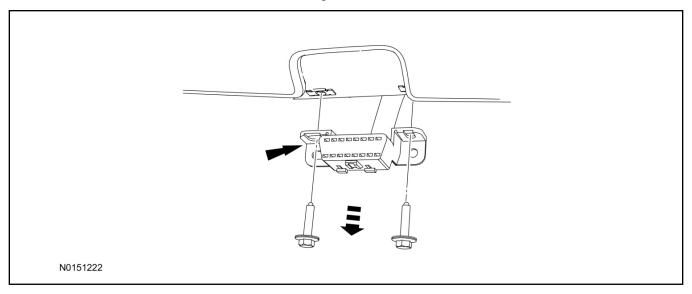


Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

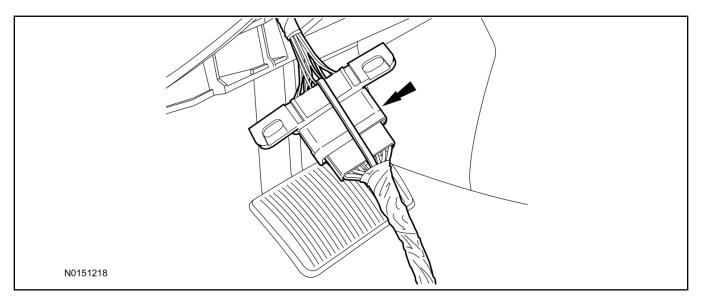
NOTE:

If the VSS kit was installed previously and the vehicle is being upgraded, proceed to the "RMST" or "RMU" upgrade section(s).

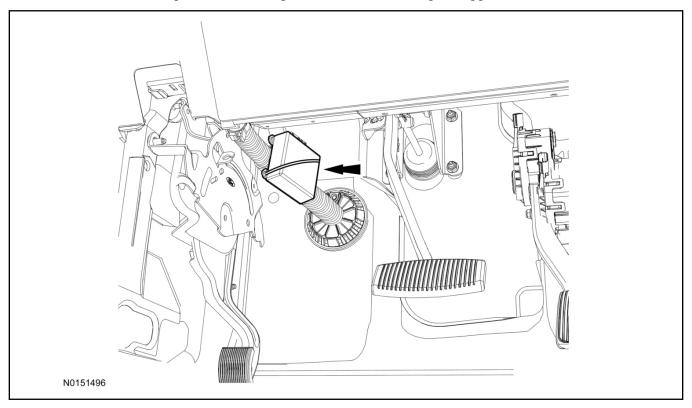
4. Remove the 2 bolts and remove the OBD II port from the IP frame.



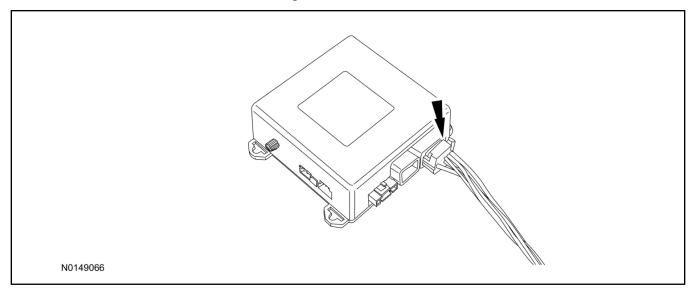
- 5. Connect the VSS T-harness to the OBD II port.
 - Secure the T-harness to the OBD II port using a tie-strap.



- 6. Position the VSS harness inside the IP being careful to avoid sharp edges and moving parts.
- 7. Install the new VSS harness OBD II port to the IP frame and install the bolts.
 - Do not over tighten.
- 8. Position the VSS module on top of the Body Control Module (BCM) and secure to wire harness with tie-straps.
 - Ensure the VSS module is positioned so the shock sensor adjustment knob can be accessed for later use
 - Ensure the tie-strap is routed through the VSS module loops at opposite corners.



- 9. Connect the VSS harness to the VSS module.
 - Secure the VSS harness with tie-straps.



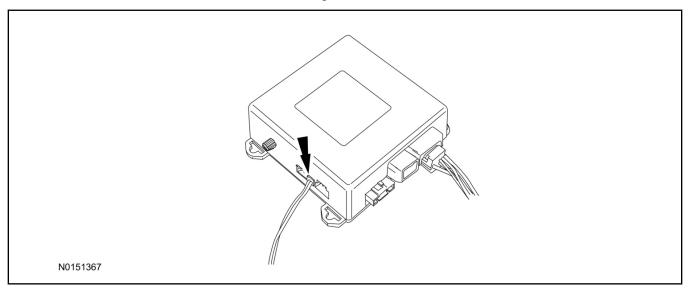
Optional Security Indicator LED Mounting



Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

- 10. Keep the following points in mind when routing or positioning the LED for mounting:
 - Have at least 3/4" clearance behind trim panels for the wiring harness to be routed.
 - The LED should be clearly visible from the driver's side window when mounted.
 - Do not mount the LED on trim panels that cover air bags.
- 11. Mount the LED at an appropriate location on the upper steering column shroud, using the guidelines listed above.
 - Drill a 9/32" hole into the selected location, for the LED to mount in.
- 12. Route the LED wire harness to the VSS module.

- 13. Connect the LED wire harness to the VSS module 2-pin white connector.
 - Secure the LED wire harness with tie-straps.



Learn VSS to Vehicle

NOTE:

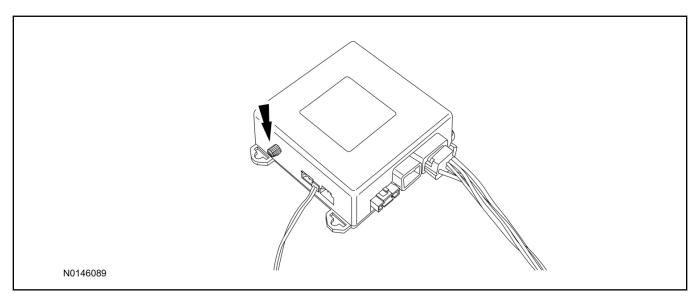
Make sure the brake pedal is not depressed during this sequence.

- 14. Press the vehicle's unlock button located on the driver's door. Make sure all doors are unlocked.
- 15. Put the key in the ignition.
- 16. Cycle eight times rapidly (within 10 seconds) between the 1 (OFF/LOCK) position and 3 (ON) position.
 - The eighth turn must end in the 3 (ON) position. The doors will lock, then unlock, to confirm that the programming mode has been activated.
- 17. Wait for 10 seconds and the remote start module will program itself to the system.
 - After 20 seconds, you will automatically exit the programming mode. The doors will lock, then unlock, to confirm that the programming mode has been exited.

Shock Sensor Sensitivity Adjustment

NOTE:

The VSS module is equipped with an internal dual zone Shock Sensor. The VSS system will activate a single horn honk/single light flash anytime a light to moderate impact is detected, and a "panic" type 30 second horn honk/light flash sequence when a heavy impact is detected while the VSS system is armed. Adjustment of both zones is accomplished through a single adjustment knob on the VSS module. Rotating the knob clockwise will increase sensitivity and rotating the knob counter-clockwise will decrease sensitivity. Sensitivity adjustment must be completed with the module securely mounted and the adjustment knob accessible.



- 18. Starting with the adjustment knob in approximately the halfway position, lower the driver's window and exit the vehicle.
- 19. Press the LOCK button on the vehicle's RKE fob to arm the VSS system. The LED will light solid for 20 seconds and then begin to flash a steady on/off sequence to indicate the system is armed.
- 20. Using a closed fist, impact the steering wheel with moderate force to simulate a light impact on the vehicle. If the impact is detected, the horn will honk and the lights will flash 1 time to indicate the warning impact was detected.
- 21. Using a closed fist, impact the steering wheel with heavy force to simulate a hard impact (i.e. glass breakage) on the vehicle. If the impact is detected, the horn will honk and the lights will flash a steady on off sequence to indicate the heavy or full shock trigger was detected.
- 22. Increase (rotate clockwise) or decrease (rotate counter-clockwise) the adjustment knob as necessary to achieve desired sensitivity, repeat the previous steps to test, and verify adjustment.

VSS Functional Test

NOTE:

If installed, observe the LED while performing these tests.

- 23. Lower the driver's door window, then close all doors, hood, and trunk/hatch and press lock on the keyfob. The LED should stay lit for 20 seconds while the VSS system pre-arms, after which it will flash every 3-4 seconds in fully armed mode.
- 24. Reach inside the window hit the door unlock trim switch. The LED should continue to flash, indicating that the vehicle is still armed. Use the inside driver's door handle to open the door. The alarm should sound, indicating perimeter breach. Turn the alarm off by turning the ignition to "On".
 - If equipped with OE perimeter security, there will be a 12 second interior chime prior to alarm sounding. For vehicles not equipped with OE perimeter security, there will be a 12 second delay with no interior chime prior to alarm sounding.

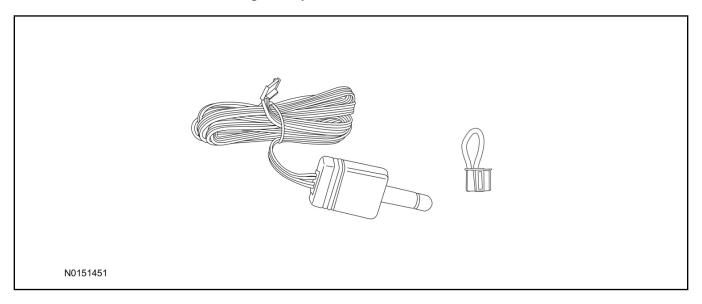
- 25. Exit the vehicle and arm it again, this time leaving the driver's door open. The vehicle should arm itself, ignoring the open door but monitoring the rest. Once the vehicle is armed, shut the driver's door and reopen it after a few seconds. The alarm should sound. Turn the alarm off by hitting unlock on the keyfob.
- 26. Test all other vehicle doors, the hood and the trunk in the same manner, by setting off the alarm and disarming with the keyfob.
- 27. Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.
- II. Remote Start (RMST) Upgrade Antenna Kit "Sold Separately"

△ CAUTION:

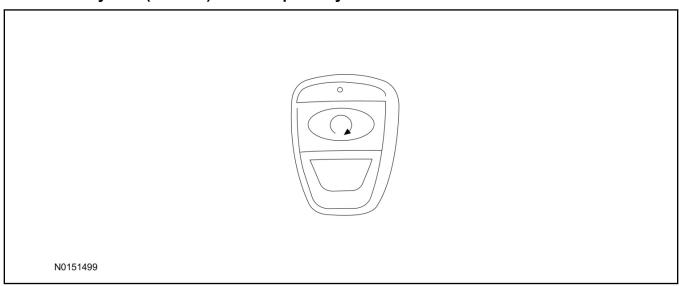
Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

NOTE:

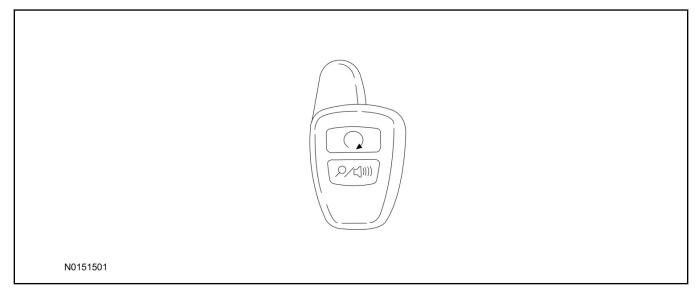
Verify that the vehicle has a hood switch Installed. If the vehicle is not equipped with a hood switch refer to "Hood Switch Kit - Sold Separately".



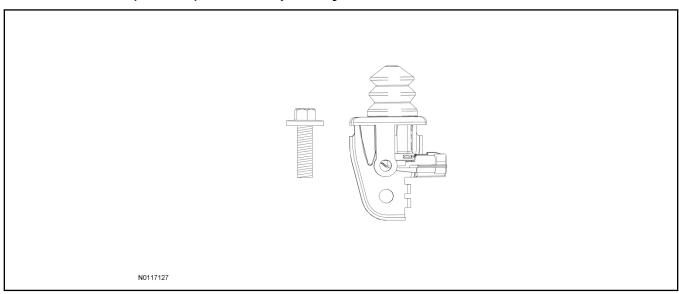
Standard Key Fob (15K601) "Sold Separately"



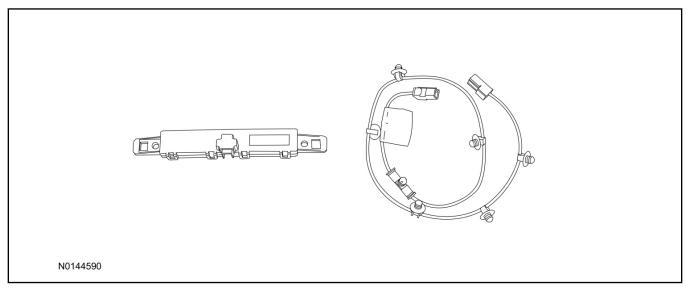
Bi-directional Key Fob (15K601) "Sold Separately"



Hood Switch Kit (19G366) - "Sold Separately"



TPM Antenna Kit Components - "Sold Separately"



Optional RMST Upgrade Components "Sold Separately"

28. Review the RMST Upgrade components.

Remote Start (RMST) Upgrade - Antenna Kit "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|------------------------------|
| 1 | Bi-directional Antenna (TBD) |
| 1 | Security Jumper (TBD) |

Standard Key Fob (15K601) "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|---------------------------|
| 1 | Standard Key Fob (15K601) |

Bi-directional Key Fob (15K601) "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|---------------------------------|
| 1 | Bi-directional Key Fob (15K601) |

Hood Switch Kit Contents (if required) "Sold Separately"

29. Review the Hood Switch kit contents.

Hood Switch Kit "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|----------------------|
| 1 | Bolt |
| 1 | Hood Switch Assembly |

TPM Antenna Kit Components "Sold Separately"

30. Review the TPM antenna kit contents.

TPM Antenna Kit

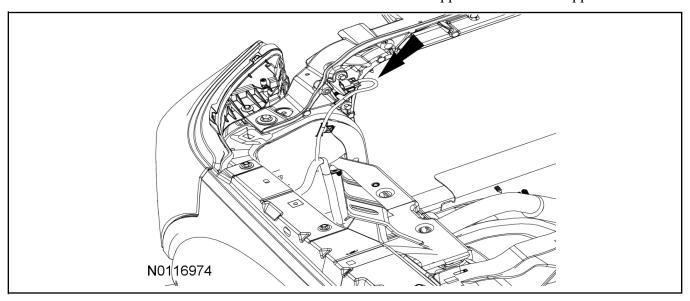
| QUANTITY | DESCRIPTION |
|----------|--------------------------|
| 1 | Antenna Module |
| 1 | Antenna Jumper Wire |
| 1 | 2-sided Tape (not shown) |

Hood Switch Kit - (if required) "Sold Separately"

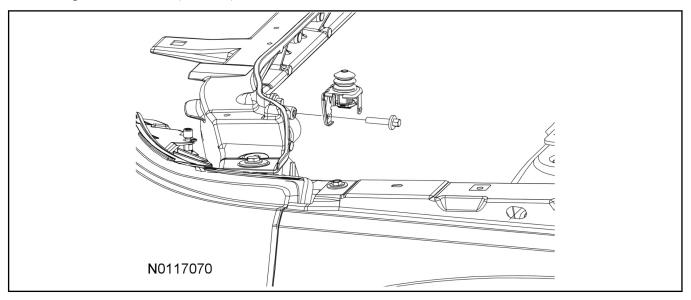
NOTE:

Hood switch installation is optional for VSS installation and required if the vehicle is being upgraded to RMST/RMU and is not currently equipped with a hood switch.

33. Locate the hood switch harness located on the LH side of the upper radiator core support.



- 54. Install the Hood switch assembly to the existing hood switch mounting on the upper radiator core support as shown.
 - Install the bolt.
 - Tighten to 10 Nm (89 lb-in).



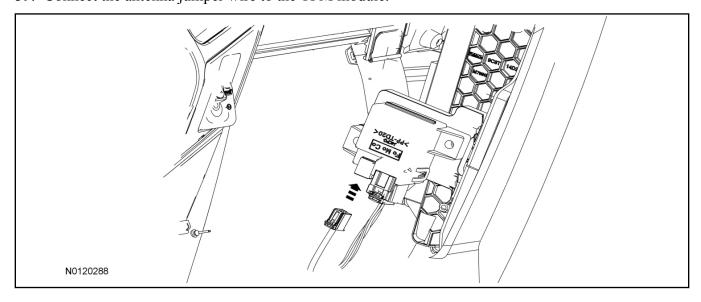
- 33. Connect the electrical connector to the hood switch.
- 34. Install the hood switch wire harness push pin retainer to the hood switch bracket.

TPM Antenna Kit Installation

NOTE:

The TPM Antenna Kit is only required if the vehicle is not equipped with factory remote start.

- 35. Open the glove compartment.
- 36. Push in the 2 side tabs and fully lower the glove compartment.
- 39. Connect the antenna jumper wire to the TPM module.



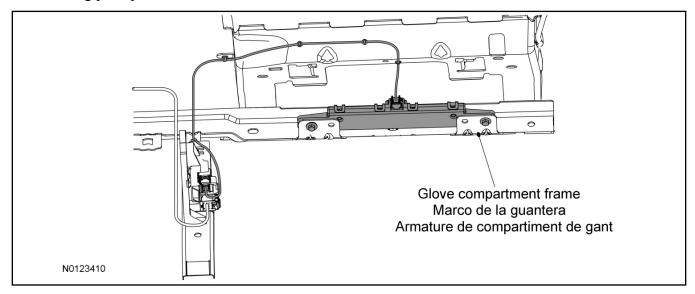
3: . **NOTE:**

View is from inside the instrument panel glove box area.

NOTE:

The white push-pin attaches to the back of the TPM module bracket

Route the TPM antenna jumper wire along the glove compartment frame as shown, using the existing push pin holes.



- 5; . Secure the antenna module to the glove box frame on top of the existing antenna module brackets.
 - Secure the antenna module with tie straps though the existing bracket holes.
- 42. Connect the antenna jumper wire connector to the antenna module.

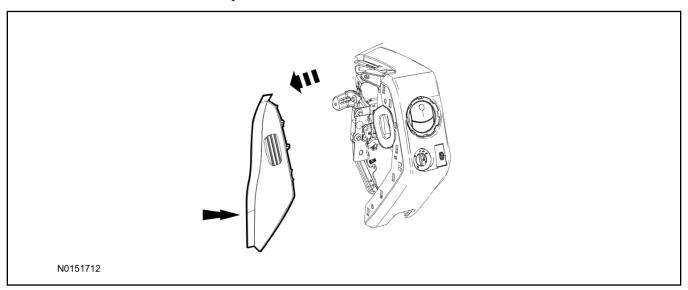
43. *NOTICE*:

While closing the glove compartment make sure that the TPM harness and antenna harness do not come in contact with the glove compartment door.

Close the glove compartment.

RMST Kit Antenna Installation

44. Remove the LH IP side finish panel.



45. Clean the antenna mounting surface using an alcohol base solution and a clean cloth.

46. **NOTE:**

Do not touch the adhesive, reduced adhesion may result.

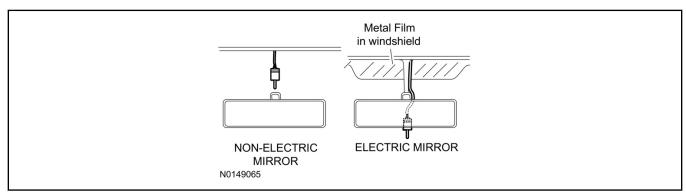
NOTE:

Make sure that the long wire on the antenna is pointing towards the top of the windshield since this wire will be routed along the headliner.

NOTE:

The wire will be attached to the control module later in this procedure.

Remove the protective backing from the adhesive on the antenna and firmly press the body of the antenna onto the mounting surface.

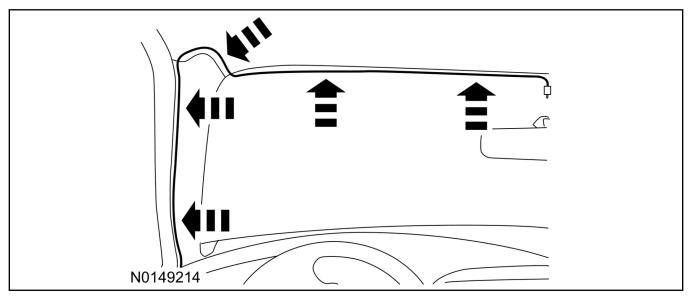


47. If necessary, position the A-pillar trim slightly outward to provide access to route the antenna wire. For additional information, refer to Workshop Manual (WSM) Section 501-05.

NOTE:

Do not route the antenna wire over the top of air bags.

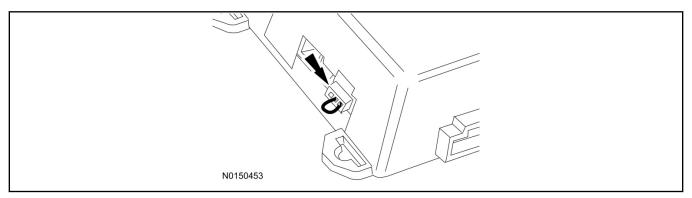
- 48. Route the antenna cable along the headliner and down the A-pillar towards the floor. Continue routing the wire into the IP towards the VSS module.
 - Secure with tie-straps.



- 49. Connect the antenna connector to the VSS module.
- 4: Reposition the A-pillar trim panel back, if necessary. For additional information, refer to WSM Section 501-05.
- 6; . If the RMST kit will not be upgraded to RMU functions at this time, install the LH IP side finish panel.

VSS Module - Optional Vehicle Security Features

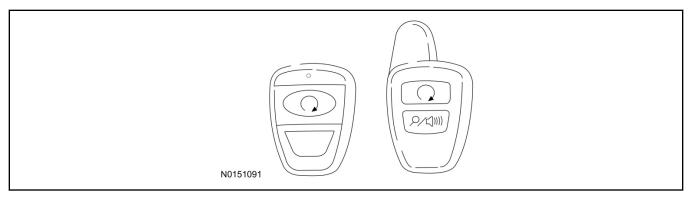
- 52. Enable/Disable Vehicle Security Features: Locate the security jumper supplied in the kit.
 - Install the jumper to the VSS module if the vehicle security features are to be **disabled**.
 - Not installing and/or removing the jumper from the VSS module will keep the vehicle security features **enabled**.



RMST Activation

- 53. Verify that the IDS is updated to the most current version.
- 54. Connect IDS.
 - Follow the prompts to select new vehicle session.
 - Enter VIN.
- 55. Activate the remote start using the IDS.
 - Select the Tool Box icon.
 - · Select Body.
 - Select Security.
 - Select Remote Start.
 - Verify that the information on the IDS screen is correct and all procedures have been followed.
 - Select Yes. This will enable the remote start function on the vehicle.
- 56. For vehicles equipped with standard message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Convenience.
 - · Select Remote Start.
 - · Select System.
 - Verify that the remote start system is checked.
- 57. For vehicles equipped with advanced message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Vehicle Settings.
 - Select Vehicle.
 - Select Remote Start System.
 - Verify that the remote start system is enabled.

Programming Key Fobs



58. **NOTE:**

These steps must be performed with the VSS module security jumper removed if previously installed. For additional information refer to "VSS Module - Optional Vehicle Security Features".

- 1 Start with doors unlocked
- 2 Driver's door open (remaining open throughout)
- 3 Verify that the gearshift lever is in the "PARK" position.
- 4 Depress and hold brake pedal.
- 5 Start with ignition key OFF.
- 6 Cycle ignition key to the ON then OFF position 5 times, then back to the ON position a 6th time.
 - The horn will honk 3 times to indicate transmitter learn mode access.
- 7 Press the START button on each transmitter you wish to program. The horn will honk 1 time each time the START button is pressed to indicated the transmitter has been learned.
- 8 Cycle ignition key to the OFF position to exit transmitter learn mode.

9 NOTE:

If the security jumper is installed the vehicle security features are disabled.

If previously removed, reinstall the VSS module security jumper. For additional information, refer to "VSS Module - Optional Vehicle Security Features".

RMST Functional Test

NOTE:

Do not put a key in the ignition for the following steps.

- 59. Make sure the shift lever is in PARK and the ignition is in the OFF position. Remove all keys from the vehicle.
- 5: Close the hood.
- 7: Close all of the vehicle doors.
- 62. Start the vehicle by pressing the remote start button twice on the remote start key fob.
- 63. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
- 64. Open the hood.

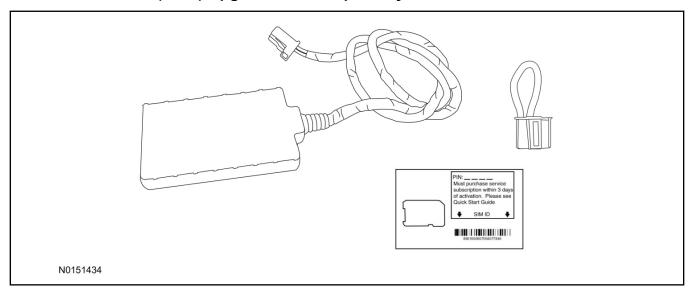
65. **NOTE:**

Vehicle doors should be closed while performing this step.

Confirm that the vehicle will not start with the hood open.

Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

III. Remote Access (RMU) Upgrade "Sold Separately"



66. Review the RMU upgrade components.

Optional Components — Remote Access (RMU) Upgrade "Sold Separately"

| QUANTITY | DESCRIPTION |
|----------|-----------------------------|
| 1 | Remote Messaging Unit (RMU) |
| 1 | SIM Card Carrier |
| 1 | Security Jumper |

67. If previously installed, remove the LH IP side finish panel.

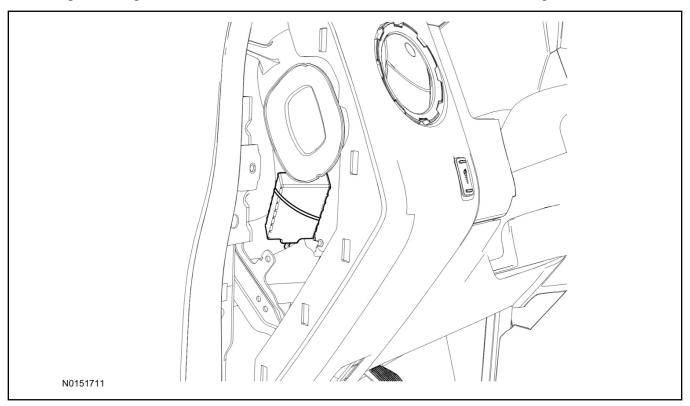
^CAUTION:

Carefully route and secure module and harnesses so that they do not interfere with moving parts or linkages.

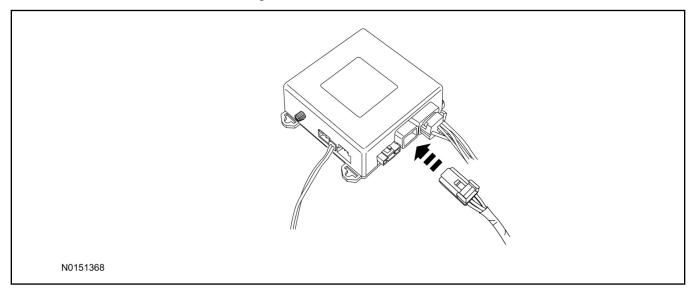
NOTE:

For proper range of operation, the RMU must be installed as shown in the diagram below.

68. Using a tie-strap secure the RMU to the A/C duct behind the LH IP side finish panel.

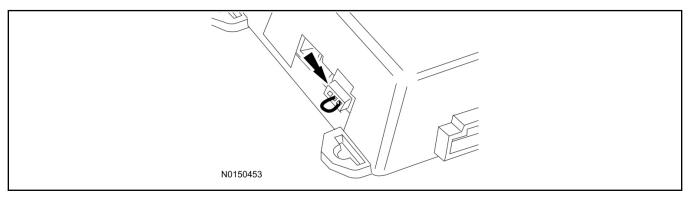


- 69. Connect the RMU electrical connector to the VSS module.
 - Secure the harness with tie-straps.



VSS Module - Optional Vehicle Security Features

- 6: Enable/Disable Vehicle Security Features: Locate the security jumper supplied in the kit.
 - Install the jumper to the VSS module if the vehicle security features are to be **disabled**.
 - Not installing and/or removing the jumper from the VSS module will keep the vehicle security features enabled.



8; . Install the LH IP side finish panel.

Remote Start Activation - (Vehicles Without Factory Remote Start)

- 72. Verify that the IDS is updated to the most current version.
- 73. Connect IDS.
 - Follow the prompts to select new vehicle session.
 - Enter VIN.
- 74. Activate the remote start using the IDS.
 - Select the Tool Box icon.
 - · Select Body.
 - · Select Security.
 - · Select Remote Start.
 - Verify that the information on the IDS screen is correct and all procedures have been followed.
 - Select Yes. This will enable the remote start function on the vehicle.
- 75. For vehicles equipped with standard message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - · Select Convenience.
 - Select Remote Start.
 - · Select System.
 - Verify that the remote start system is checked.

- 76. For vehicles equipped with advanced message center, verify that the remote start option now appears.
 - Using the Select and Arrow buttons on the steering wheel, select Settings.
 - Select Vehicle Settings.
 - · Select Vehicle.
 - Select Remote Start System.
 - Verify that the remote start system is enabled.

RMU Activation

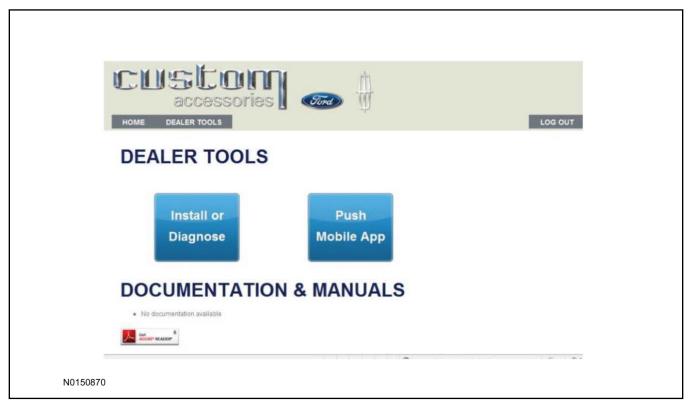
NOTE:

Please note that the Remote Access application that is used to start the vehicle for this RMST kit will only work with iPhone and Android phones.

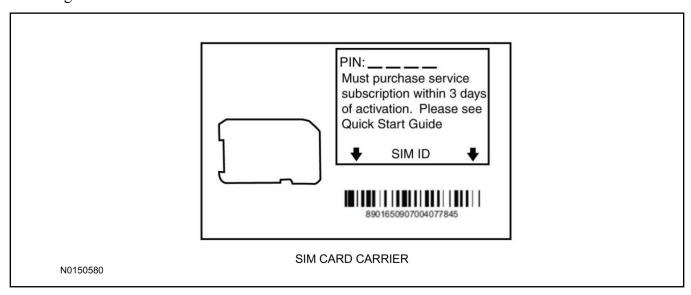
- 77. For RMU activation the following information from the customer is recommended to provide them with electronic notification for app retrieval:
 - 1 Email Address
 - 2 Cell Phone Number
 - 3 Cell Phone Carrier Company
- 78. Log on to your Professional Technician Society (PTS) account and enter the vehicle information.
 - 1 Select "Vehicle Id".
 - 2 Select "By Year & Model"
 - 3 Choose the year & model of the vehicle and then select "GO".
 - 4 Hover over the "Workshop" tab.
 - 5 Select the "Accessory Installation" menu item.
 - 6 Under the "Electrical" heading, select the "Remote Access Activation" link (first time users will need to agree to terms & conditions).
 - 7 Select the "Install or Diagnose" link.

NOTE:

If you are not directed to the screen shown below (or user agreement screen for first time users), make sure your internet browser zone settings are set to medium. This setting can be found in your browsers "internet options" under the "privacy" tab.



79. Once on the "Install" page, enter the SIM ID code that was provided with the RMST kit. Select "Begin or Continue Installation".



7: Click on the "On screen steps 1-6", and follow the on screen instructions to complete the installation.

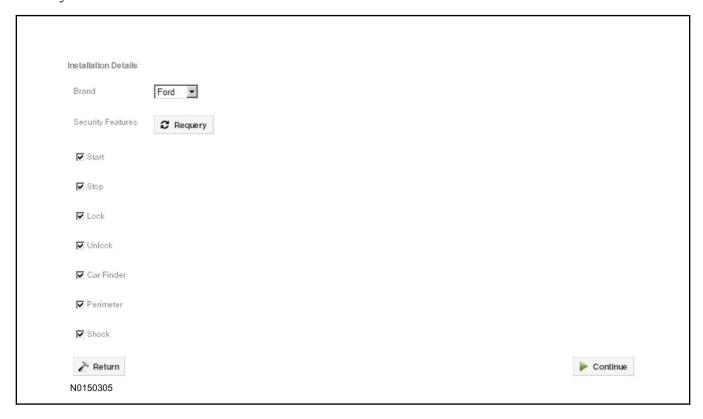


NOTE:

The following step will complete the activation process, when you are directed to a screen similar to the one below ensure the correct vehicle brand is selected and that all applicable features are enabled.

NOTE:

The "perimeter" and "shock" settings below are optional features and should only be selected when security features are enabled.



- 9; Perform a functional check of the system by testing each of the available features.
 - Start/Stop function
 - Lock/Unlock function
 - Car finder
 - Signal (for troubleshooting only)



NOTE:

All tests above must be completed in order to move to the next step. If any of the listed functions fail, move the vehicle to an outside location and retest.

NOTE:

In the event start or stop fail, refer to the "Remote Start Activation" section in this manual.

NOTE

In the event lock/unlock or car find fail, refer to the "Learn Remote Start System to Vehicle" section in this manual.

- 82. Once the hardware installation and RMU activation process is complete, record the 4-digit PIN on the SIM card carrier. Provide the SIM card carrier to the customer so they can add this system to their Remote Access Account. Customer must have both the 4-digit PIN and SIM ID to activate/add their vehicle to their Remote Access Account.
- 83. If the customer agrees, you may push the mobile application to the customer. You will need the customer's phone number and cellular carrier. If the customer opts to install the application themselves, they can locate it in their mobile app store.

Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.