READ ME FIRST

TECHNICAL SUPPORT
1-800-FORD-KEY
CANADIAN DEALERS
BILINGUAL FRENCH/ENGLISH
TECHNICAL SUPPORT
(514)973-2846

For convenience this document uses short names when referring to a particular system or kit. The list below identifies the short names used herein:
Remote Start System —> **RMST**

Navigating this document can be accomplished by: 1) using the buttons in the Acrobat toolbar or 2) clicking on the bookmark links in the bookmark pane to the left. (Clicking on the (+) symbols next to a bookmark will expand that bookmark, revealing additional selections).

This installation instruction covers the installation of all Remote Start Kits.

Vehicle wiring is subject to change. All possible efforts have been taken to ensure that the information contained herein is accurate as of the revision dates indicated. As such, it is critical that vehicle circuits are tested prior to making any connections, to ensure that the proper vehicle circuit has been located.

Prior to beginning this installation it is recommended that you lower the driver's door window to prevent locking the keys in the vehicle.
Prior to beginning your first installation of this product it is recommended that you:

1. Thoroughly review and print out the instructions;
2. Review the reference section to become acquainted with the additional information that is available.
3. Go through the vehicle specific wiring and use as a reference during the installation.
4. Review the installation video on the Ford Genuine Accessory website that is located with the RMST Installation Instructions.

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Ford Accessory Vehicle Security, Keyless Entry and Remote Start Warranty Return Procedures

DO NOT CLAIM PARTS WARRANTY ON FORM 1863

Parts Warranty Processing:

Lifetime limited coverage to original purchaser on all components against defects and workmanship. (For complete Warranty details, please refer to the warranty section found at the rear of each Security or Remote Start systems Owners Manual) Contact the warrantor, Code Systems for return authorization/replacement approval for failed components at no charge by the manufacturer. Return of Components to Code Systems requires the following:

1. Dealer/FAD representative must call the Ford Vehicle Security System Dealer Warranty Department at 1-800-FORDKEY (1-800-367-3539) to obtain generic claim form.
2. Fill out claim form and identify the defective component, **not the entire kit,** and fax to 1-631-231-5785.
3. Dealer/FAD will receive via fax the claim form with RA number authorizing the return of defective components.
4. Dealer/FAD is to box the defective component (including a copy of the claim form) with the claim number clearly written on the package(s) and ship them freight pre-paid to:

   Ford Service Parts
   180 Marcus Blvd.
   Hauppauge, NY 11788

   Note: If the package is sent without a claim number/claim number visible on the outside of the package, the shipment will be refused and returned at sender's expense.

5. Once a tracking number for the returning component has been issued to Code Systems, replacement components will be shipped within 24 hours via regular UPS ground transportation.
6. Dealer/FAD is responsible for service parts not returned/received by the Warranty Service Center within 30 days of the original claim date. Post the 60 days; the Dealer/FAD will be liable for all non-returned components at service part pricing.

Removal and reinstallation labor may be reimbursable under the New Vehicle Limited Warranty or 12-month/12,000 mile warranty (which ever is greater) and must be submitted by filling a warranty claim through ACES II.

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Splicing Procedures

NOTE:
Refer to applicable wiring diagrams for circuit information.

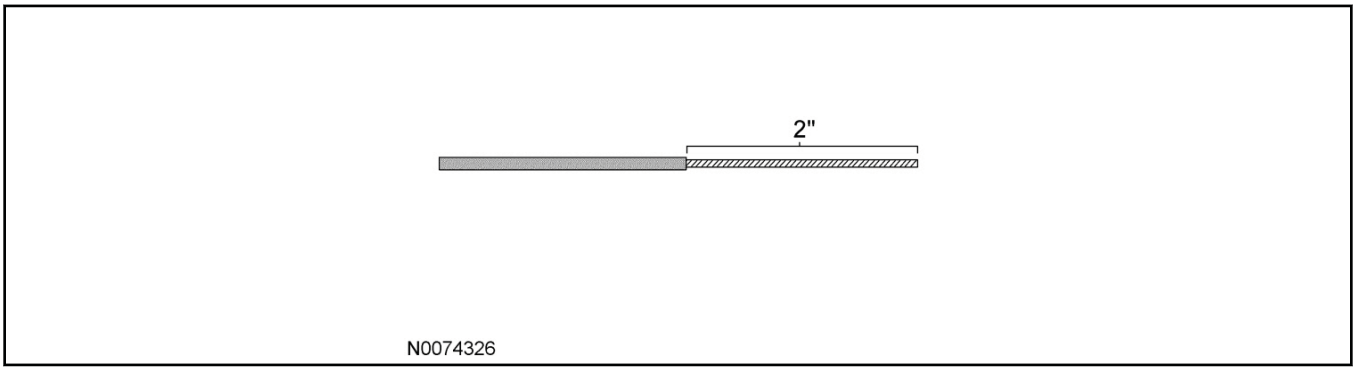
NOTE:
This procedure contains multiple splicing techniques.

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

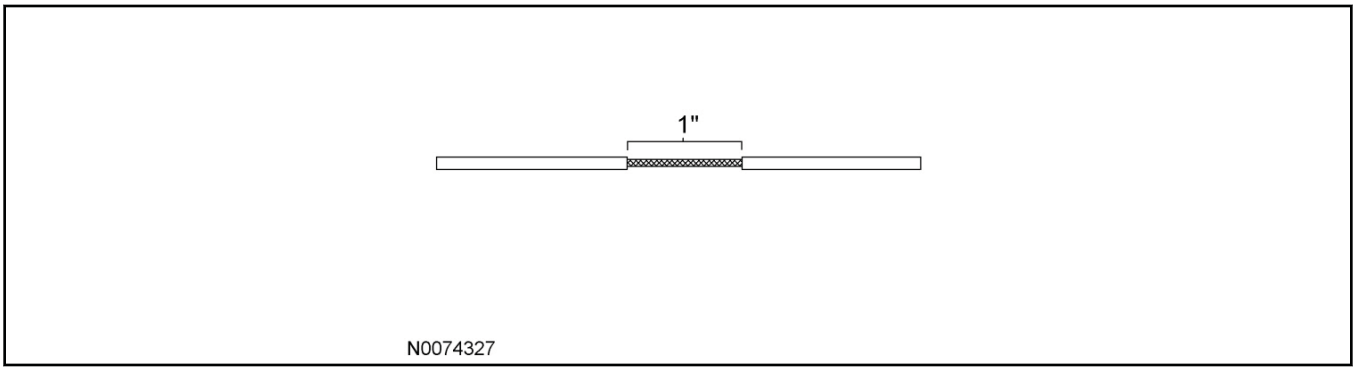
2-Wire Solder "Center Splice" With No Wire Cutting

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

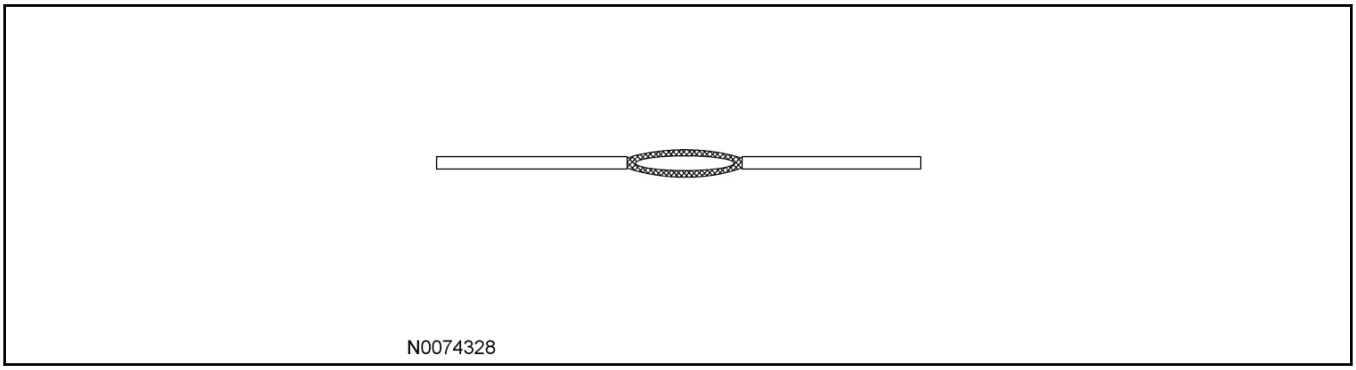
1. Strip approximately two inches of insulation from the wire to be installed in the vehicle.



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.



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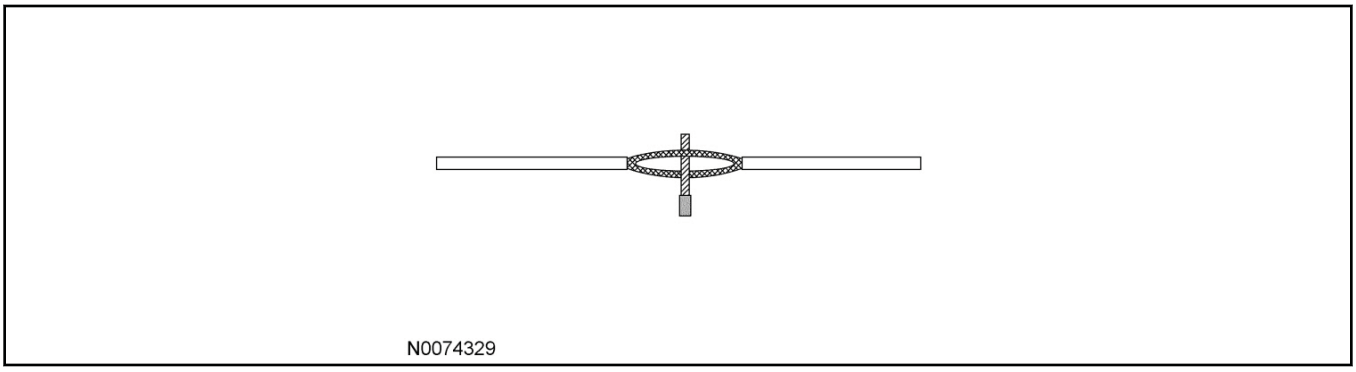
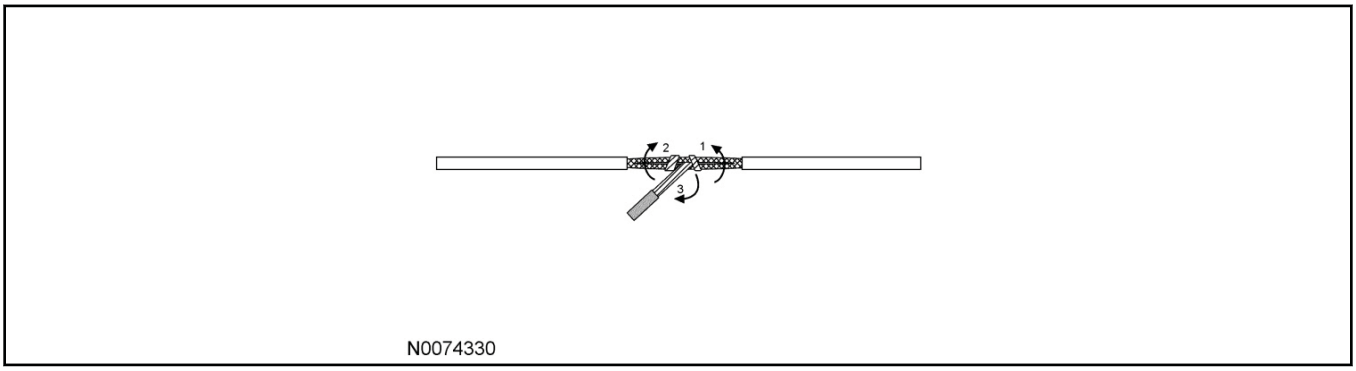
4. Insert the new wire between the parted strands. If more than one wire is being spliced, wrap them in opposite directions.



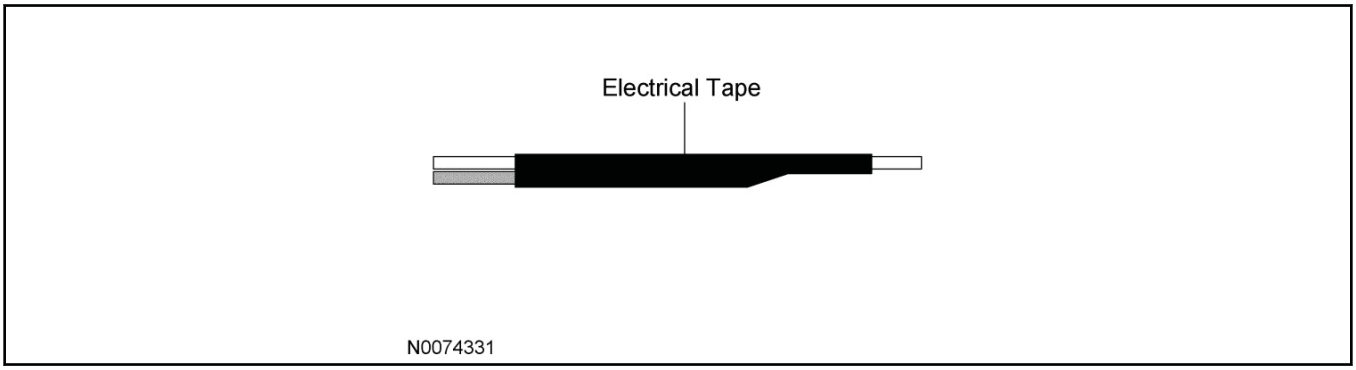
NOTE:
Use Rosin Core Mildly-Activated (RMA) Solder. Do not use Acid Core Solder.

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.



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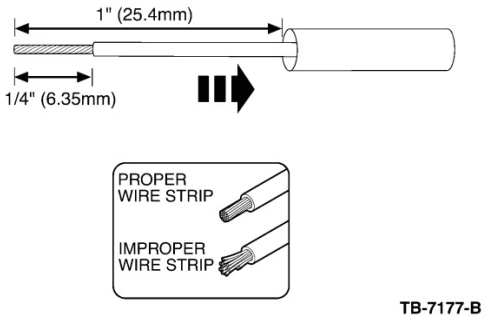
2-Wire Solder Splice/Ratcheting Crimp Tool Splice Procedure

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

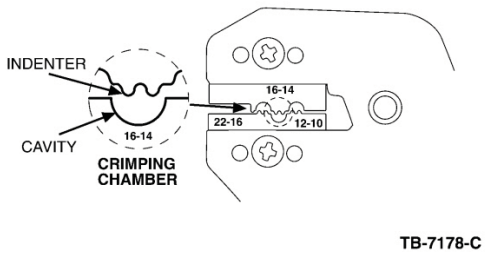
NOTE:
For Splicing Procedure Use Wire Splice Tool Kit (164-R5903).

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.



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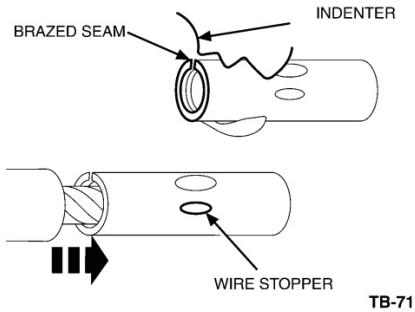
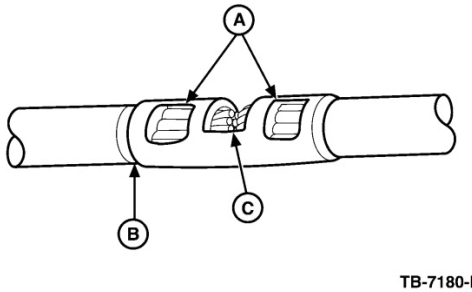
9. Center one (1) end of the butt splice on the appropriate crimping chamber. If visible, be sure to place the brazed seam of the butt splice toward the indenter. Hold the butt splice in place and squeeze the tool handles together until the ratchet engages sufficiently to hold the butt splice in position (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).



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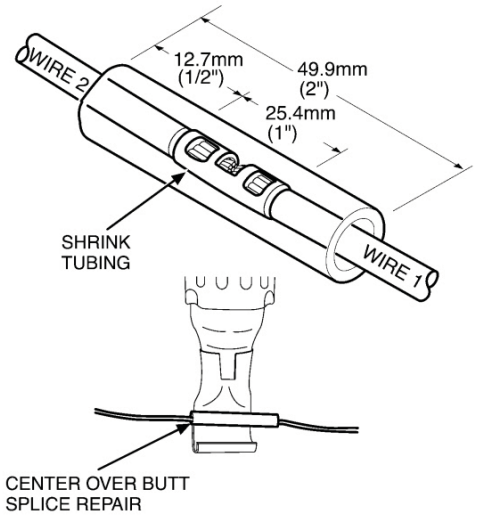
11. **NOTE:**
Overlap heat shrink tubing on both wires.

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.



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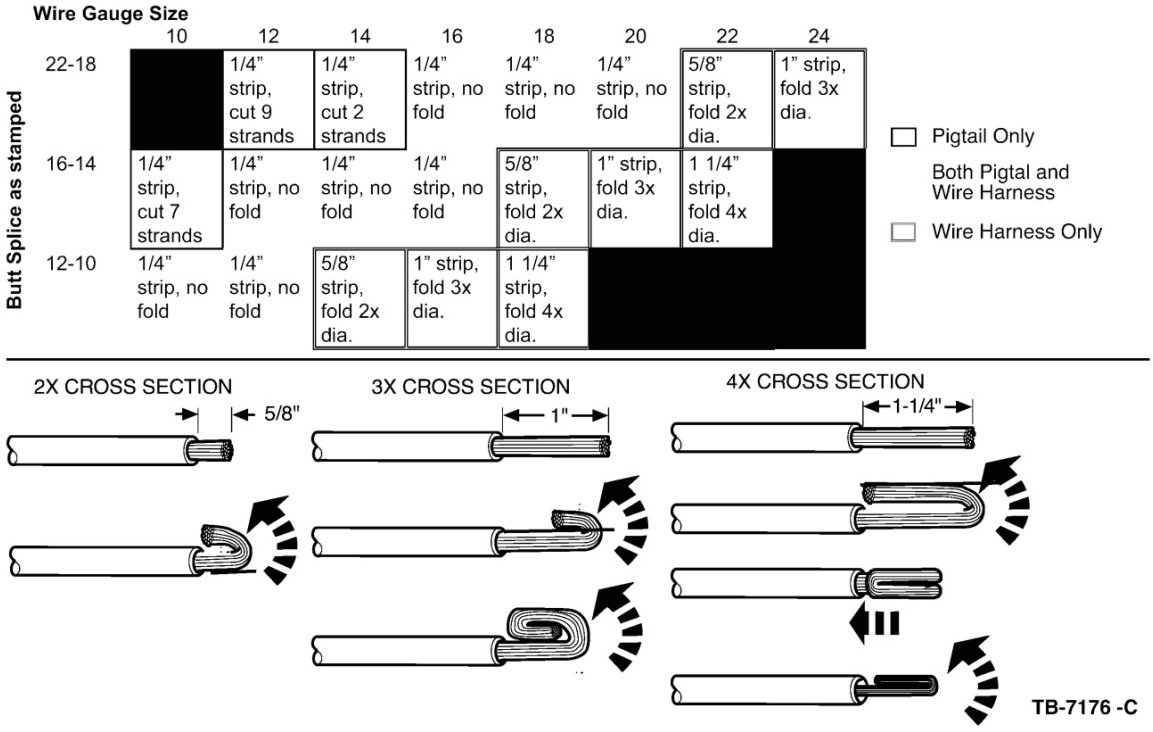
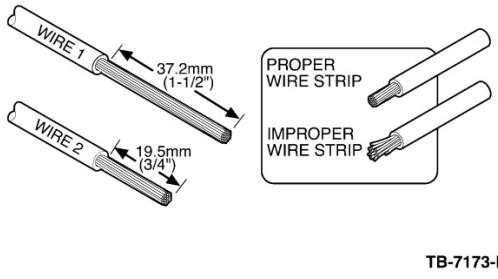
Wire Stripping Lengths and Application Techniques.



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.



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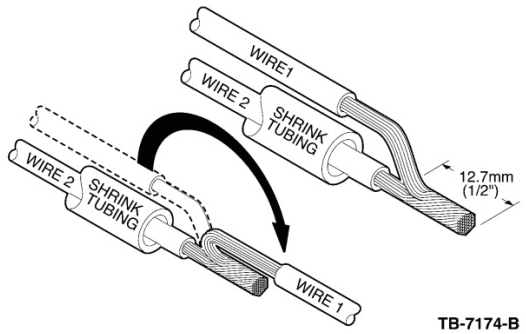
13. **NOTE:**
Use rosin core mildly activated (RMS) solder. do not use acid core solder for wire repair.

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.

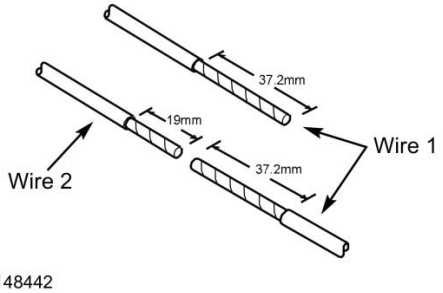
NOTE:
The hot melt forms an adhesive seal between the wire insulation and the heat shrink tubing, which prevents air and moisture from entering the solder point.

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.



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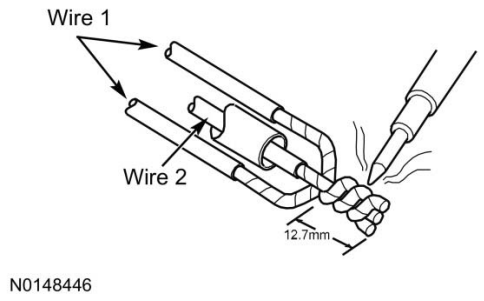
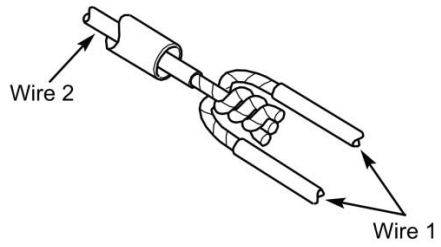
15. **NOTE:**
    Wait for solder to cool before moving wires.

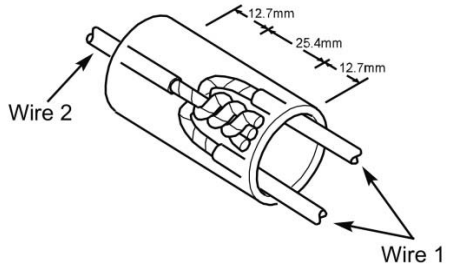
    Apply heat shrink tubing to Wire #2. Twist both ends of Wire #1 around Wire #2. Solder wires together.



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



17. Evenly position heat shrink tubing over wire repair.



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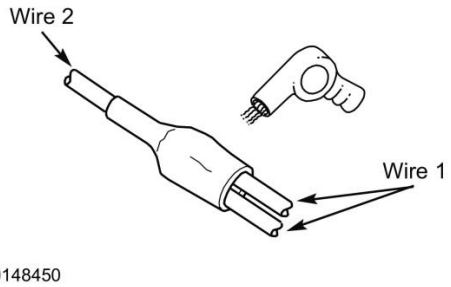
18. **NOTE:**
    Durability of a heat shrink tubing splice is dependent on the hot melt that will appear from both ends of the tube.

    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.

    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.



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REMOTE START SYSTEM INSTALLATION

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VEHICLE PREPARATION
Hood Switch Kit Installation
INSTALLATION
Remote Start
GENERAL PROCEDURES
Remote Start System Activation
Functional Test - Standard Remote Start
Functional Test - Bidirectional Remote Start

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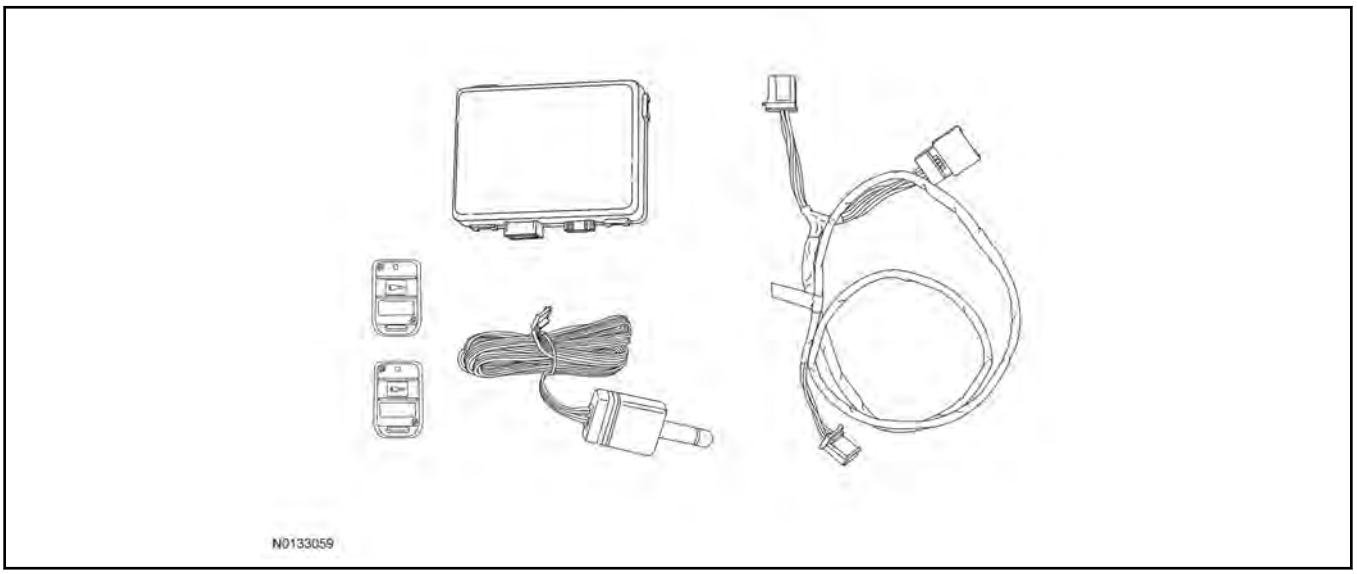
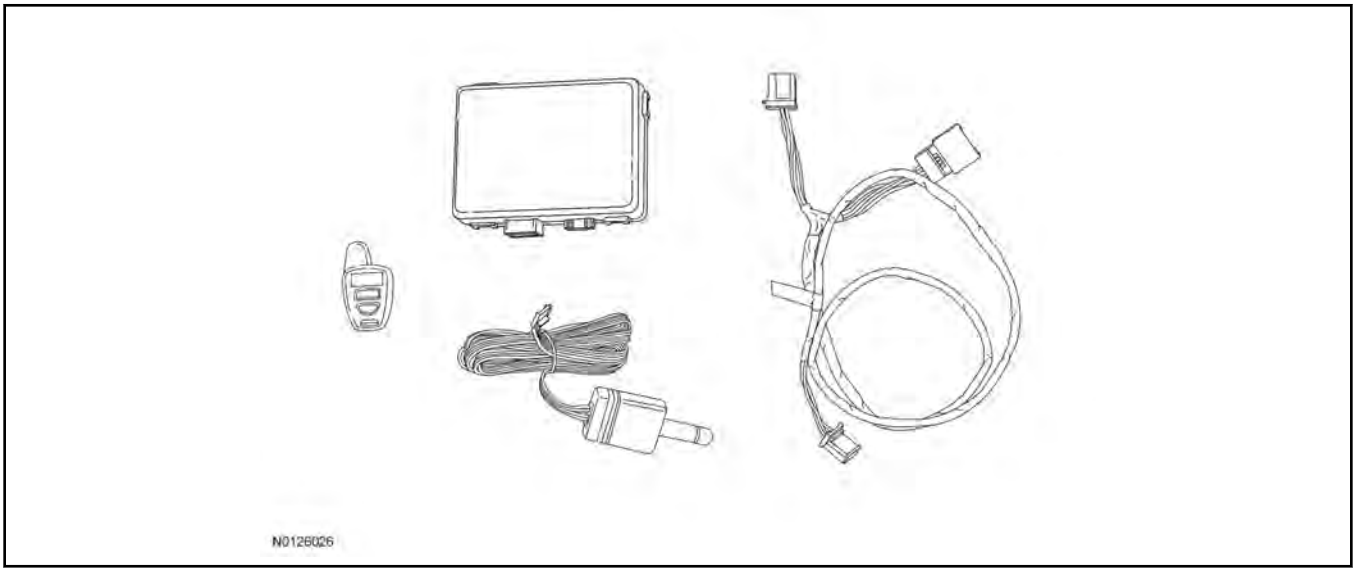
INSTALLATION

Remote Start

Standard Remote Start System (RMST) Components



Bi-directional Remote Start System (RMST) Components



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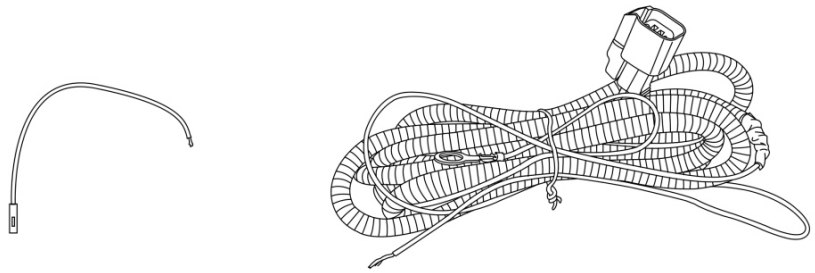
INSTALLATION (Continued)

Hood Switch Kit - SE Vehicles Only

N0122208

Hood Switch Wire Harness Kit - SE Vehicles Only



N0143443

Taurus - Key Start

1. Verify correct kit number.

Review Standard RMST Kit Contents

2. Review the Standard RMST kit contents.

Standard RMST Kit

QUANTITY	DESCRIPTION
2	Standard 1 Button Key Fob
1	Remote Start Module
1	Standard Antenna
1	T-harness

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INSTALLATION (Continued)

Review Bi-directional RMST Kit Contents

3. Review Bi-directional RMST Kit Contents

Bi-directional RMST Kit

QUANTITY	DESCRIPTION
1	Bi-directional Key Fob
1	Remote Start Module
1	Bi-directional Antenna
1	T-harness

Review Hood Switch Kit Contents

4. Review the Hood Switch kit contents.

Hood Switch Kit

QUANTITY	DESCRIPTION
1	Hood Switch Assembly

Review Hood Switch Wire Harness Kit Contents

5. Review the Hood Switch kit contents.

Hood Switch Wire Harness Kit

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

Vehicle Preparation

6. Verify that an OE hood switch is installed.
   - If the vehicle is not equipped with a OE hood switch, refer to Hood Switch Installation in this procedure.
7. Remove the parcel shelf. For additional information, refer to Workshop Manual (WSM), Section 501-05.
8. Disconnect the Tire Pressure Monitor (TPM) Module, located on the passenger's side of the vehicle near the rear window.

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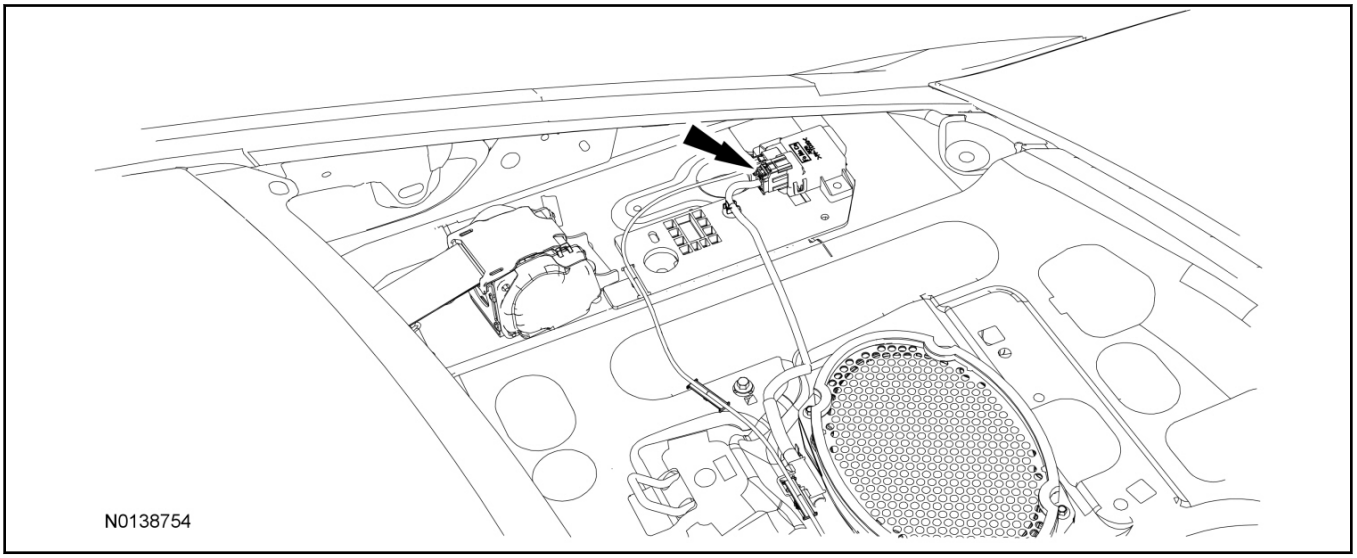
INSTALLATION (Continued)



Antenna Mounting

NOTE:
For good range of operation, the antenna must be installed correctly.

NOTE:
Keep these points in mind when mounting the antenna.

- Do not mount the antenna behind or on any metal film or window tinting.
- Do not mount the antenna so that one of the antenna elements touches or crosses any vehicle wiring and/or metal.

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

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 rear window, This wire will be routed along the headliner.

10. Install the antenna onto the rear window.
    1 Remove the protective backing from the adhesive on the antenna and firmly press the body of the antenna to the rear window.
    2 Route the antenna harness inside the headliner to the C-pillar. Route down the C-pillar.
    3 Secure the antenna harness with zip-ties, as required.

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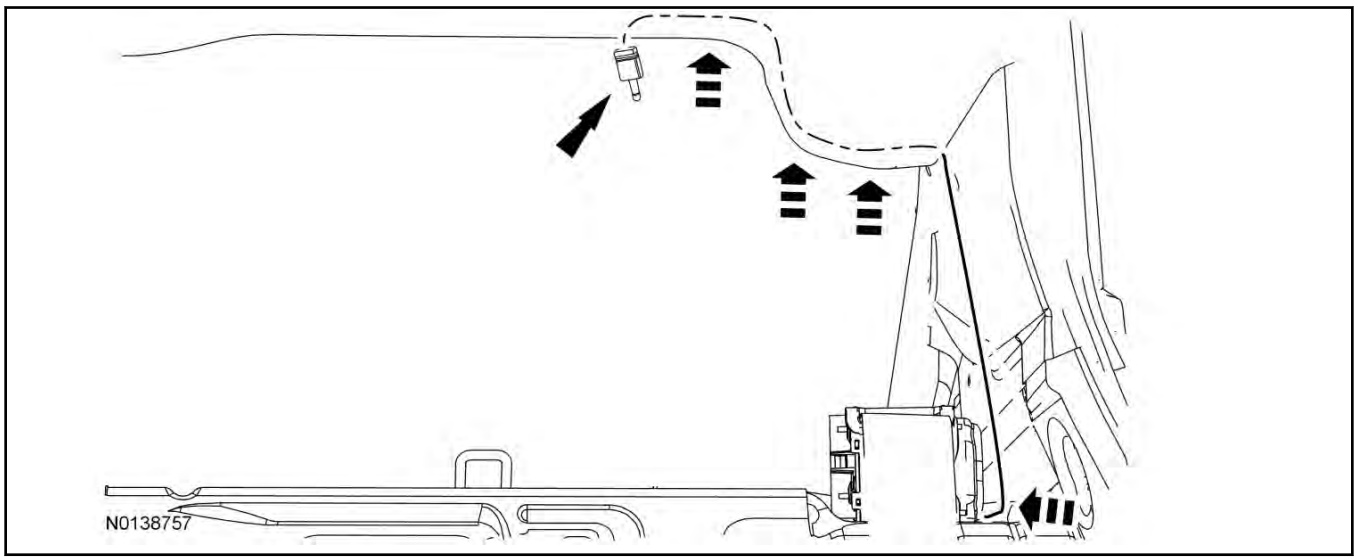
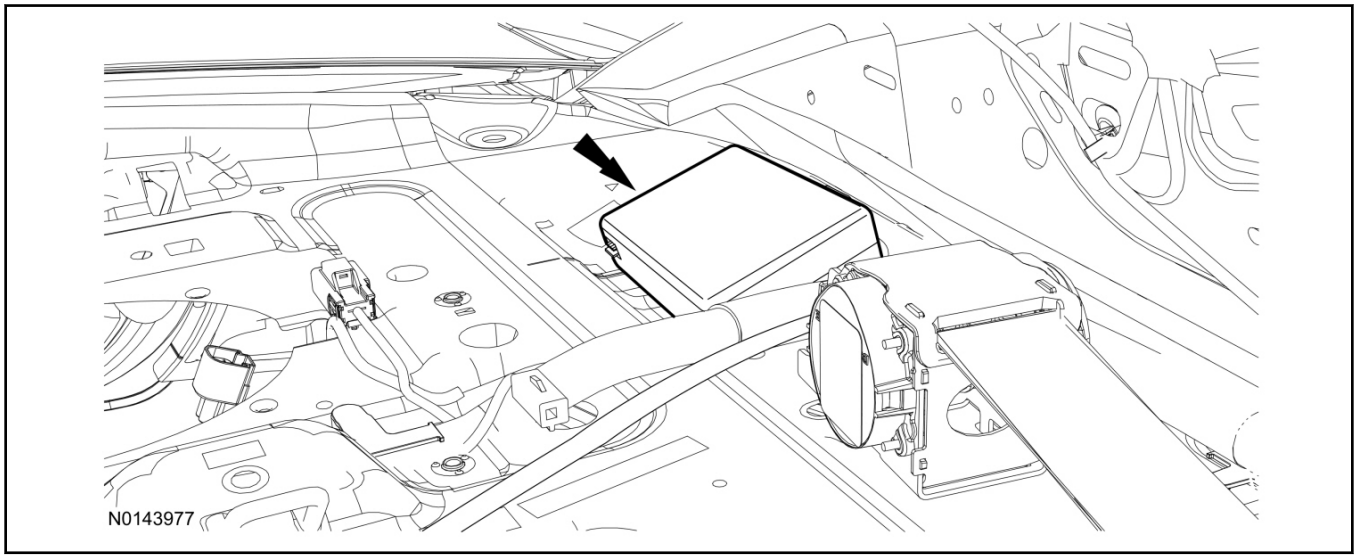
INSTALLATION (Continued)



Install CGEA module

11. Install the CGEA module onto the vehicles body near the driver's side C-pillar, as shown.
    - Secure with the 3M Dual Lock™ strips.



12. Connect the female end of the 8-pin T-harness to the TPM module.

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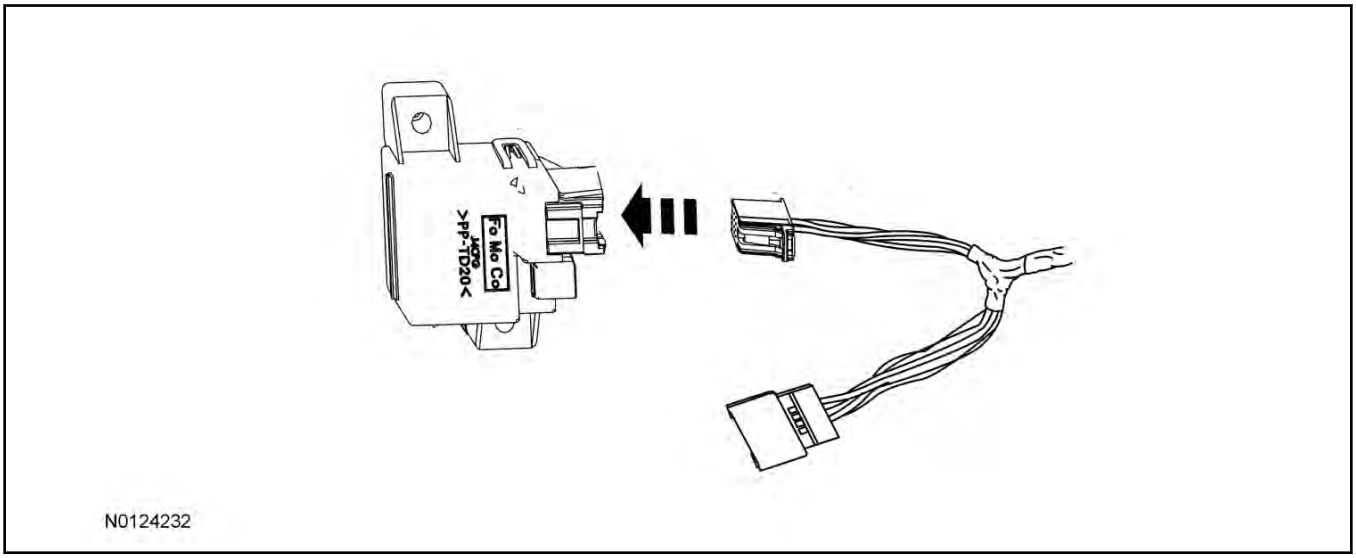
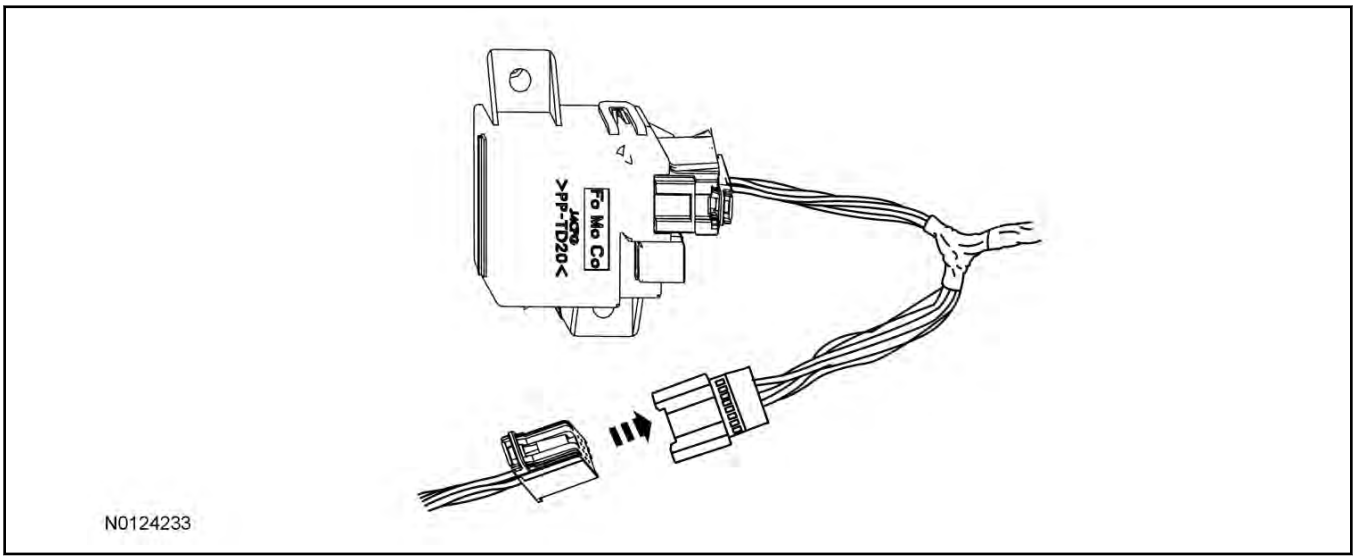
INSTALLATION (Continued)



13. Connect the male end of the 8-pin T-harness to the vehicle's existing TPM module harness.



14. Route the T-harness from the TPM module to the CGEA module.
    - Secure the T-harness with zip-ties.
15. Connect the antenna to the CGEA module.
    - Secure the antenna harness with zip-ties.

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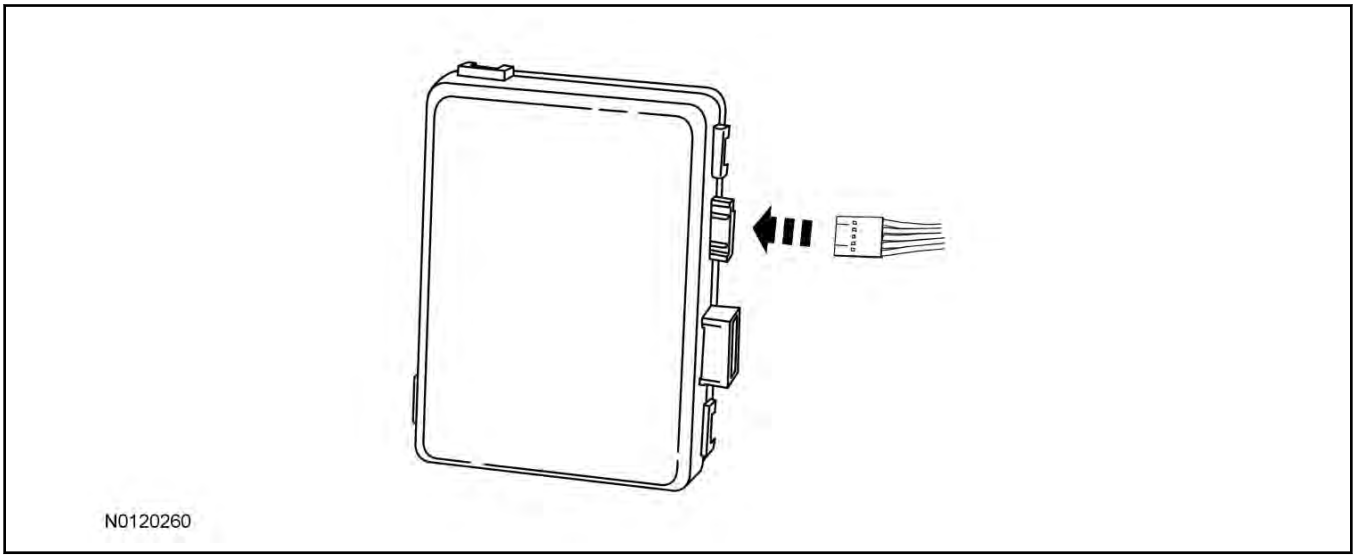
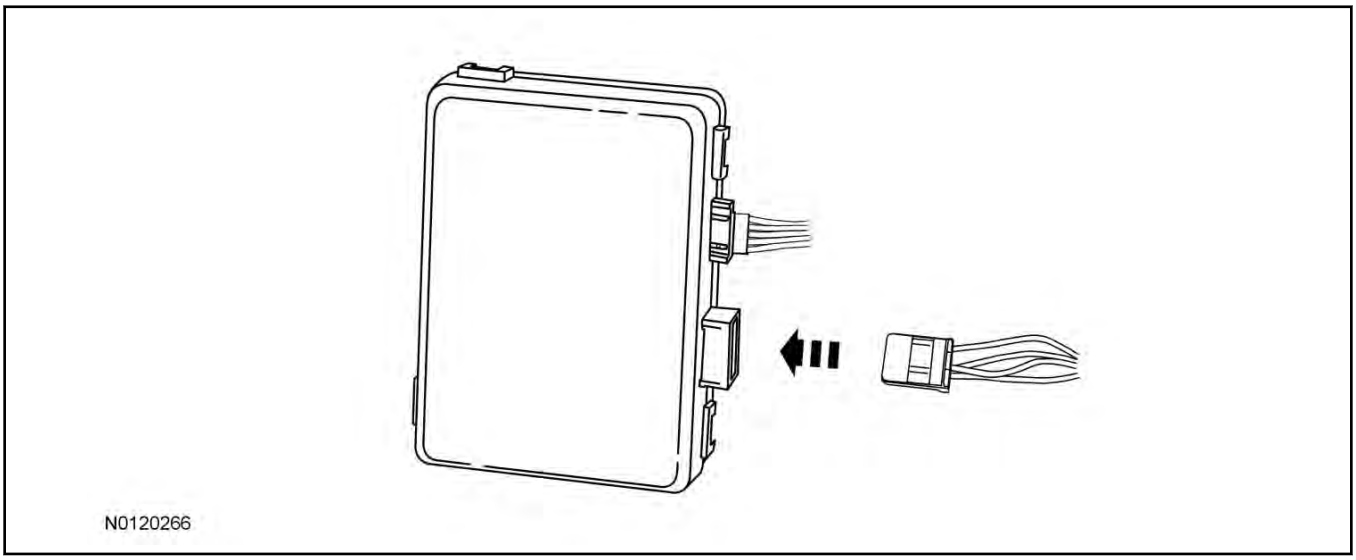
INSTALLATION (Continued)



16. Connect the T-harness to the CGEA module.



Hood Switch Installation

NOTE:
Hood switch installation is only required if the vehicle is not currently equipped with a hood switch.

17. Remove the fender bolt and install the hood switch ground wire.
    - Tighten to 12 Nm (106 lb-in).

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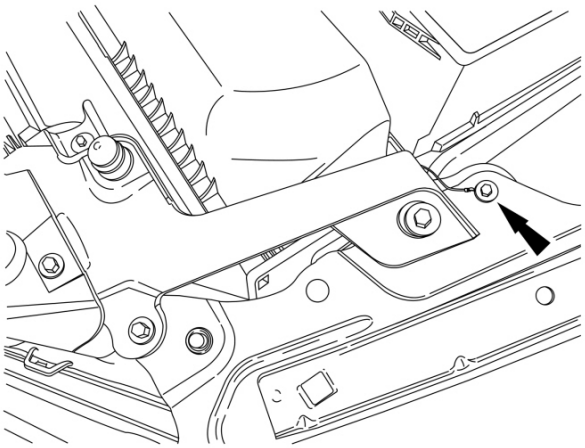
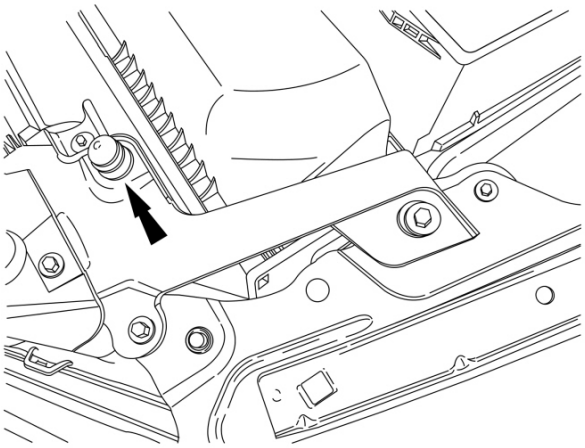
INSTALLATION (Continued)



N0141960

18. Install the hood switch.
    - Connect the electrical connector.



N0141925

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

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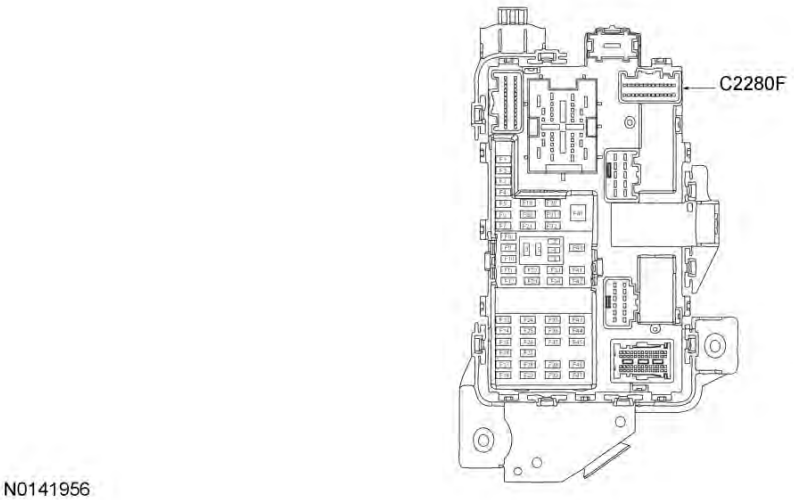
INSTALLATION (Continued)



21. If equipped, remove the pin plug from BCM connector C2280F Pin 2.
    - If the vehicle is not equipped with a hood switch from the factory C2280F will not have a wire at the Pin 2 location.
22. ***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.
23. Connect BCM connector C2280F.

NOTICE:
Refer to "Proper Wire Splicing Techniques" before proceeding.

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

Assemble Trim

25. Install the parcel shelf. For additional information, refer to WSM, Section 501-05.

Remote Start Activation

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

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INSTALLATION (Continued)

28. 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.
29. 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.
30. 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.

Learn Remote Start System to Vehicle

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

31. Press the vehicle's unlock button located on the driver's door. Make sure all doors are unlocked.
32. Put the key in the ignition.
33. 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.
34. 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.

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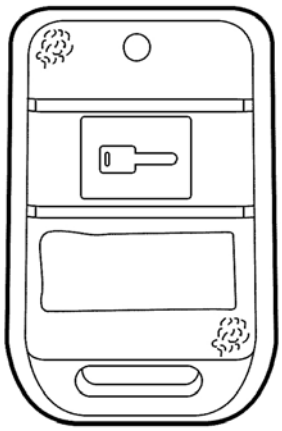
Standard RMST Functional Test

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

35. Make sure the shift lever is in PARK and the ignition is in the OFF position. Remove all keys from the vehicle.
36. Close the hood.
37. Close all of the vehicle doors.
38. Start the vehicle by pressing and holding the remote start button on the remote start key fob for more than 2 seconds.



STANDARD RMST FOB

N0097291

39. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
40. Enter the vehicle and confirm that the vehicle shuts down when attempting to shift out of park.
41. Open the hood.
42. **NOTE:**
    Vehicle doors should be closed while performing this step.

    Confirm that the vehicle will not start with the hood open.
    Please contact Ford Hotline with any issues regarding remote start functionality.
    Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

Bi-directional RMST Functional Test

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

43. Press and release the Panic/Car Finder button on the remote start key fob to confirm that the button has been programmed. The vehicle should honk 4-6 times.

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INSTALLATION (Continued)

BI-DIRECTIONAL KEY FOB

N0122258

44. Make sure the shift lever is in PARK and the ignition is in the OFF position. Remove all keys from the vehicle.
45. Close the hood.
46. Close all of the vehicle doors.
47. Start the vehicle by pressing the remote start button 2 times on the bi-directional key fob.
48. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
49. Enter the vehicle and confirm that the vehicle shuts down when attempting to shift out of park.
50. Open the hood.
51. **NOTE:**
    Vehicle doors should be closed while performing this step.

    Confirm that the vehicle will not start with the hood open.
    Please contact Ford Hotline with any issues regarding remote start functionality.
    Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

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PUSH BUTTON START

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INSTALLATION
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GENERAL PROCEDURES
Proper Splicing Techniques
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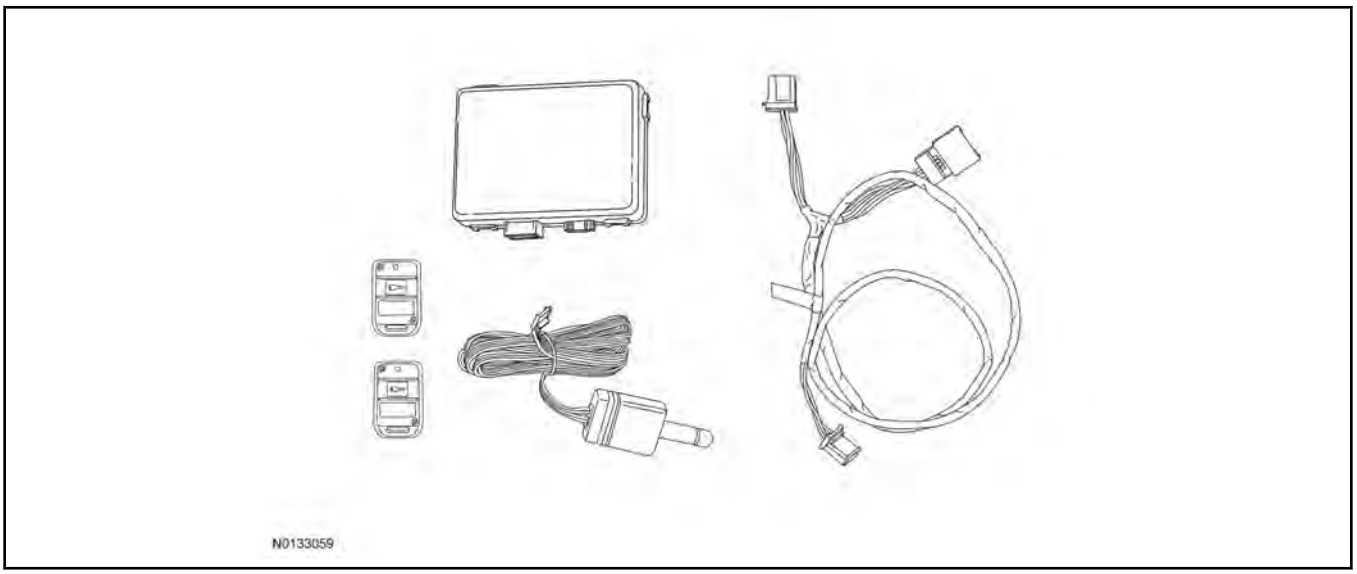
INSTALLATION

Remote Start

Remote Start System (RMST) Components



Taurus - Push Button Start

1. Verify correct kit number.

Review RMST Kit Contents

2. Review the RMST kit contents.

RMST Kit

QUANTITY	DESCRIPTION
2	1 Button Key Fob
1	Remote Start Module
1	Antenna
1	T-harness

Vehicle Preparation

3. Remove the parcel shelf. For additional information, refer to Workshop Manual (WSM), Section 501-05.
4. Disconnect the Tire Pressure Monitor (TPM) Module, located on the passenger's side of the vehicle near the rear window.

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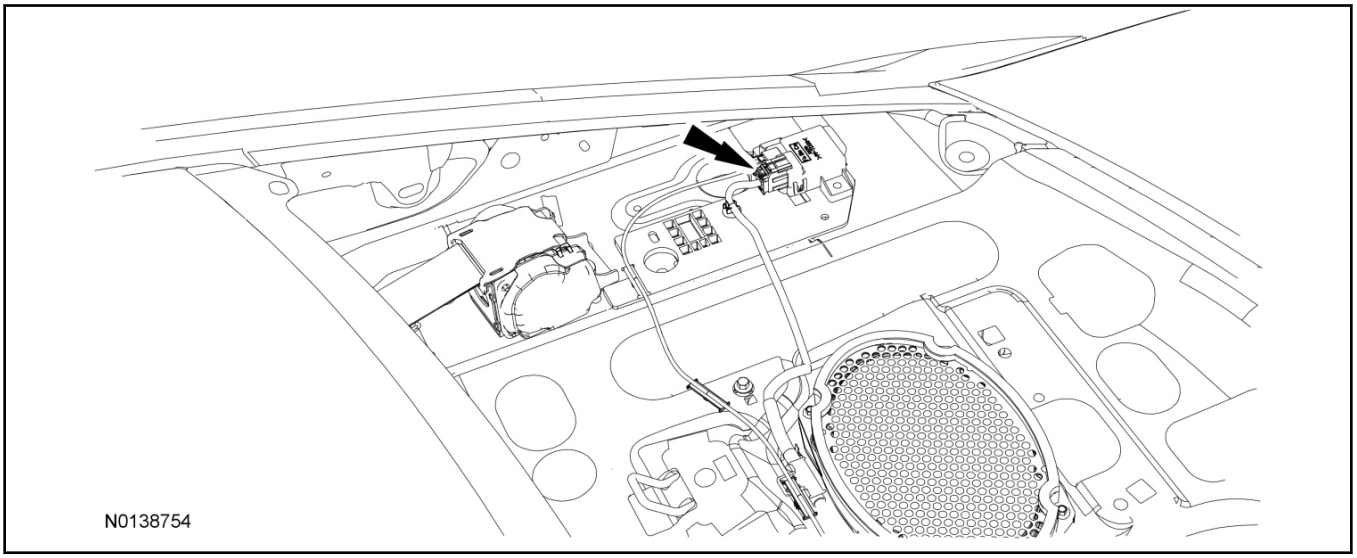
INSTALLATION (Continued)



Antenna Mounting

NOTE:
For good range of operation, the antenna must be installed correctly.

NOTE:
Keep these points in mind when mounting the antenna.

- Do not mount the antenna behind or on any metal film or window tinting.
- Do not mount the antenna so that one of the antenna elements touches or crosses any vehicle wiring and/or metal.

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

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 rear window, This wire will be routed along the headliner.

6. Install the antenna onto the rear window.
    1 Remove the protective backing from the adhesive on the antenna and firmly press the body of the antenna to the rear window.
    2 Route the antenna harness inside the headliner to the C-pillar. Route down the C-pillar.
    3 Secure the antenna harness with zip-ties, as required.

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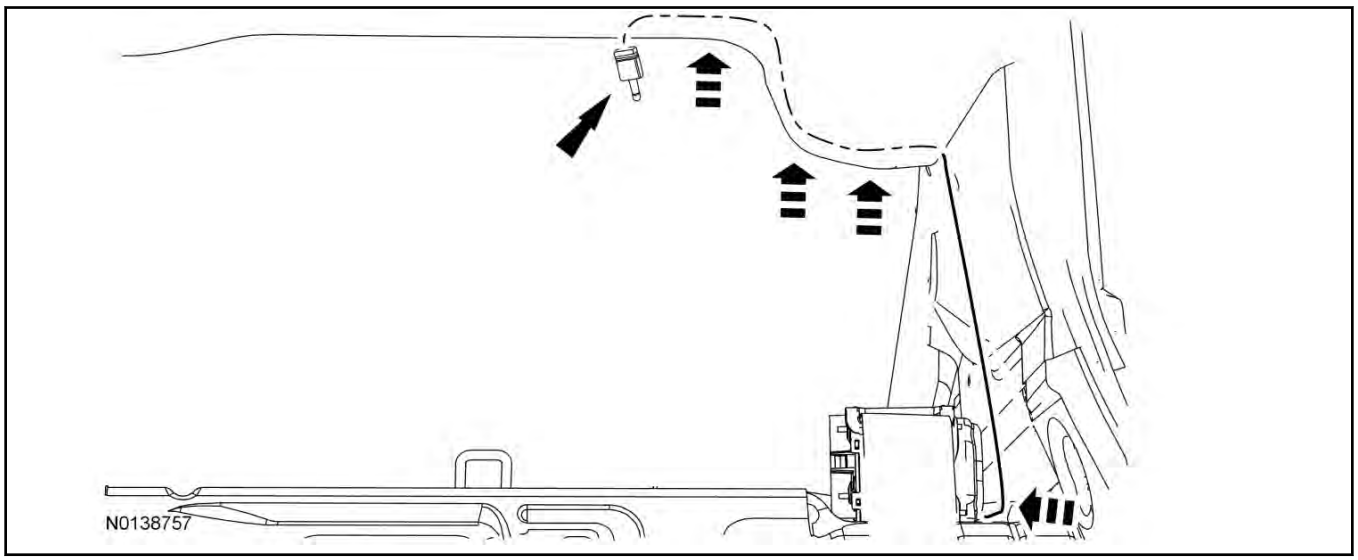
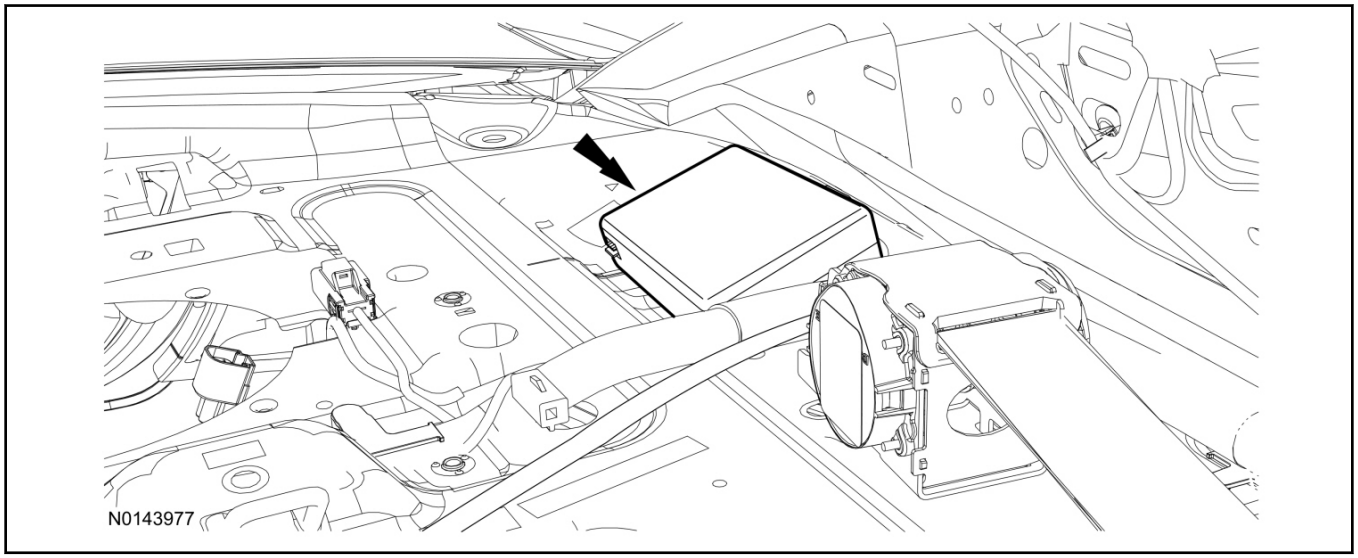
INSTALLATION (Continued)



Install CGEA module

7. Install the CGEA module onto the vehicles body near the driver's side C-pillar, as shown.
   - Secure with the 3M Dual Lock™ strips.



8. Connect the female end of the 8-pin T-harness to the TPM module.

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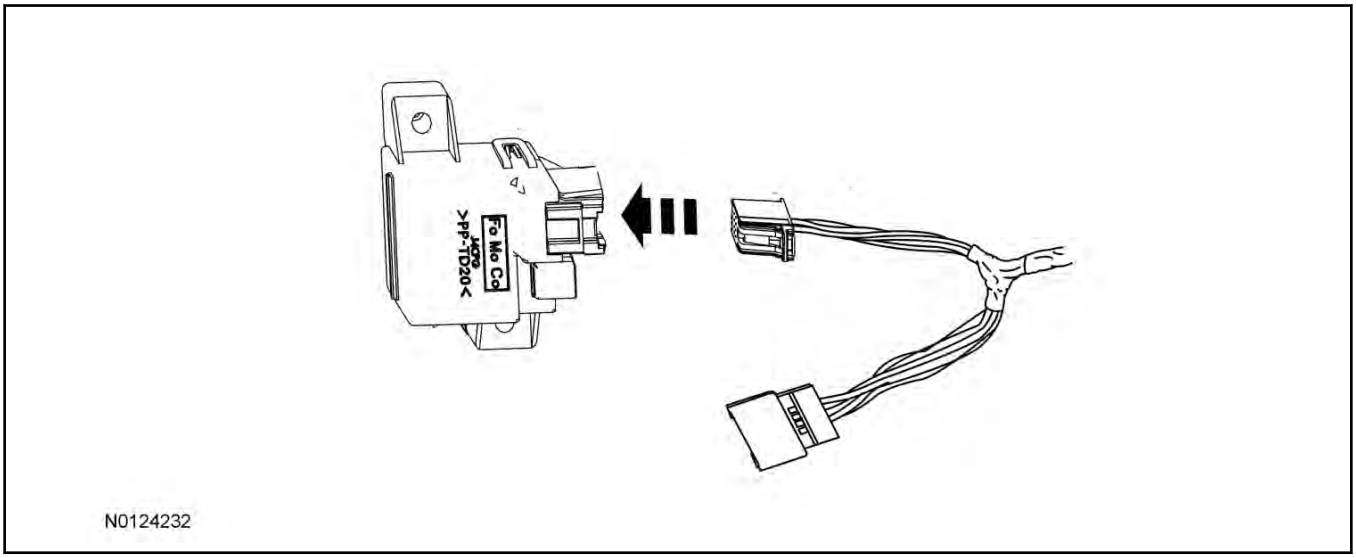
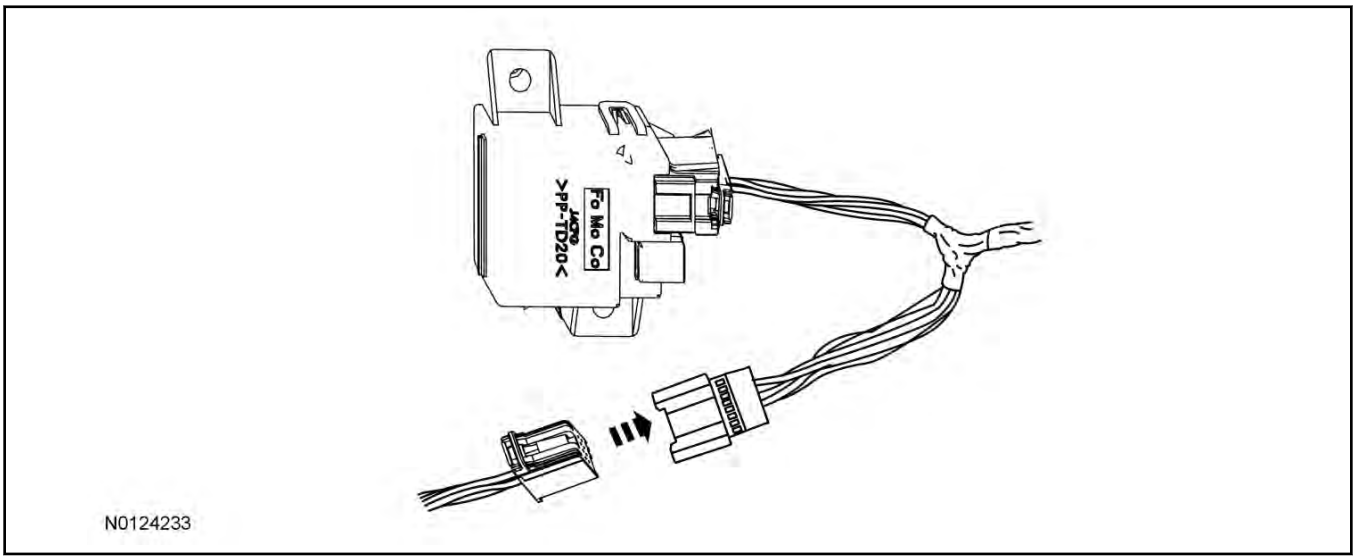
INSTALLATION (Continued)



9. Connect the male end of the 8-pin T-harness to the vehicle's existing TPM module harness.



10. Route the T-harness from the TPM module to the CGEA module.
    - Secure the T-harness with zip-ties.
11. Connect the antenna to the CGEA module.
    - Secure the antenna harness with zip-ties.

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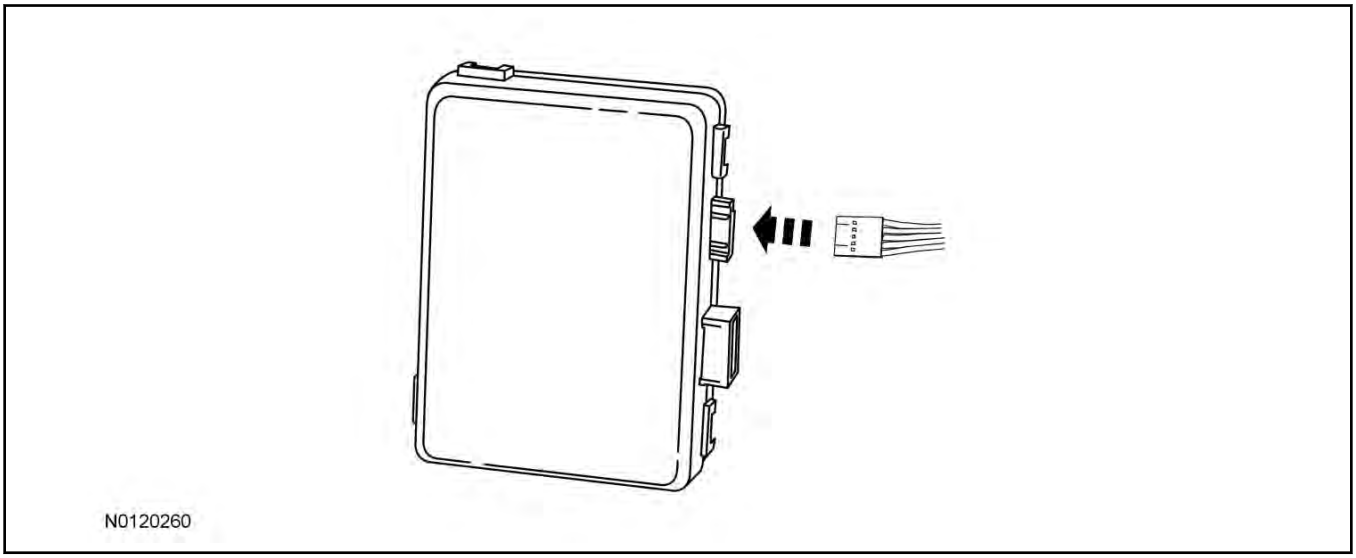
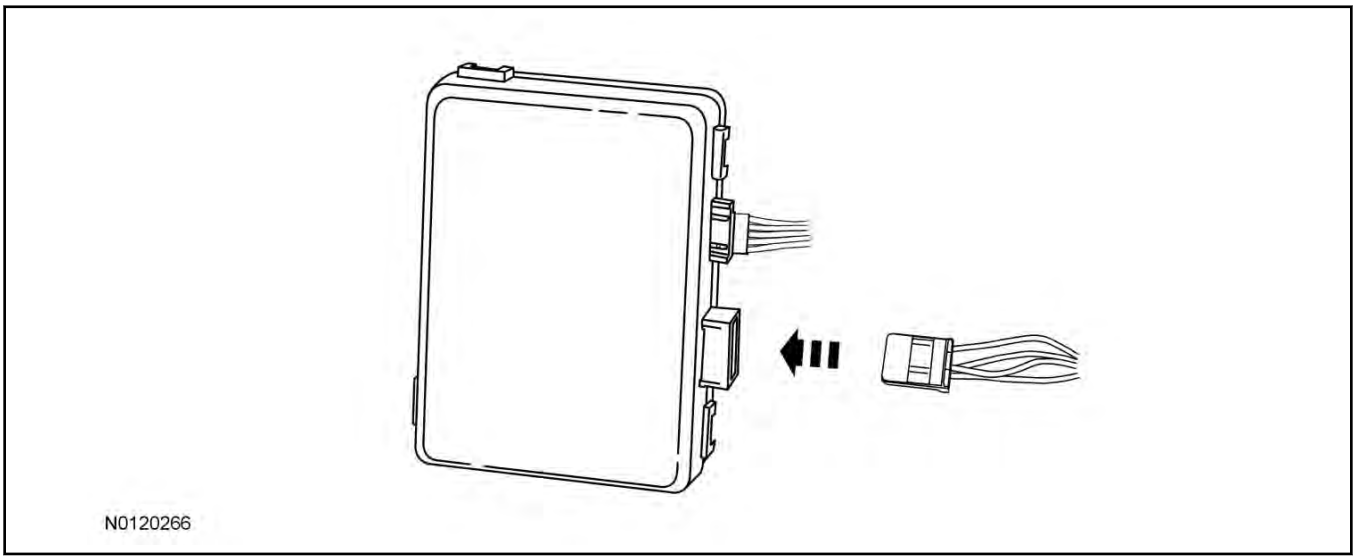
INSTALLATION (Continued)



12. Connect the T-harness to the CGEA module.



Assemble Trim

13. Install the parcel shelf. For additional information, refer to WSM, Section 501-05.

RMST Functional Test

14. Make sure the shift lever is in park and the engine is off. Remove all Intelligent Access (IA) Keys from the vehicle.
15. Close the hood.
16. Close all vehicle doors.
17. Start the vehicle by pressing and holding the remote start button on the remote start key fob for more than 2 seconds.

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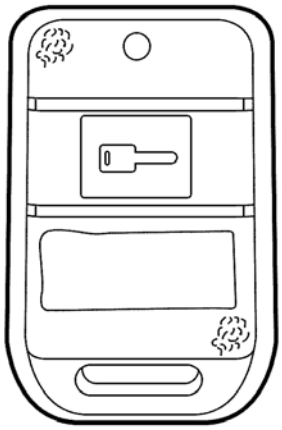
INSTALLATION (Continued)



STANDARD RMST FOB

N0097291

18. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
19. Enter the vehicle and confirm that the vehicle shuts down when attempting to shift out of park.
20. Open the hood.
21. **NOTE:**
    Vehicle doors should be closed while performing this step.

    Confirm that the vehicle will not start with the hood open.
    Please contact Ford Hotline with any issues regarding remote start functionality.
    Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

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- Troubleshooting

WIRING DIAGRAMS
- Vehicle Specific Wiring Diagrams

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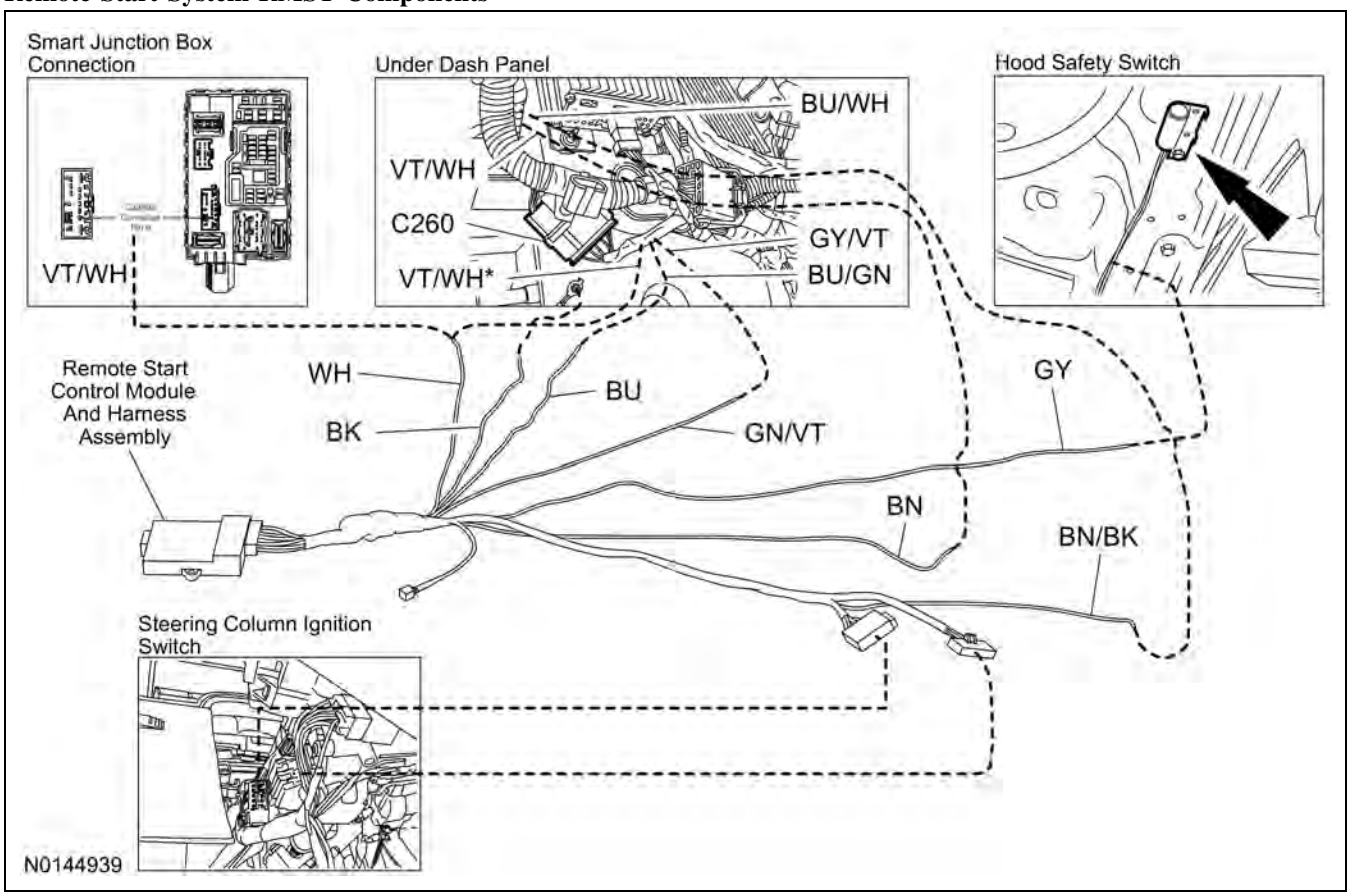
INSTALLATION

Remote Start

Remote Start System RMST Components



Mustang

NOTICE: **Remote start systems are only applicable to vehicles with automatic transmissions.**

NOTE: Both original keys are required for all remote start systems on vehicles equipped with SECURILOCK.

1. Verify correct kit number.

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INSTALLATION (Continued)

Review Remote Start Installation Kit Contents

NOTE: Kits are vehicle specific and are not interchangeable.

2. Review the RMST kit contents.

Remote Start System Standard Kit (RMST) Type - ''A''

QUANTITY	DESCRIPTION
1	TYPE - ''A'' MODULE ASSEMBLY
1	RMST SOFTWARE CARTRIDGE ASSEMBLY
2	1 BUTTON POWERCODE TRANSMITTER
1	TYPE - ''A'' CUSTOM WIRING HARNESS
1	ANTENNA
1	HOOD SAFETY SWITCH ASSEMBLY
1	INSTALLATION PARTS BAG
1	FUSE PARTS BAG
1	OPERATORS INSTRUCTIONS
1	OPERATORS QUICK REFERENCE WALLET CARD
1	UNDERHOOD WARNING LABEL
1	SECURILOCK INTERFACE KIT

3. Review the RMST bidirectional kit contents.

Remote Start System Bidirectional Kit (RMST) Type - ''A''

QUANTITY	DESCRIPTION
1	TYPE - ''A'' MODULE ASSEMBLY
1	RMST SOFTWARE CARTRIDGE ASSEMBLY
1	2 BUTTON POWERCODE TRANSMITTER
1	TYPE - ''A'' CUSTOM WIRING HARNESS
1	ANTENNA
1	ANTENNA HARNESS
1	HOOD SAFETY SWITCH ASSEMBLY
1	INSTALLATION PARTS BAG
1	FUSE PARTS BAG
1	OPERATORS INSTRUCTIONS
1	OPERATORS QUICK REFERENCE WALLET CARD
1	UNDERHOOD WARNING LABEL
1	SECURILOCK INTERFACE KIT

Module Preparation

4. Place the supplied fuses into the power distribution block on the remote start control module.
   - Move the polarity jumpers to their proper locations on the control module, see illustration.

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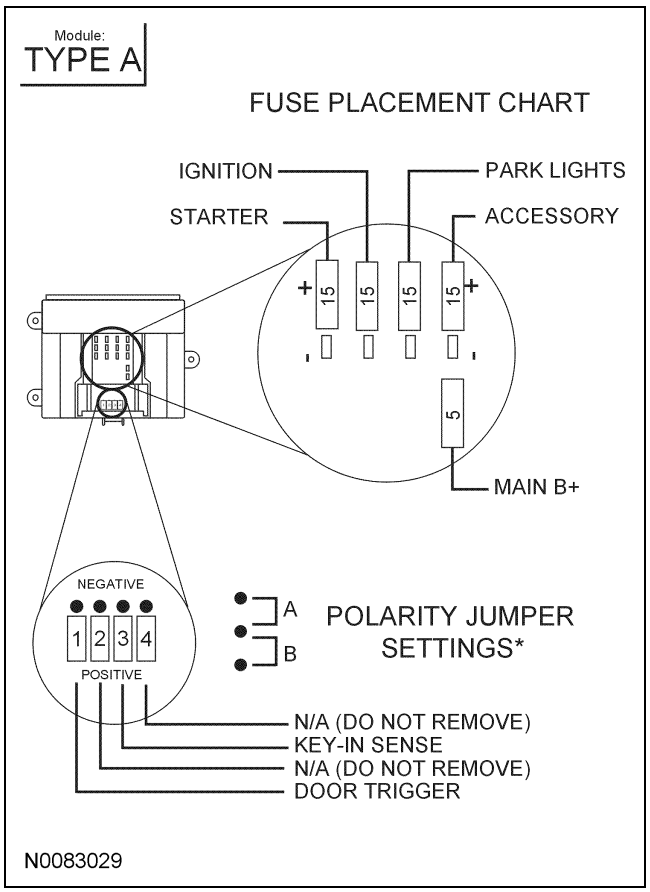
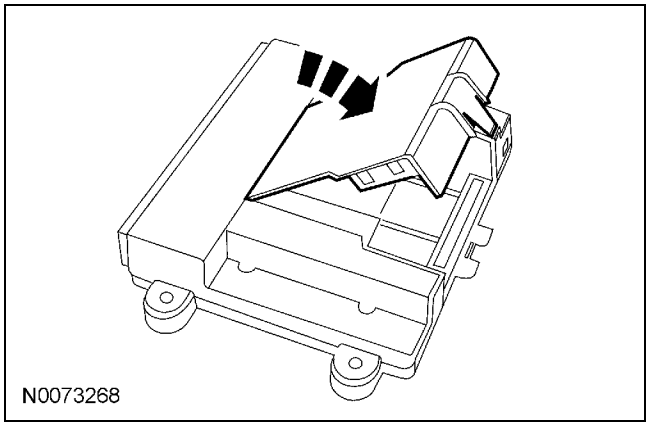
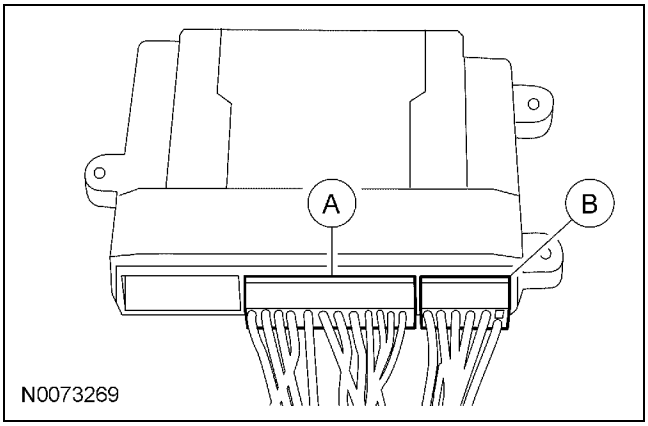
INSTALLATION (Continued)



5. Place the software cartridge onto the RMST control module.



6. Plug the wiring harness(es) into the module.
   - A - Harness: 24-way, used on all systems.
   - B - Harness: 10-way, used on all systems with RMST.



7. **NOTE:** Do not cut the override programming button off of the harness, it is used for all installations.

   NOTE: For vehicle specific wiring diagram(s) click here.

   Referring to the vehicle specific wiring section for the system being installed, gather all individual wires that will be routed to the same areas of the vehicle into groups. Cover each wire group with electrical tape for approximately 18''. Depending on the vehicle, there will be 2 to 5 different wire groups.

   Trim the unused wires approximately 6 - 8'' from the module.

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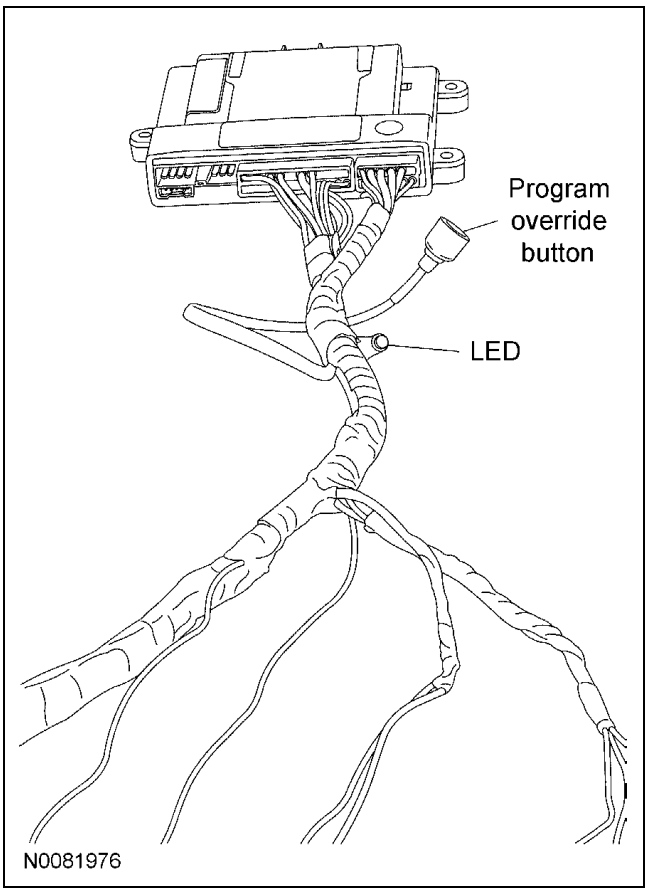
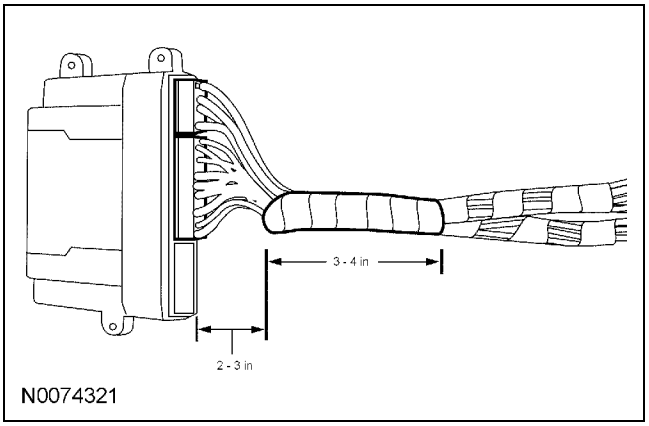
INSTALLATION (Continued)



8. Tape the harness sections together, making sure to cover all of the unused wires.



Vehicle Preparation

9. Remove the left hand scuff plate and cowl trim panel.

10. Remove the 2 lower instrument panel steering column cover screws and the cover.

11. Remove the 4 bolts and the steering column opening trim panel reinforcement.

12. **NOTE:** Release the upper steering column shroud by carefully pressing the sides inward.

    Remove the 3 lower steering column shroud screws, then separate the upper and lower shrouds.

13. Remove the right hand scuff plate, cowl trim panel and fuse door panel.

Antenna Mounting

NOTE: For good range of operation, the antenna must be installed correctly.

NOTE: Keep these points in mind when selecting a location and mounting the antenna.

- Do not mount the antenna behind or on any metal film or window tinting on the windshield.
- Do not mount the antenna so that one of the antenna elements touches or crosses any vehicle wiring and/or metal.
- On vehicles without metal film in the windshield around the rear view mirror, mount the antenna between the headliner and the rear view mirror.
- On vehicles equipped with an electronic mirror, or on vehicles with metal film around the rearview mirror, mount the antenna approximately 3 inches below the mirror attachment point to the windshield and/or mirror electronics.

14. Choose a suitable mounting location following the guidelines above.

Install The Antenna

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

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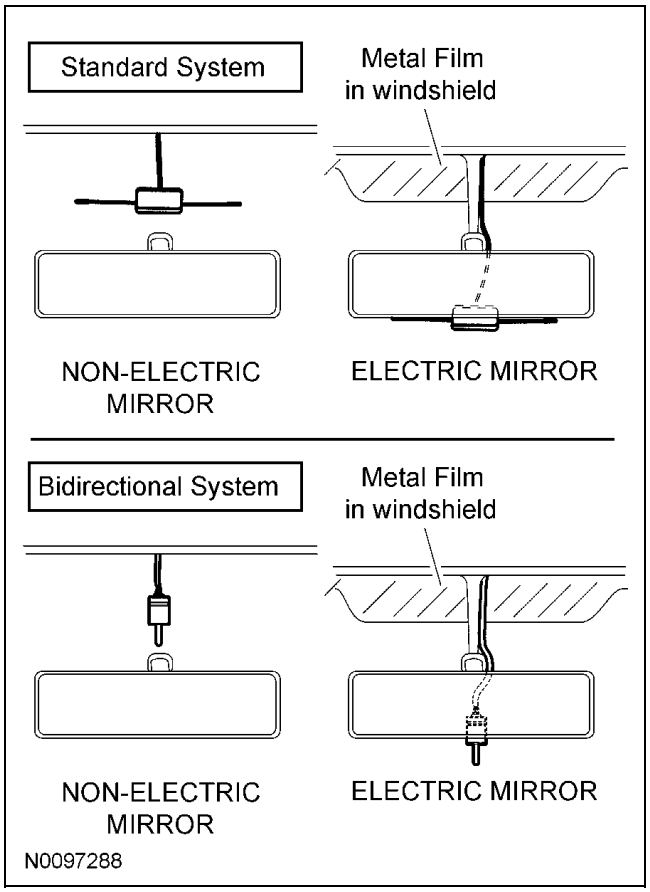
INSTALLATION (Continued)

16. **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.

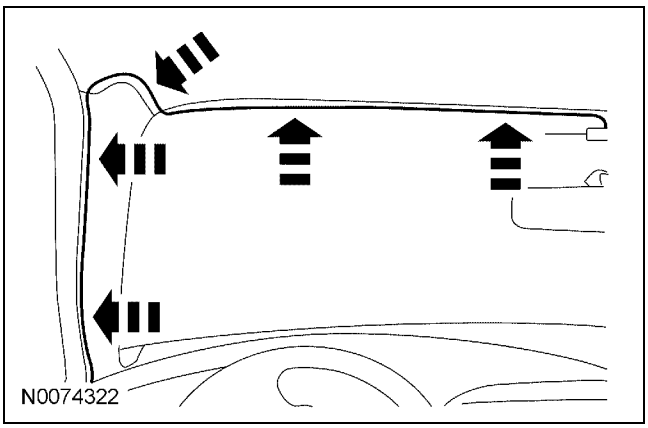
    Remove the protective backing from the adhesive on the antenna and firmly press the body of the antenna to the windshield.



17. 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 the air bag.

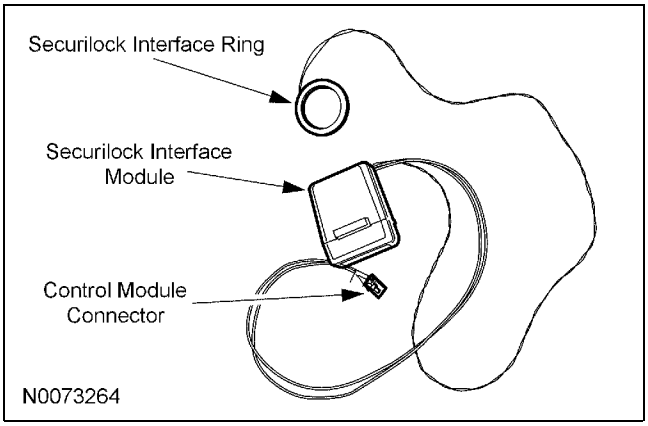
18. Route the antenna cable along the headliner and down the A pillar towards the floor.



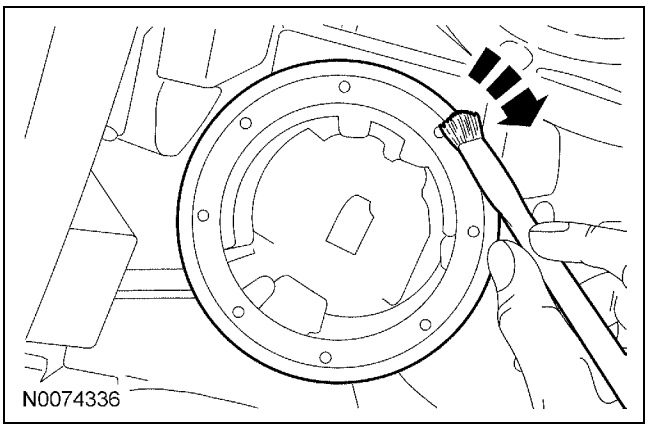
19. Reposition the A pillar trim panel.

Install The Securilock Interface Kit

20. Route the ring of the SECURILOCK interface antenna lead up along the steering column to the PATS transceiver location.



21. Following the directions on the supplied tube of adhesive primer, apply a thin coating around the transceiver antenna coil and allow to dry for approximately 5 minutes.



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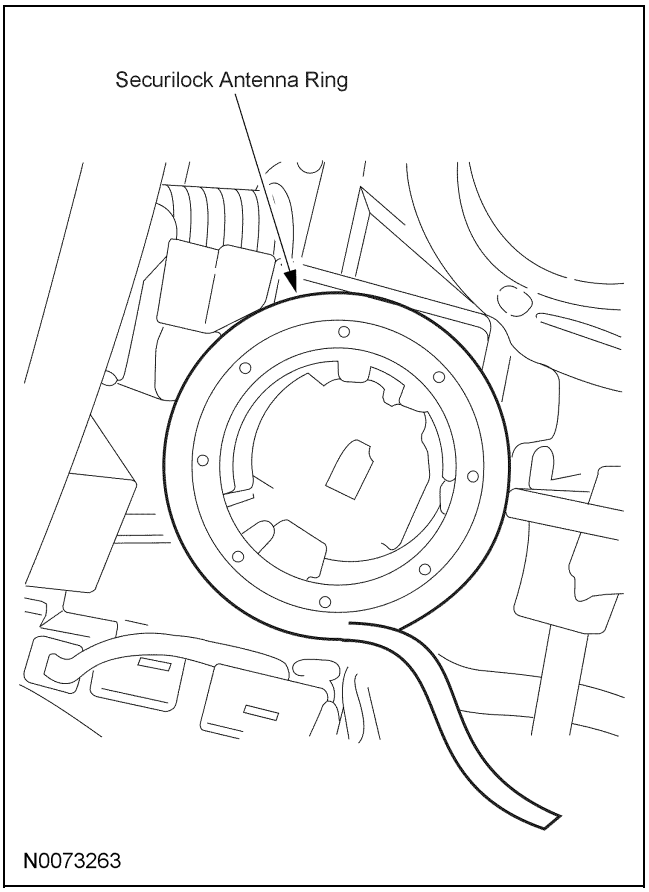
INSTALLATION (Continued)

22. ***NOTICE:*** **Do not damage the transceiver ring during installation or while installing the steering column shroud.**

    A damaged transceiver ring will result in an inoperable remote start system.

    Remove the protective backing from the SECURILOCK antenna ring. Place the SECURILOCK ring over the PATS transceiver and press firmly in place.



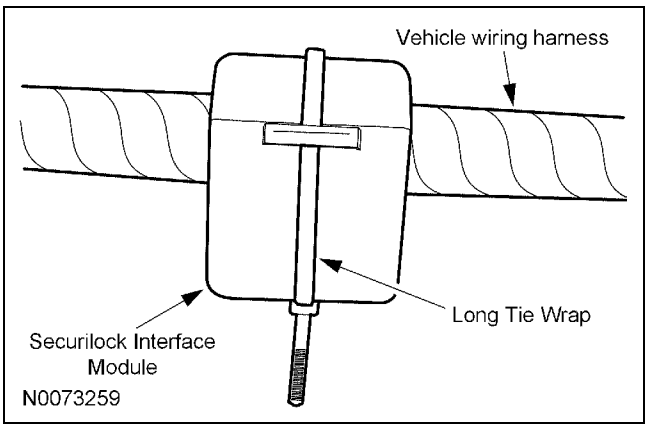
Install The Securilock Interface Module

23. **NOTE:** Do Not mount the SECURILOCK Interface Module to or within 3'' of a metal surface, including any underdash brackets, or in the knee bolster area.

    Mount the SECURILOCK Interface Module to an underdash wiring harness using one of the supplied long tie wraps.

24. ***NOTICE:*** **Do not attach the harness to the steering column.**

    Route the harness and connector the to module mounting location.



Install the Remote Start Control Module and Harness Assembly

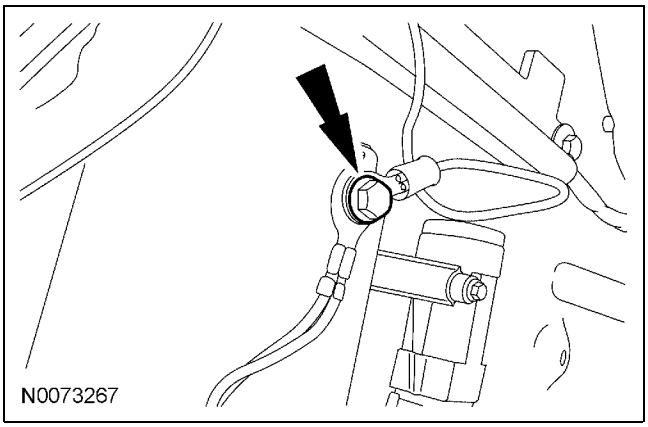
25. Place the remote start module and harness assembly on the floor of the vehicle.

Identify Circuit Wires For Connections

NOTE: For vehicle specific wiring diagram(s) click here.

NOTE: For proper wire splicing techniques click here.

26. Connect the Black ground wire from the remote start module harness to the chassis ground point at the driver kick panel.



27. Disconnect the ignition switch electrical connector.

28. Connect the remote start harness hard shell connectors to the ignition switch and ignition switch connector

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INSTALLATION (Continued)

29. **NOTE:** A DVOM connected to the correct wire will show 12V, then show 0V when the horn button is held.

    A logic probe will show power on the correct wire, then show ground when the horn button is held.

    NOTE: Wire is located inside wire convolute running to connector C260 but does not terminate. Wire can be found within 2-6'' from connector on the side heading into main IP harness in a looped fashion underneath bright green tape.

    Identify the Blue/White horn circuit wire under dash panel.

30. Connect the Brown/Black wire from the remote start module harness to the Blue/White horn circuit wire under dash panel.

31. **NOTE:** A DVOM connected to the correct wire will show 12V, then show 0V when the door lock switch is pressed.

    A logic probe will show power on the correct wire, then show ground when the door lock switch is pressed.

    NOTE: Wire is located inside wire loom running to connector C260 but does not terminate. Wire can be found 4'' from connector on the side heading toward the bulkhead of the vehicle in a looped fashion underneath bright green tape.

    Identify the Blue/Green power door lock circuit wire under dash panel.

32. Connect the Blue wire from the remote start module harness to the Blue/Green wire under dash panel.

33. **NOTE:** A DVOM connected to the correct wire will show 12V with the vehicle door(s) open and the dome light on, then show 0V with the vehicle door(s) closed and the dome light off.

    NOTE: A logic probe connected to the correct wire will show power with the vehicle door(s) open and the dome light on, then show ground with the vehicle door(s) closed and the dome light off.

    NOTE: Wire is located inside wire loom running to connector C260 but does not terminate. Wire can be found 4'' from connector on the side heading toward the bulkhead of the vehicle in a looped fashion underneath bright green tape.

    NOTE: Be sure that the dome light has timed out and is off before performing the door closed test.

    Be sure that the dome lamp is illuminated before performing the door open test.

    Identify the Grey/Violet dome light circuit wire under dash panel.

34. Connect the Green/Violet wire from the remote start module harness to the Grey/Violet dome light circuit wire under dash panel.

35. **NOTE:** A DVOM connected to the correct wire will show 0V, then show 12V while depressing the brake pedal.

    A logic probe will show ground when on the correct wire, then show power while depressing the brake pedal.

    NOTE: Wire is located inside wire convolute running to connector C260 but does not terminate. Wire can be found within 2-6'' from connector on the side heading into the main IP harness in a looped fashion underneath bright green tape.

    Identify the Violet/White brake switch circuit wire under dash panel.

36. Connect the Brown wire from the remote start module harness to the Violet/White brake switch circuit wire under dash panel.

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INSTALLATION (Continued)

37. **NOTE:** A DVOM connected to the correct wire will show 12V, when the headlight switch is ON, then show 0V when the headlight switch is OFF.

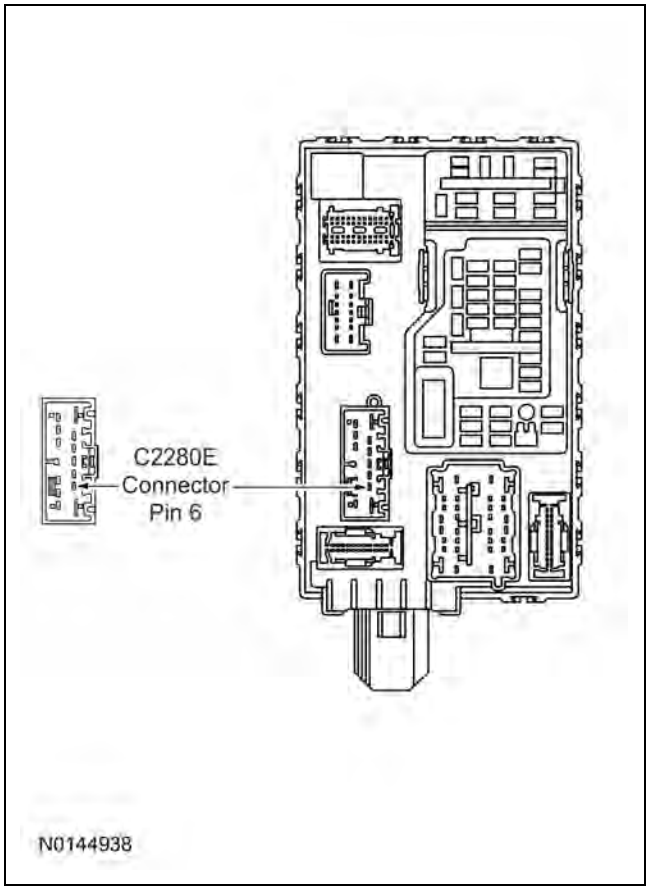
    A logic probe will show power on the correct wire when the headlight switch is ON, then show ground when the headlight switch is OFF.

    NOTE: Do NOT splice into any circuits leading to the back of the headlight switch. Doing so may lead to headlight switch failure.

    NOTE: Post J1 Running Change: Wire is located inside wire loom running to connector C260 but does not terminate. Wire can be found 4'' from connector on the side heading toward the bulkhead of the vehicle in a looped fashion underneath bright green tape.

    Identify the Violet/White parking light circuit wire at the Smart Junction Box (SJB) connector C2280E Pin 6.

38. Connect the White wire from the remote start module harness to the Violet/White parking light circuit wire at the SJB connector C2280E Pin 6.



Install The Hood Safety Switch

39. **NOTE:** Route the hood safety switch wire carefully avoiding any moving parts or components that can produce excessive heat.

    NOTE: Using a piece of convolute adds in the appearance of the installation.

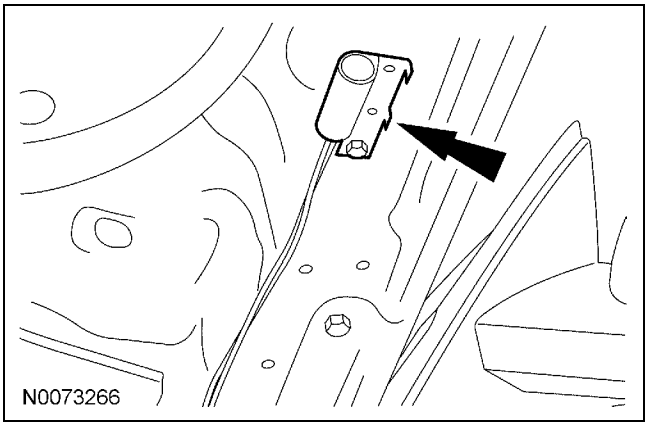
    NOTE: The switch should be positioned about 30 degrees below parallel to the ground to accommodate for parking on inclines.

    Failure to position the switch properly could result in one of the following:

    - False alarm trips
    - Non-Remote Start events
    - Inadvertent shutdown during Remote Start

    Locate an easy to access area near the driver side hood hinge and install the hood safety switch using the supplied metal screws.

40. Apply rustproofing compound (PM-13-A) to the drilled hole and torque the screw to 1.00 Nm (10 lb-in).



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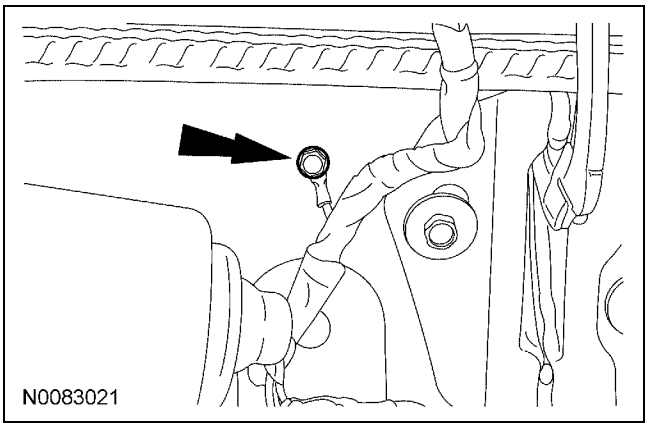
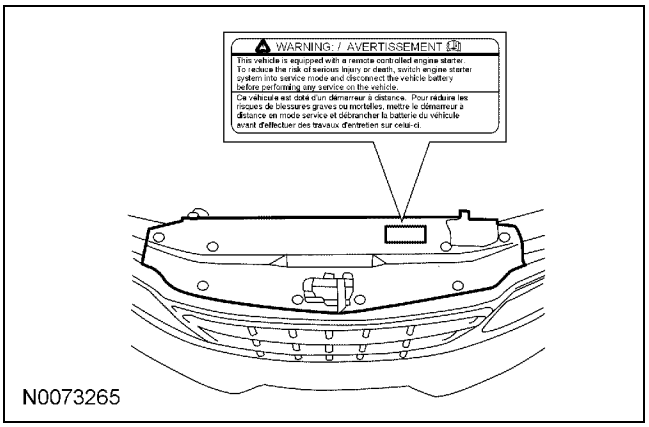
INSTALLATION (Continued)

41. Connect hood switch ground wire to a suitable location on the bulkhead.



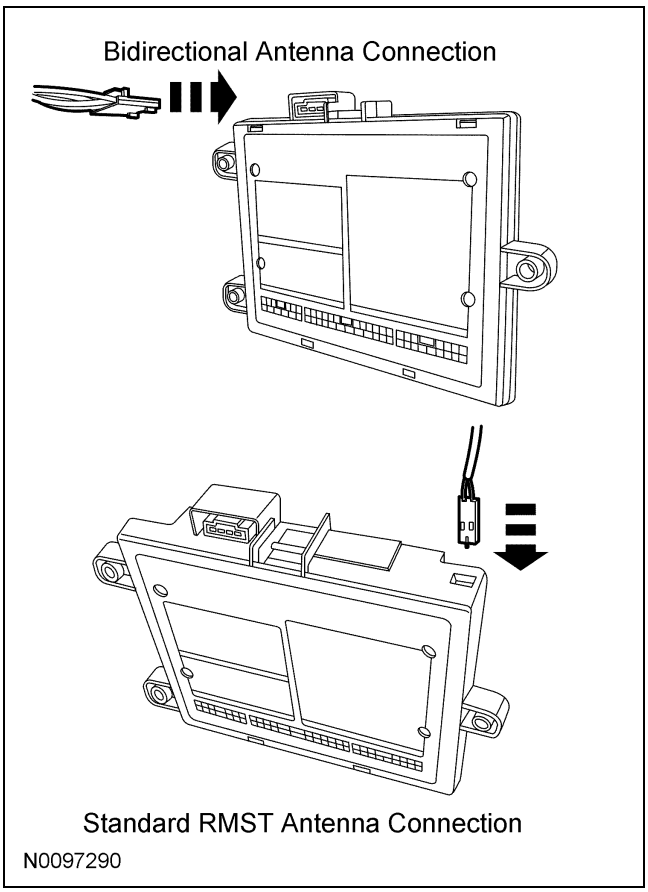
42. **NOTE:** Place the label on the radiator fan shroud or similar area.

    Install the underhood warning label



43. Route the Gray hood safety switch wire through the bulkhead into the engine compartment and attach to the hood safety switch.

44. Connect the antenna to the RMST control module.



45. Connect the SECURILOCK interface module to the RMST control module.

Program The RMST System

46. Refer to the RMST programming section for this vehicle click here.

Secure RMST Harness and Control Module

47. Use the supplied tie wraps to secure the RMST harness wires.

48. **NOTE:** Do not mount the control module in the knee bolster area.

    Secure the control module at three points to the vehicle.

    Use the supplied long tie wraps to mount the RMST control module to the underdash wiring harness.

Install Trim

49. Install the right hand scuff plate, cowl trim panel and fuse door panel.

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INSTALLATION (Continued)

50. Assemble the upper and lower steering column shrouds, and install the 3 lower shroud screws.

51. Install the steering column opening trim panel reinforcement.

    Install the 4 bolts.

    - Tighten to 9 Nm (80 lb-in).

52. Install the lower instrument panel steering column cover and screws.

53. Install the left hand scuff plate and cowl trim panel.

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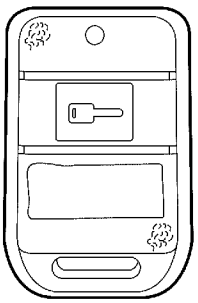
GENERAL PROCEDURES

Programming - Standard Remote Start

Programming the Module



STANDARD RMST FOB

N0097291

1. **NOTE:** If the remote start options (Key-in sense polarity, door ajar polarity, or tach mode) are not programmed correctly, vehicle will not remote start or operate properly.

   NOTE: Make sure that the hood and doors are closed before proceeding.

   NOTE: The LED on the remote start harness must be visible to complete module programming.

   NOTE: The remote start override button must be accessible.

Programming Options: Entering Programming Mode

2. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCR	LED
2	1	TACHLESS MODE	ON

3. Press and hold the brake pedal.

4. Turn the ignition key to the RUN position.

   The dome light will turn off.

5. Press and hold the remote start system override button for at least 10 seconds.

   After 10 seconds the horn with honk 3 times, indicating the system is now in the learn mode.

   Release the brake pedal and the RMST override button.

6. Press and release the override button. The horn will honk 4 times indicating the system has entered the first program bank.

   If not, please check the following:

   - Brake pedal switch wire solder connection.
   - Hood closed and Grey hood safety switch wire solder connection.
   - All doors closed and dome light circuit wire solder connections.
   - The key is in the RUN position.
   - The software cartridge is firmly seated in the RMST module.
   - The RMST harness connections are firmly seated in the RMST module.

NOTE: If you require additional assistance: CALL 1-800-FORD KEY.

7. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.

8. Press and release the brake pedal.

   The horn will honk 1 time indicating the system has entered the option 1 of the second program bank.

NOTICE: **When turning LED on or off using remote start fob button quickly press and immediately release the remote start button.**

Failure to quickly release the remote start fob button will result in system defaulting to the factory options.

9. The LED must be on for option 1. If the LED is illuminated no action is required. If the LED is not illuminated press the remote start fob button and verify the LED illuminates.

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GENERAL PROCEDURES (Continued)

NOTE: If the remote start fob button is held for more than 3 seconds the system will chirp the horn 4 times, indicating the system has returned to factory default settings. If this occurs return to step 1 of the programming section and reprogram the remote start module.

NOTE: The remote start module is now programmed.

10. Remove the ignition key.

Programming the SECURILOCK

NOTE: Two PATS keys are required to program the SECURILOCK.

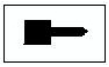
NOTE: IMPORTANT: Each of the following steps should be completed with no more than 5 seconds delay between steps.

11. Insert the first ignition key and turn to the run position.

    Watch for the PATS light to turn off. Remove the first key.

12. Insert the second ignition key and turn to the run position.

    Watch for the PATS light to turn off. Remove the second key.

13. Press and hold the remote start button  for 3 seconds.

    The PATS light should stay on for 3-5 seconds before turning off, which means that the SECURILOCK was successfully programmed.

NOTE: If the PATS light blinks rapidly, repeat steps 1-3 to retry programming the SECURILOCK.

NOTE: The engine will start if the Remote Start kit has been installed correctly, the brake is not depressed, and the hood and doors are closed.

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GENERAL PROCEDURES

Functional Test - Standard Remote Start

NOTE: If during any of the steps of the functional test, the remote start system or vehicle doesn't react or perform accordingly, please refer to the remote start troubleshooting guide.

NOTE: For remote start troubleshooting guide click here.

1. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
2. Press and hold the Start button on the remote control key fob for 2-3 seconds - Horn should honk once indicating receipt of the start request.
3. The remote start systems should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.
4. Close the hood, and insert a key into the ignition switch.
5. Attempt to re-start the vehicle again using the key fob.
6. The remote start systems should turn on the ignition, but then honk the horn five times and shut down indicating a key is in the ignition switch.
7. Remove the key and open a door.
8. Attempt to re-start the vehicle again using the key fob.
9. The remote start systems should turn on the ignition, but then honk the horn three times and shut down indicating a door is open.
10. Close the door.
11. Attempt to re-start the vehicle again using the key fob.
12. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.
13. On vehicles equipped with power window interrupt, Attempt to close windows to check power window interrupt function.
14. Once all systems have been checked, open the door*, or press the brake pedal - the remote start systems should shut down.

NOTE: *MyKey vehicle remote start systems will shut down upon vehicle entry. Please see vehicle owner's guide or remote start owner's manual for more information.

Troubleshooting

15. **NOTE:** When attempting to remote start your vehicle, the system has several safety checks that it performs. If any of these inputs are present that should not be, the system will respond back to you with several horn ''chirps'' to help you identify which input is present. These ''chirps'' will occur after initiating a start sequence with the transmitter, the system will turn on the ignition, but then respond back with several horn ''chirps'' and abort the starting process.

    Example: Depress the remote start fob button for 3 seconds and then release. The vehicle horn will ''chirp'' one time to indicate that RMST signal was received. If the vehicle doesn't start and the horn ''chirps'' 3 times, there is a fault - ''Vehicle Door is Open''

CHIRPS	PROBLEM
1 Chirp	SECURILOCK not programmed correctly, or the SECURILOCK antenna ring is damaged.
2 Chirps	BRAKE is being pressed, or the HOOD is open.
3 Chirps	One of the vehicles DOORS are open.
4 Chirps	TACH not programmed.

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GENERAL PROCEDURES (Continued)

CHIRPS	PROBLEM
5 Chirps	The KEY is in the ignition.
6 Chirps	The remote start system is in SERVICE/VALET mode.

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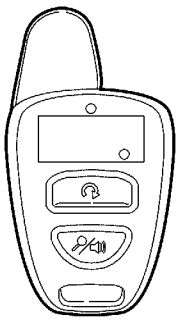
GENERAL PROCEDURES

Programming - Bidirectional Remote Start

Programming the Module



BIDIRECTIONAL FOB

N0097292

1. **NOTE:** If the remote start options (Key-in sense polarity, door ajar polarity, or tach mode) are not programmed correctly, vehicle will not remote start or operate properly.

   NOTE: Make sure that the hood and doors are closed before proceeding.

   NOTE: The LED on the remote start harness must be visible to complete module programming.

   NOTE: The remote start override button must be accessible.

Programming Options: Entering Programming Mode

2. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCR	LED
2	1	TACHLESS MODE	ON

3. Press and hold the brake pedal.

4. Turn the ignition key to the RUN position.

   The dome light will turn off.

5. Press and hold the remote start system override button for at least 10 seconds.

   After 10 seconds the horn with honk 3 times, indicating the system is now in the learn mode.

   Release the brake pedal and the RMST override button.

6. Press and release the override button. The horn will honk 4 times indicating the system has entered the first program bank.

   If not, please check the following:

   - Brake pedal switch wire solder connection.
   - Hood closed and Grey hood safety switch wire solder connection.
   - All doors closed and dome light circuit wire solder connections.
   - The key is in the RUN position.
   - The software cartridge is firmly seated in the RMST module.
   - The RMST harness connections are firmly seated in the RMST module.

NOTE: If you require additional assistance: CALL 1-800-FORD KEY.

7. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.

8. Press and release the brake pedal.

   The horn will honk 1 time indicating the system has entered the option 1 of the second program bank.

NOTICE: **When turning LED on or off using remote start fob button quickly press and immediately release the remote start button.**

Failure to quickly release the remote start fob button will result in system defaulting to the factory options.

9. The LED must be on for option 1. If the LED is illuminated no action is required. If the LED is not illuminated press the remote start fob button and verify the LED illuminates.

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GENERAL PROCEDURES (Continued)

NOTE: If the remote start fob button is held for more than 3 seconds the system will chirp the horn 4 times, indicating the system has returned to factory default settings. If this occurs return to step 1 of the programming section and reprogram the remote start module.

NOTE: The remote start module is now programmed.

10. Remove the ignition key.

Programming the SECURILOCK

NOTE: Two PATS keys are required to program the SECURILOCK.

NOTE: IMPORTANT: Each of the following steps should be completed with no more than 5 seconds delay between steps.

11. Insert the first ignition key and turn to the run position.

    Watch for the PATS light to turn off. Remove the first key.

12. Insert the second ignition key and turn to the run position.

    Watch for the PATS light to turn off. Remove the second key.

13. Press the remote start button twice within 3 seconds.

    The PATS light should stay on for 3-5 seconds before turning off, which means that the SECURILOCK was successfully programmed.

NOTE: If the PATS light blinks rapidly, repeat steps 1-3 to retry programming the SECURILOCK.

NOTE: The engine will start if the Remote Start kit has been installed correctly, the brake is not depressed, and the hood and doors are closed.

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GENERAL PROCEDURES

Functional Test - Bidirectional Remote Start

NOTE: If during any of the steps of the functional test, the remote start system or vehicle doesn't react or perform accordingly, please refer to the remote start troubleshooting guide.

NOTE: For remote start troubleshooting guide click here.

1. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
2. Press the Start button on the remote control key fob twice within 3 seconds - Horn should honk once indicating receipt of the start request.
3. The remote start systems should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.
4. Close the hood, and insert a key into the ignition switch.
5. Attempt to re-start the vehicle again using the key fob.
6. The remote start systems should turn on the ignition, but then honk the horn five times and shut down indicating a key is in the ignition switch.
7. Remove the key and open a door.
8. Attempt to re-start the vehicle again using the key fob.
9. The remote start systems should turn on the ignition, but then honk the horn three times and shut down indicating a door is open.
10. Close the door.
11. Attempt to re-start the vehicle again using the key fob.
12. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.
13. On vehicles equipped with power window interrupt, Attempt to close windows to check power window interrupt function.
14. Once all systems have been checked, open the door*, or press the brake pedal - the remote start systems should shut down.

NOTE: *MyKey vehicle remote start systems will shut down upon vehicle entry. Please see vehicle owner's guide or remote start owner's manual for more information.

Troubleshooting

15. **NOTE:** When attempting to remote start your vehicle, the system has several safety checks that it performs. If any of these inputs are present that should not be, the system will respond back to you with several horn ''chirps'' to help you identify which input is present. These ''chirps'' will occur after initiating a start sequence with the transmitter, the system will turn on the ignition, but then respond back with several horn ''chirps'' and abort the starting process.

    Example: Depress the remote start fob button for 3 seconds and then release. The vehicle horn will ''chirp'' one time to indicate that RMST signal was received. If the vehicle doesn't start and the horn ''chirps'' 3 times, there is a fault - ''Vehicle Door is Open''

CHIRPS	PROBLEM
1 Chirp	SECURILOCK not programmed correctly, or the SECURILOCK antenna ring is damaged.
2 Chirps	BRAKE is being pressed, or the HOOD is open.
3 Chirps	One of the vehicles DOORS are open.
4 Chirps	TACH not programmed.

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'13 Mustang

TYPE "A" CUSTOM WIRE HARNESS

RMST MODULE WIRE HARNESS

STEERING COLUMN HARNESS

	Color	Function
A-3	PINK	Ignition Input/Output
A-2	ORANGE	HVAC Output
A-13	VIOLET	Starter Output
B-8	BLACK/WHITE	Key-in-sense Input
A-4	RED	Battery

	Color	Function
A-21	BROWN/BLACK	Horn Relay Output

Horn (BLUE/WHITE)* — STEERING COLUMN HARNESS

DRIVER'S KICK PANEL HARNESS

	Color	Function
A-5	BLACK	Ground
A-24	BLUE	Door Lock Output
A-2	GREEN/VIOLET	Door Ajar Switch Input
B-7	BROWN	Brake Input

MAKE THIS CONNECTION FIRST! — CHASSIS GROUND POINT IN DRIVER' S KICK PANEL

Door Lock ((BLUE/GREEN)** — UNDER DASH PANEL

Dome Light (GRAY/VIOLET)** — UNDER DASH PANEL

Brake Switch (VIOLET/WHITE)* — BRAKE SWITCH

HEADLAMP SWITCH HARNESS

	Color	Function
A-1	WHITE	Parking Light Output

Parking Lights On (VIOLET/WHITE)*** — SMART JUNCTION BOX (SJB) C2280E Pin 6

UNDER HOOD HARNESS

	Color	Function
A-19	GRAY	Hood Open Switch Input

Vehicle Interior | Engine Compartment — Hood Tilt Switch

Chassis Ground — Do Not Ground to Hood

*Wire is located inside wire convolute running to connector C260 but does not terminate. Wire can be found within 2-6" from connector on the side heading into main IP harness in a looped fashion underneath bright green tape.

**Wire is located inside wire loom running to connector C260 but does not terminate. Wire can be found 4" from connector on the side heading toward the bulkhead of the vehicle in a looped fashion underneath bright green tape.

*** Post-J1 Running Change: Wire is located inside wire loom running to connector C260 but does not terminate. Wire can be found 4" from connector on the side heading toward the bulkhead of the vehicle in a looped fashion underneath bright green tape.

REMOTE START SYSTEM INSTALLATION

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INSTALLATION
Remote Start

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Proper Splicing Techniques
Programming - Standard Remote Start
Functional Test - Standard Remote Start
Programming - Bidirectional Remote Start
Functional Test - Bidirectional Remote Start
Troubleshooting

WIRING DIAGRAMS
Vehicle Specific Wiring Diagrams

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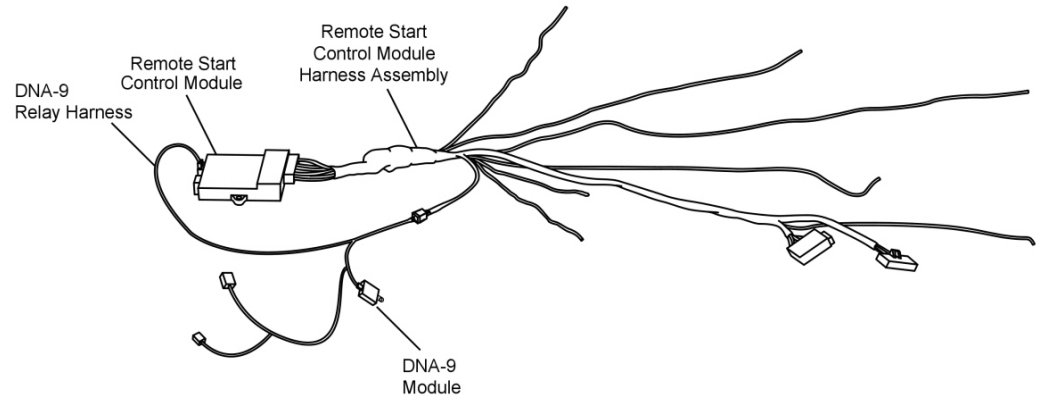
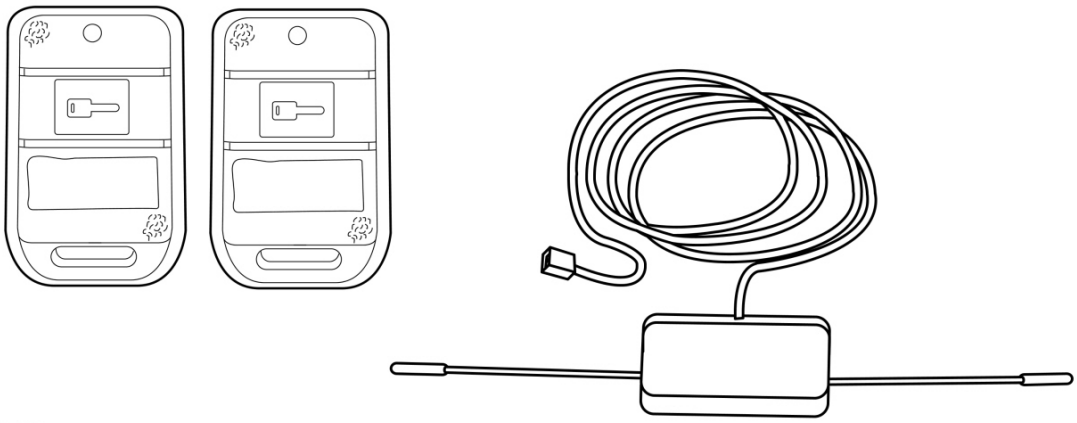
INSTALLATION

Remote Start System (RMST)

RMST System Components



Additional "Standard RMST" Components



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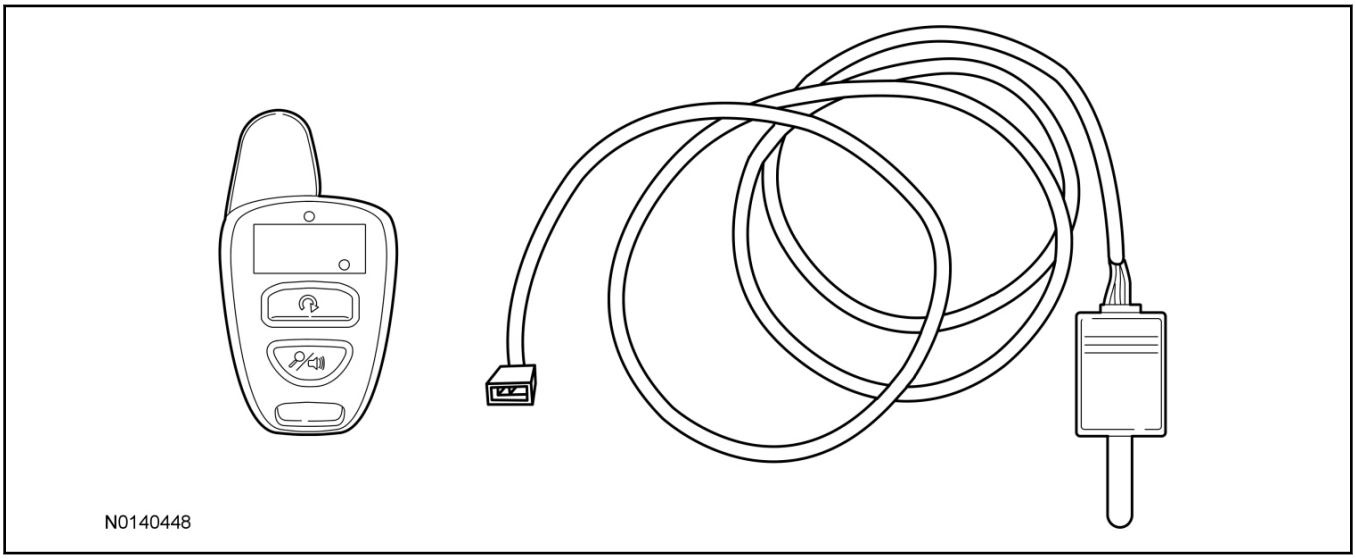
INSTALLATION (Continued)

Additional "Bi-directional RMST" Components



Fiesta - Key Start

NOTICE:
RMST systems are only applicable to vehicles with automatic transmissions.

1. Verify correct kit number.

Review RMST Installation Kit Contents

NOTE:
Kits are vehicle specific and are not interchangeable.

2. Review the RMST kit contents.

RMST System Standard Kit Type - "A"

QUANTITY	DESCRIPTION
1	TYPE - "A" MODULE ASSEMBLY
1	RMST SOFTWARE CARTRIDGE ASSEMBLY
2	1 BUTTON POWER CODE TRANSMITTER
1	TYPE - "A" CUSTOM WIRING HARNESS
1	ANTENNA
1	HOOD SAFETY SWITCH ASSEMBLY
1	INSTALLATION PARTS BAG
1	FUSE PARTS BAG
1	OPERATORS INSTRUCTIONS
1	UNDERHOOD WARNING LABEL
1	DNA-9 Module

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INSTALLATION (Continued)

RMST System Standard Kit Type - "A"(Continued)

1	DNA-9 Relay Harness
1	Wire Harness Label

3. Review the RMST bidirectional kit contents.

RMST System Bidirectional Kit Type - "A"

QUANTITY	DESCRIPTION
1	TYPE - "A" MODULE ASSEMBLY
1	RMST SOFTWARE CARTRIDGE ASSEMBLY
1	2 BUTTON POWER CODE TRANSMITTER
1	TYPE - "A" CUSTOM WIRING HARNESS
1	ANTENNA
1	ANTENNA HARNESS
1	HOOD SAFETY SWITCH ASSEMBLY
1	INSTALLATION PARTS BAG
1	FUSE PARTS BAG
1	OPERATORS INSTRUCTIONS
1	UNDERHOOD WARNING LABEL
1	DNA-9 Module
1	DNA-9 Relay Harness
1	Wire Harness Label

Module Preparation

4. Place the supplied fuses into the power distribution block on the RMST control module.
   - Move the polarity jumpers to their proper locations on the control module, see illustration.

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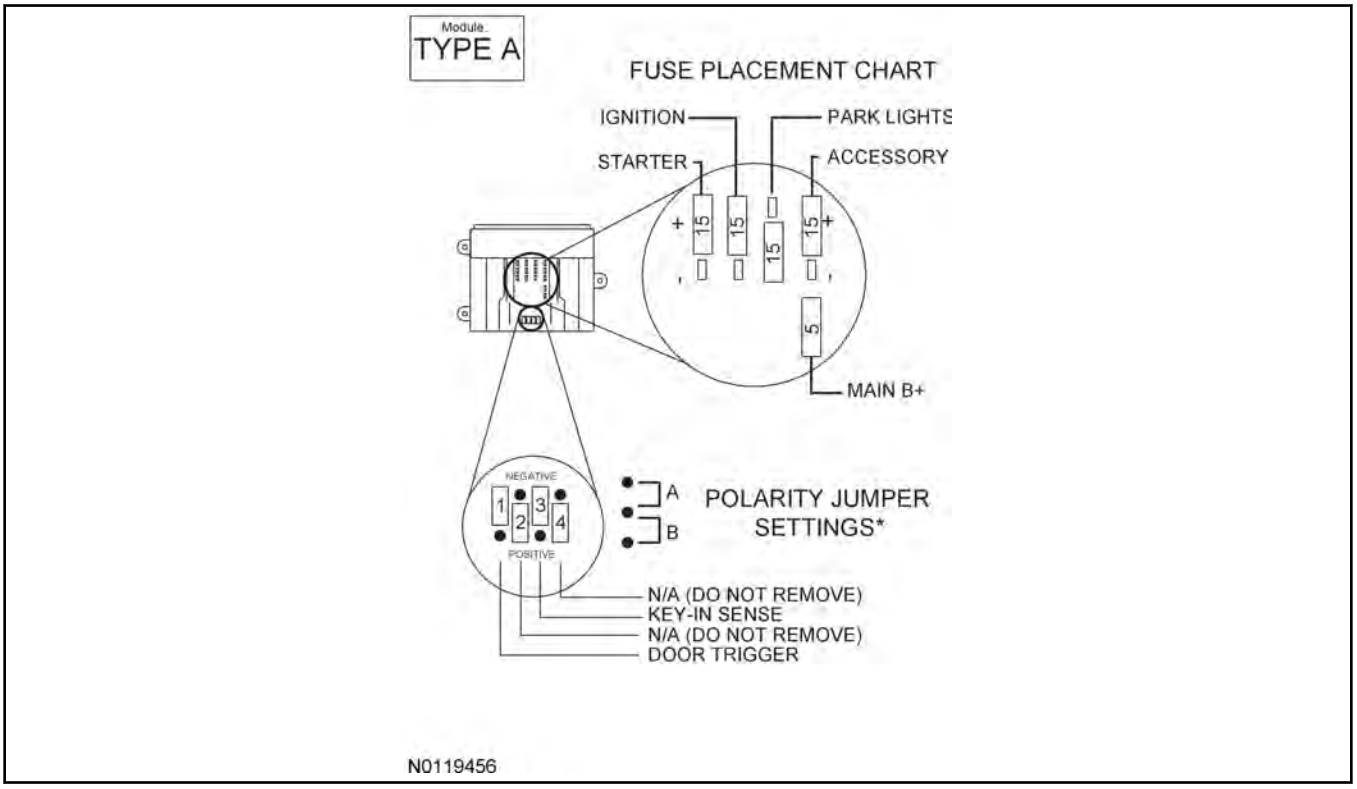
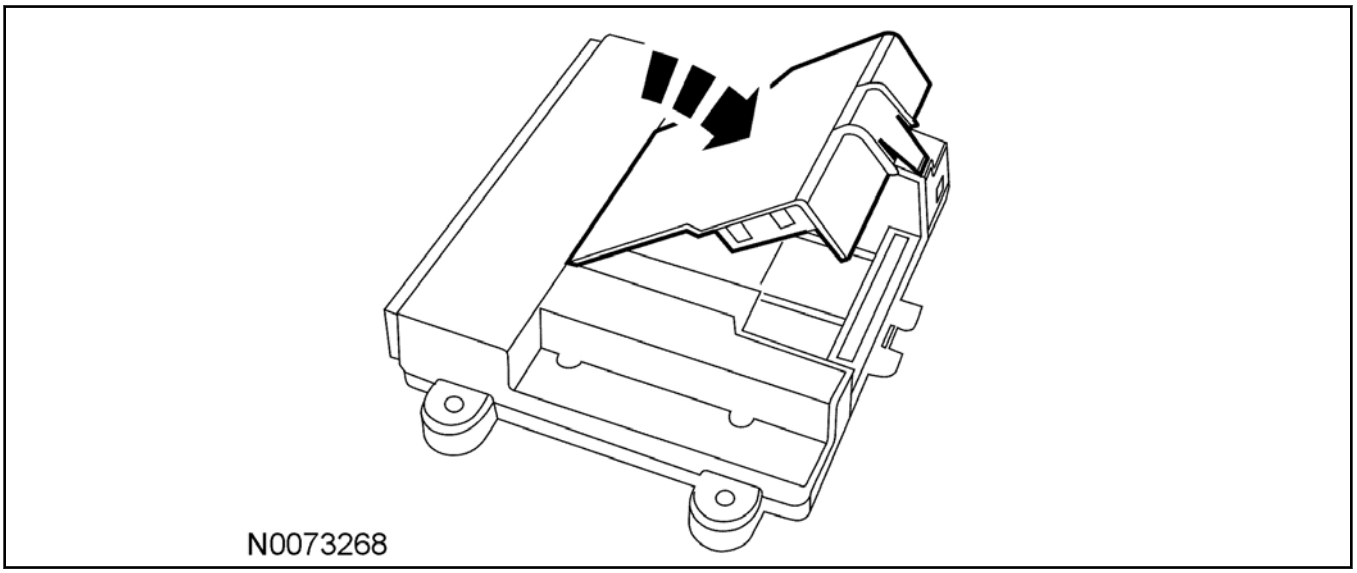
INSTALLATION (Continued)



5. Place the software cartridge onto the RMST control module.



6. Plug the wiring harness(es) into the module.
   - A - Harness: 24-way, used on all systems.
   - B - Harness: 10-way, used on all systems with RMST.

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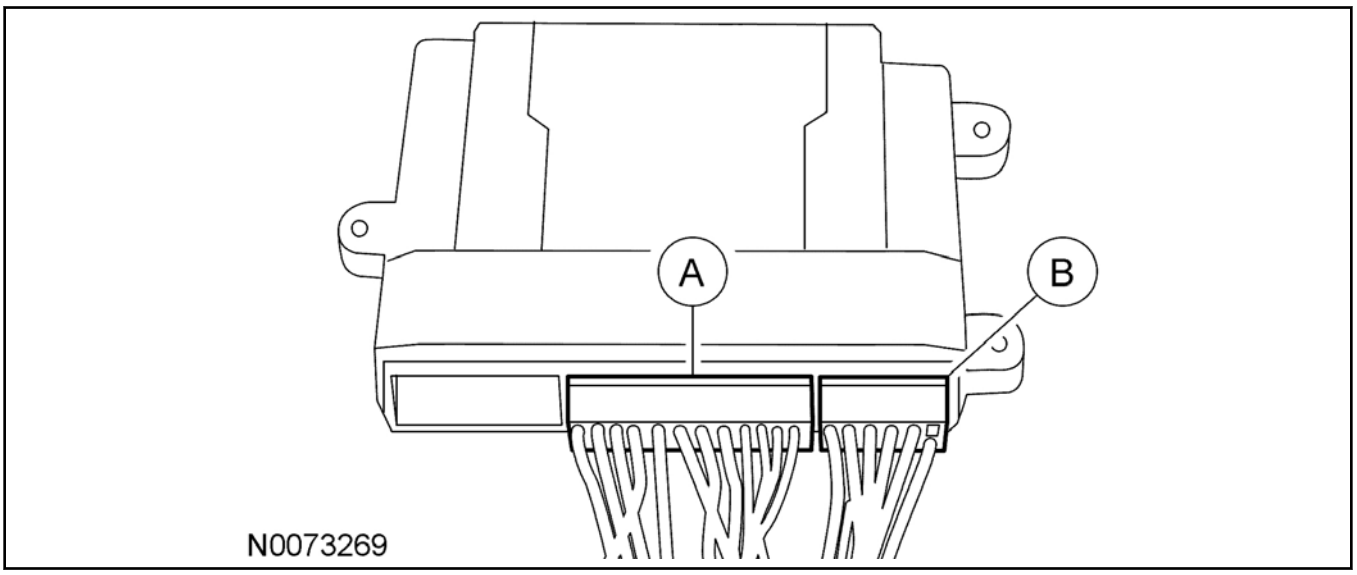
INSTALLATION (Continued)



7. **NOTE:**
   Do not cut the override programming button off of the harness, it is used for all installations.

   Referring to the vehicle specific wiring section for the system being installed, gather all individual wires that will be routed to the same areas of the vehicle into groups. Cover each wire group with electrical tape for approximately 18". Depending on the vehicle, there will be 2 to 5 different wire groups.
   Trim the unused wires approximately 6 - 8" from the module.

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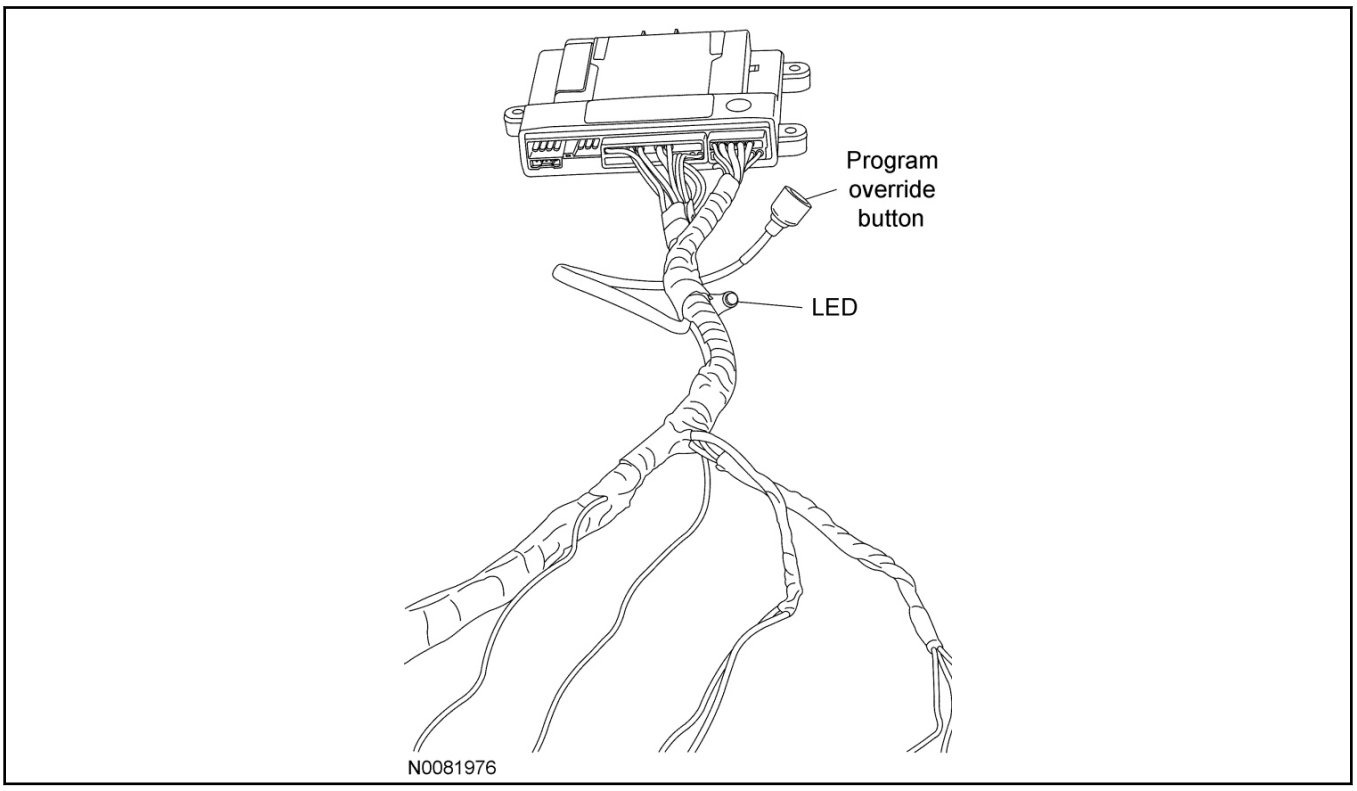
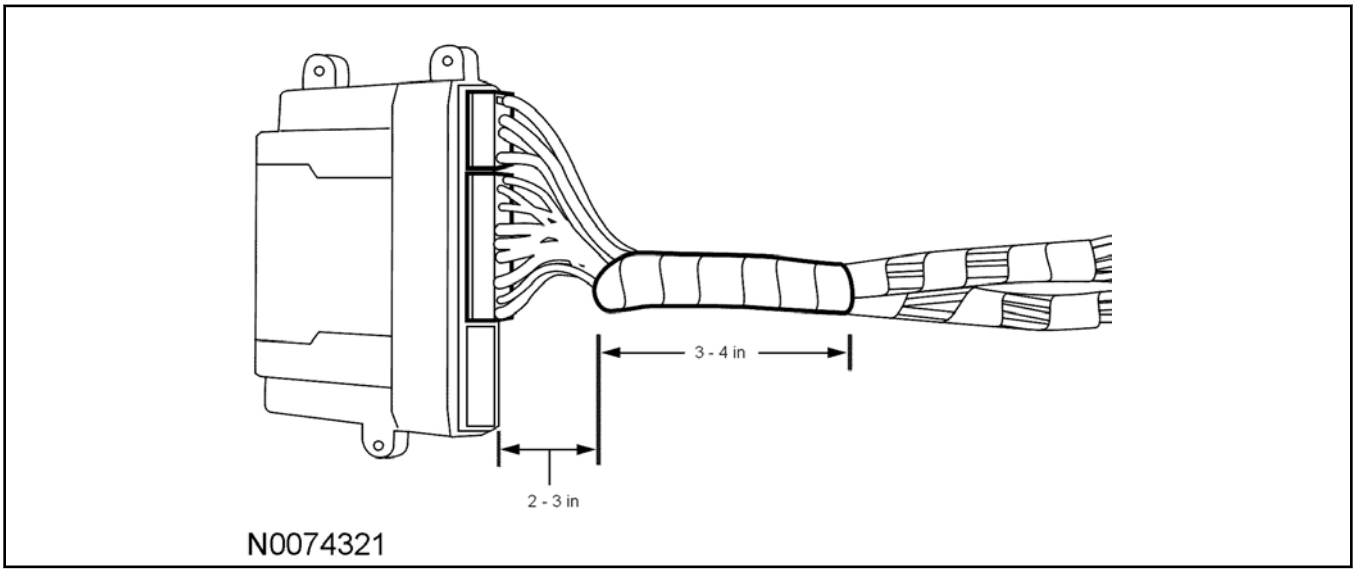
INSTALLATION (Continued)



8. Tape the harness sections together, making sure to cover all of the unused wires.



Vehicle Preparation

9. Remove the retainers and the upper and lower steering column shrouds.
10. Open and remove the glove box.
11. Remove the RH lower Instrument panel insulator.
12. Using a suitable non-marring tool, work around the outer edge of the headlamp switch to release the clips and pull the switch out through the front of the finish panel.
    - Disconnect the electrical connector.

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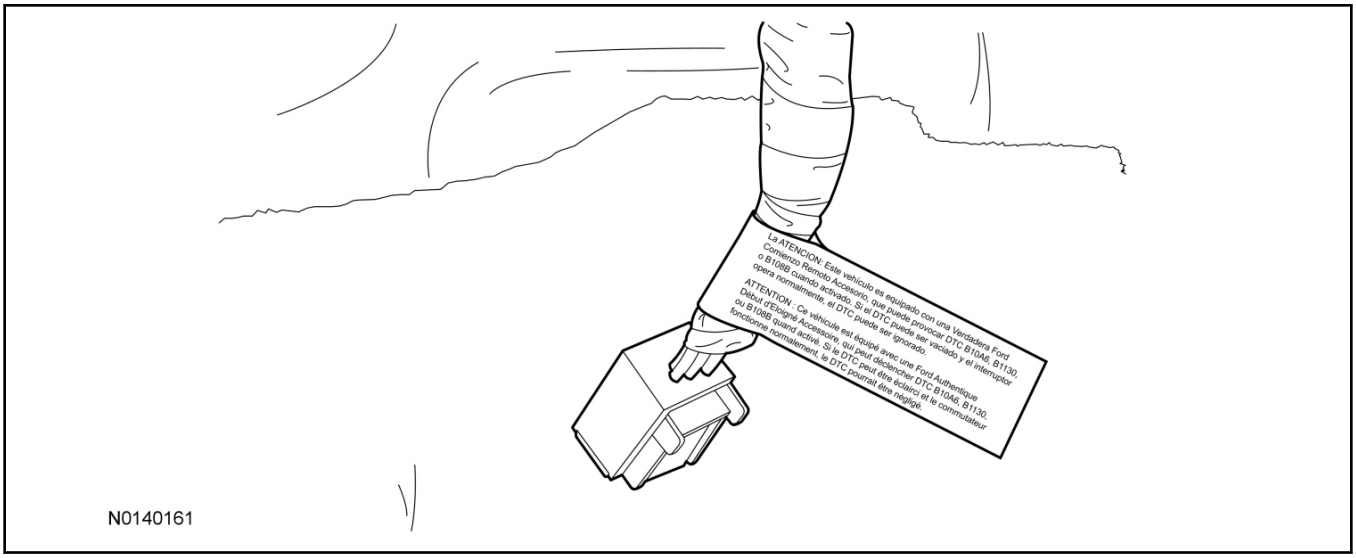
INSTALLATION (Continued)

13. Install the supplied wire harness label to the headlamp switch harness.
    - If required, fish the headlamp switch wire harness out of the instrument panel.



14. Connect and Install the headlamp switch.

Antenna Mounting

NOTE:
For good range of operation, the antenna must be installed correctly.

NOTE:
Keep these points in mind when selecting a location and mounting the antenna.

- Do not mount the antenna behind or on any metal film or window tinting on the windshield.
- Do not mount the antenna so that one of the antenna elements touches or crosses any vehicle wiring and/or metal.
- On vehicles without metal film in the windshield around the rear view mirror, mount the antenna between the headliner and the rear view mirror.
- On vehicles equipped with an electronic mirror, or on vehicles with metal film around the rearview mirror, mount the antenna approximately 3 inches below the mirror attachment point to the windshield and/or mirror electronics.

15. Choose a suitable mounting location based on the guidelines above.

Install The Antenna

16. Clean the mounting surface using an alcohol base solution and a clean cloth.
17. **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.

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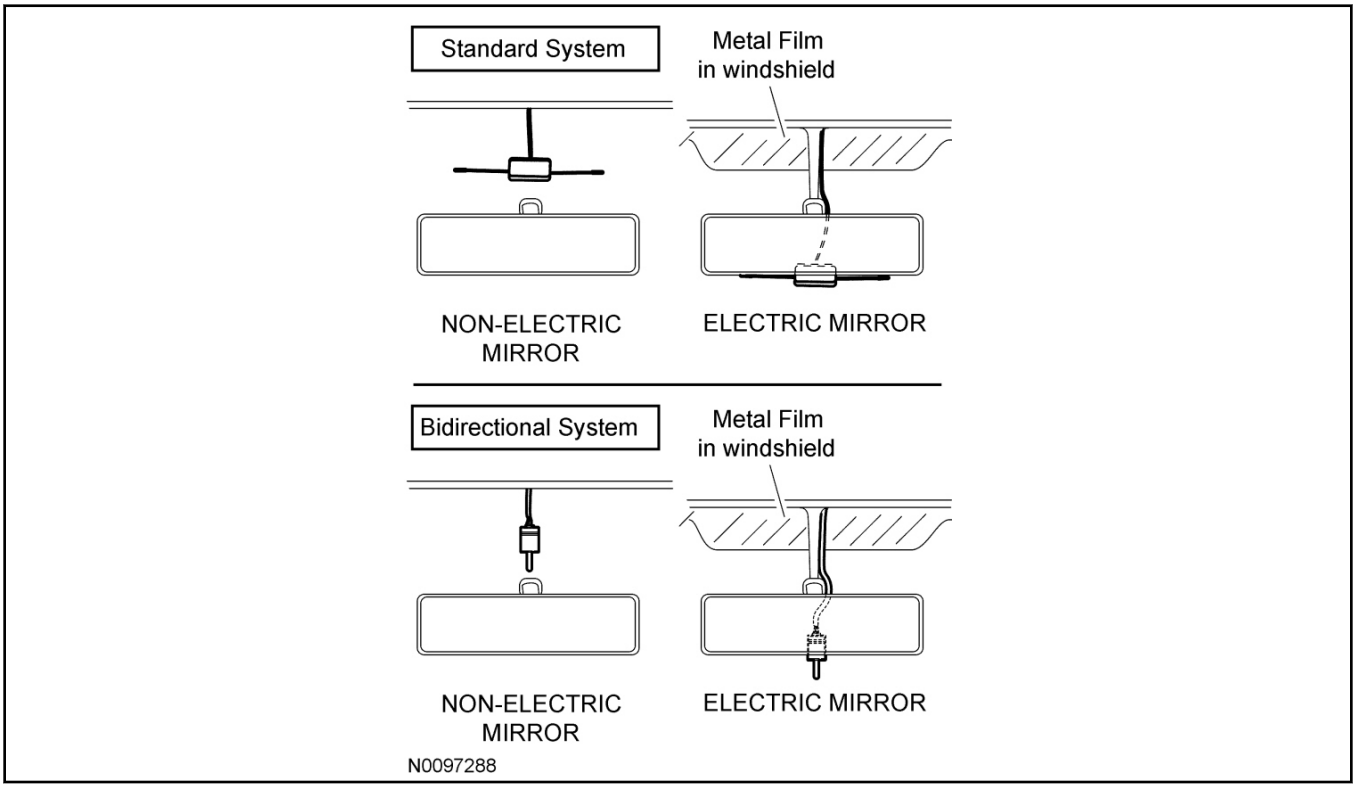
INSTALLATION (Continued)

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

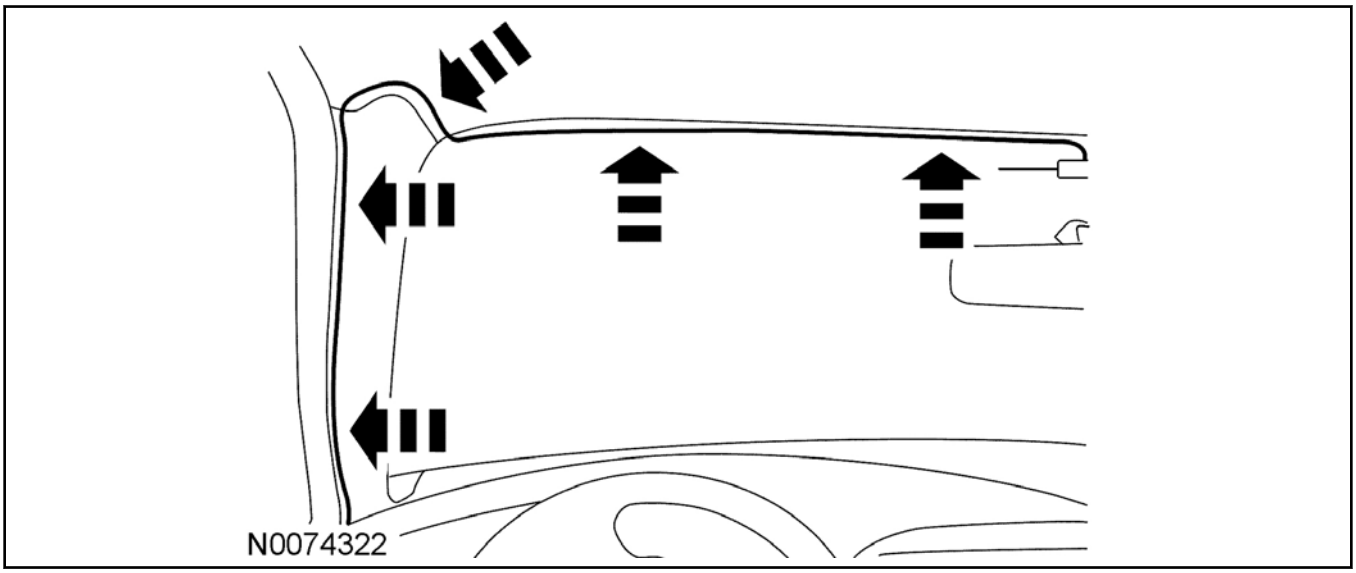
Remove the protective backing from the adhesive on the antenna and firmly press the body of the antenna to the windshield.



18. 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 the air bag.

19. Route the antenna cable along the headliner and down the A pillar towards the floor.



20. Reposition the A pillar trim panel.

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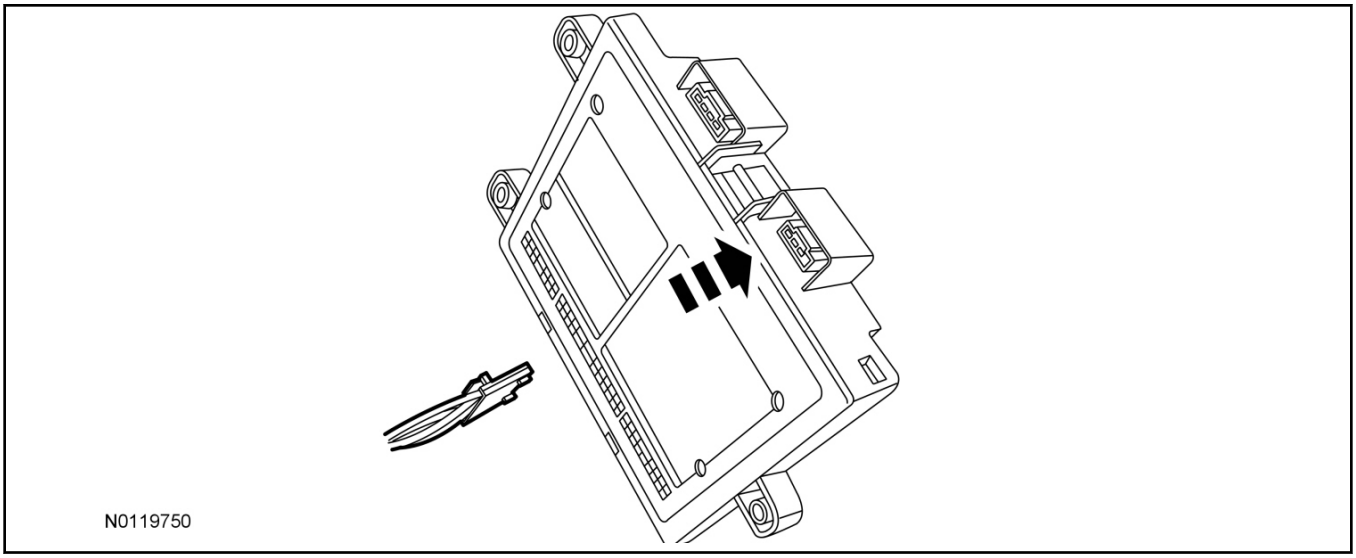
INSTALLATION (Continued)

Install the RMST Control Module and Harness Assembly

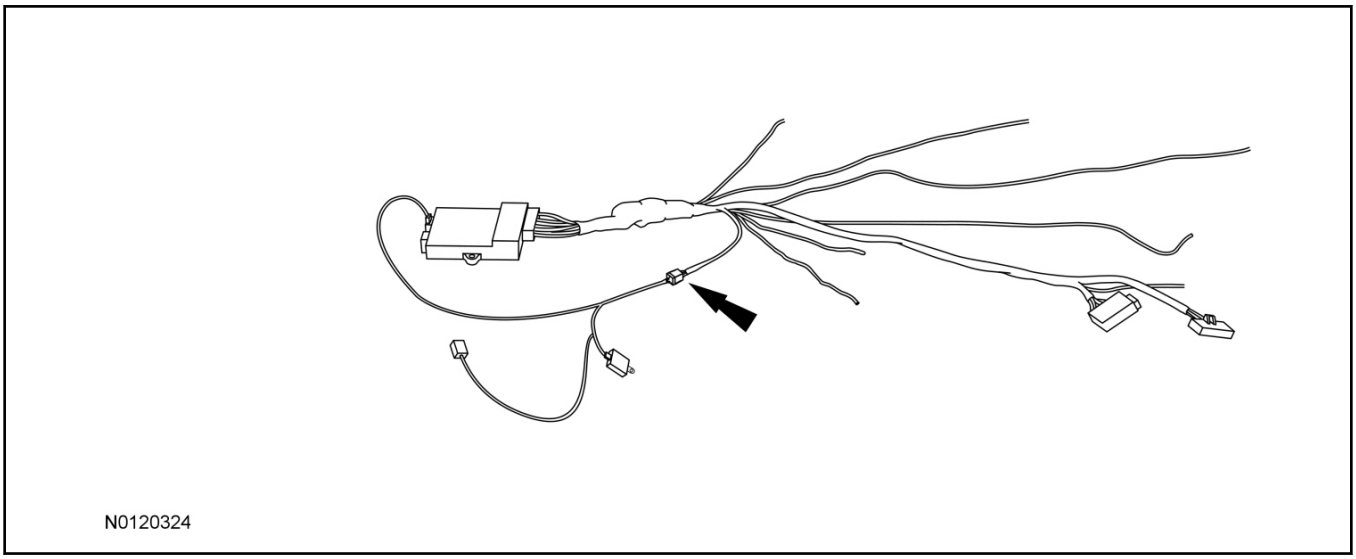
21. Place the RMST module and harness assembly on the floor of the vehicle.

Install the DNA-9 Relay Harness and Module

22. Disconnect the Passive Anti-Theft System (PATS) transceiver electrical connector.
23. Connect the DNA-9 relay harness to the PATS transceiver electrical connector and to the vehicle harness.
24. Connect the DNA-9 relay harness to the RMST module.



25. Connect the DNA-9 Module to the relay harness.
    - Secure to the right of the steering column with tie-straps.
26. Connect the DNA-9 relay harness to the 2-pin connector on the RMST module harness.



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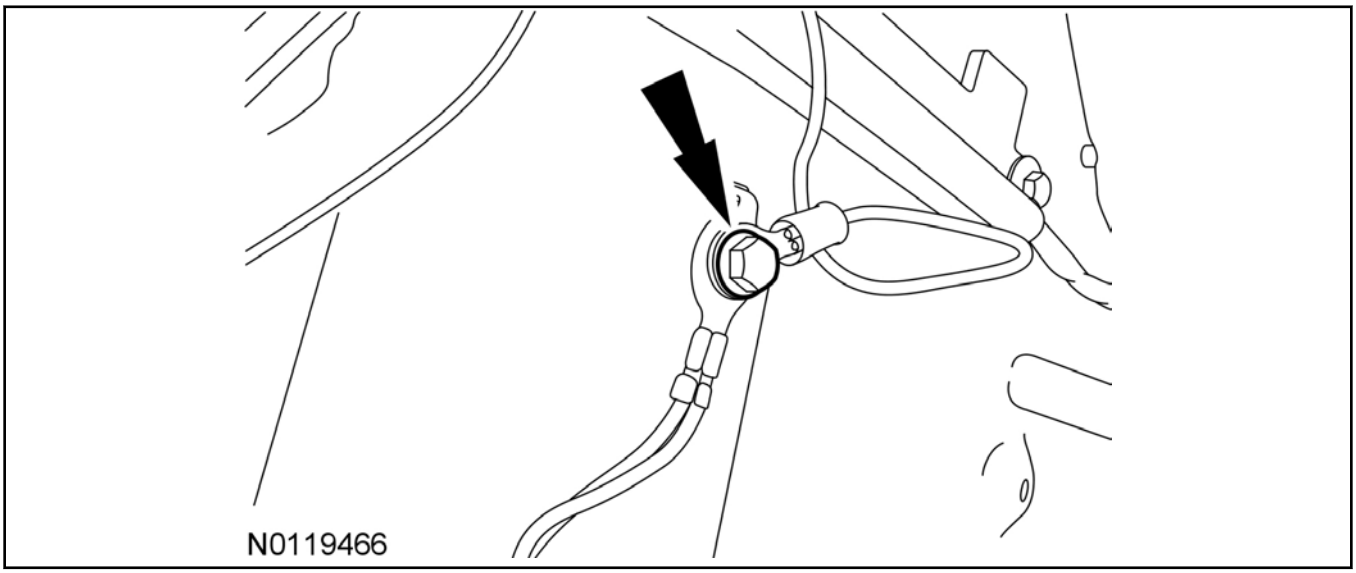
INSTALLATION (Continued)

Identify Circuit Wires For Connections

27. Connect the Black ground wire from the RMST module harness to the chassis ground point on the drivers side.
    - Chassis ground points are located near the drivers side sill plate.



28. Disconnect the ignition switch electrical connector.
29. Connect the RMST harness hard shell connectors to the ignition switch and ignition switch connector.
30. **NOTE:**
    A DVOM connected to the correct wire will show 12V, then show 0V when the horn button is held.
    A logic probe will show power on the correct wire, then show ground when the horn button is held.

    Identify the Brown horn circuit wire in the steering column harness.
31. Connect the Brown/Black wire from the RMST module harness to the Brown horn circuit wire in the steering column harness.
32. **NOTE:**
    This circuit should be tested with the ignition in the OFF position.

    NOTE:
    A DVOM connected to the correct wire will show open, then show ground when the key is turned to unlock in the key cylinder on the outside of the door.
    A logic probe will show open on the correct wire, then show ground when the key is turned to unlock in the key cylinder on the outside of the door.

    Identify the Yellow/Gray power door lock circuit wire at the BCM connector C2280G pin 6.
33. Connect the Blue wire from the RMST module harness to the Yellow/Gray power door lock circuit wire at BCM connector C2280G pin 6.

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INSTALLATION (Continued)

34. **NOTE:**
    A DVOM connected to the correct wire will show 0V, then show 12V while depressing the brake pedal.
    A logic probe will show ground on the correct wire, then show power while depressing the brake pedal.

    Identify the Blue/Gray brake switch circuit wire at the brake switch.

35. Connect the Brown wire from the RMST module harness to the Blue/Gray brake switch circuit wire at the brake switch harness.

36. **NOTE:**
    A DVOM connected to the correct wire will show 0V with the vehicle door(s) open and the dome light ON, then show 12V with the vehicle door(s) closed and the dome light OFF.

    NOTE:
    A logic probe connected to the correct wire will show ground with the vehicle door(s) open and dome light ON then show power with the vehicle door(s) closed and the dome light off.

    NOTE:
    Be sure that the dome light has timed out and is OFF before performing the door closed test.
    Be sure that the dome lamp is illuminated before performing the door open test.

    Identify the Yellow/Gray dome light circuit wire at the BCM connector C2280C pin 5.

37. Connect the Green/Violet wire from the RMST module harness to the Yellow/Gray dome light circuit wire at the BCM connector C2280C pin 5.

38. **NOTE:**
    A DVOM connected to the correct wire will show 12V with the parking light switch OFF, then show ground with the parking light switch ON.

    NOTE:
    A Logic probe will show power with the parking light switch OFF and ground with the parking light switch ON.

    Identify the Yellow/Blue parking lights circuit wire at the headlamp switch.

39. Connect the White wire from the RMST module harness to the Yellow/Blue parking lights circuit wire at the headlamp switch.

Install The Hood Safety Switch

40. **NOTE:**
    Route the hood safety switch wire carefully avoiding any moving parts or components that can produce excessive heat.

    NOTE:
    Using a piece of convolute adds in the appearance of the installation.

    NOTE:
    The switch should be positioned about 30 degrees below parallel to the ground to accommodate for parking on inclines.

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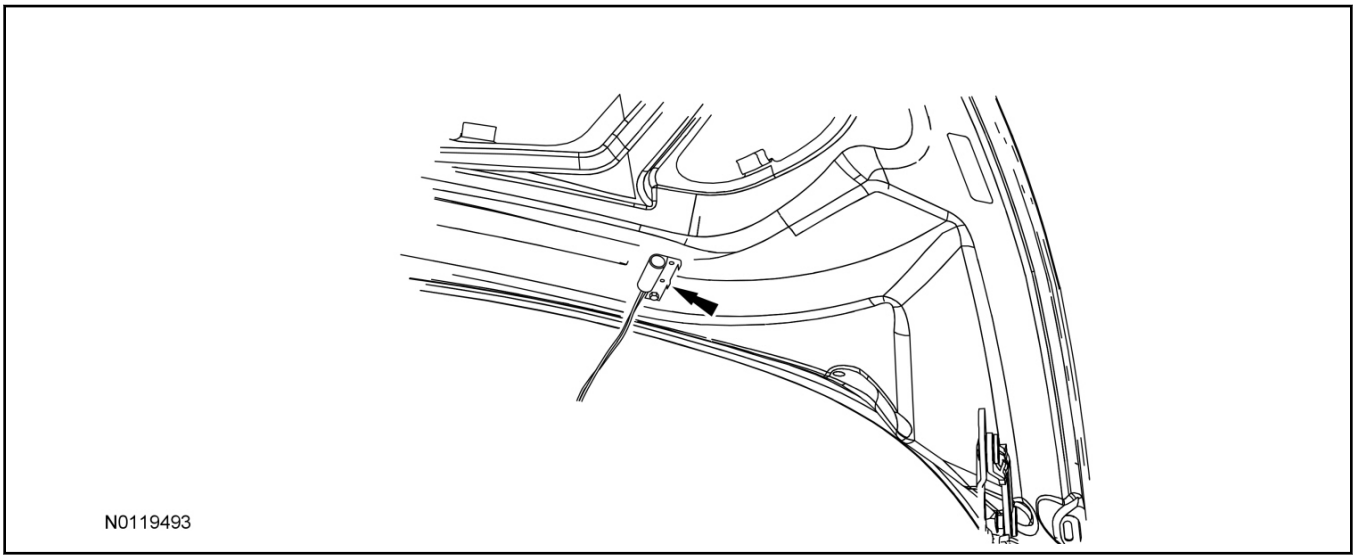
INSTALLATION (Continued)

Failure to position the switch properly could result in one of the following:

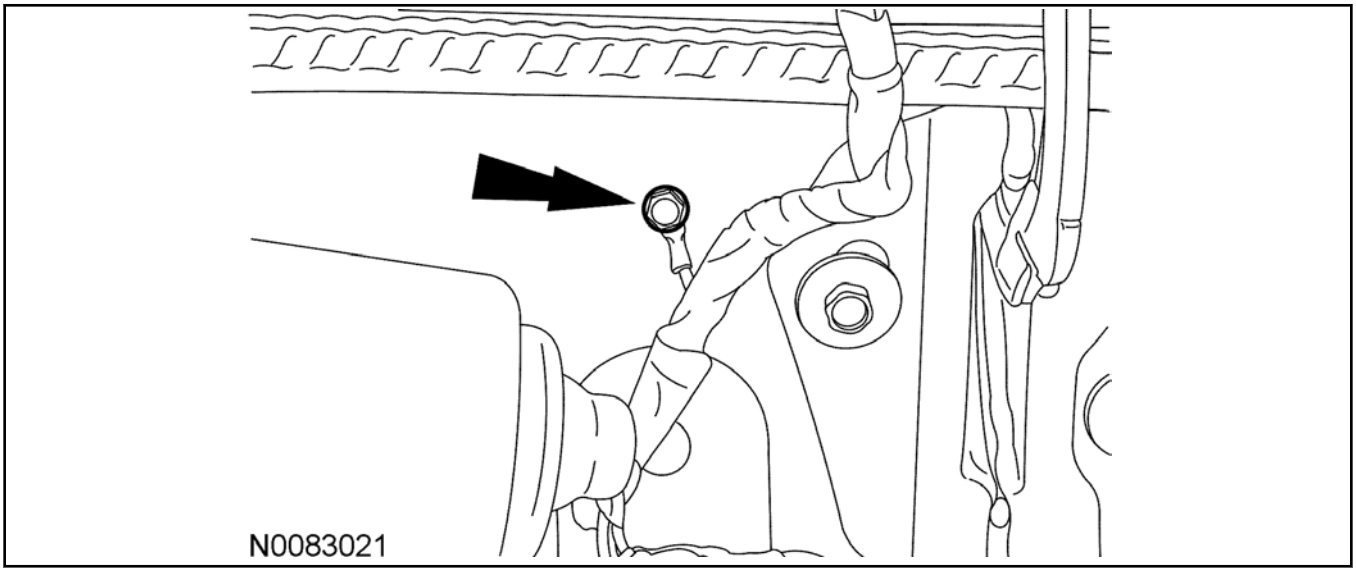
- False alarm trips
- Non-RMST events
- Inadvertent shutdown during RMST

Locate an easy to access area to the left of the driver side hood hinge and install the hood safety switch using the supplied metal screws.

41. Apply rustproofing compound (PM-13-A) to the drilled hole and torque the screw to 1.00 Nm (10 lb-in).



42. Connect hood switch ground wire to a suitable location on the bulkhead.



43. **NOTE:**
Place the label on the radiator fan shroud or similar area.

Install the underhood warning label

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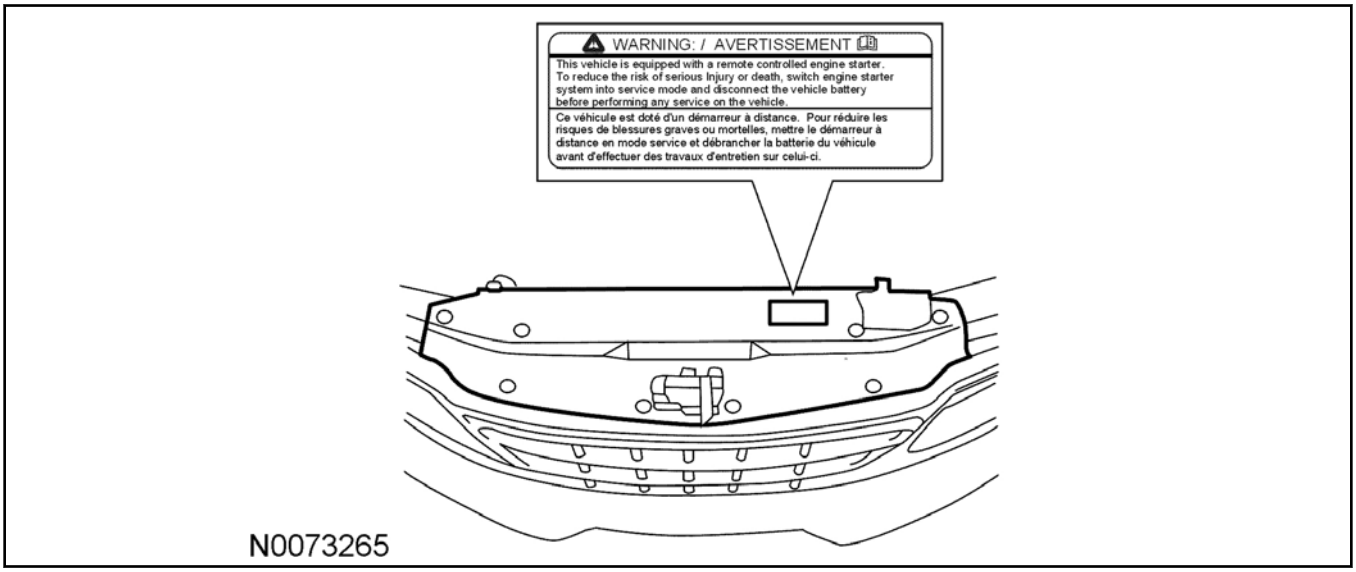
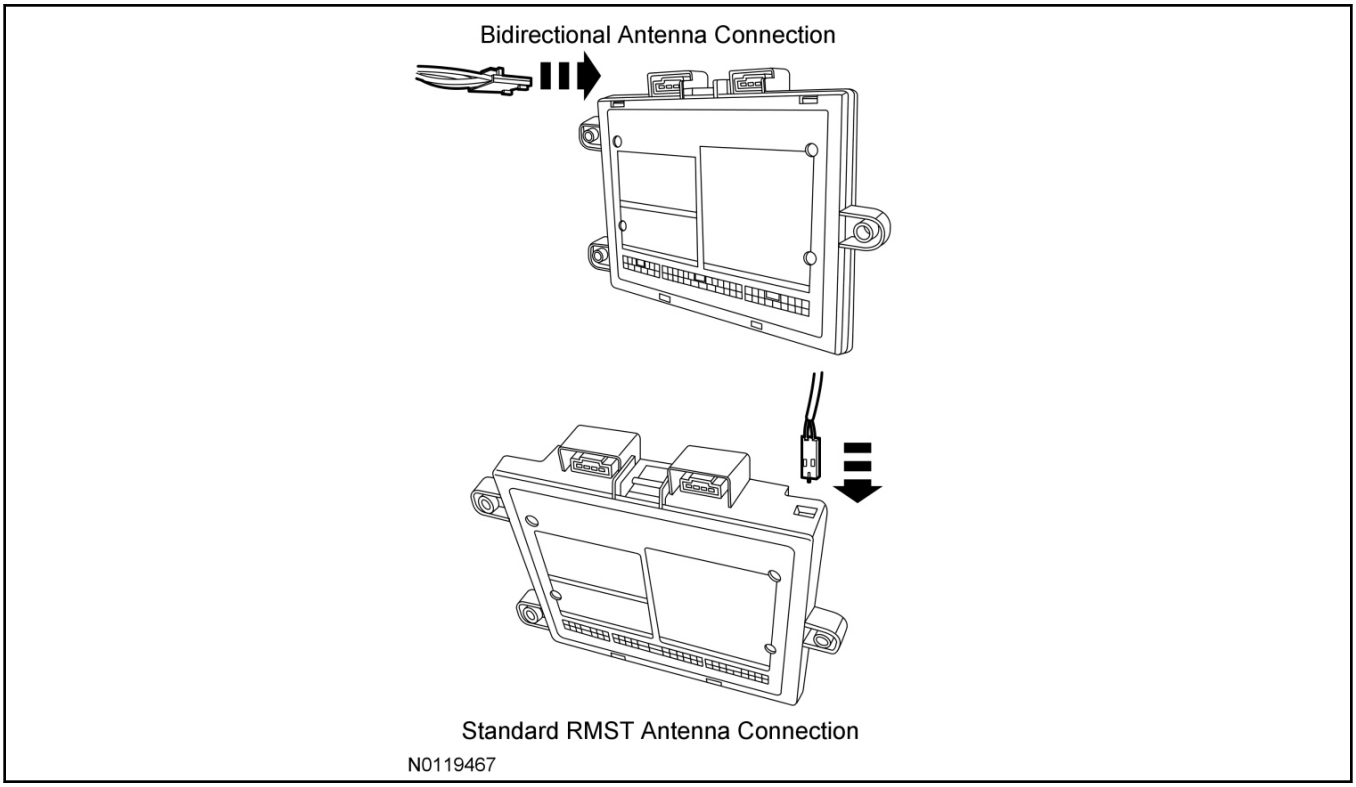
INSTALLATION (Continued)



44. Route the Gray hood safety switch wire through the bulkhead into the engine compartment and attach to the hood safety switch.

45. Connect the antenna to the RMST control module.



Program The RMST System

46. Refer to the RMST programming section for this vehicle.

Secure RMST Harness and Control Module

47. Use the supplied tie wraps to secure the RMST harness wires.

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INSTALLATION (Continued)

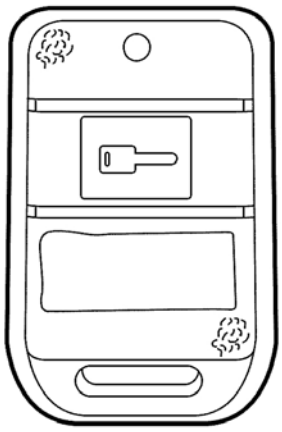
48. **NOTE:**
    Do not mount the control module in the knee bolster area.
    Secure the control module at three points to the vehicle.

    Use the supplied long tie wraps to mount the RMST control module to the underdash wiring harness, to the right of the steering column.

Install Trim

49. Install the upper and lower steering column shrouds.
    Install the retainers.
50. Install the glove compartment.
51. Install the RH lower Instrument panel Insulator.

Programming - Standard RMST



STANDARD RMST FOB

N0097291

NOTE:
If the RMST options (Key-in sense polarity, door ajar polarity, or tach mode) are not programmed correctly, vehicle will not RMST or operate properly.

NOTE:
The LED on the RMST harness must be visible to complete module programming.

NOTE:
The RMST override button must be accessible.

52. Make sure that the hood and doors are closed before proceeding.

Programming Options: Entering Programming Mode

53. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCRIPTION	LED
2	1	TACHLESS MODE	ON

54. Press and hold the brake pedal.

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55. Turn the ignition key to the RUN position.
    The dome light will turn off.
56. Press and hold the RMST system override button for at least 10 seconds. After 10 seconds the horn with honk 3 times, indicating the system is now in the learn mode. Release the brake pedal and the RMST override button.
57. Press and release the override button. The horn will honk 4 times indicating the system has entered the first program bank. If not, please check the following:
    - Brake pedal switch wire solder connection.
    - Hood closed and Grey hood safety switch wire solder connection.
    - All doors closed and dome light circuit wire solder connections.
    - The key is in the RUN position.
    - The software cartridge is firmly seated in the RMST module.
    - The RMST harness connections are firmly seated in the RMST module.

NOTE:
If you require additional assistance: CALL 1-800-FORD KEY.

58. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.
59. Press and release the brake pedal.
    The horn will honk 1 time indicating the system has entered the option 1 of the second program bank.

NOTICE:
When turning LED on or off using RMST fob button quickly press and immediately release the RMST button. Failure to quickly release the RMST fob button will result in system defaulting to the factory options.

60. The LED must be on for option 1. If the LED is illuminated no action is required. If the LED is not illuminated press the RMST fob button and verify the LED illuminates.

NOTE:
If the RMST fob button is held for more than 3 seconds the system will chirp the horn 4 times, indicating the system has returned to factory default settings. If this occurs return to step 1 of the programming section and reprogram the RMST module.

NOTE:
The RMST module is now programmed.

61. Remove the ignition key.

Programming the DNA-9

NOTE:
Two PATS keys are required to program the DNA-9.

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INSTALLATION (Continued)

NOTE:
IMPORTANT: Each of the following steps should be completed with no more than 5 seconds delay between steps.

62. Insert the first Ignition key and turn to the run position.
    Watch for the PATS light to turn off. Remove the first key.
63. Insert the second ignition key and turn to the run position.
    Watch for the PATS light to turn off. Remove the second key.
64. **NOTE:**
    If the PATS light blinks rapidly, repeat steps 1-3 to retry programming the SECURILOCK.

    NOTE:
    The engine will start if the RMST kit has been installed correctly, the brake is not depressed, and the hood and doors are closed.

    Press and hold the RMST button for 3 seconds.

    - The PATS light should stay on for 3-5 seconds before turning off, which means that the DNA-9 was successfully programed.

Functional Test - Standard RMST

NOTE:
If during any of the steps of the functional test, the RMST system or vehicle doesn't react or perform accordingly, please refer to the RMST troubleshooting guide.

65. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
66. Press and hold the Start button on the remote control key fob for 2-3 seconds - Horn should honk once indicating receipt of the start request.
67. The RMST systems should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.
68. Close the hood.
69. Open a door.
70. Attempt to re-start the vehicle again using the key fob.
71. The RMST systems should turn on the ignition, but then honk the horn three times and shut down indicating a door is open.
72. Close the door.
73. Attempt to re-start the vehicle again using the key fob.
74. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.
75. On vehicles equipped with power window interrupt, Attempt to close windows to check power window interrupt function.

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INSTALLATION (Continued)

76. Once all systems have been checked, open the door, or press the brake pedal - the RMST systems should shut down.

Troubleshooting

77. **NOTE:**
When attempting to remote start your vehicle, the system has several safety checks that it performs. If any of these inputs are present that should not be, the system will respond back to you with several horn "chirps" to help you identify which input is present. These "chirps" will occur after initiating a start sequence with the transmitter, the system will turn on the ignition, but then respond back with several horn "chirps" and abort the starting process.

Example: Depress the RMST fob button for 3 seconds and then release. The vehicle horn will "chirp" one time to indicate that RMST signal was received. If the vehicle doesn't start and the horn "chirps" 3 times, there is a fault - "Vehicle Door is Open"

CHIRPS	PROBLEM
1 Chirp	DNA-9 not programmed correctly, or the DNA-9 antenna ring is damaged.
2 Chirps	BRAKE is being pressed, or the HOOD is open.
3 Chirps	One of the vehicles DOORS are open.
4 Chirps	TACH not programmed.
5 Chirps	The KEY is in the ignition.
6 Chirps	The RMST system is in SERVICE/VALET mode.

Programming Bidirectional RMST

BIDIRECTIONAL FOB

N0097292

NOTE:
If the RMST options (Key-in sense polarity, door ajar polarity, or tach mode) are not programmed correctly, vehicle will not RMST or operate properly.

NOTE:
The LED on the RMST harness must be visible to complete module programming.

NOTE:
The RMST override button must be accessible.

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INSTALLATION (Continued)

78. Make sure that the hood and doors are closed before proceeding.

Programming Options: Entering Programming Mode

79. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCRIPTION	LED
2	1	TACHLESS MODE	ON

80. Press and hold the brake pedal.
81. Turn the ignition key to the RUN position.
    The dome light will turn off.
82. Press and hold the RMST system override button for at least 10 seconds.
    After 10 seconds the horn with honk 3 times, indicating the system is now in the learn mode.
    Release the brake pedal and the RMST override button.
83. Press and release the override button. The horn will honk 4 times indicating the system has entered the first program bank.
    If not, please check the following:
    - Brake pedal switch wire solder connection.
    - Hood closed and Grey hood safety switch wire solder connection.
    - All doors closed and dome light circuit wire solder connections.
    - The key is in the RUN position.
    - The software cartridge is firmly seated in the RMST module.
    - The RMST harness connections are firmly seated in the RMST module.

NOTE:
If you require additional assistance: CALL 1-800-FORD KEY.

84. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.
85. Press and release the brake pedal.
    The horn will honk 1 time indicating the system has entered the option 1 of the second program bank.

NOTICE:
When turning LED on or off using RMST fob button quickly press and immediately release the RMST button.
Failure to quickly release the RMST fob button will result in system defaulting to the factory options.

86. The LED must be on for option 1. If the LED is illuminated no action is required. If the LED is not illuminated press the RMST fob button and verify the LED illuminates.

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INSTALLATION (Continued)

NOTE:
If the RMST fob button is held for more than 3 seconds the system will chirp the horn 4 times, indicating the system has returned to factory default settings. If this occurs return to step 1 of the programming section and reprogram the RMST module.

NOTE:
The RMST module is now programmed.

87. Remove the ignition key.

Programming the DNA-9

NOTE:
Two PATS keys are required to program the DNA-9.

NOTE:
IMPORTANT: Each of the following steps should be completed with no more than 5 seconds delay between steps.

88. Insert the first ignition key and turn to the run position.
    Watch for the PATS light to turn off. Remove the first key.
89. Insert the second ignition key and turn to the run position.
    Watch for the PATS light to turn off. Remove the second key.

NOTE:
If the PATS light blinks rapidly, repeat steps 1-3 to retry programming the DNA-9.

NOTE:
The engine will start if the RMST kit has been installed correctly, the brake is not depressed, and the hood and doors are closed.

90. Press the RMST button key pic twice within 3 seconds.
    The PATS light should stay on for 3-5 seconds before turning off, which means that the DNA-9 was successfully programmed.

Functional Test - Bidirectional RMST

NOTE:
If during any of the steps of the functional test, the RMST system or vehicle doesn't react or perform accordingly, please refer to the RMST troubleshooting guide.

91. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
92. Press the Start button on the remote control key fob twice within 3 seconds - Horn should honk once indicating receipt of the start request.
93. The RMST systems should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.
94. Close the hood.

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INSTALLATION (Continued)

95. Open a door.
96. Attempt to re-start the vehicle again using the key fob.
97. The RMST systems should turn on the ignition, but then honk the horn three times and shut down indicating a door is open.
98. Close the door.
99. Attempt to re-start the vehicle again using the key fob.
100. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.
101. On vehicles equipped with power window interrupt, Attempt to close windows to check power window interrupt function.
102. Once all systems have been checked, press the brake pedal - the RMST systems should shut down.

Troubleshooting

103. **NOTE:**
When attempting to remote start your vehicle, the system has several safety checks that it performs. If any of these inputs are present that should not be, the system will respond back to you with several horn "chirps" to help you identify which input is present. These "chirps" will occur after initiating a start sequence with the transmitter, the system will turn on the ignition, but then respond back with several horn "chirps" and abort the starting process.

Example: Depress the RMST fob button for 3 seconds and then release. The vehicle horn will "chirp" one time to indicate that RMST signal was received. If the vehicle doesn't start and the horn "chirps" 3 times, there is a fault - "Vehicle Door is Open"

CHIRPS	PROBLEM
1 Chirp	DNA-9 not programmed correctly, or the DNA-9 antenna ring is damaged.
2 Chirps	BRAKE is being pressed, or the HOOD is open.
3 Chirps	One of the vehicles DOORS are open.
4 Chirps	TACH not programmed.

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'13 Fiesta - Key Start

TYPE "A" CUSTOM WIRE HARNESS

RMST MODULE WIRE HARNESS

STEERING COLUMN HARNESS

	Color	Function
A-3	PINK	Ignition Input/Output
A-2	ORANGE	HVAC Output
A-13	VIOLET	Starter Output
B-8	BLACK/WHITE	Key-in-sense Input
A-4	RED	Battery

	Color	Function
A-21	BROWN/BLACK	Horn Relay Output
A-1	WHITE	Parking Light Output

DRIVER'S KICK PANEL HARNESS

	Color	Function
A-5	BLACK	Ground
A-24	BLUE	Door Lock Output
B-7	BROWN	Brake Input
A-20	GREEN/VIOLET	Door Ajar Switch Input

UNDER HOOD HARNESS

	Color	Function
A-19	GRAY	Hood Open Switch Input

VEHICLE HARNESS

IGNITION SWITCH

Horn (BROWN)

STEERING COLUMN HARNESS

Parking Lights (YELLOW/BLUE)

HEADLAMP SWITCH

MAKE THIS CONNECTION FIRST!

CHASSIS GROUND POINT IN DRIVER' S KICK PANEL

Door Lock (YELLOW/GRAY)

BCM C2280G PIN 6

Brake (BLUE/GRAY)

BRAKE SWITCH HARNESS

Dome Light Return (YELLOW/GRAY)

BCM C2280C PIN 5

Vehicle Interior

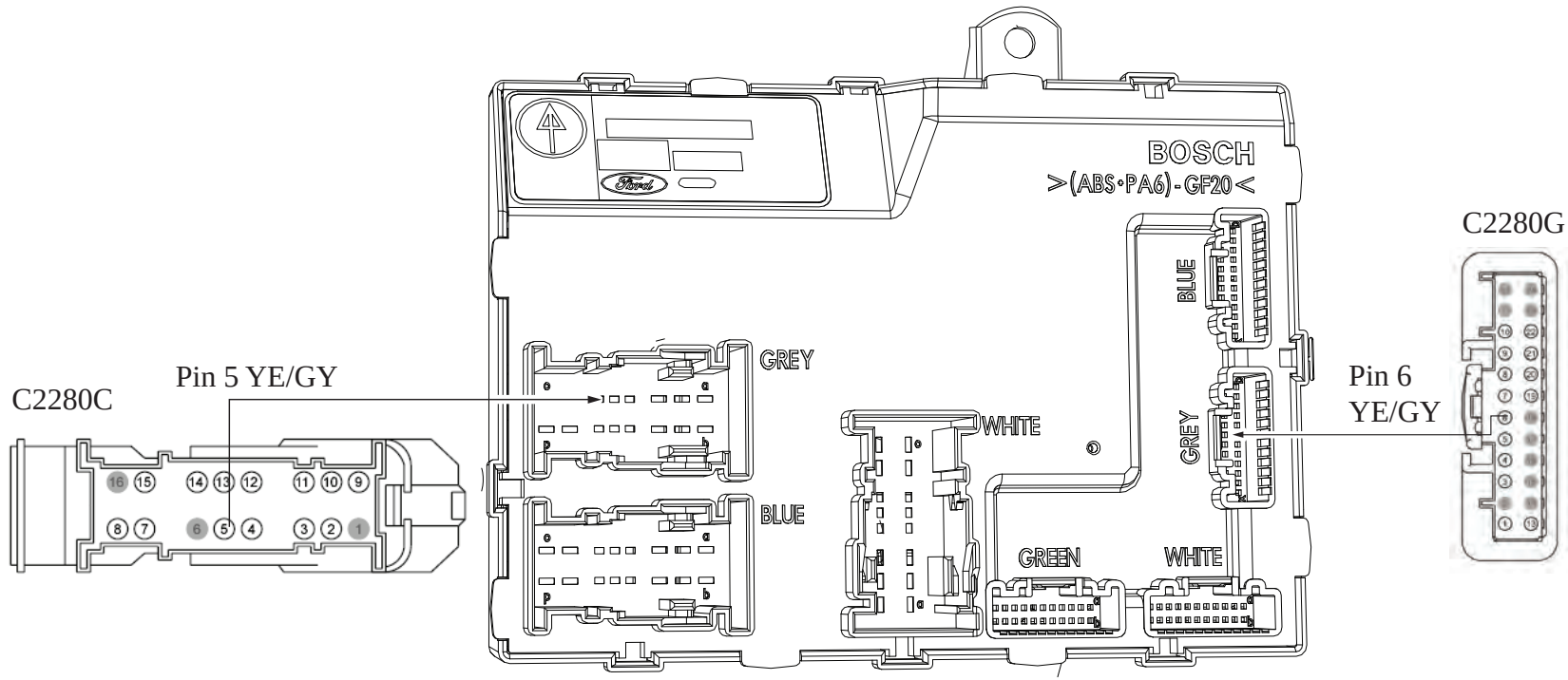
Engine Compartment

Hood Tilt Switch

Chassis Ground

Do Not Ground to Hood!

Body Control Module (BCM)



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REMOTE START SYSTEM INSTALLATION

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Troubleshooting

WIRING DIAGRAMS
Vehicle Specific Wiring Diagrams

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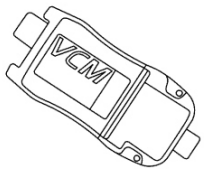
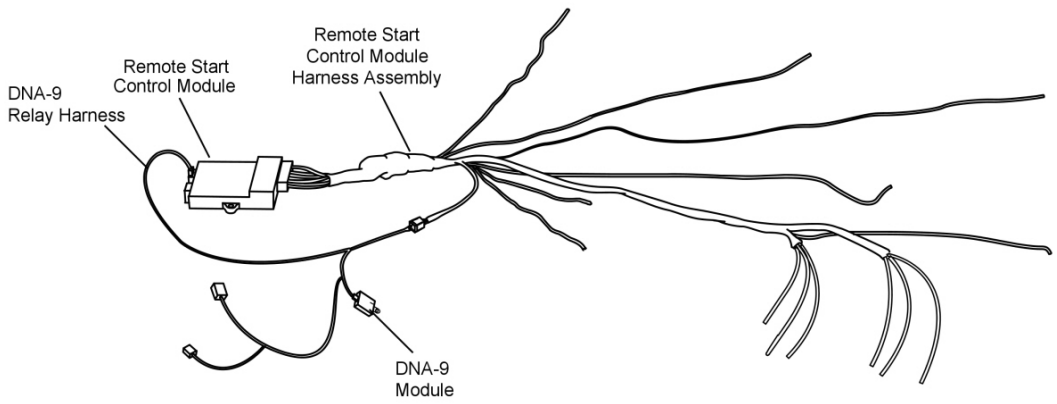
INSTALLATION

Remote Start System (RMST)

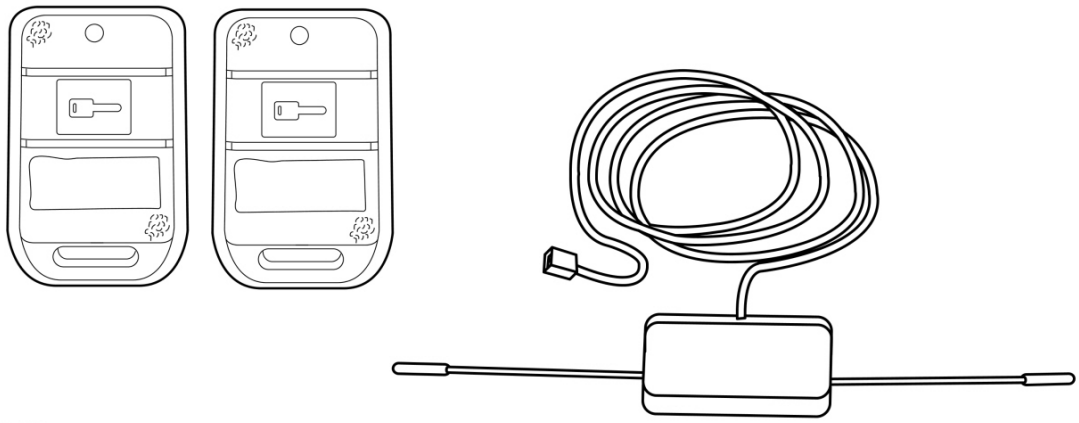
Special Tool(s)

 ST2834-A	Vehicle Communication Module (VCM) and Integrated Diagnostic System (IDS) software with appropriate hardware, or equivalent scan tool

RMST Components



Additional "Standard RMST" Components



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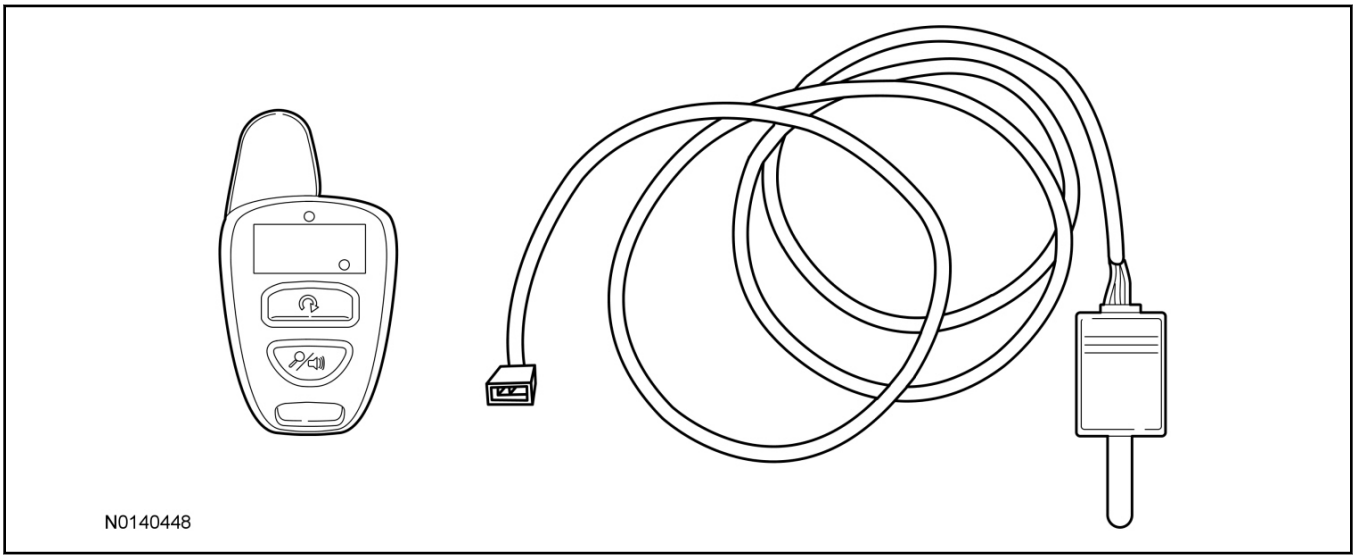
INSTALLATION (Continued)

Additional "Bi-directional RMST" Components



Fiesta - Push Button Start

NOTICE:
RMST systems are only applicable to vehicles with automatic transmissions.

1. Verify correct kit number.

Review RMST Installation Kit Contents

NOTE:
Kits are vehicle specific and are not interchangeable.

2. Review the RMST kit contents.

RMST Standard Kit Type - "A"

QUANTITY	DESCRIPTION
1	TYPE - "A" MODULE ASSEMBLY
1	RMST SOFTWARE CARTRIDGE ASSEMBLY
2	1 BUTTON POWER CODE TRANSMITTER
1	TYPE - "A" CUSTOM WIRING HARNESS
1	ANTENNA
1	HOOD SAFETY SWITCH ASSEMBLY
1	INSTALLATION PARTS BAG
1	FUSE PARTS BAG
1	OPERATORS INSTRUCTIONS
1	UNDERHOOD WARNING LABEL
1	DNA-9 MODULE

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INSTALLATION (Continued)

RMST Standard Kit Type - "A"(Continued)

1	DNA-9 RELAY HARNESS
2	Wire Harness Label

3. Review the RMST bidirectional kit contents.

RMST System Bidirectional Kit Type - "A"

QUANTITY	DESCRIPTION
1	TYPE - "A" MODULE ASSEMBLY
1	RMST SOFTWARE CARTRIDGE ASSEMBLY
1	2 BUTTON POWER CODE TRANSMITTER
1	TYPE - "A" CUSTOM WIRING HARNESS
1	ANTENNA
1	ANTENNA HARNESS
1	HOOD SAFETY SWITCH ASSEMBLY
1	INSTALLATION PARTS BAG
1	FUSE PARTS BAG
1	OPERATORS INSTRUCTIONS
1	UNDERHOOD WARNING LABEL
1	DNA-9 MODULE
1	DNA-9 RELAY HARNESS
1	REAR-VIEW MIRROR INFORMATION CARD
2	Wire Harness Label

Module Preparation

4. Place the supplied fuses into the power distribution block on the RMST control module.
   - Move the polarity jumpers to their proper locations on the control module. Refer to the following illustration.

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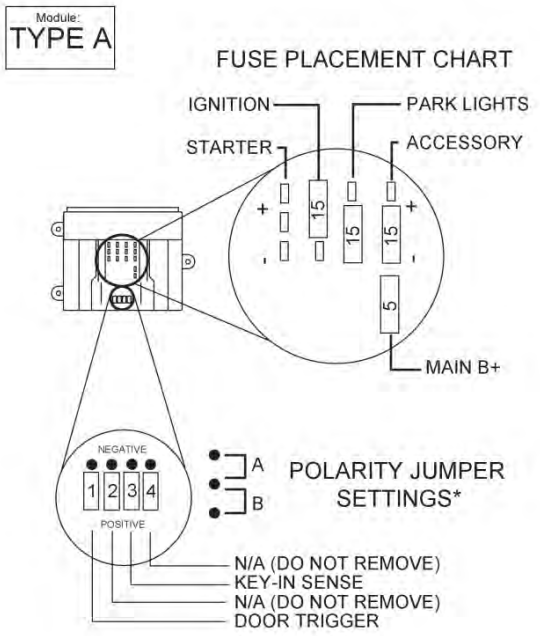
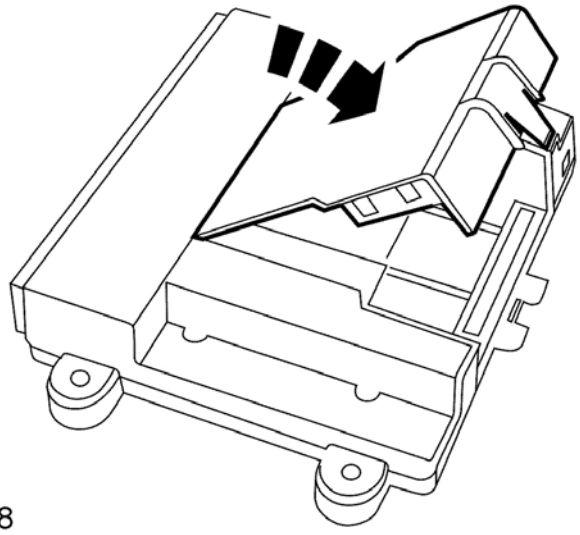
INSTALLATION (Continued)



5. Place the software cartridge onto the RMST control module.



6. Plug the wiring harness(es) into the module.
   - A - Harness: 24-way, used on all systems.
   - B - Harness: 10-way, used on all systems with RMST.
   - C - Harness: 16-way, used on all systems with RMST.

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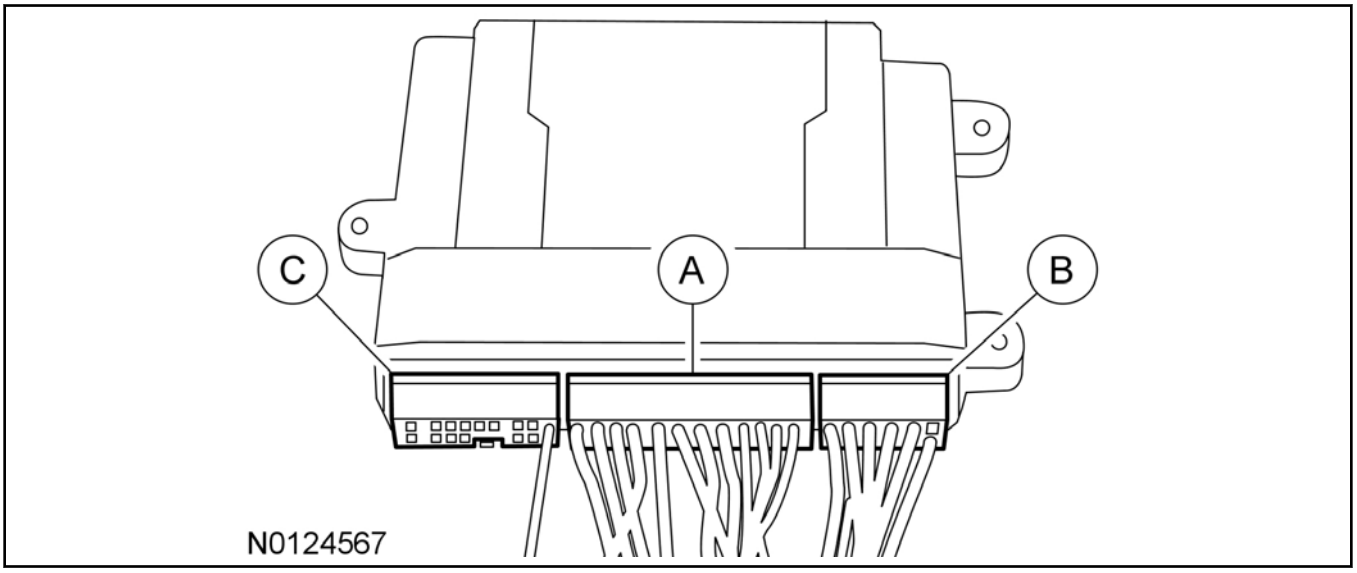
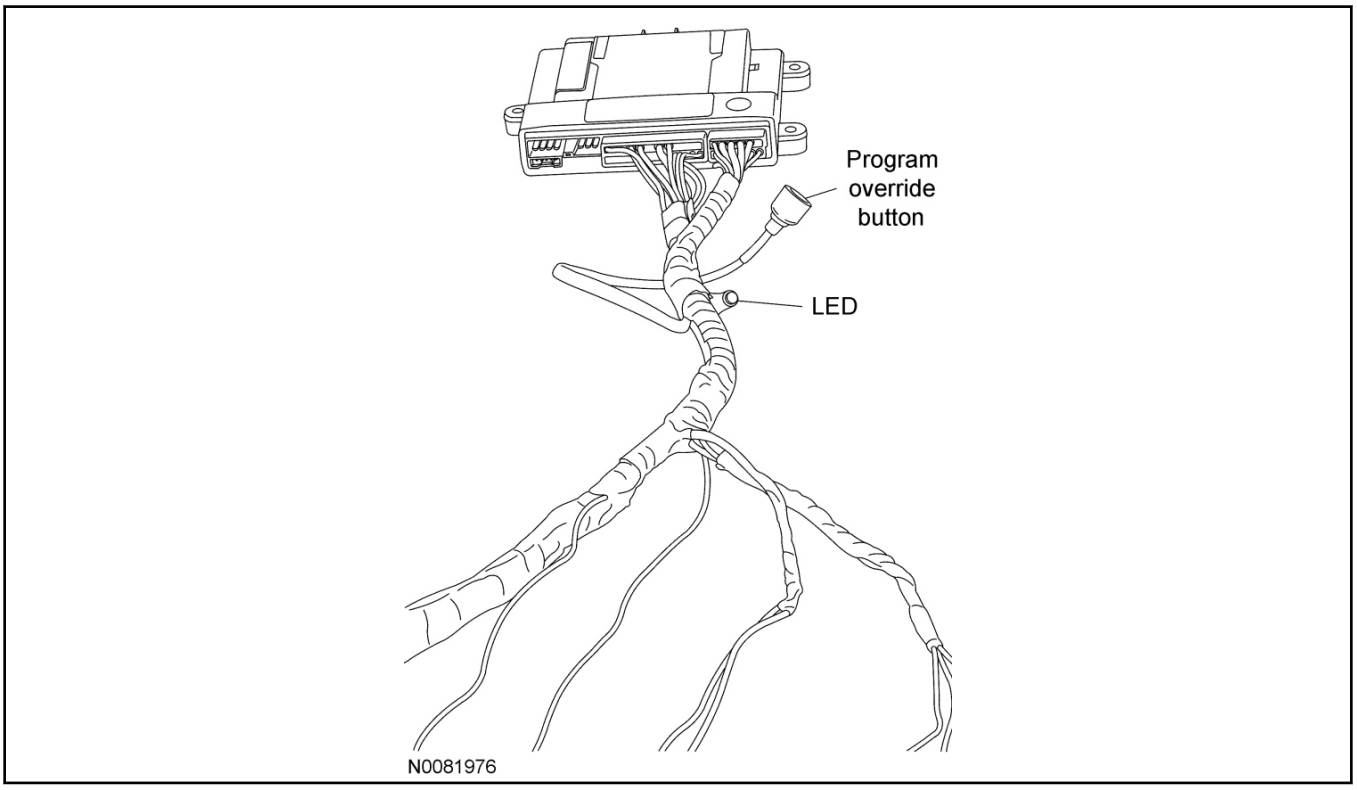
INSTALLATION (Continued)



7. **NOTE:**
   Do not cut the override programming button from the harness, it is used for all installations.

   Referring to the vehicle specific wiring section for the system being installed, gather all individual wires that will be routed to the same areas of the vehicle into groups. Cover each wire group with electrical tape for approximately 18". Depending on the vehicle, there will be 2 to 5 different wire groups.
   Trim the unused wires approximately 6 - 8" from the module.



8. Tape the harness sections together, making sure to cover all of the unused wires.

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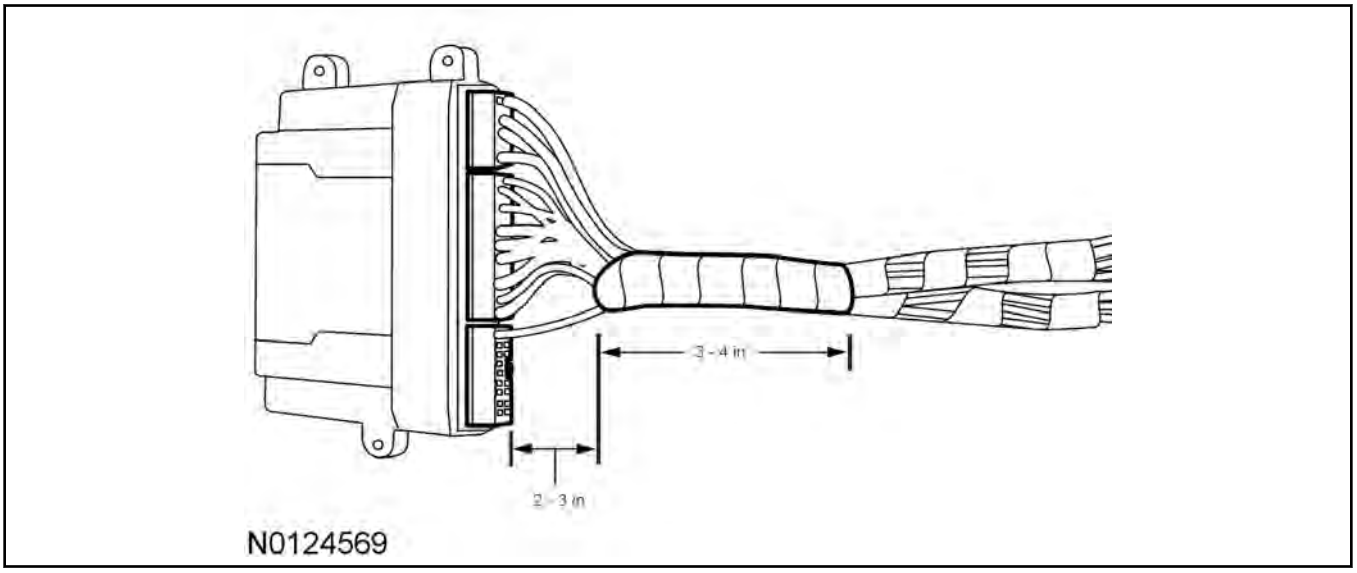
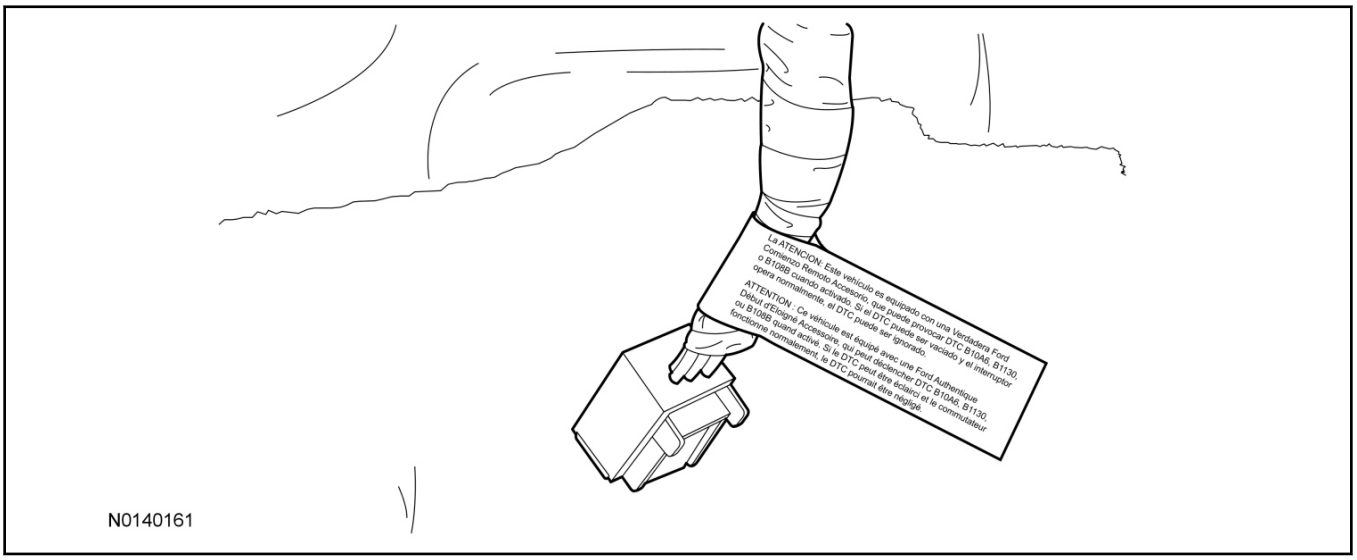
INSTALLATION (Continued)



Vehicle Preparation

9. Remove the retainers and the upper and lower steering column shrouds.
10. Open and remove the glove box.
11. Remove the RH lower instrument panel insulator.
12. Using a suitable non-marring tool, work around the outer edge of the headlamp switch to release the clips and pull the switch out through the front of the finish panel.
    - Disconnect the electrical connector.
13. Install the supplied wire harness label to the headlamp switch harness.
    - If required, fish the headlamp switch wire harness out of the instrument panel.



14. Connect and Install the headlamp switch.
15. Remove the start/stop switch. For additional Information, refer to Workshop Manual (WSM), Section 211-05.

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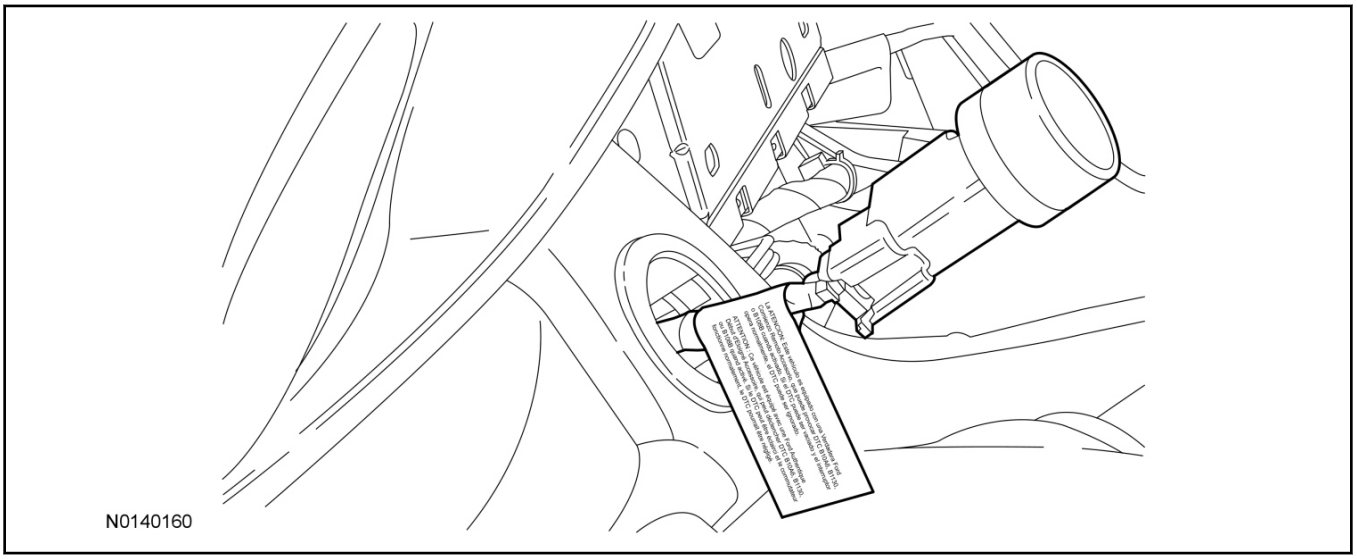
16. Install the supplied wire harness label to the start/stop switch harness.



17. Install the start/stop switch. For additional Information, refer to WSM, Section 211-05.

Antenna Mounting

NOTE:
For good range of operation, the antenna must be installed correctly.

NOTE:
Keep these points in mind when selecting a location and mounting the antenna.

- Do not mount the antenna behind or on any metal film or window tinting on the windshield.
- Do not mount the antenna so that one of the antenna elements touches or crosses any vehicle wiring and/or metal.
- On vehicles without metal film in the windshield around the rear view mirror, mount the antenna between the headliner and the rear view mirror.
- On vehicles equipped with an electronic mirror, or on vehicles with metal film around the rearview mirror, mount the antenna approximately 3 inches below the mirror attachment point to the windshield and/or mirror electronics.

18. Choose a suitable mounting location based on the guidelines above.

Install the Antenna

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

20. **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.

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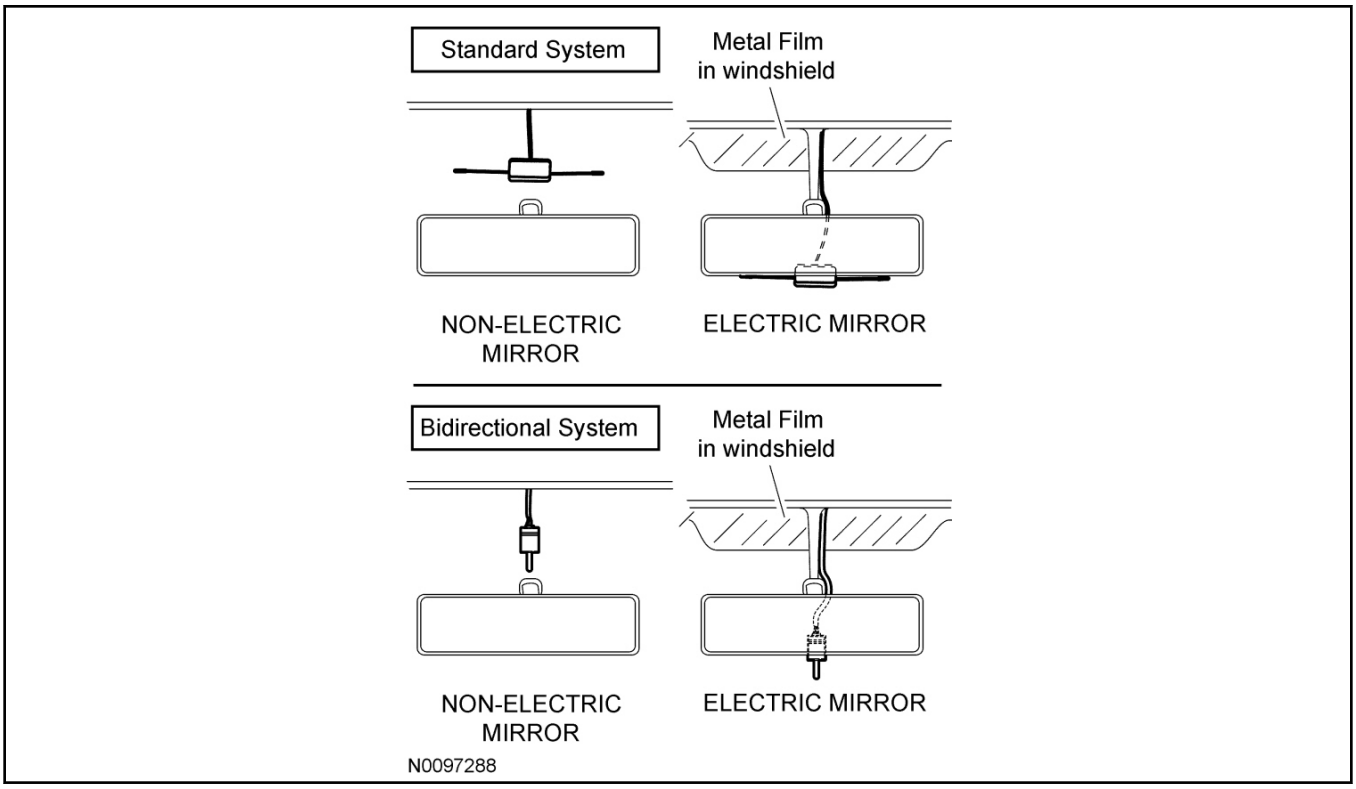
INSTALLATION (Continued)

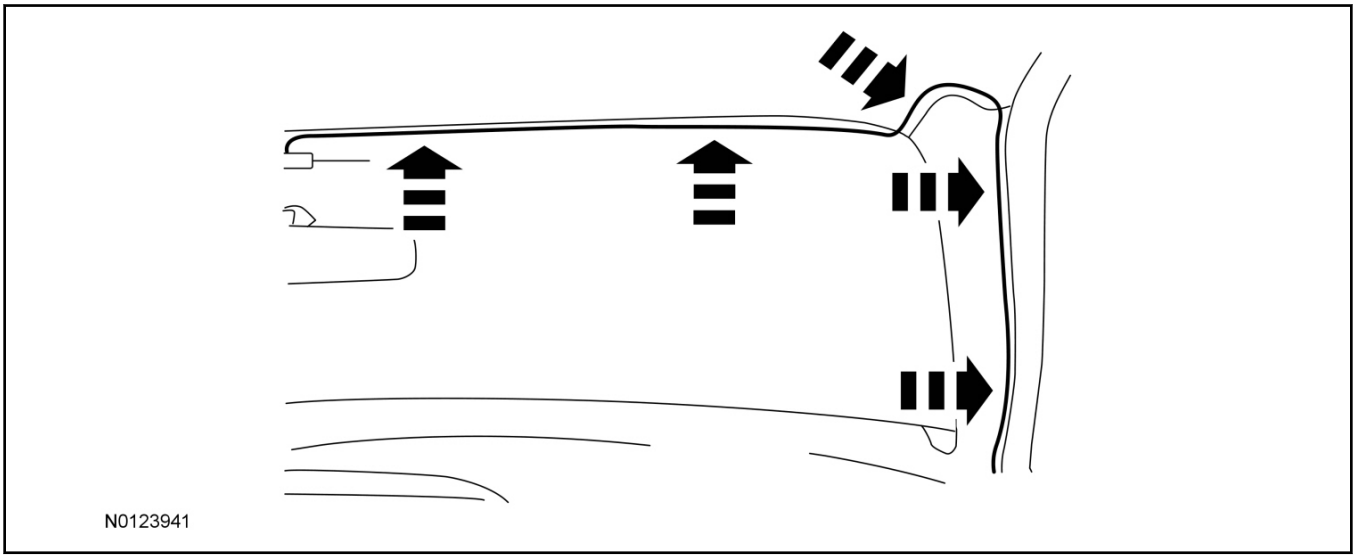
Remove the protective backing from the adhesive on the antenna and firmly press the body of the antenna to the windshield.



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

NOTE:
Do not route the antenna wire over the top of the air bag.

22. Route the antenna cable along the headliner and down the A-pillar towards the floor.



23. Reposition the A-pillar trim panel.

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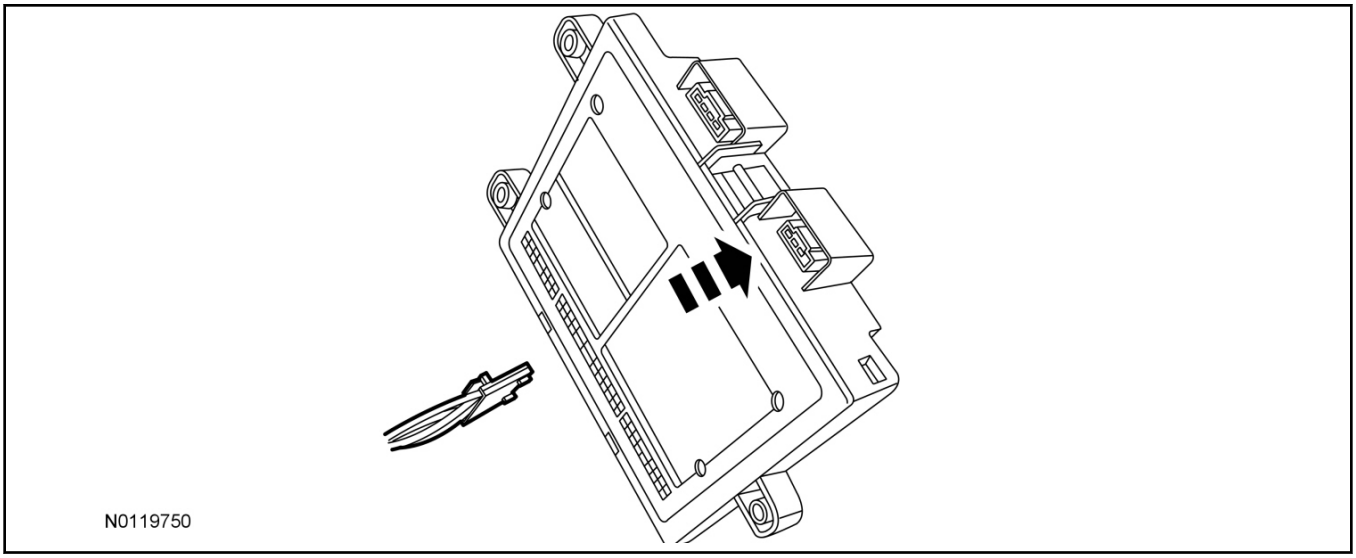
INSTALLATION (Continued)

Install the RMST Control Module and Harness Assembly

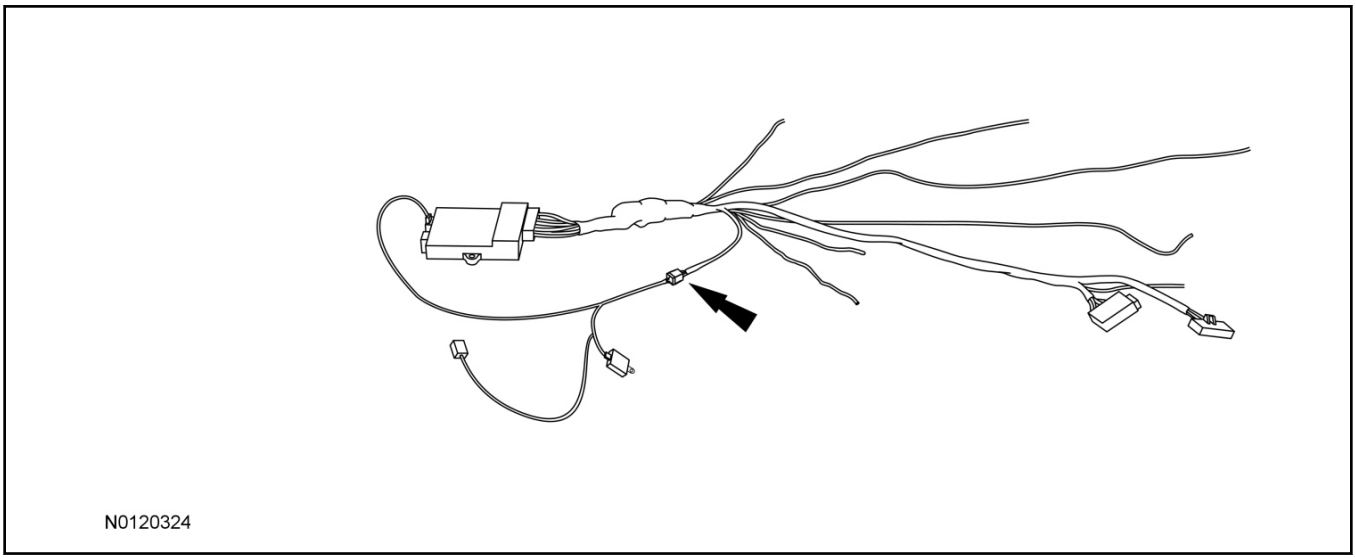
24. Place the RMST module and harness assembly on the passenger side floor.

Install the DNA-9 Relay Harness and Module

25. Disconnect the passive anti-theft system (PATS) transceiver electrical connector.
26. Connect the DNA-9 relay harness to the PATS transceiver electrical connector and to the vehicle harness.
27. Connect the DNA-9 relay harness to the RMST module.



28. Connect the DNA-9 module to the relay harness.
    - Secure to the right of the steering column with tie-straps.
29. Connect the DNA-9 relay harness to the 2-pin connector on the RMST module harness.



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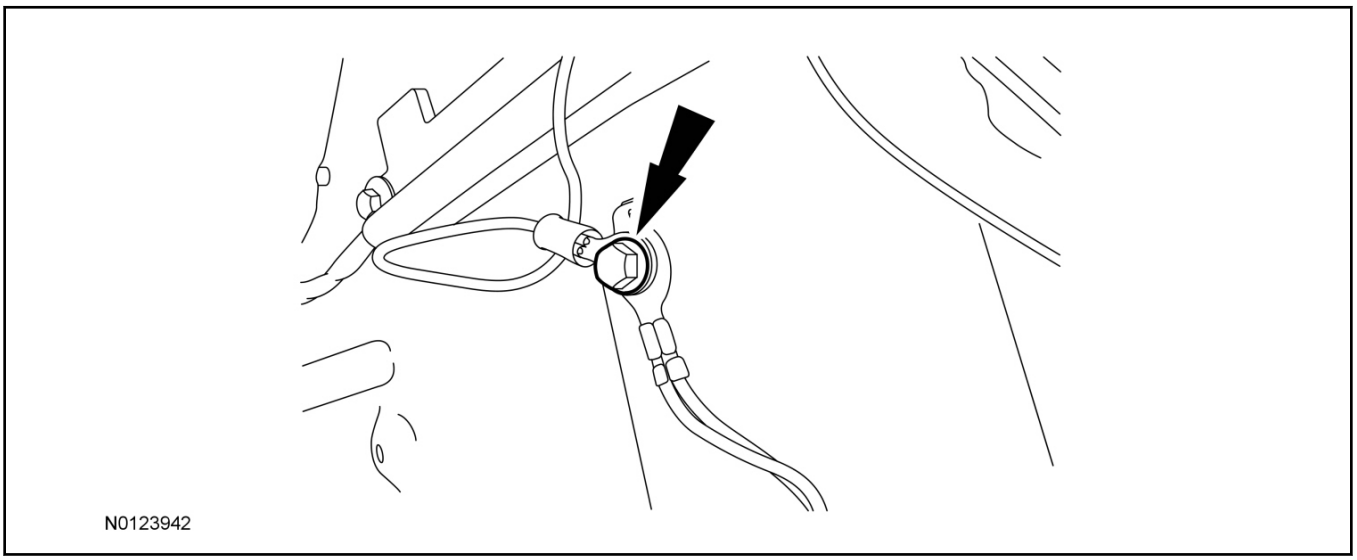
INSTALLATION (Continued)

Identify Circuit Wires For Connections

30. Connect the Black ground wire from the RMST module harness to the chassis ground point on the passenger side.

    - Chassis ground points are located near the passenger side sill plate.



31. **NOTE:**
    A DVOM connected to the correct wire will show 12V, then show 0V when the horn button is held.
    A logic probe will show power on the correct wire, then show ground when the horn button is held.

    Identify the Brown horn circuit wire at the body control module (BCM) connector C2280E pin 21.

32. Connect the Brown/Black wire from the RMST module harness to the Brown horn circuit wire at BCM connector C2280E pin 21.

33. **NOTE:**
    This circuit should be tested with ignition OFF.

    NOTE:
    A DVOM connected to the correct wire will show open, then show 0V when a key is turned to unlock, in one of the exterior door lock cylinders.
    A logic probe will show open on the correct wire, then show ground when a key is turned to unlock, in one of the exterior door lock cylinders.

    Identify the Yellow/Gray power door lock circuit wire at the BCM connector C2280G pin 6.

34. Connect the Blue wire from the RMST module harness to the Yellow/Gray power door lock circuit wire at BCM connector C2280G pin 6.

35. **NOTE:**
    A DVOM connected to the correct wire will show 0V, then show 12V while depressing the brake pedal.
    A logic probe will show ground on the correct wire, then show power while depressing the brake pedal.
    (4 door) Identify the Blue/Gray brake switch circuit at the Central Junction Box.
    (5 door) Identify the Blue/Gray brake switch circuit at the passenger's side door sill harness.

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INSTALLATION (Continued)

36. Connect the Brown wire from the RMST module harness to the Blue/Gray brake switch wire at the passenger's side door sill (5 door) or the Central Junction Box (4 door).
37. **NOTE:**
    A DVOM connected to the correct wire will show 0V with the vehicle door(s) open and the dome light ON, then show 12V with the vehicle door(s) closed and the dome light OFF.

    NOTE:
    A logic probe connected to the correct wire will show ground with the vehicle door(s) open and the dome light ON, then show power with the vehicle door(s) closed and the dome light OFF.

    NOTE:
    Be sure that the dome light has timed out and is OFF before performing the door closed test.
    Be sure that the dome lamp is illuminated before performing the door open test.

    Identify the Yellow/Gray dome light circuit wire at the BCM connector C2280C pin 5.
38. Connect the Green/Violet wire from the RMST module harness to the Yellow/Gray dome light circuit wire at the BCM connector C2280C pin 5.
39. **NOTE:**
    A DVOM connected to the correct wire will show low power with the headlamp switch in the OFF position, then show 0V with the headlamp switch in the parking lights ON position.

    NOTE:
    A logic probe will show ground with the headlamp switch in the ON position and OPEN with the switch in the OFF position.

    Identify the Yellow/Blue parking lights circuit wire at the headlamp switch.
40. Connect the White wire from the RMST module harness to the Yellow/Blue parking lights circuit wire at the headlamp switch.
41. **NOTE:**
    A DVOM connected to the correct wire will show 0V then show power with the brake pedal depressed.

    NOTE:
    A logic probe will show ground and then power with the brake pedal depressed.

    Identify the Green/Blue brake pedal switch circuit wire at the brake pedal switch harness.
42. Connect the Dark Green wire from the RMST module harness to the Green/Blue brake pedal switch circuit wire at the brake pedal switch harness.
43. **NOTE:**
    A DVOM connected to the correct wire will show near 0V then show 12V when the ignition switch is pressed.

    NOTE:
    A logic probe will show open/low power and then power when the ignition switch is pressed.

    Identify the Gray/Brown ignition switch circuit wire at BCM connector C2280B Pin 12.

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INSTALLATION (Continued)

44. Connect the Pink wire from the RMST module harness to the Gray/Brown ignition switch circuit wire at BCM connector C2280B Pin 12.

45. **NOTE:**
A DVOM connected to the correct wire will show power then show 0V when the ignition switch is pressed.

NOTE:
A logic probe will show the wire rests at power and then ground when the ignition switch is pressed.

Identify the Yellow/Orange starter circuit wire at the passenger side kick panel connector C212 Pin 43.

46. Connect the Violet wire from the RMST module harness to the Yellow/Orange starter circuit wire at the passenger side kick panel connector C212 Pin 43.

47. **NOTE:**
A DVOM connected to the correct wire will show power, then show 0V when a key is turned to unlock, in one of the exterior door lock cylinders.
A logic probe will show power on the correct wire, then show ground when a key is turned to unlock, in one of the exterior door lock cylinders.

Identify the Blue/Brown Unlock Sense circuit wire at BCM connector C2280G Pin 5.

48. Connect the Blue/Orange wire from the RMST module harness to the Blue/Brown Unlock Sense circuit wire at BCM connector C2280G Pin 5.

49. **NOTE:**
A DVOM connected to the correct wire will show 0V, then show power when the driver door is open.
A logic probe will show ground on the correct wire, then show power when the driver door is open.

Identify the Green/Violet door ajar circuit wire at BCM connector C2280G Pin 10.

50. Cut the Green/Violet door ajar circuit wire at BCM connector C2280G Pin 10.

51. Splice one of the following wires to each side of the previously cut Green/Violet door ajar circuit wire at BCM connector C2280G Pin 10.
    - Orange/Black wire from the RMST module harness to the harness side of the cut.
    - Orange wire from the RMST module harness to the BCM side of the cut.

Power Connection

52. **NOTE:**
A DVOM connected to the correct wire will show 12V with the ignition in the OFF position.

NOTE:
A logic probe will show power with the ignition in the OFF position.

Identify the Red battery circuit wire at the BCM connector C2280A Pin 1.

53. Connect the Red wire from the RMST module harness to the Red battery circuit wire at the BCM connector C2280A Pin 1.

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Install the Hood Safety Switch

54. **NOTE:**
    Route the hood safety switch wire carefully avoiding any moving parts or components that can produce excessive heat.

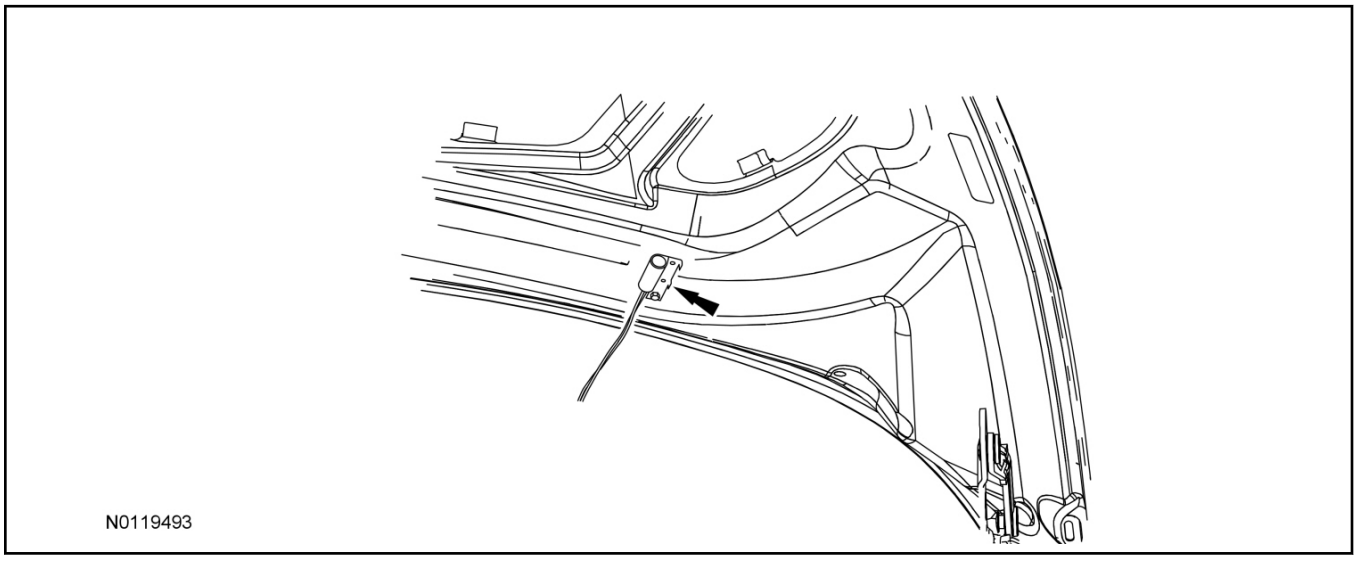
    NOTE:
    Using a piece of convolute adds in the appearance of the installation.

    NOTE:
    The switch should be positioned about 30 degrees below parallel to the ground to accommodate for parking on inclines.
    Failure to position the switch properly could result in one of the following:

    - False alarm trips
    - Non-RMST events
    - Inadvertent shutdown during RMST

    Locate an easy to access area to the left of the driver side hood hinge and install the hood safety switch using the supplied metal screws.

55. Apply rustproofing compound (PM-13-A) to the drilled hole and torque the screw to 1.00 Nm (10 lb-in).



56. Connect the hood switch ground wire to a suitable location on the bulkhead.

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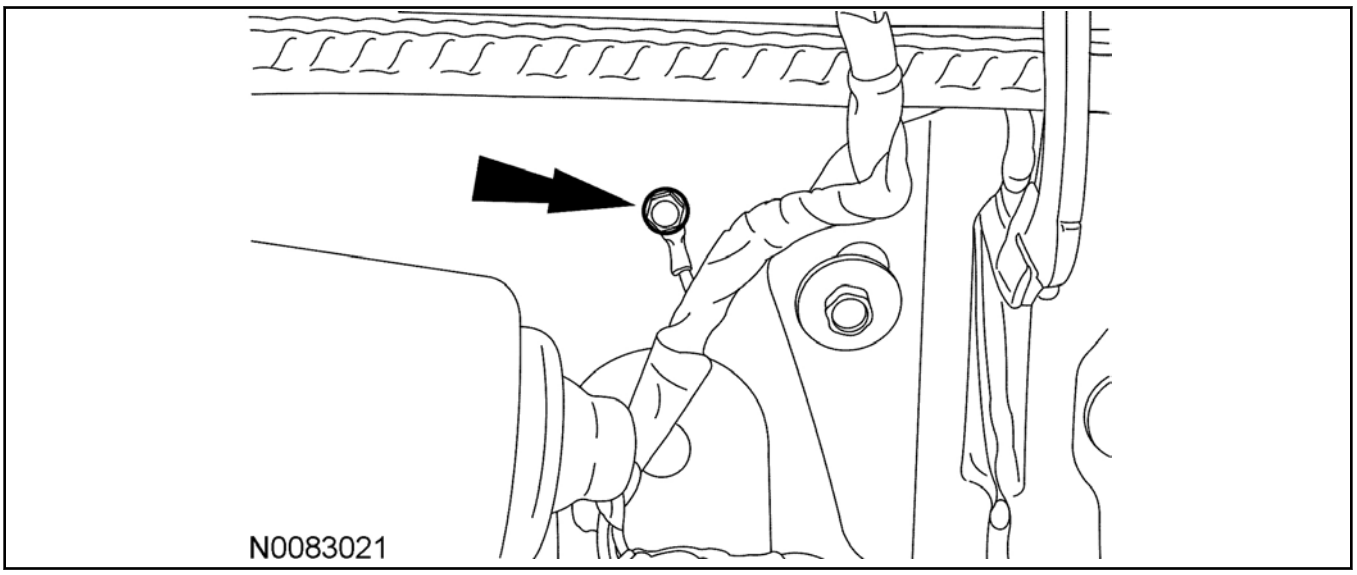
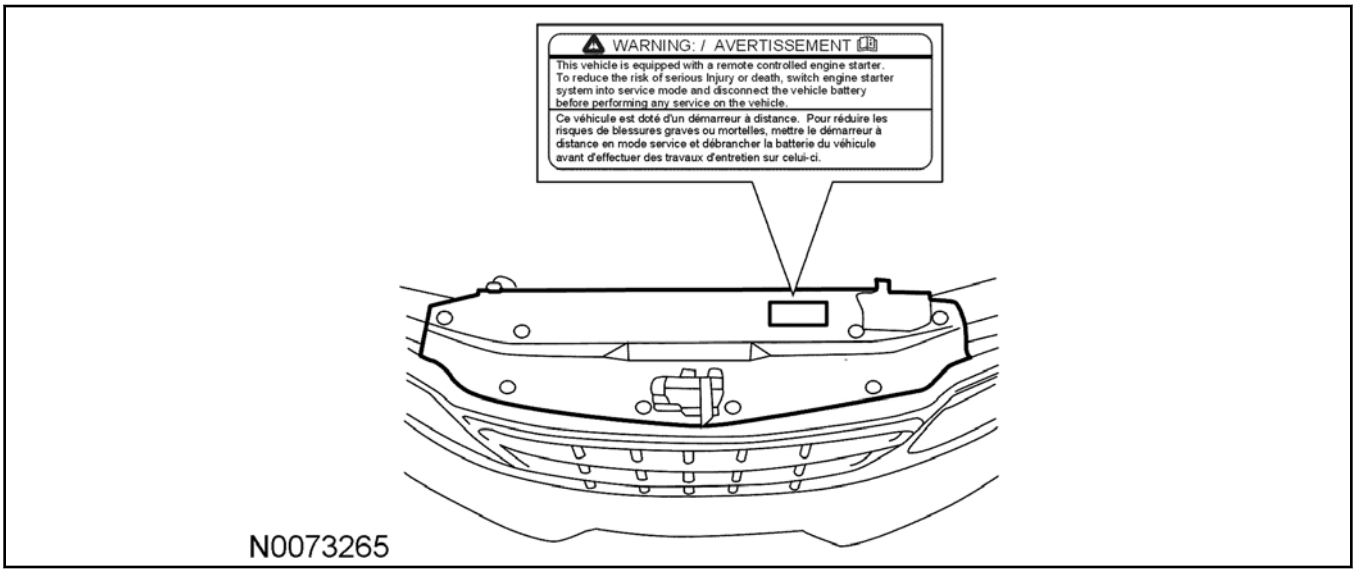
INSTALLATION (Continued)



57. **NOTE:**
    Place the label on the radiator fan shroud or similar area.

    Install the underhood warning label.



58. Route the Gray hood safety switch wire through the bulkhead into the engine compartment and attach to the hood safety switch.
59. Connect the antenna to the RMST control module.

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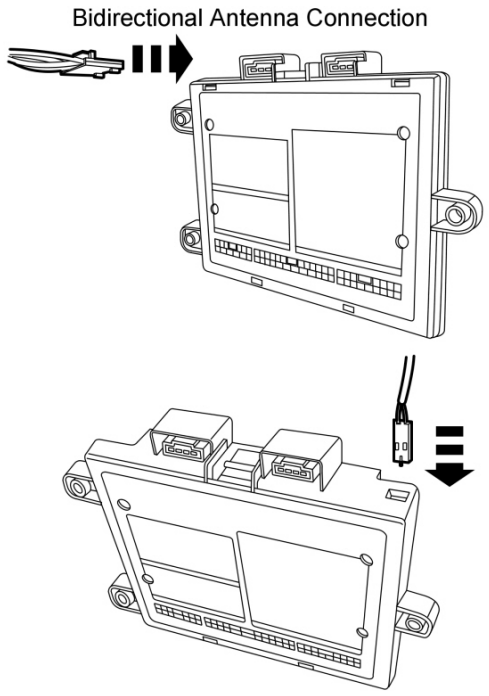
INSTALLATION (Continued)



Program the RMST System

60. Refer to the RMST programming section for this vehicle.

Secure RMST Harness and Control Module

61. Use the supplied tie-straps to secure the RMST harness wires.

62. **NOTE:**
    Do not mount the control module in the knee bolster area.
    Secure the control module at three points to the vehicle.

    Use the supplied long tie-straps to mount the RMST control module to the underdash wiring harness, to the right of the steering column.

Install Trim

63. Install the upper and lower steering column shrouds.
    Install the retainers.

64. Install the glove compartment.

65. Install the RH lower instrument panel insulator.

NOTE:
The following step is for bi-directional RMST kits only.

66. Hang the customer's rear view mirror information card on the rear view mirror.

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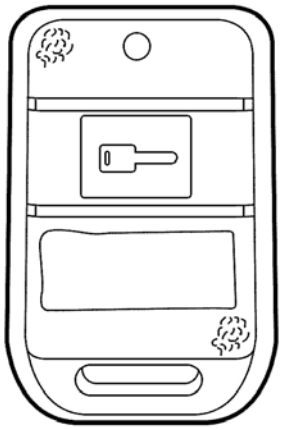
INSTALLATION (Continued)

Programming - Standard RMST



STANDARD RMST FOB

N0097291

NOTE:
If the RMST options (Key-in sense polarity, door ajar polarity, or tach mode) are not programmed correctly, vehicle will not RMST or operate properly.

NOTE:
The LED on the RMST harness must be visible to complete module programming.

NOTE:
The RMST override button must be accessible.

67. Make sure that the hood and doors are closed before proceeding.

Programming Options: Entering Programming Mode

68. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCRIPTION	LED
2	1	TACHLESS MODE	ON

69. Press and hold the brake pedal.
70. Turn the ignition key to the RUN position.
    - The dome light will turn off.
71. Press and hold the RMST system override button for at least 10 seconds. After 10 seconds the horn with honk 3 times, indicating the system is now in the learn mode. Release the brake pedal and the RMST override button.
72. Press and release the override button. The horn will honk 4 times indicating the system has entered the first program bank. If not, please check the following:
    - Brake pedal switch wire solder connection.
    - Hood closed and Grey hood safety switch wire solder connection.
    - All doors closed and dome light circuit wire solder connections.

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- The key is in the RUN position.
- The software cartridge is firmly seated in the RMST module.
- The RMST harness connections are firmly seated in the RMST module.

NOTE:
If you require additional assistance: CALL 1-800-FORD KEY.

73. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.
74. Press and release the brake pedal.
    - The horn will honk 1 time indicating the system has entered the option 1 of the second program bank.

NOTICE:
When turning LED on or off using RMST fob button quickly press and immediately release the RMST button. Failure to quickly release the RMST fob button will result in system defaulting to the factory options.

75. The LED must be on for option 1. If the LED is illuminated no action is required. If the LED is not illuminated press the RMST fob button and verify the LED illuminates.

NOTE:
If the RMST fob button is held for more than 3 seconds the system will chirp the horn 4 times, indicating the system has returned to factory default settings. If this occurs return to step 1 of the programming section and reprogram the RMST module.

NOTE:
The RMST module is now programmed.

76. Remove the ignition key.

Programming the DNA-9 Using Diagnostic Equipment

NOTE:
This procedure only programs the Passive Anti-Theft System (PATS) portion of the key into the Instrument Panel Cluster (IPC).

77. With an Intelligent Access key in the vehicle, turn the ignition on by pushing the Start button without depressing the brake.
78. From the scan tool, enter TOOLBOX. Select Body>Security>PATS Functions and follow the Integrated Diagnostic System (IDS) on-screen instructions to enter PATS security access.
79. Once security access is granted, prepare the RMST module for PATS programming. Press and hold the brake pedal.
80. Remove the Intelligent Access key from the vehicle and place on workbench 10 feet from the vehicle.

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INSTALLATION (Continued)

81. Press and hold the RMST system override button on the RMST harness for at least 10 seconds.
    - After 10 seconds the horn will honk 3 times, indicating the system is now in the learn mode.
    - Release the brake pedal and the RMST override button.
82. Press and release the override button 1 time. The horn should honk 4 times.
83. Quickly press and release the RMST button on the RMST key fob 1 time. Verify that the LED has turned on. This indicates that the RMST module is ready for programming to the vehicle PATS system.

NOTE:
You may need to perform the following step **TWICE** in order to successfully program the RMST system.

84. From the scan tool menu, select "Program additional transponder key". Follow the on screen prompts to program additional keys and to program the RMST system to the vehicle.
85. Disconnect the scan tool, and turn off the ignition when complete.

Functional Test - Standard RMST

NOTE:
If during any of the steps of the functional test, the RMST system or vehicle doesn't react or perform accordingly, please refer to the RMST troubleshooting guide.

86. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
87. Press and hold the Start button on the remote control key fob for 2-3 seconds, the Horn should honk once indicating receipt of the start request.
88. The RMST systems should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.
89. Attempt to re-start the vehicle again using the key fob.
90. Remove the key and open a door.
91. Attempt to re-start the vehicle again using the key fob.
92. The RMST systems should turn on the ignition, but then honk the horn three times and shutdown indicating a door is open.
93. Close the door.
94. Attempt to re-start the vehicle again using the key fob.
95. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.
96. On vehicles equipped with power window interrupt, Attempt to close windows to check power window interrupt function.
97. Once all systems have been checked, open the door, or press the brake pedal. The RMST systems should shut down.
98. Restart the vehicle then unlock and open the door. The RMST systems should shut down.

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INSTALLATION (Continued)

99. Verify that the vehicle can be restarted with the Intelligent Access key, 3-5 seconds after engine shutdown.

Troubleshooting

100. **NOTE:**When attempting to remote start your vehicle, the system has several safety checks that it performs. If any of these inputs are present that should not be, the system will respond back to you with several horn "chirps" to help you identify which input is present. These "chirps" will occur after initiating a start sequence with the transmitter, the system will turn on the ignition, but then respond back with several horn "chirps" and abort the starting process.
Example: Depress the RMST fob button for 3 seconds and then release. The vehicle horn will "chirp" one time to indicate that RMST signal was received. If the vehicle doesn't start and the horn "chirps" 3 times, there is a fault - "Vehicle Door is Open"

CHIRPS	PROBLEM
1 Chirp	DNA-9 not programmed correctly, or the DNA-9 antenna ring is damaged.
2 Chirps	BRAKE is being pressed, or the HOOD is open.
3 Chirps	One of the vehicles DOORS are open.
4 Chirps	TACH not programmed.
5 Chirps	The KEY is in the ignition.
6 Chirps	The RMST system is in SERVICE/VALET mode.

Programming Bi-directional RMST

BIDIRECTIONAL FOB

N0097292

NOTE:
If the RMST options (Key-in sense polarity, door ajar polarity, or tach mode) are not programmed correctly, vehicle will not RMST or operate properly.

NOTE:
The LED on the RMST harness must be visible to complete module programming.

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NOTE:
The RMST override button must be accessible.

101. Make sure that the hood and doors are closed before proceeding.

Programming Options: Entering Programming Mode

102. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCRIPTION	LED
2	1	TACHLESS MODE	ON

103. Press and hold the brake pedal.
104. Turn the ignition key to the RUN position.
    - The dome light will turn off.
105. Press and hold the RMST system override button for at least 10 seconds. After 10 seconds the horn with honk 3 times, indicating the system is now in the learn mode. Release the brake pedal and the RMST override button.
106. Press and release the override button. The horn will honk 4 times indicating the system has entered the first program bank. If not, please check the following:
    - Brake pedal switch wire solder connection.
    - Hood closed and Grey hood safety switch wire solder connection.
    - All doors closed and dome light circuit wire solder connections.
    - The key is in the RUN position.
    - The software cartridge is firmly seated in the RMST module.
    - The RMST harness connections are firmly seated in the RMST module.

NOTE:
If you require additional assistance: CALL 1-800-FORD KEY.

107. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.
108. Press and release the brake pedal.
    - The horn will honk 1 time indicating the system has entered the option 1 of the second program bank.

NOTICE:
When turning LED on or off using RMST fob button quickly press and immediately release the RMST button. Failure to quickly release the RMST fob button will result in system defaulting to the factory options.

109. The LED must be on for option 1. If the LED is illuminated no action is required. If the LED is not illuminated press the RMST fob button and verify the LED illuminates.

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INSTALLATION (Continued)

NOTE:
If the RMST fob button is held for more than 3 seconds the system will chirp the horn 4 times, indicating the system has returned to factory default settings. If this occurs return to step 1 of the programming section and reprogram the RMST module.

NOTE:
The RMST module is now programmed.

110. Remove the ignition key.

Programming the DNA-9 Using Diagnostic Equipment

NOTE:
This procedure only programs the Passive Anti-Theft System (PATS) portion of the key into the Instrument Panel Cluster (IPC).

111. With an Intelligent Access key in the vehicle, turn the ignition on by pushing the Start button without depressing the brake.
112. From the scan tool, enter TOOLBOX. Select Body>Security>PATS Functions and follow the Integrated Diagnostic System (IDS) on-screen instructions to enter PATS security access.
113. Once security access is granted, prepare the RMST module for PATS programming. Press and hold the brake pedal.
114. Remove the Intelligent Access key from the vehicle and place on workbench 10 feet from the vehicle.
115. Press and hold the RMST system override button on the RMST harness for at least 10 seconds.
    - After 10 seconds the horn will honk 3 times, indicating the system is now in the learn mode.
    - Release the brake pedal and the RMST override button.
116. Press and release the override button 1 time. The horn should honk 4 times.
117. Quickly press and release the RMST button on the RMST key fob 1 time. Verify that the LED has turned on. This indicates that the RMST module is ready for programming to the vehicle PATS system.

NOTE:
You may need to perform the following step **TWICE** in order to successfully program the RMST system.

118. From the scan tool menu, select "Program additional transponder key". Follow the on screen prompts to program additional keys and to program the RMST system to the vehicle.
119. Disconnect the scan tool, and turn off the ignition when complete.

Functional Test - Bi-directional RMST

NOTE:
If during any of the steps of the functional test, the RMST system or vehicle doesn't react or perform accordingly, please refer to the RMST troubleshooting guide.

120. Make sure all doors are closed but hood is open and windows are down (doors will be locking).

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INSTALLATION (Continued)

121. Press and hold the Start button on the remote control key fob for 2-3 seconds, the Horn should honk once indicating receipt of the start request.
122. The RMST systems should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.
123. Attempt to re-start the vehicle again using the key fob.
124. Remove the key and open a door.
125. Attempt to re-start the vehicle again using the key fob.
126. The RMST systems should turn on the ignition, but then honk the horn three times and shutdown indicating a door is open.
127. Close the door.
128. Attempt to re-start the vehicle again using the key fob.
129. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.
130. On vehicles equipped with power window interrupt, Attempt to close windows to check power window interrupt function.
131. Once all systems have been checked, open the door, or press the brake pedal. The RMST systems should shut down.
132. Restart the vehicle then unlock and open the door. The RMST systems should shut down.
133. Verify that the vehicle can be restarted with the Intelligent Access key, 3-5 seconds after engine shutdown.

Troubleshooting

134. **NOTE:** When attempting to remote start your vehicle, the system has several safety checks that it performs. If any of these inputs are present that should not be, the system will respond back to you with several horn "chirps" to help you identify which input is present. These "chirps" will occur after initiating a start sequence with the transmitter, the system will turn on the ignition, but then respond back with several horn "chirps" and abort the starting process.
Example: Depress the RMST fob button for 3 seconds and then release. The vehicle horn will "chirp" one time to indicate that RMST signal was received. If the vehicle doesn't start and the horn "chirps" 3 times, there is a fault - "Vehicle Door is Open".

CHIRPS	PROBLEM
1 Chirp	DNA-9 not programmed correctly, or the DNA-9 antenna ring is damaged.
2 Chirps	BRAKE is being pressed, or the HOOD is open.
3 Chirps	One of the vehicles DOORS are open.
4 Chirps	TACH not programmed.

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TYPE "A" CUSTOM WIRE HARNESS

RMST MODULE WIRE HARNESS

	Color	Function
A-7	PINK	Ignition Input/Output
A-24	VIOLET	Starter Output
A-4	RED	Battery
A-13	ORANGE	Door Ajar Switch 1
C-9	ORANGE/BLACK	Door Ajar Switch 2
B-9	BLUE/ORANGE	Unlock Sense
A-20	GREEN/VIOLET	Door Ajar Switch Input

	Color	Function
A-21	BROWN/BLACK	Horn Relay Output
A-1	WHITE	Parking Light Output

DRIVER'S KICK PANEL HARNESS

	Color	Function
A-5	BLACK	Ground
A-24	BLUE	Door Lock Output
B-7	BROWN	Brake Input
A-14	DARK GREEN	Cruise Control Deactivation Switch

UNDER HOOD HARNESS

	Color	Function
A-19	GRAY	Hood Open Switch Input

Ignition (GRAY/BROWN) (+) → BCM C2280B PIN 12

Starter (YELLOW/ORANGE) (−) → PASSENGER SIDE KICK PANEL C212 Pin 43

Battery (YELLOW/RED) (+) → BCM C2280A PIN 1

Driver Door Ajar (GREEN/VIOLET) (−) — CUT — BCM C2280G PIN 10

Unlock Sense (BLUE/BROWN) (−) → BCM C2280G PIN 5

Dome Light Return (YELLOW/GRAY) (−) → BCM C2280C PIN 5

Horn (BROWN) (−) → BCM C2280E PIN 21

Parking Lights (YELLOW/BLUE) (−) → BCM C2280E PIN 9

MAKE THIS CONNECTION FIRST! → CHASSIS GROUND POINT IN DRIVER' S KICK PANEL

Door Lock (YELLOW/GRAY) (−) → BCM C2280G PIN 6

Brake (BLUE/GRAY) (+) → PASSENGER DOOR SILL (5 DOOR) CENTRAL JUNCTION BOX (4 DOOR)

Brake Pedal Switch(GREEN/BLUE) (+) → PASSENGER DOOR SILL

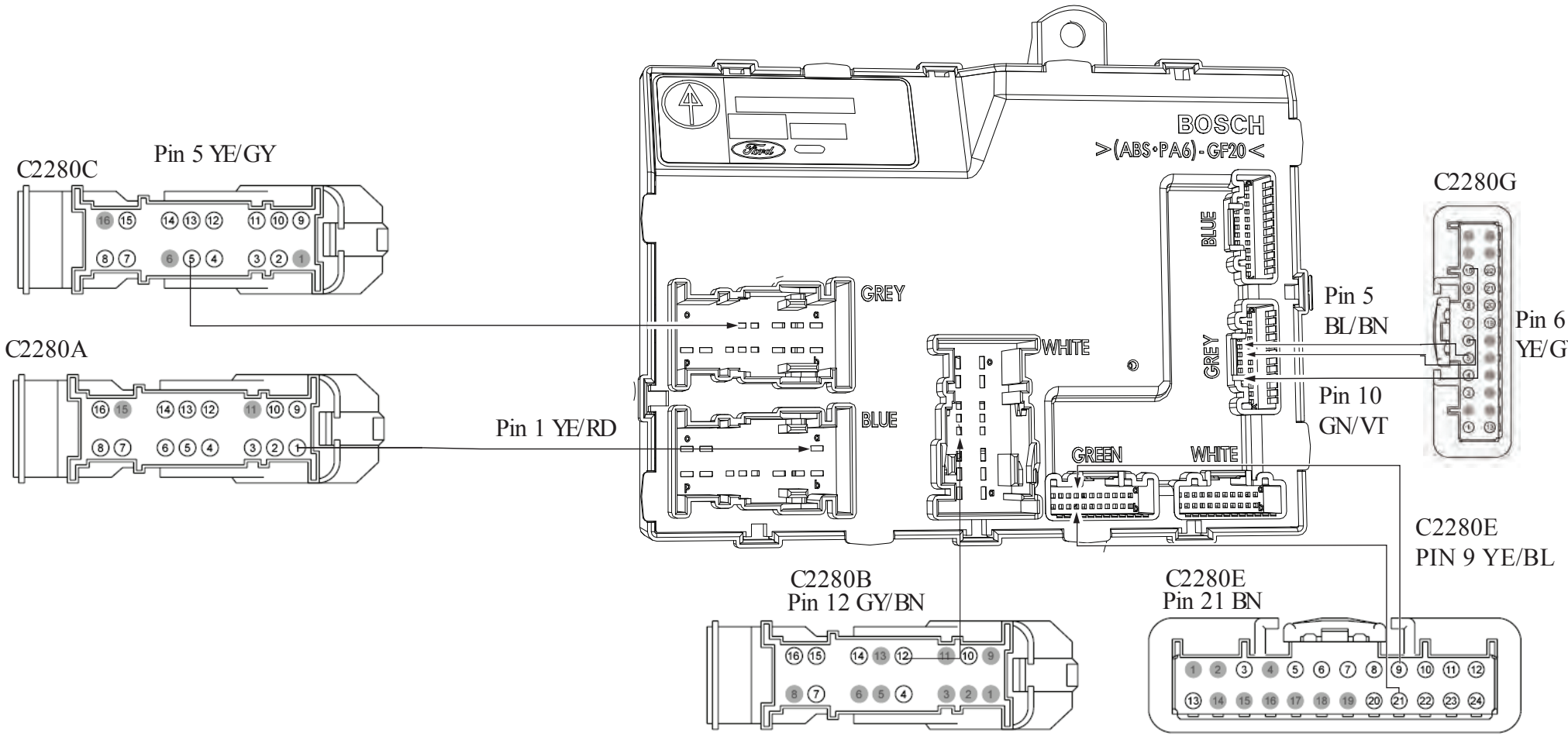
Vehicle Interior | Engine Compartment

Hood Tilt Switch

Chassis Ground

Do Not Ground to Hood!

Body Control Module (BCM)



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WIRING DIAGRAMS
Vehicle Specific Wiring Diagrams

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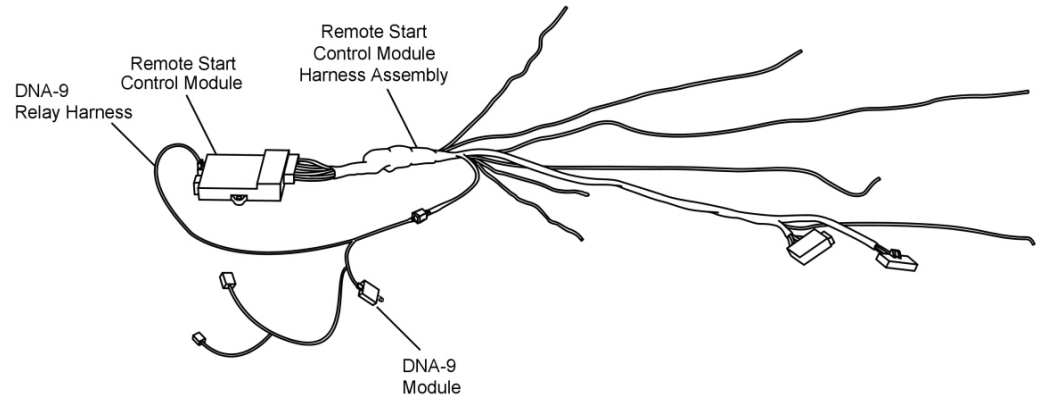
INSTALLATION

Remote Start - Focus - Key Start

RMST System Components



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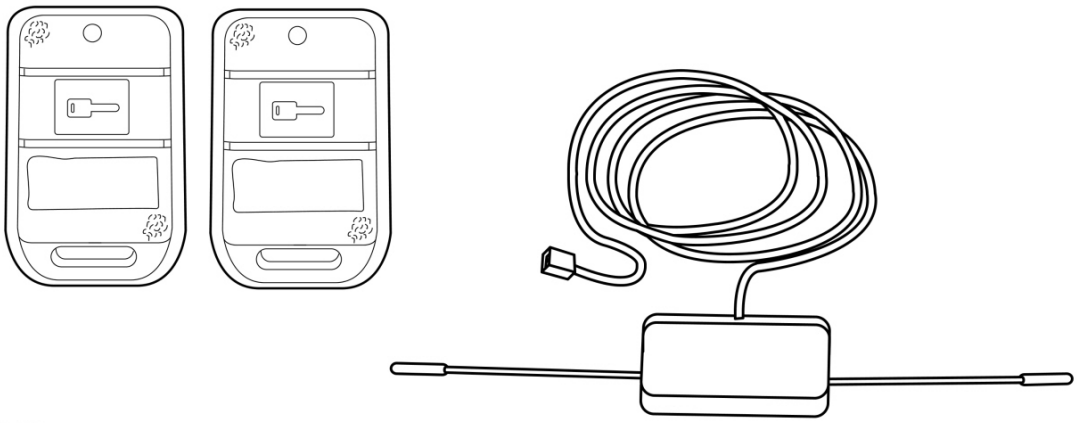
Additional "Standard RMST" Components



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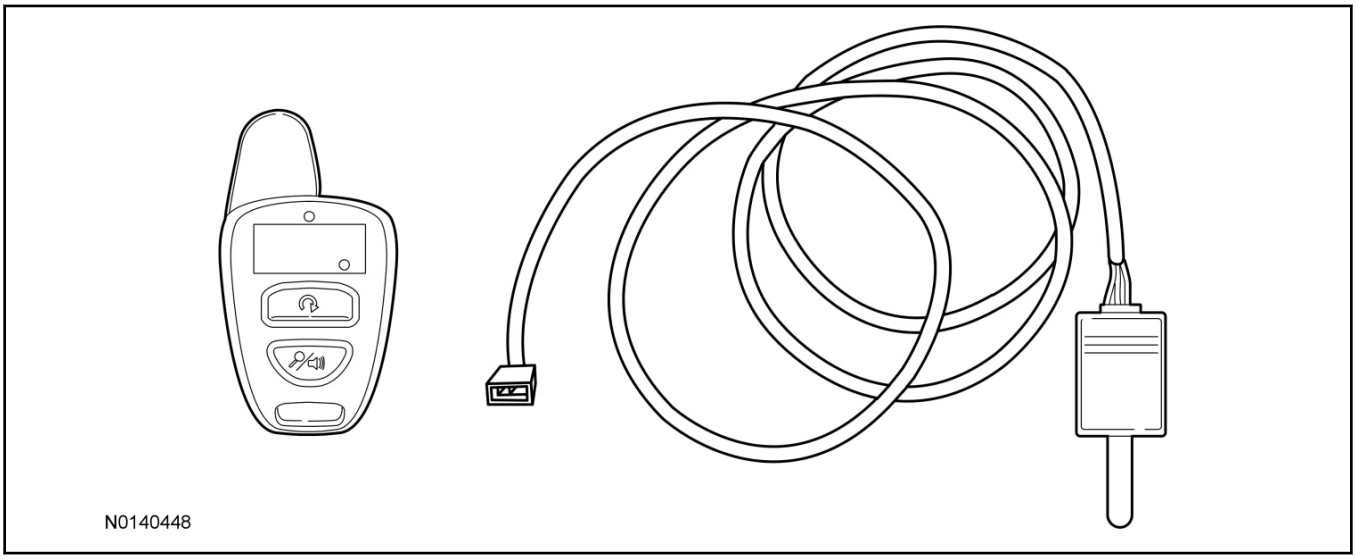
INSTALLATION (Continued)

Additional "Bi-directional RMST" Components



Focus - Key Start

NOTICE:
Remote start systems are only applicable to vehicles with automatic transmissions.

1. Verify correct kit number.

Review Remote Start Installation Kit Contents

NOTE:
Kits are vehicle specific and are not interchangeable.

2. Review the RMST kit contents.

RMST System Standard Kit Type - "A"

QUANTITY	DESCRIPTION
1	TYPE - "A" MODULE ASSEMBLY
1	RMST SOFTWARE CARTRIDGE ASSEMBLY
2	1 BUTTON POWER CODE TRANSMITTER
1	TYPE - "A" CUSTOM WIRING HARNESS
1	ANTENNA
1	HOOD SAFETY SWITCH ASSEMBLY
1	INSTALLATION PARTS BAG
1	FUSE PARTS BAG
1	OPERATORS INSTRUCTIONS
1	UNDERHOOD WARNING LABEL
1	DNA-9 Module

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INSTALLATION (Continued)

RMST System Standard Kit Type - "A"(Continued)

1	DNA-9 Relay Harness
1	Wire Harness Label

3. Review the RMST bidirectional kit contents.

RMST System Bidirectional Kit Type - "A"

QUANTITY	DESCRIPTION
1	TYPE - "A" MODULE ASSEMBLY
1	RMST SOFTWARE CARTRIDGE ASSEMBLY
1	2 BUTTON POWER CODE TRANSMITTER
1	TYPE - "A" CUSTOM WIRING HARNESS
1	ANTENNA
1	ANTENNA HARNESS
1	HOOD SAFETY SWITCH ASSEMBLY
1	INSTALLATION PARTS BAG
1	FUSE PARTS BAG
1	OPERATORS INSTRUCTIONS
1	UNDERHOOD WARNING LABEL
1	DNA-9 Module
1	DNA-9 Relay Harness
1	Wire Harness Label

Module Preparation

4. Place the supplied fuses into the power distribution block on the remote start control module.
   - Move the polarity jumpers to their proper locations on the control module. Refer to the following illustration.

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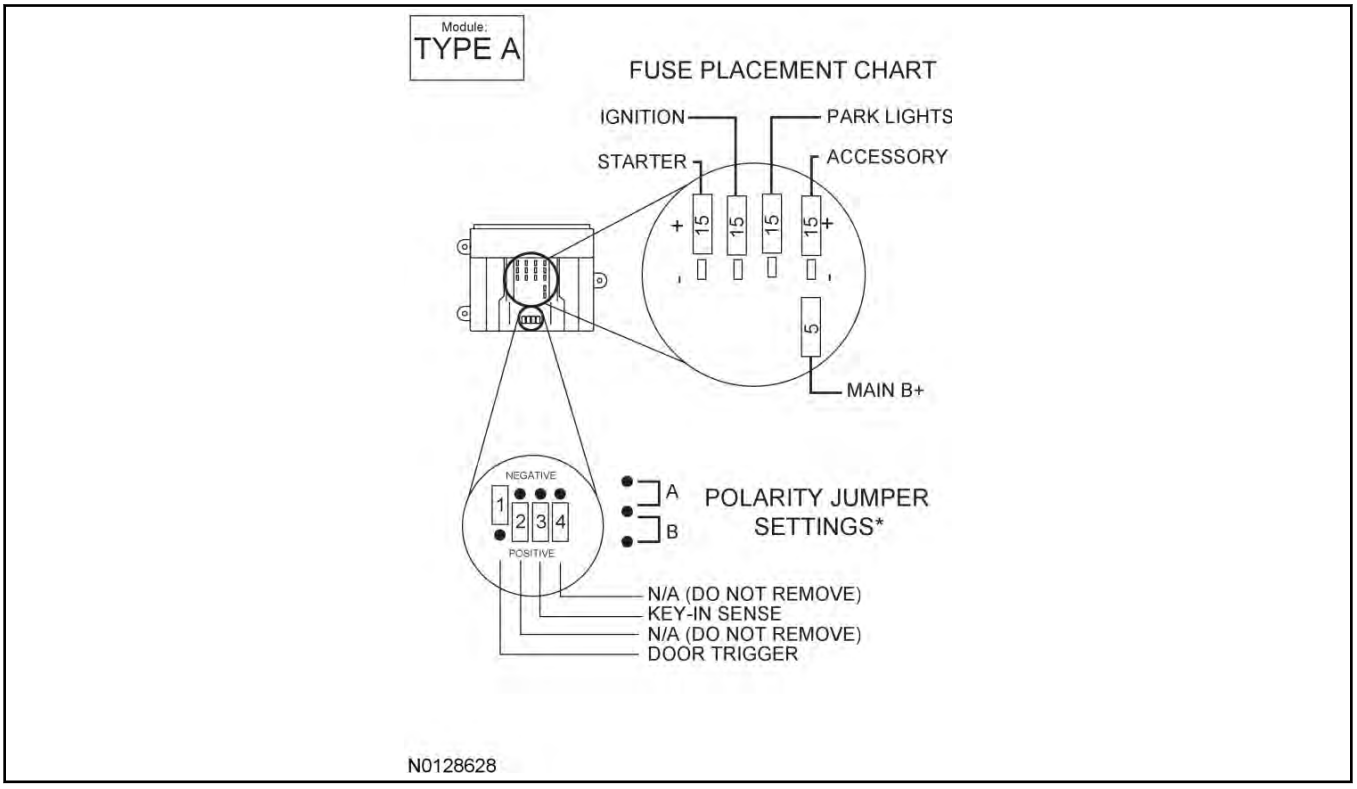
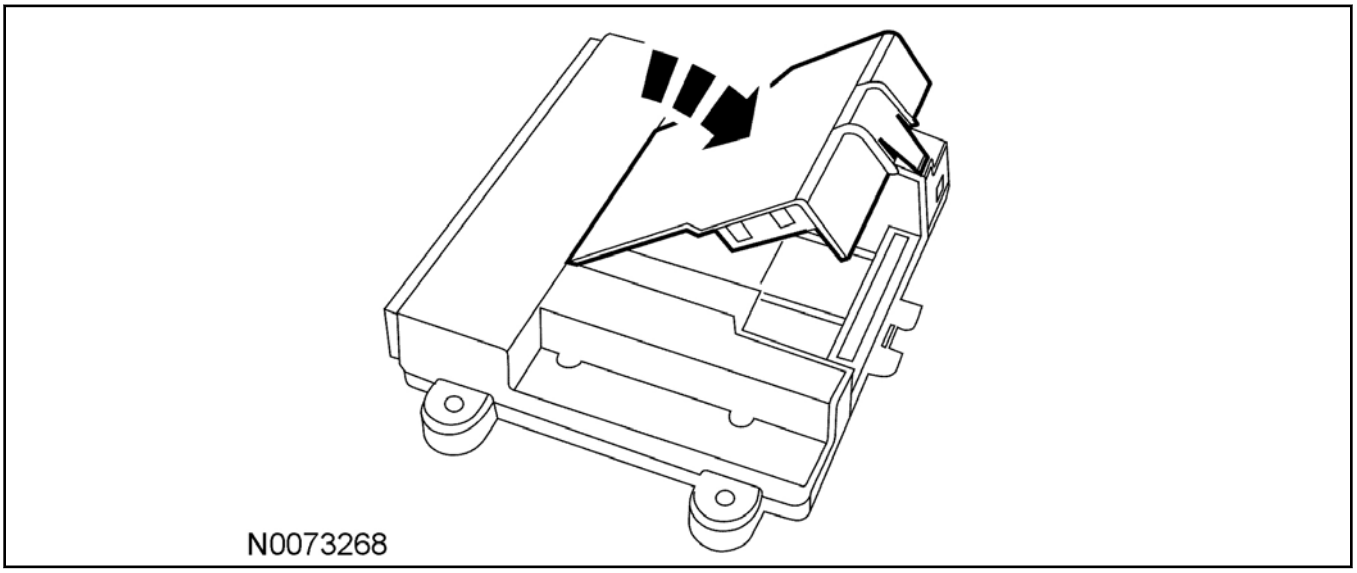
INSTALLATION (Continued)



5. Place the software cartridge onto the RMST control module.



6. Plug the wiring harness(es) into the module.
   - A - Harness: 24-way, used on all systems.
   - B - Harness: 10-way, used on all systems with RMST.

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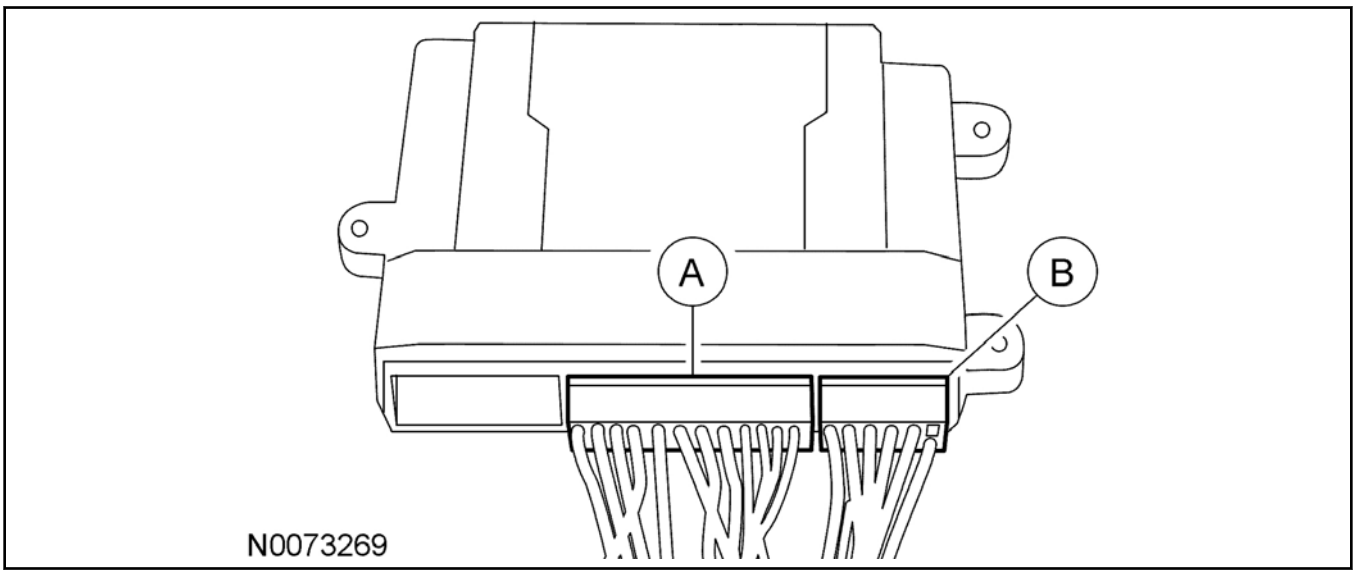
INSTALLATION (Continued)



7. **NOTE:**
   Do not cut the override programming button from the harness, it is used for all installations.

   NOTE:
   Review the vehicle specific wiring diagram(s).

   Referring to the vehicle specific wiring section for the system being installed, gather all individual wires that will be routed to the same areas of the vehicle into groups. Cover each wire group with electrical tape for approximately 18". Depending on the vehicle, there will be 2 to 5 different wire groups.
   Trim the unused wires approximately 6 - 8" from the module.

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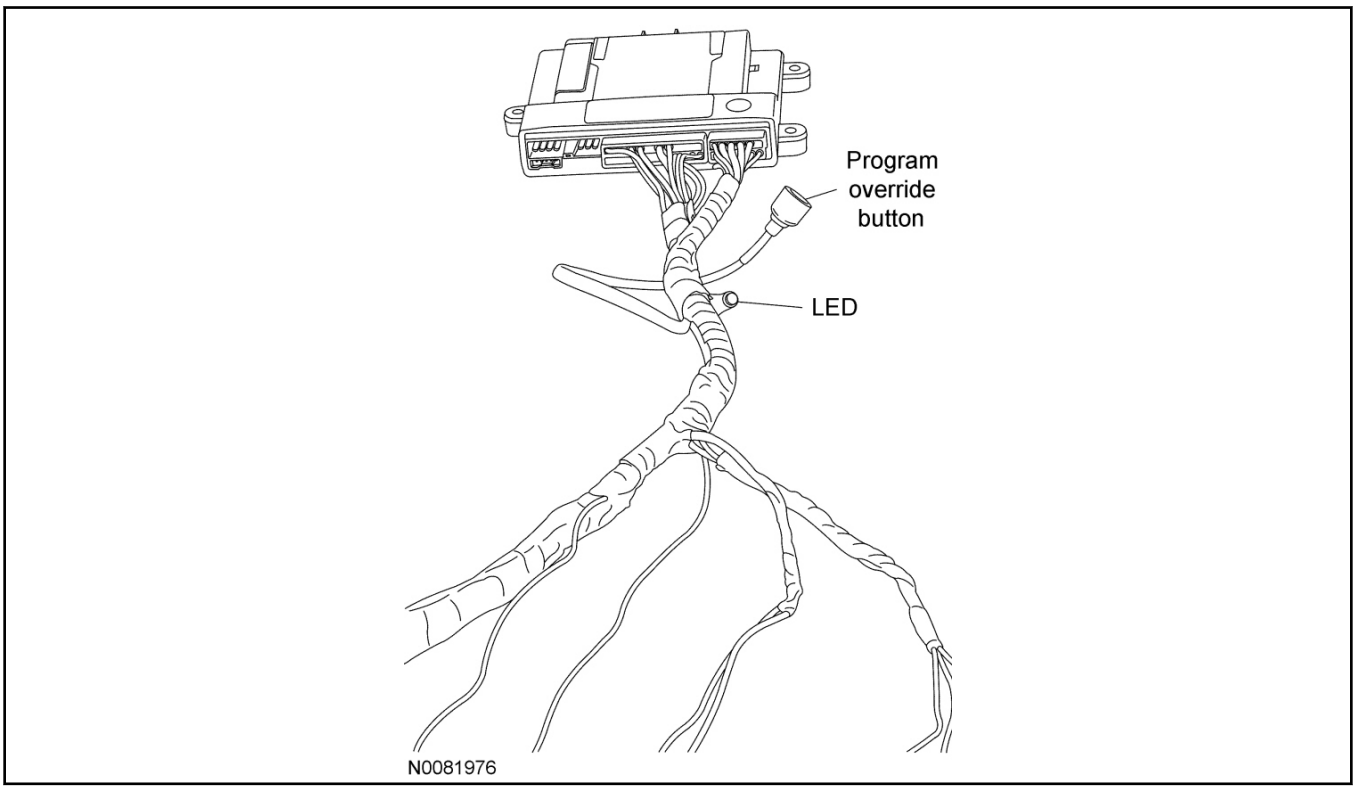
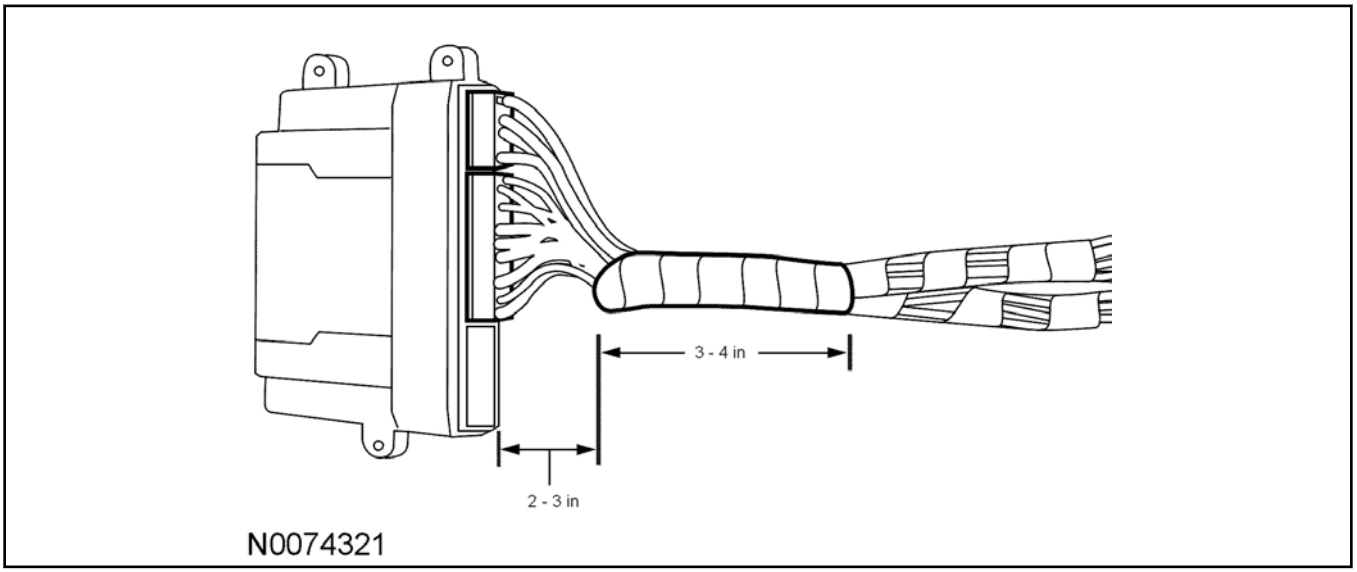
INSTALLATION (Continued)



8. Tape the harness sections together, making sure to cover all of the unused wires.



Vehicle Preparation - All Vehicles

9. **NOTE:**
   LH shown, RH similar.

   Remove the LH and RH instrument panel side trim panels.

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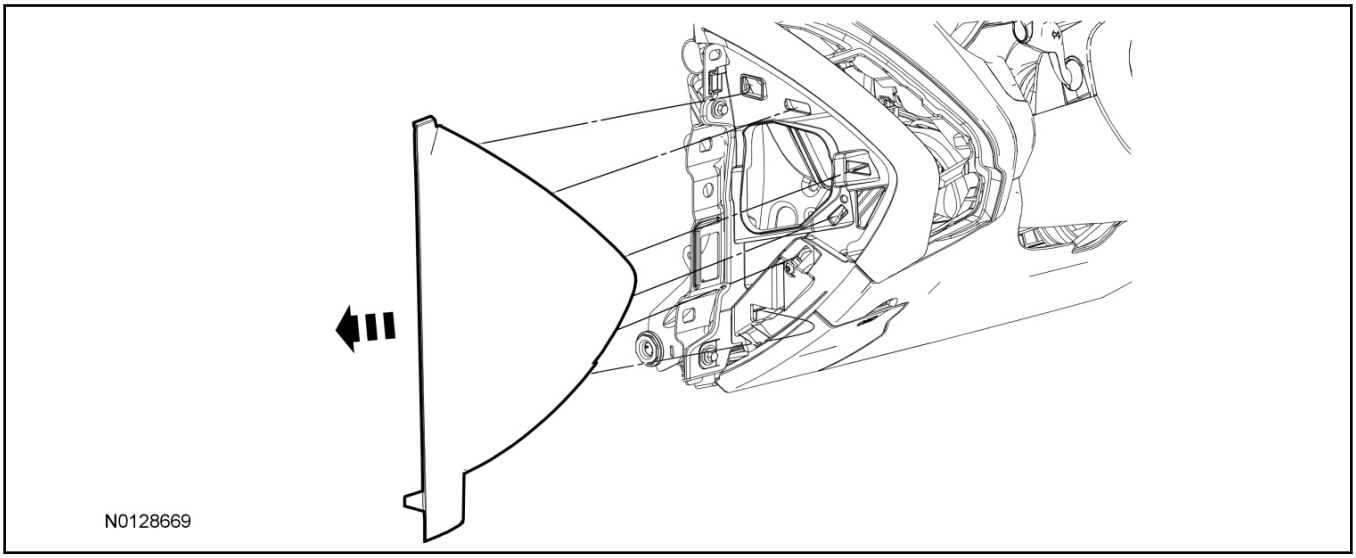
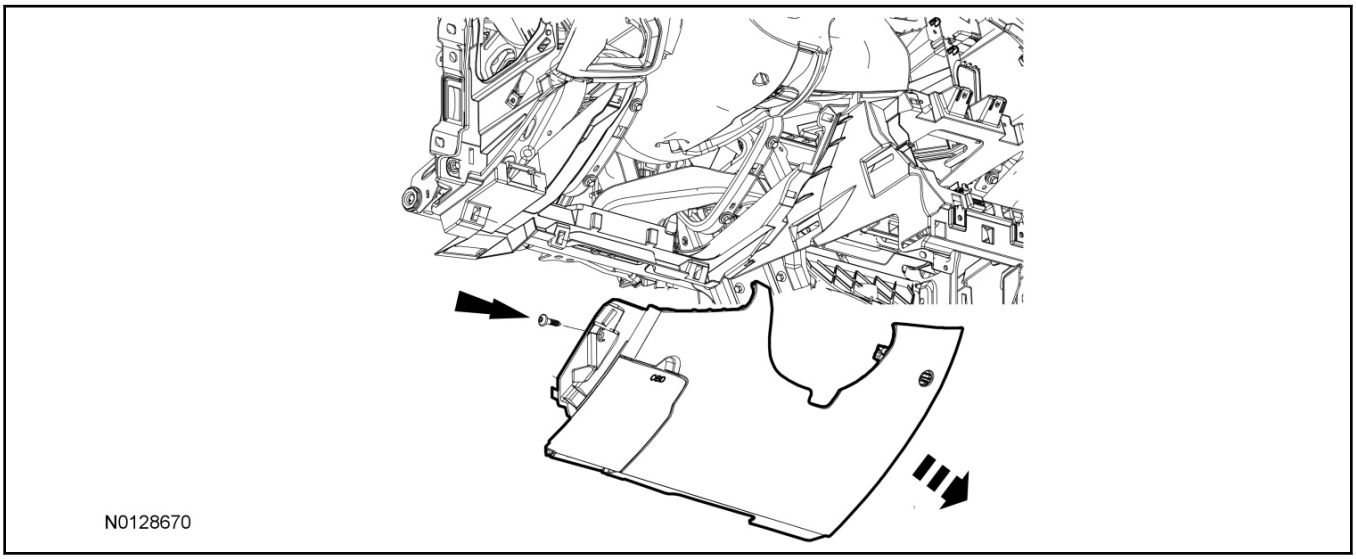
INSTALLATION (Continued)



10. Remove the steering column cover trim panel.
    - Remove the screw.



11. Remove the lower steering column shroud.
    1 Remove the 2 screws.
    2 Detach and remove the lower steering column shroud.
12. Remove the RH lower instrument panel insulator.
    - Remove the 2 retainers.
13. Remove the glove compartment.
    - Remove the 5 screws.

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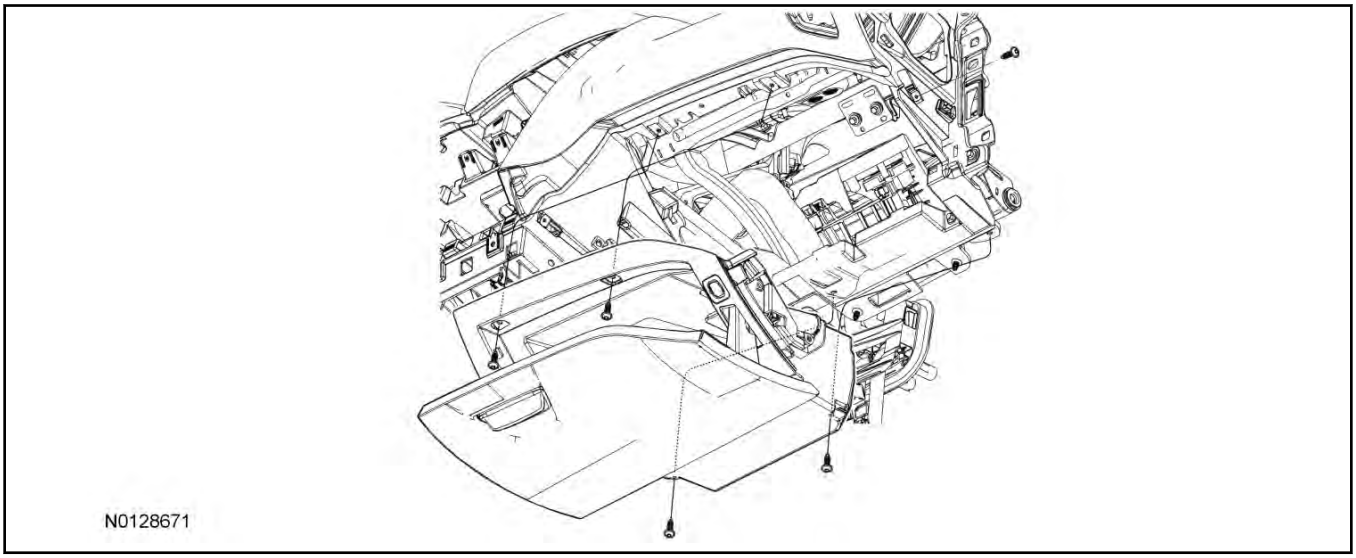
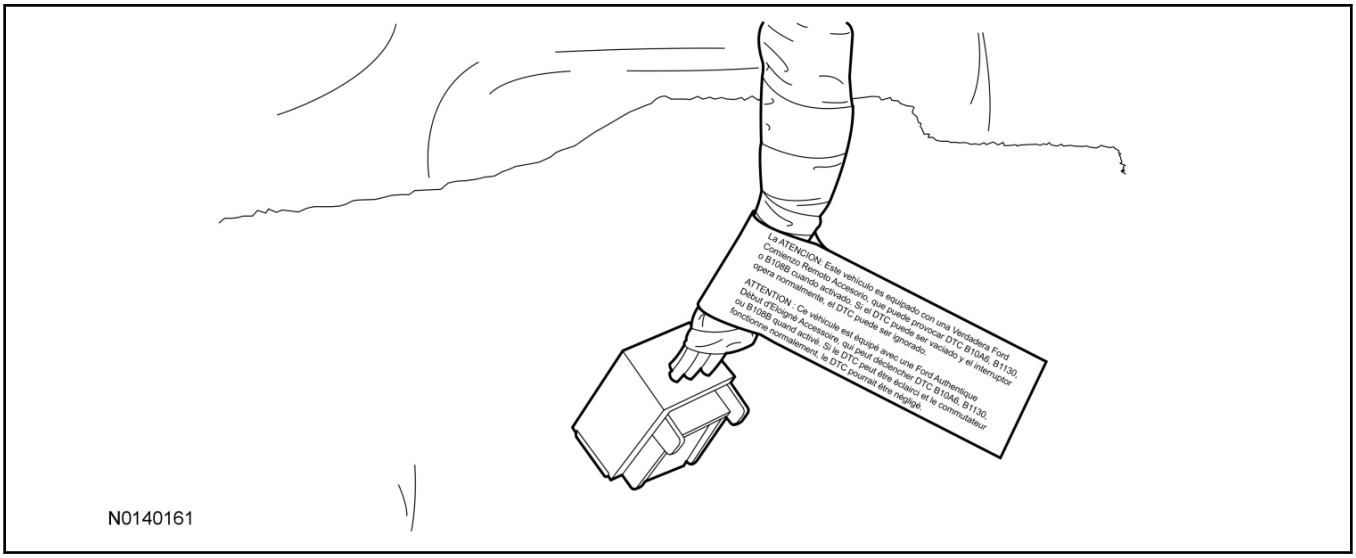
INSTALLATION (Continued)



14. Using a suitable non-marring tool, work around the outer edge of the headlamp switch to release the clips and pull the switch out through the front of the finish panel.
    - Disconnect the electrical connector.
15. Install the supplied wire harness label to the headlamp switch harness.
    - If required, fish the headlamp switch wire harness out of the instrument panel.



16. Connect and Install the headlamp switch.

Antenna Mounting

NOTE:
For good range of operation, the antenna must be installed correctly.

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INSTALLATION (Continued)

NOTE:
Keep these points in mind when selecting a location and mounting the antenna.

- Do not mount the antenna behind or on any metal film or window tinting on the windshield.
- Do not mount the antenna so that one of the antenna elements touches or crosses any vehicle wiring and/or metal.
- Do not mount the antenna close to RF devices, (EZ Pass, etc), that are installed on the windshield.
- On vehicles without metal film in the windshield around the rear view mirror, mount the antenna between the headliner and the rear view mirror.
- On vehicles equipped with an electronic mirror, or on vehicles with metal film around the rearview mirror, mount the antenna approximately 3 inches below the mirror attachment point to the windshield and/or mirror electronics.

17. Choose a suitable mounting location based on the guidelines above.

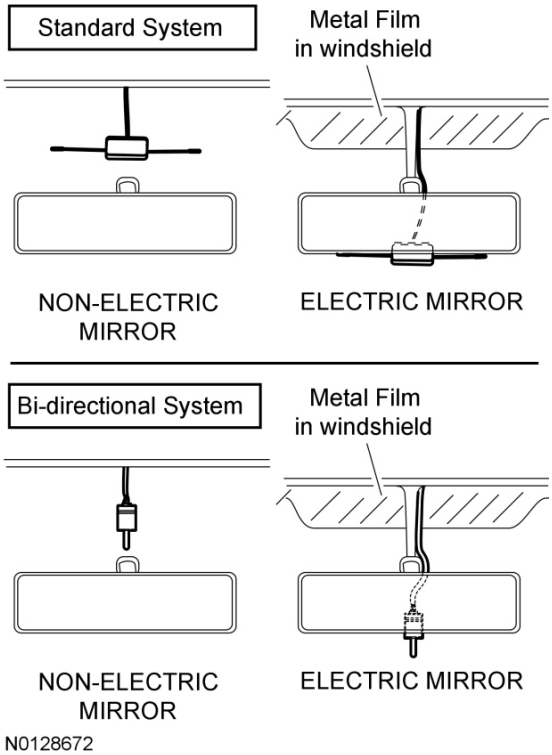
Install The Antenna

18. Clean the mounting surface using an alcohol base solution and a clean cloth.
19. **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 to the windshield.



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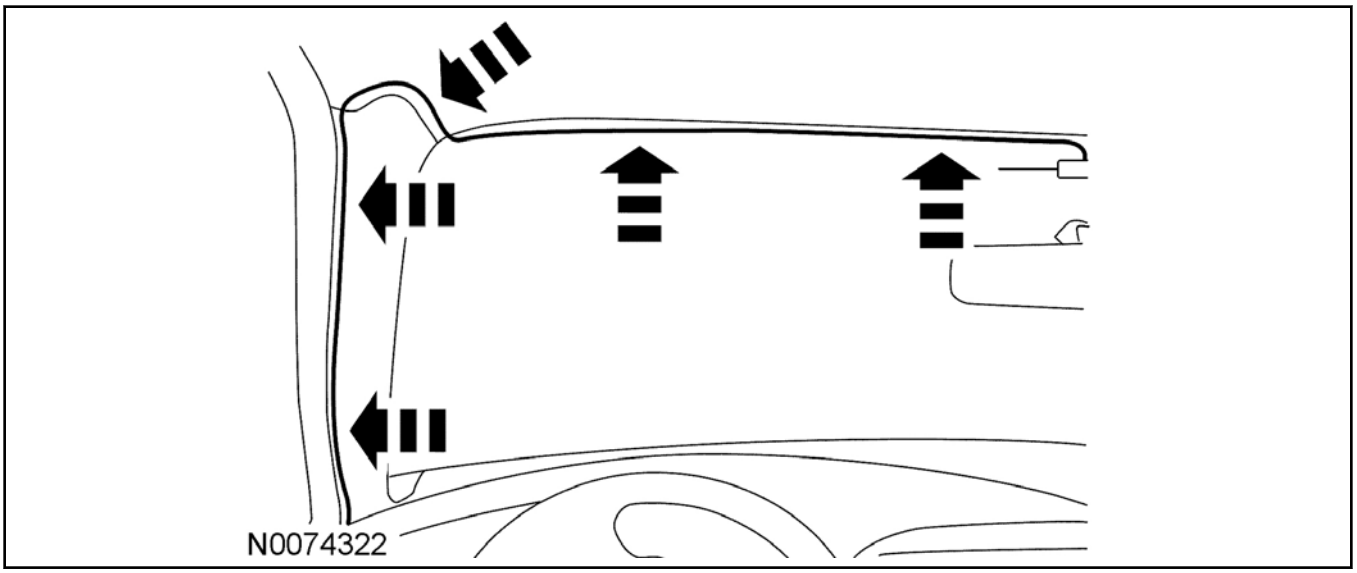
INSTALLATION (Continued)

20. 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 the air bag.

21. Route the antenna cable along the headliner and down the A-pillar towards the floor.



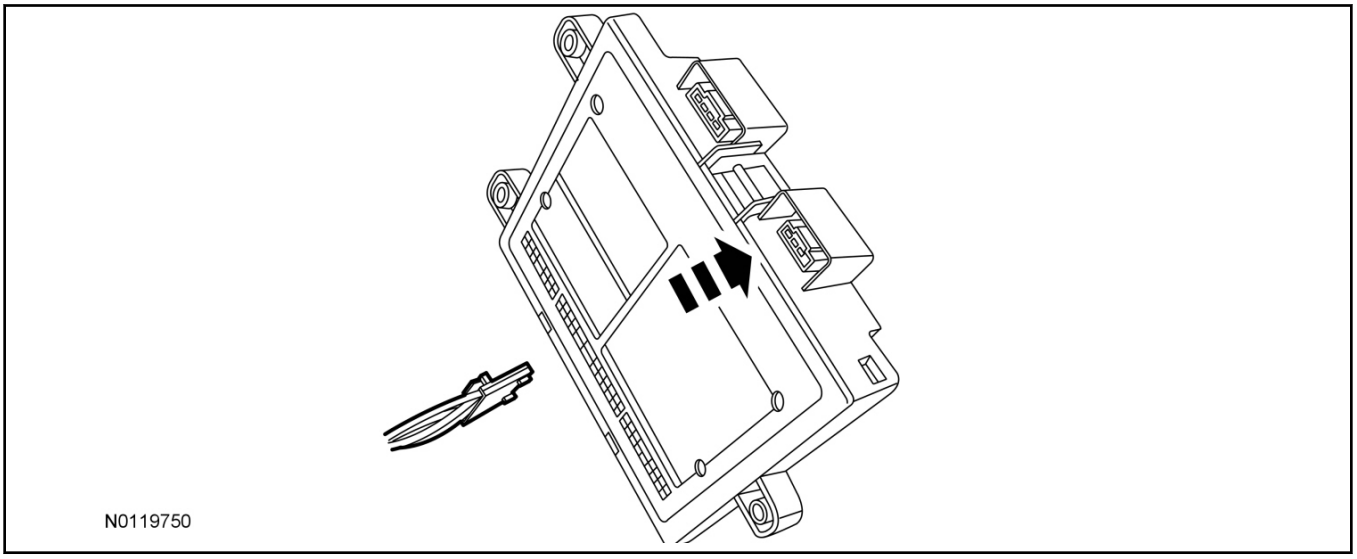
22. Reposition the A-pillar trim panel back, if necessary.

Install the Remote Start Control Module and Harness Assembly

23. Place the remote start module and harness assembly on the floor of the vehicle.

Install the DNA-9 Relay Harness and Module

24. Disconnect the Passive Anti-Theft System (PATS) transceiver electrical connector.
25. Connect the DNA-9 relay harness to the PATS transceiver electrical connector and to the vehicle harness.
26. Connect the DNA-9 relay harness to the remote start module.



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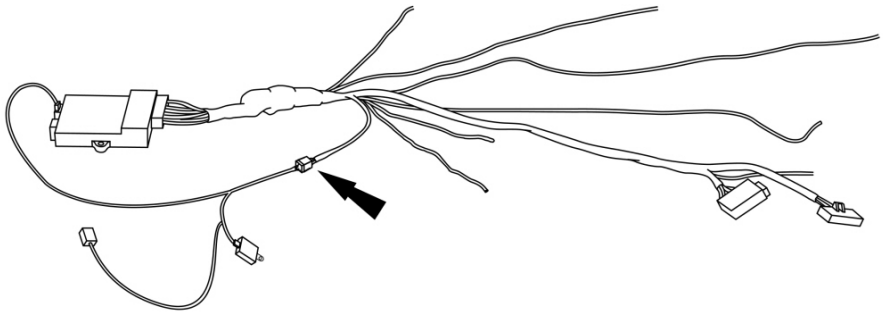
INSTALLATION (Continued)

27. Connect the DNA-9 Module to the relay harness.
    - Secure to the steering column wire harness with tie-straps.
28. Connect the DNA-9 relay harness to the 2-pin connector on the remote start module harness.



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Identify Circuit Wires For Connections

NOTE:
It is recommended to identify all vehicle wires that will be connected before making any permanent connections. If all wires cannot be located, call 1-800-FORDKEY.

NOTE:
Review the vehicle specific wiring diagram(s).

NOTE:
Review the proper wire splicing techniques prior to proceeding.

29. Connect the Black ground wire from the remote start module harness to the chassis ground point on the driver's side.
    - Chassis ground points are located near the driver's side sill plate.

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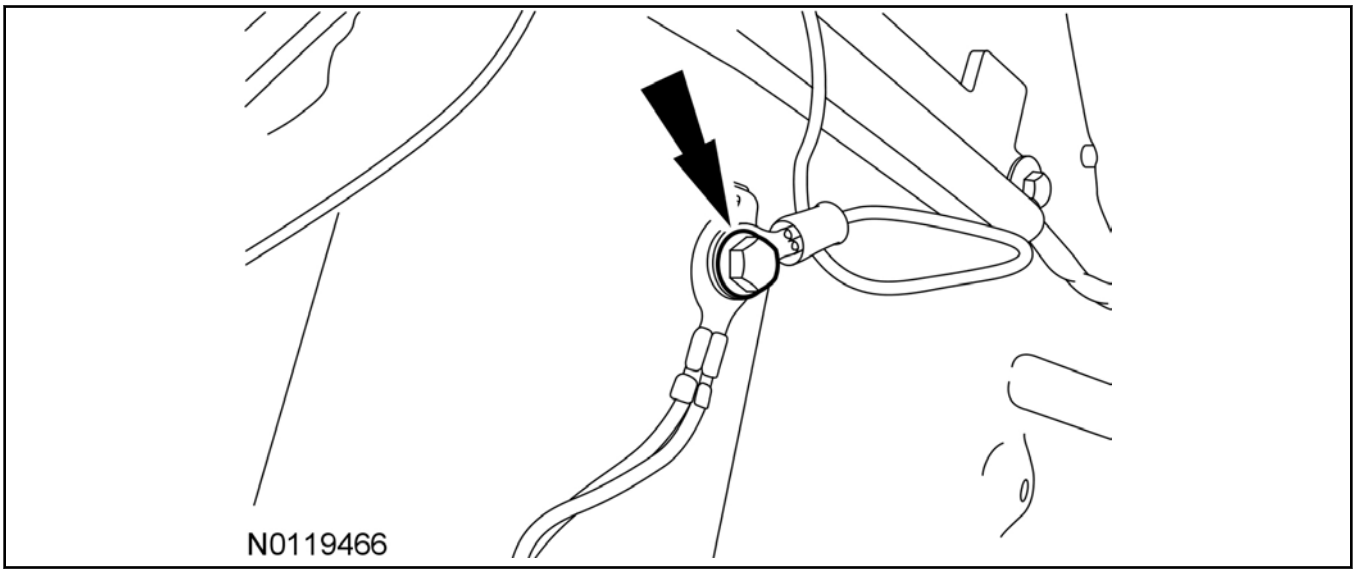
INSTALLATION (Continued)



30. Disconnect the ignition switch electrical connector.
31. Connect the remote start harness hard shell connectors to the ignition switch and ignition switch connector.
32. **NOTE:**
    A DVOM connected to the correct wire will show ~12V, then show ~0V when the horn button is held.
    A logic probe will show power on the correct wire, then show ground when the horn button is held.

    Identify the Blue/White horn circuit wire in the steering column harness.
33. Connect the Brown/Black wire from the remote start module harness to the Blue/White horn circuit wire in the steering column harness.
34. **NOTE:**
    This circuit should be tested with ignition OFF.

    NOTE:
    A DVOM connected to the correct wire will show ~10.40V, then show ~0V when the door lock switch is pressed.
    A logic probe will show power on the correct wire, then show ground when the door lock switch is pressed.

    Identify the Brown power door lock circuit wire at the Body Control Module (BCM) connector C2280C pin 11.
35. Connect the Blue wire from the remote start module harness to the Brown power door lock circuit wire at the BCM connector C2280C pin 11.
36. **NOTE:**
    A DVOM connected to the correct wire will show ~0V, then show ~12V while depressing the brake pedal.
    A logic probe will show ground on the correct wire, then show power while depressing the brake pedal.

    Identify the Green/Red brake switch circuit wire at the BCM connector C2280A pin 16.

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INSTALLATION (Continued)

37. Connect the Brown wire from the remote start module harness to the Green/Red brake switch circuit wire at the BCM connector C2280A pin 16.

38. **NOTE:**
A DVOM connected to the correct wire will show ~0V with the vehicle door(s) open and the dome light ON, then show ~12V with the vehicle door(s) closed and the dome light OFF.

NOTE:
A logic probe connected to the correct wire will show ground with the vehicle door(s) open and the dome light ON, then show power with the vehicle door(s) closed and the dome light OFF.

NOTE:
Be sure that the dome light has timed out and is OFF before performing the door closed test.
Be sure that the dome lamp is illuminated before performing the door open test.

Identify the White/Brown dome light circuit wire at the BCM connector C2280H pin 11.

39. Connect the Green/Violet wire from the remote start module harness to the White/Brown dome light circuit wire at the BCM connector C2280H pin 11.

40. **NOTE:**
A DVOM connected to the correct wire will show ~1V, when doors are unlocked (lock LED OFF), then show power when doors are locked (lock LED ON).
A logic probe will show open on the correct wire when doors are unlocked (lock LED OFF), then show power when doors are locked (lock LED ON).

Identify the White/Yellow door lock circuit wire at the BCM connector C2280C pin 13.

41. Connect the White/Blue wire from the remote start module harness to the White/Yellow door lock circuit wire at the BCM connector C2280C pin 13.

Relay Harness

42. Remove the circuit 87 Yellow wire and terminal from the relay harness connector.
    - Release the locking tab and pull the wire and terminal from the connector.
    - Discard the Yellow wire, it will not be used for this application.

43. Install a suitable insulated crimp terminal eyelet to the White interrupt relay wire. Attach the White relay wire to a suitable grounding location.

44. Connect the White wire from the remote start module harness to the black wire at the relay harness.

45. Identify the Lt. Green/Violet headlamp switch wire at the headlamp switch.

46. **NOTE:**
Be sure to leave enough wire at each end of the cut wire to properly splice the relay wire to the headlamp switch harness.

Cut the Lt. Green/Violet headlamp switch wire at the headlamp switch.

- Connect the Blue wire from the relay harness to the feed side of the Lt. Green/Violet headlamp switch wire at the headlamp switch.
- Connect the Red wire from the relay harness to the load side of the Lt. Green/Violet headlamp switch wire at the headlamp switch.

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INSTALLATION (Continued)

47. Connect the relay to the relay harness.
48. Secure the relay and relay harness to the steering column harness.

Install The Hood Safety Switch

49. **NOTE:**
    Route the hood safety switch wire carefully avoiding any moving parts or components that can produce excessive heat.

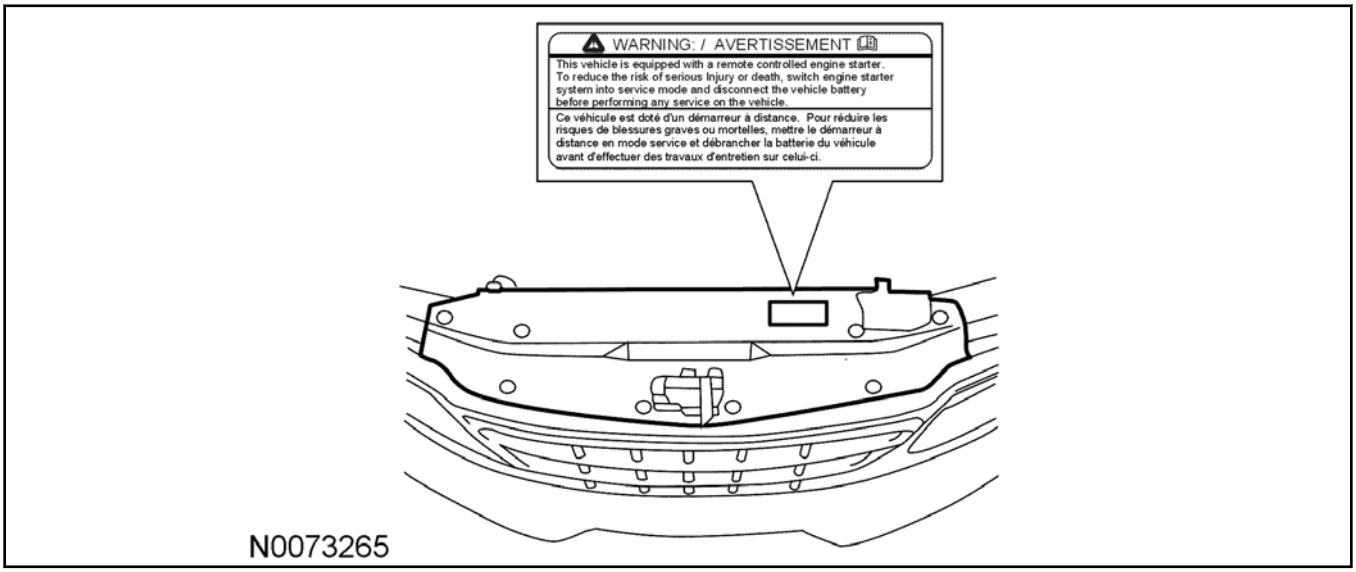
    NOTE:
    Using a piece of convolute adds to the appearance of the installation.

    NOTE:
    The switch should be positioned about 30 degrees below parallel to the ground to accommodate for parking on inclines.
    Failure to position the switch properly could result in one of the following:

    - False alarm trips
    - Non-remote start events
    - Inadvertent shutdown during remote start

    Locate an easy to access area to the left of the driver side hood hinge and install the hood safety switch using the supplied metal screws.
50. Apply rustproofing compound PM-13A to the drilled hole and tighten the screw to 1 Nm (10 lb-in).
51. Connect the hood switch ground wire to a suitable location on the bulkhead.
52. **NOTE:**
    Place the label on the radiator fan shroud or similar area.

    Install the underhood warning label.



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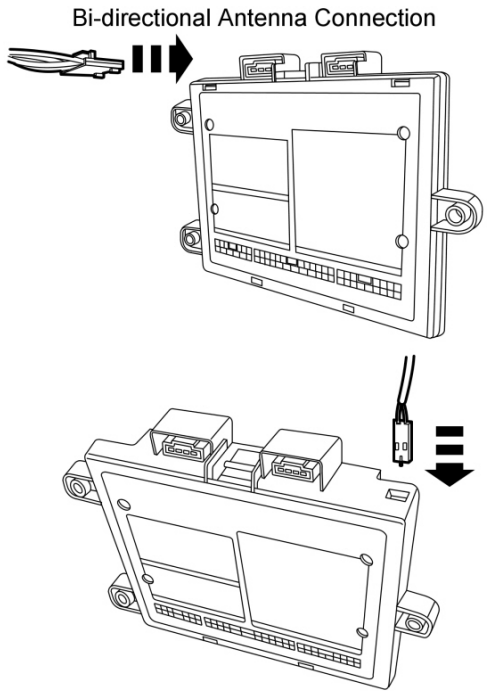
INSTALLATION (Continued)

53. Route the Gray hood safety switch wire through the bulkhead into the engine compartment and attach to the hood safety switch.
54. Connect the antenna to the RMST control module.



Program The RMST System

55. Proceed to the RMST programming section before installing trim.

Secure RMST Harness and Control Module

56. Use the supplied tie wraps to secure the RMST harness wires.
57. **NOTE:**
    Do not mount the control module in the knee bolster area.
    Secure the control module at three points to the vehicle.

    Use the supplied long tie wraps to mount the RMST control module to the underdash wiring harness, to the left of the steering column.

Install Trim

58. Install the glove compartment.
    - Install the 5 screws.
59. Install the RH lower instrument panel insulator.
    - Install the 2 retainers.
60. Install the lower steering column shroud.
    1 Attach to the upper steering column shroud.
    2 Install the 2 screws.

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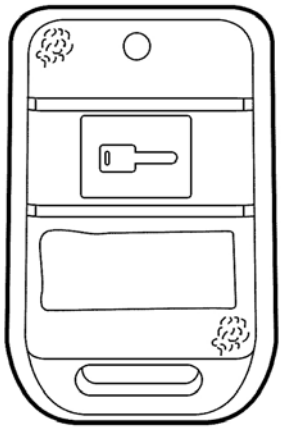
INSTALLATION (Continued)

61. Install the steering column cover trim panel.
    - Install the screw.
62. Install the LH and RH instrument panel side trim panels.

Programming - Standard Remote Start



STANDARD RMST FOB

N0097291

63. Use the following guidelines for programming the RMST system.
    - If the remote start options (Key-in sense polarity, door ajar polarity, or tach mode) are not programmed correctly, vehicle will not remote start or operate properly.
    - Make sure that the hood and doors are closed before proceeding.
    - The LED on the remote start harness must be visible to complete module programming.
    - The remote start override button must be accessible.

Programming Options: Entering Programming Mode

64. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCRIPTION	LED
2	1	TACHLESS MODE	ON

65. Press and hold the brake pedal.
66. Turn the ignition key to the RUN position.
    - The dome light will turn off.
67. Press and hold the remote start system override button for at least 10 seconds. After 10 seconds the horn with honk 3 times, indicating the system is now in the learn mode. Release the brake pedal and the RMST override button.

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INSTALLATION (Continued)

68. Press and release the override button. The horn will honk 4 times indicating the system has entered the first program bank. If not, check the following:
    - Brake pedal switch wire solder connection
    - Hood closed and Grey hood safety switch wire solder connection
    - All doors closed and dome light circuit wire solder connections
    - The key is in the RUN position
    - The software cartridge is firmly seated in the RMST module
    - The RMST harness connections are firmly seated in the RMST module

NOTE:
If you require additional assistance, CALL 1-800-FORD KEY.

69. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.
70. Press and release the brake pedal.
    - The horn will honk 1 time indicating the system has entered option 1 of the second program bank.

NOTICE:
When turning LED on or off using remote start fob button, quickly press and immediately release the remote start button. Failure to quickly release the remote start fob button will result in system defaulting to the factory options.

71. The LED must be on for option 1. If the LED is illuminated, no action is required. If the LED is not illuminated press the remote start fob button and verify the LED illuminates.

NOTE:
If the remote start fob button is held for more than 3 seconds, the system will chirp the horn 4 times, indicating the system has returned to factory default settings. If this occurs, return to step 1 of the programming section and reprogram the remote start module.

NOTE:
The remote start module is now programmed.

72. Remove the ignition key.

Programming the DNA-9

NOTE:
Two PATS keys are required to program the DNA-9.

NOTE:
IMPORTANT: Each of the following steps should be completed with no more than a 5 second delay between steps.

73. Insert the first ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the first key.

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INSTALLATION (Continued)

74. Insert the second ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the second key.
75. Press and hold the remote start button for 3 seconds.
    - The PATS light should stay on for 3-5 seconds before turning off, which means that the DNA-9 was successfully programmed.

NOTE:
If the PATS light blinks rapidly, repeat steps 1-3 to retry programming the SECURILOCK.

NOTE:
The engine will start if the Remote Start kit has been installed correctly, the brake is not depressed, and the hood and doors are closed.

Functional Test - Standard Remote Start

NOTE:
If during any of the steps of the functional test, the remote start system or vehicle doesn't react or perform accordingly, please refer to the remote start troubleshooting guide.

76. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
77. Press and hold the Start button on the remote control key fob for 2-3 seconds - horn should honk once indicating receipt of the start request.
78. The remote start systems should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.
79. Close the hood, and insert a key into the ignition switch.
80. Attempt to re-start the vehicle again using the key fob.
81. The remote start systems should turn on the ignition, but then honk the horn five times and shut down indicating a key is in the ignition switch.
82. Remove the key and open a door.
83. Attempt to re-start the vehicle again using the key fob.
84. The remote start systems should start the vehicle, then it will detect that a door is open and shut down.
85. Close the door.
86. Attempt to re-start the vehicle again using the key fob.
87. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.
88. Once all systems have been checked, open the door, or press the brake pedal - the remote start systems should shut down.

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INSTALLATION (Continued)

Troubleshooting

89. **NOTE:**

When attempting to remote start the vehicle, the system has several safety checks that it performs. If any of these inputs are present that should not be, the system will respond back with several horn "chirps" to help identify which input is present. These "chirps" will occur after initiating a start sequence with the transmitter. The system will turn on the ignition, but then respond back with several horn "chirps" and abort the starting process.

Example: Depress the remote start fob button for 3 seconds and then release. The vehicle horn will "chirp" one time to indicate that RMST signal was received. If the vehicle does not start and the horn "chirps" 3 times, there is a fault - "Vehicle Door is Open"

CHIRPS	PROBLEM
1 Chirp	DNA-9 not programmed correctly, or the DNA-9 harness is damaged.
2 Chirps	BRAKE is being pressed, or the HOOD is open.
3 Chirps	One of the vehicle DOORS is open.
4 Chirps	TACH not programmed.
5 Chirps	The KEY is in the ignition.
6 Chirps	The remote start system is in SERVICE/VALET mode.

Programming Bi-directional Remote Start

BI-DIRECTIONAL FOB

N0128674

90. Use the following guidelines for programming the RMST system.

- If the remote start options (Key-in sense polarity, door ajar polarity, or tach mode) are not programmed correctly, vehicle will not remote start or operate properly.
- Make sure that the hood and doors are closed before proceeding.
- The LED on the remote start harness must be visible to complete module programming.
- The remote start override button must be accessible.

Programming Options: Entering Programming Mode

91. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCRIPTION	LED
2	1	TACHLESS MODE	ON

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INSTALLATION (Continued)

92. Press and hold the brake pedal.
93. Turn the ignition key to the RUN position.
    The dome light will turn off.
94. Press and hold the remote start system override button for at least 10 seconds.
    After 10 seconds the horn will honk 3 times, indicating the system is now in the learn mode.
    Release the brake pedal and the RMST override button.
95. Press and release the override button. The horn will honk 4 times indicating the system has entered the first program bank.
    If not, check the following:
    - Brake pedal switch wire solder connection
    - Hood closed and Grey hood safety switch wire solder connection
    - All doors closed and dome light circuit wire solder connections
    - The key is in the RUN position
    - The software cartridge is firmly seated in the RMST module
    - The RMST harness connections are firmly seated in the RMST module

NOTE:
If you require additional assistance, CALL 1-800-FORD KEY.

96. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.
97. Press and release the brake pedal.
    The horn will honk 1 time indicating the system has entered option 1 of the second program bank.

NOTICE:
When turning LED on or off using remote start fob button, quickly press and immediately release the remote start button. Failure to quickly release the remote start fob button will result in system defaulting to the factory options.

98. The LED must be on for option 1. If the LED is illuminated, no action is required. If the LED is not illuminated, press the remote start fob button and verify the LED illuminates.

NOTE:
If the remote start fob button is held for more than 3 seconds, the system will chirp the horn 4 times, indicating the system has returned to factory default settings. If this occurs, return to step 1 of the programming section and reprogram the remote start module.

NOTE:
The remote start module is now programmed.

99. Remove the ignition key.

Programming the DNA-9

NOTE:
Two PATS keys are required to program the DNA-9.

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INSTALLATION (Continued)

NOTE:
IMPORTANT: Each of the following steps should be completed with no more than a 5 second delay between steps.

100. Insert the first ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the first key.

101. Insert the second ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the second key.

NOTE:
If the PATS light blinks rapidly, repeat steps 1-3 to retry programming the DNA-9.

NOTE:
The engine will start if the Remote Start kit has been installed correctly, the brake is not depressed, and the hood and doors are closed.

102. Press the remote start button key icon twice within 3 seconds.
    The PATS light should stay on for 3-5 seconds before turning off, which means that the DNA-9 was successfully programmed.

Functional Test - Bi-directional Remote Start

NOTE:
If during any of the steps of the functional test the remote start system or vehicle doesn't react or perform accordingly, please refer to the remote start troubleshooting guide.

103. Make sure all doors are closed but hood is open and windows are down (doors will be locking).

104. Press the Start button on the remote control key fob twice within 3 seconds - horn should honk once indicating receipt of the start request.

105. The remote start systems should start the vehicle, then it will detect that a door is open and shut down.

106. Close the hood, and insert a key into the ignition switch.

107. Attempt to re-start the vehicle again using the key fob.

108. The remote start systems should turn on the ignition, but then honk the horn five times and shut down indicating a key is in the ignition.

109. Remove the key and open a door.

110. Attempt to re-start the vehicle again using the key fob.

111. The remote start systems should turn on the ignition, but then honk the horn three times and shut down indicating a door is open.

112. Close the door.

113. Attempt to re-start the vehicle again using the key fob.

114. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.

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INSTALLATION (Continued)

115. Once all systems have been checked, open the door or press the brake pedal - the remote start systems should shut down.

Troubleshooting

116. **NOTE:**

When attempting to remote start the vehicle, the system has several safety checks that it performs. If any of these inputs are present that should not be, the system will respond back with several horn "chirps" to help identify which input is present. These "chirps" will occur after initiating a start sequence with the transmitter. The system will turn on the ignition, but then respond back with several horn "chirps" and abort the starting process.

Example: Depress the remote start fob button for 3 seconds and then release. The vehicle horn will "chirp" one time to indicate that RMST signal was received. If the vehicle does not start and the horn "chirps" 3 times, there is a fault - "Vehicle Door is Open"

CHIRPS	PROBLEM
1 Chirp	DNA-9 not programmed correctly, or the DNA-9 harness is damaged.
2 Chirps	BRAKE is being pressed, or the HOOD is open.
3 Chirps	One of the vehicle DOORS is open.
4 Chirps	TACH not programmed.

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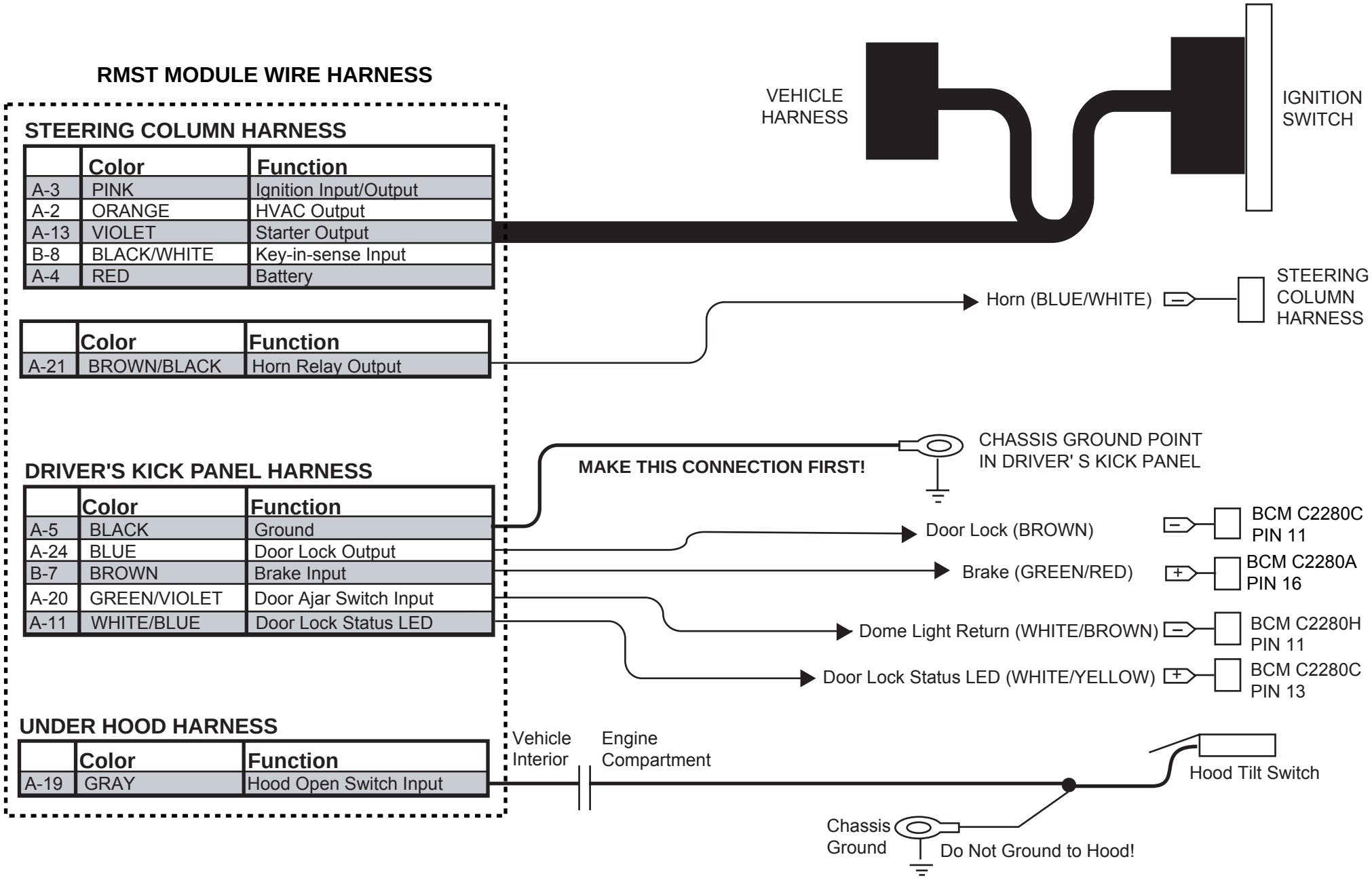
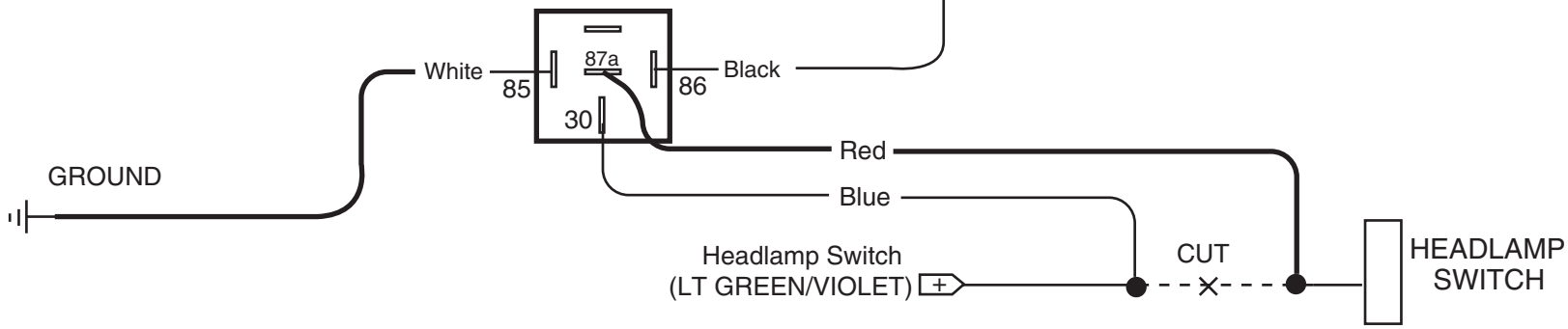
2013 Focus - Key Start



INTERRUPT RELAY

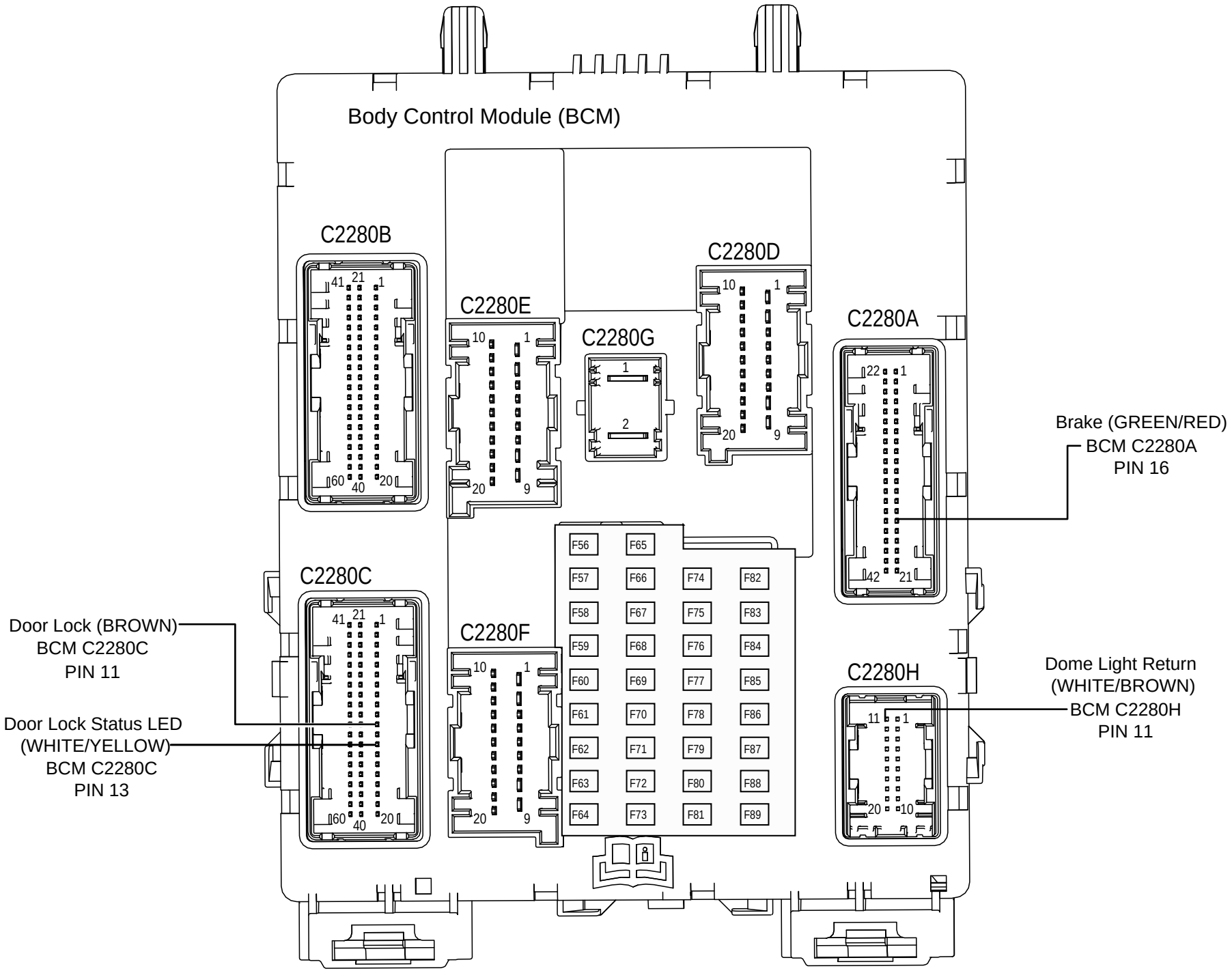
RMST MODULE WIRE HARNESS

	Color	Function
A-1	WHITE	Parking Light Output



NOTE: REMOVE THE YELLOW WIRE AND TERMINAL FROM THE RELAY SOCKET

2013 Focus - Key Start



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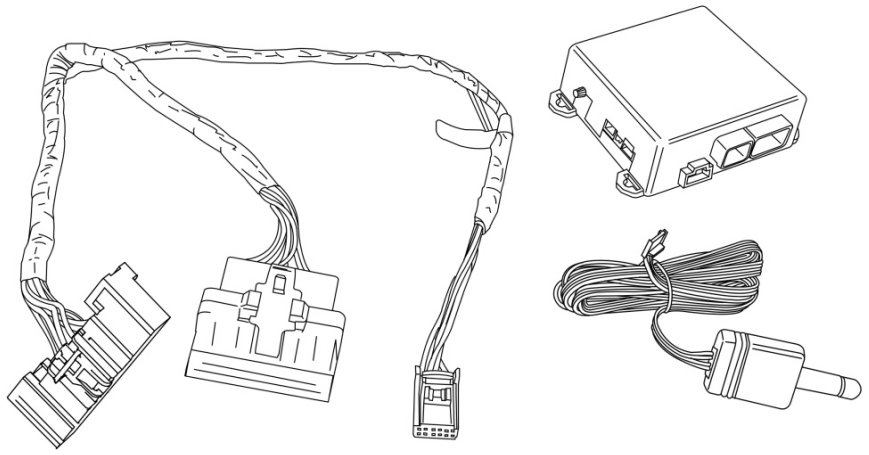
INSTALLATION

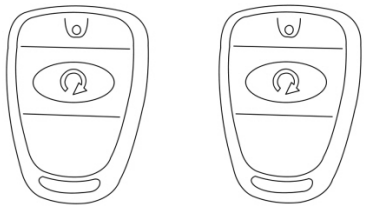
Remote Start (RMST) System - Fusion

RMST System Components



N0148918

"Standard RMST" Key Fobs



N0149211

"Bi-directional RMST" Key Fobs

N0149210

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INSTALLATION (Continued)

Fusion - Key Start

NOTICE:

Remote start systems are only applicable to vehicles with automatic transmissions.

1. Verify correct kit number.

Review Standard RMST Kit Contents

NOTE:
Kits are vehicle specific and are not interchangeable.

2. Review the RMST kit contents.

Remote Start (RMST) System Kit

QUANTITY	DESCRIPTION
1	RMST Module
1	T-harness
1	Antenna
4	Zip-tie
1	Owner's Manual
2	Standard RMST Key Fob

Review Bi-directional RMST Kit Contents

NOTE:
Kits are vehicle specific and are not interchangeable.

3. Review the RMST kit contents.

Remote Start (RMST) System Kit

QUANTITY	DESCRIPTION
1	RMST Module
1	T-harness
1	Antenna
4	Zip-tie
1	Owner's Manual
1	Bi-directional RMST Key Fob

Trim Removal

4. Detach the retaining clips and remove the steering column opening trim panel.

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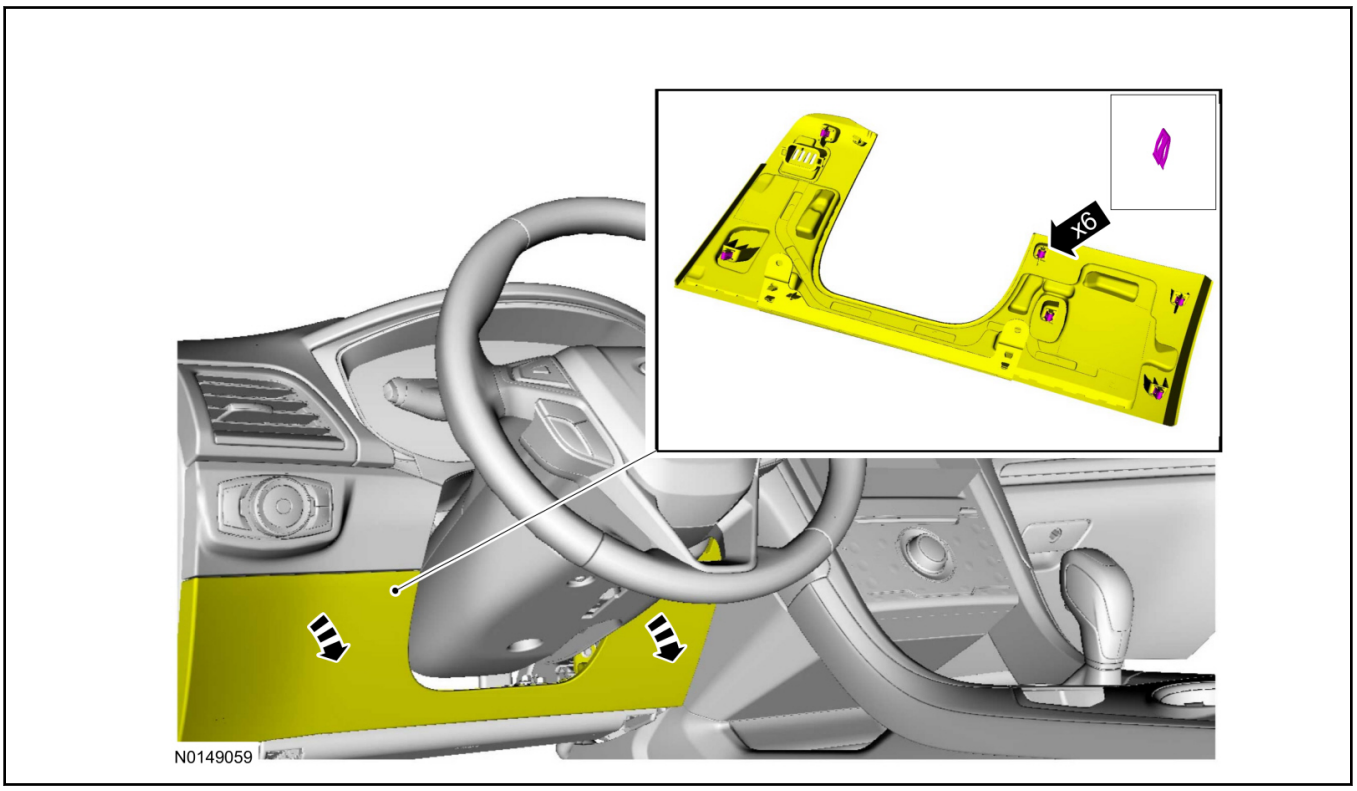
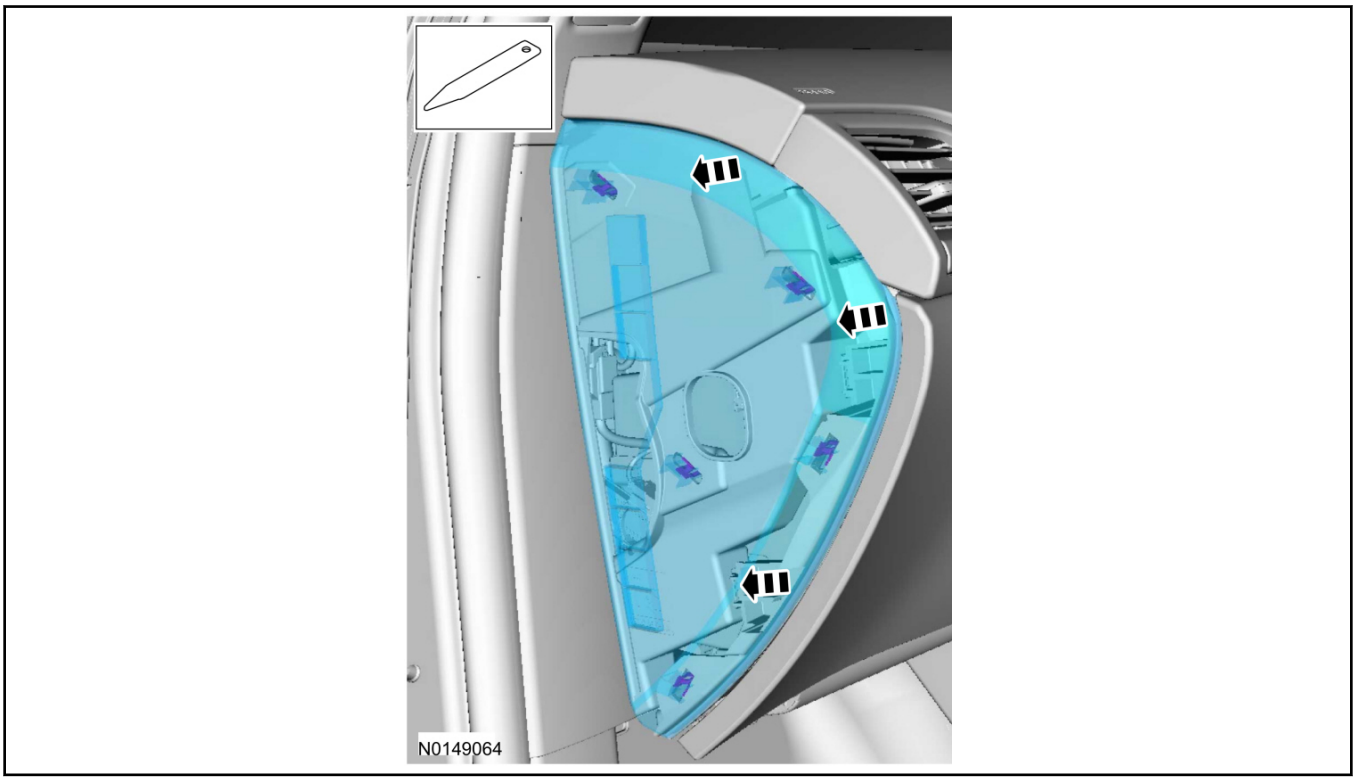
INSTALLATION (Continued)



5. Position aside the LH weather strip and remove the LH Instrument Panel (IP) side trim panel.



6. Remove the upper cowl side trim panel.

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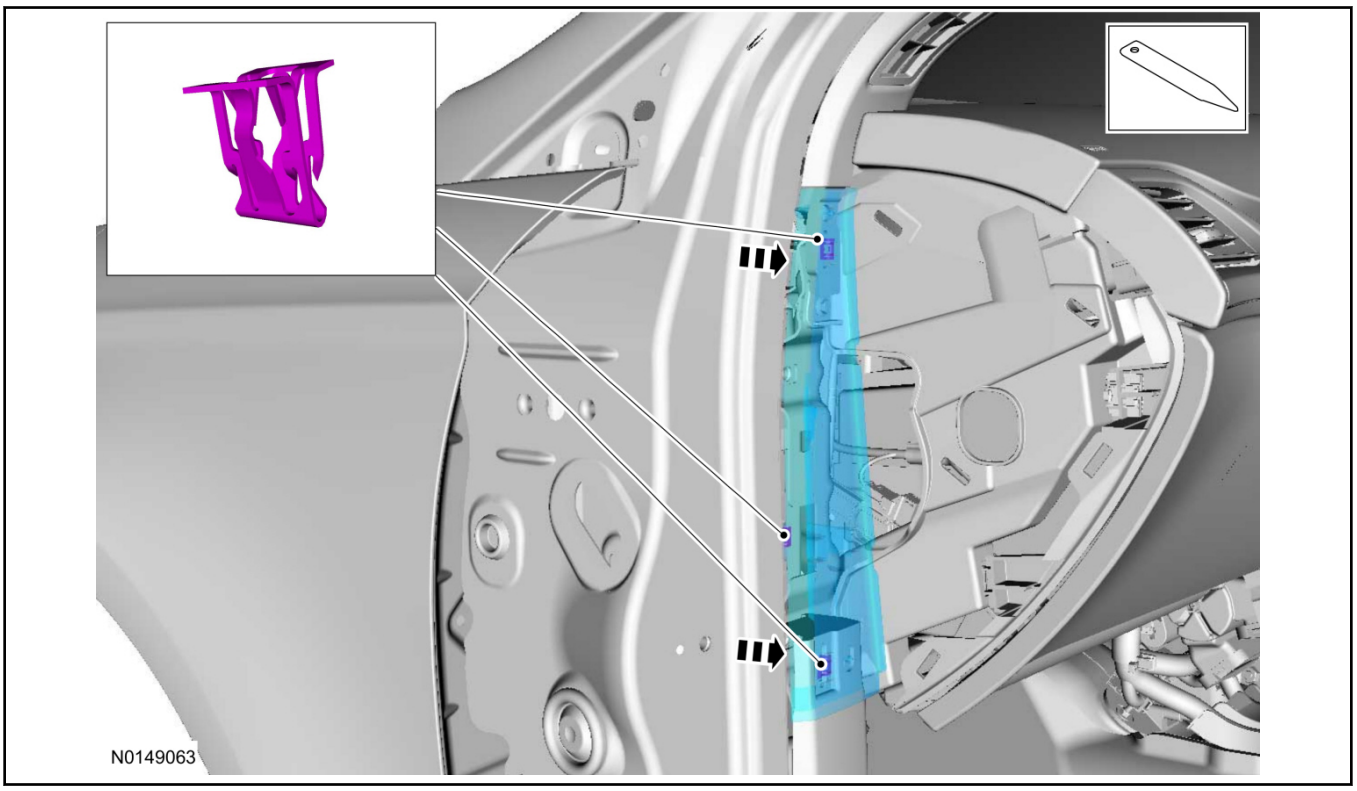
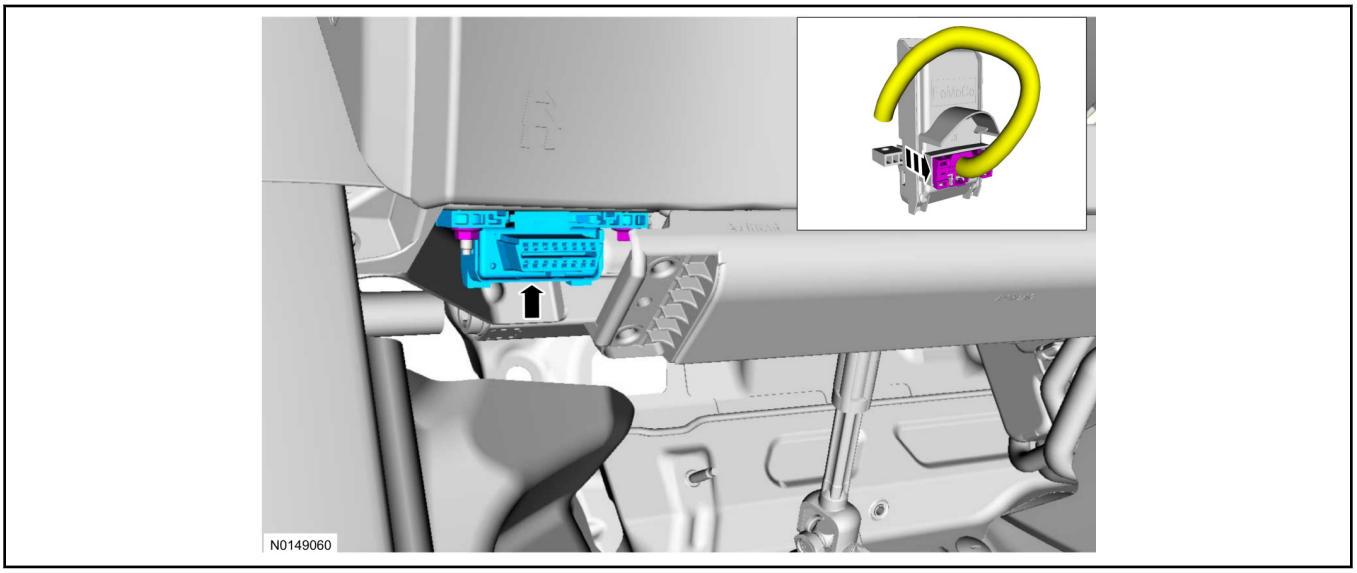
INSTALLATION (Continued)



RMST System Installation

7. Disconnect the electrical connecter from the back of the gateway module.



8. Connect the RMST T-harness to the gateway module electrical connector.

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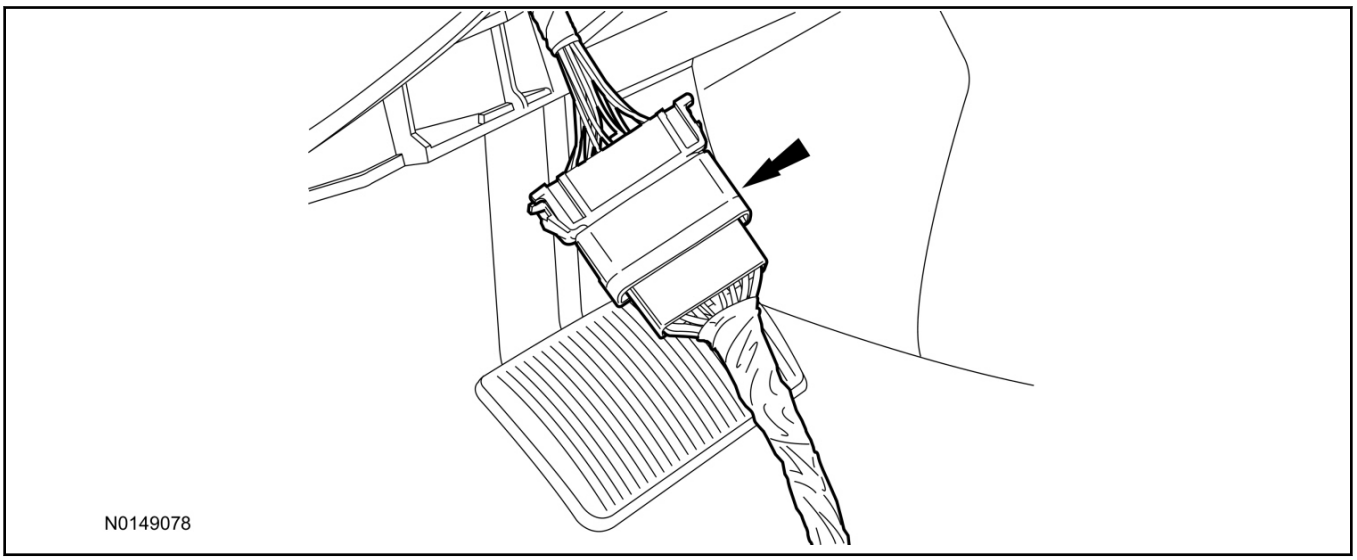
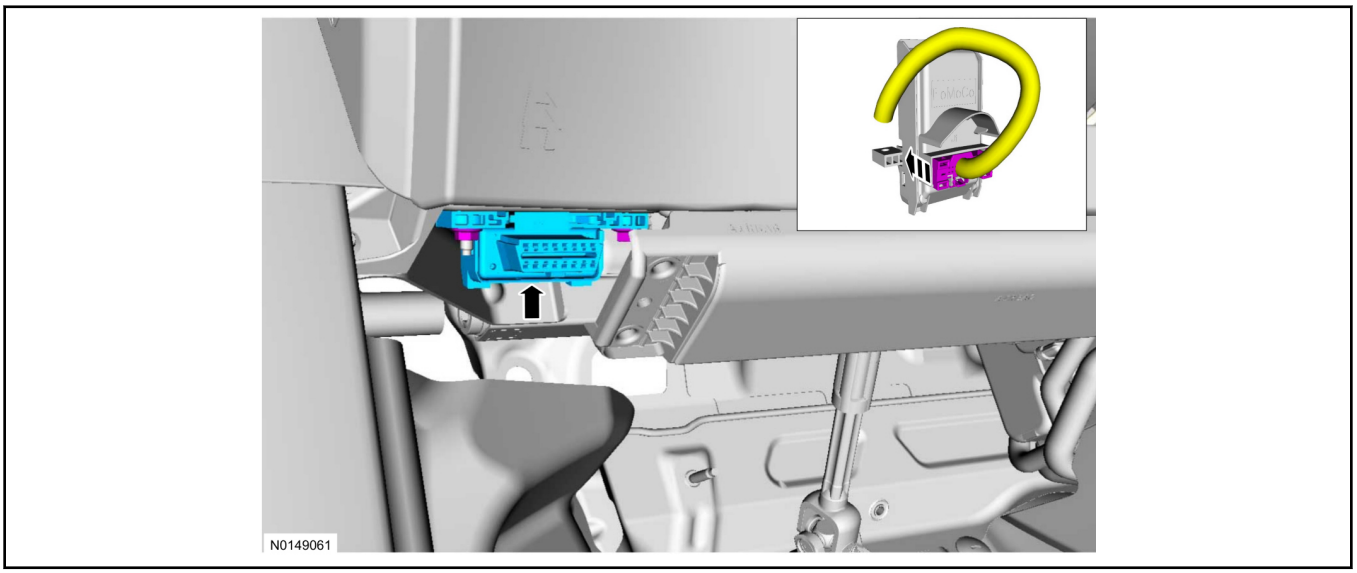
INSTALLATION (Continued)



9. Connect RMST T-harness to the back of the gateway module.



10. Install the RMST module to the IP frame.
    - Secure with zip-ties.

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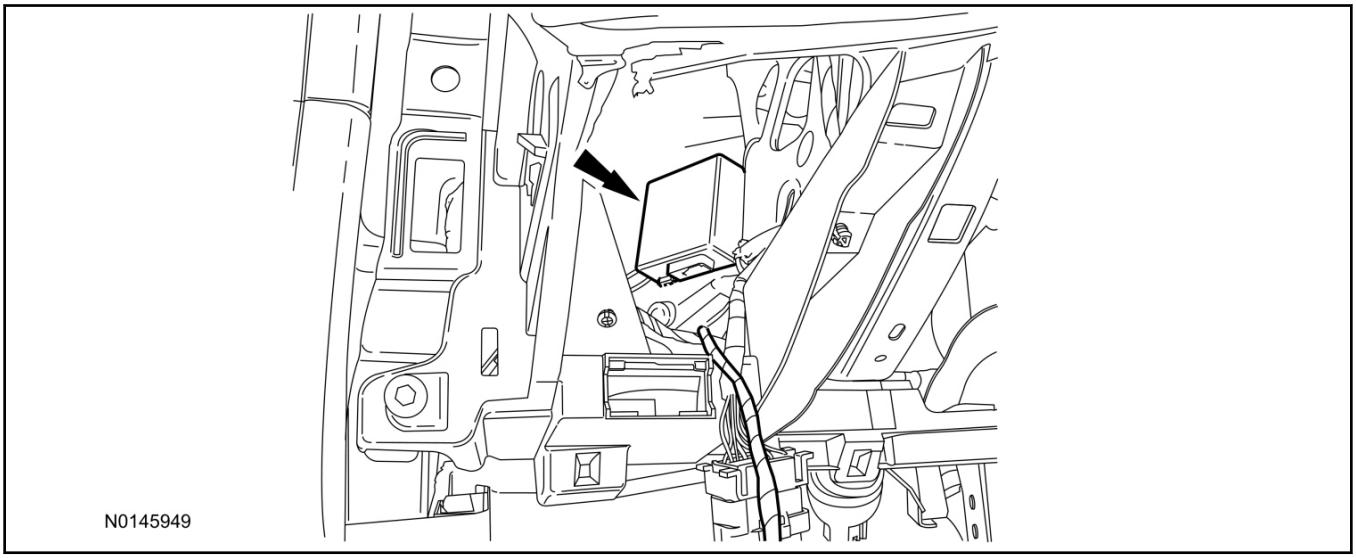
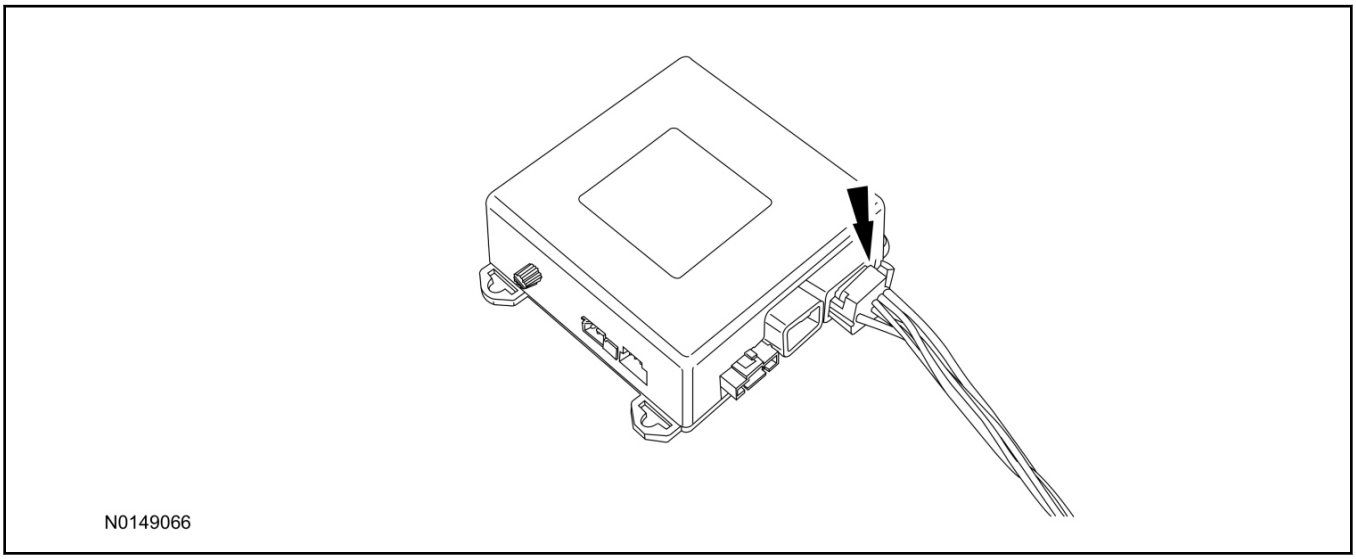
INSTALLATION (Continued)



11. Position the T-harness inside the IP.
12. Connect the T-harness to the RMST module.



Install The Antenna

13. Clean the mounting surface using an alcohol base solution and a clean cloth.
14. **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 to the windshield.

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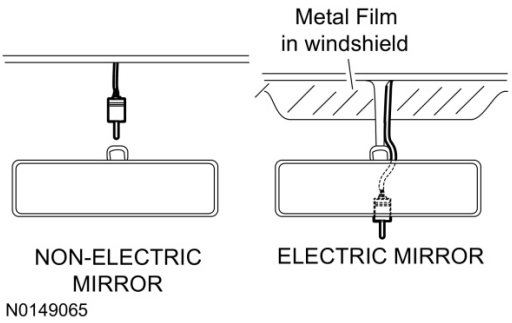
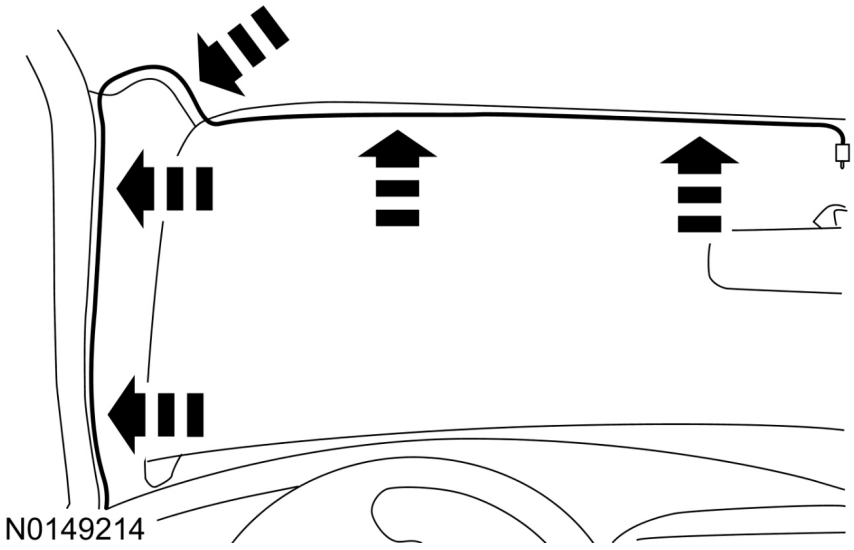
INSTALLATION (Continued)



15. 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 the air bag.

16. Route the antenna cable along the headliner and down the A-pillar towards the floor. Continue routing the wire Into the IP towards the RMST module.



17. Connect the antenna connector to the RMST module.
18. Reposition the A-pillar trim panel back, if necessary.

Install Trim

19. Install the upper cowl side trim panel.
20. Install the LH IP side trim panel and position the LH weather strip back.
21. Install the steering column opening trim panel.

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INSTALLATION (Continued)

Remote Start Activation

22. Verify that the IDS is updated to the most current version.
23. Connect IDS.
    - Follow the prompts to select new vehicle session.
    - Enter VIN.
24. 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.
25. 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.
26. 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.
27. **NOTE:**
    This step applies to both standard and advanced message centers.

    While in the message center menu change the remote start running duration from the default 10 minute setting to 15 minutes.

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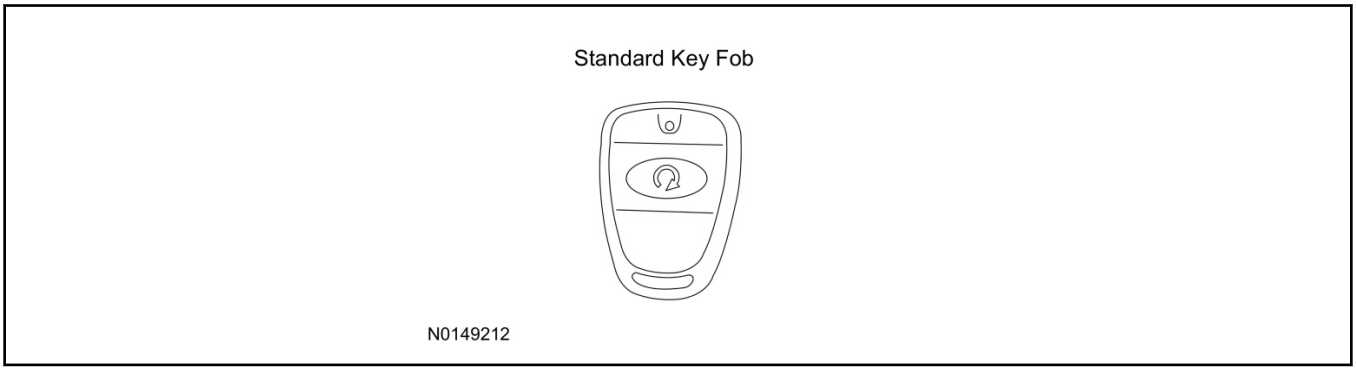
INSTALLATION (Continued)

Standard RMST Functional Test

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



28. Make sure the shift lever is in PARK and the ignition is in the OFF position. Remove all keys from the vehicle.
29. Close the hood.
30. Close all of the vehicle doors.
31. Start the vehicle by pressing and holding the remote start button on the remote start key fob for more than 2 seconds.
32. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
33. Open the hood.
34. **NOTE:**
    Vehicle doors should be closed while performing this step.

    Confirm that the vehicle will not start with the hood open.
    Please contact Ford Hotline with any issues regarding remote start functionality.
    Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

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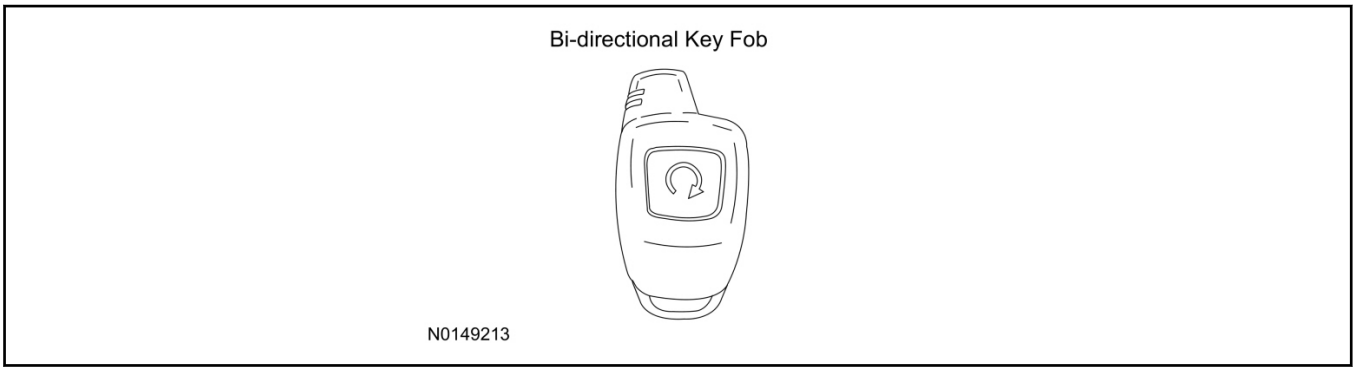
INSTALLATION (Continued)

Bi-directional RMST Functional Test

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



35. Make sure the shift lever is in PARK and the ignition is in the OFF position. Remove all keys from the vehicle.
36. Close the hood.
37. Close all of the vehicle doors.
38. Start the vehicle by pressing the remote start button 2 times on the bi-directional key fob.
39. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
40. Open the hood.
41. **NOTE:**
    Vehicle doors should be closed while performing this step.

    Confirm that the vehicle will not start with the hood open.
    Please contact Ford Hotline with any issues regarding remote start functionality.
    Please contact 1-800-FORD-KEY with any issues regarding hardware or kit contents.

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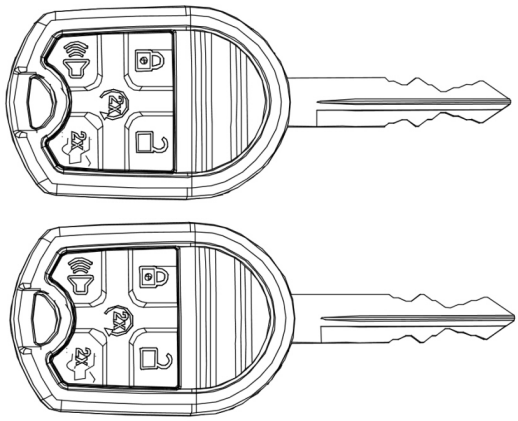
INSTALLATION

Remote Start

5-Button Remote Start System (RMST) Components



N0149595

Hood Switch Kit (19G366) - SE Vehicles Only

N0122208

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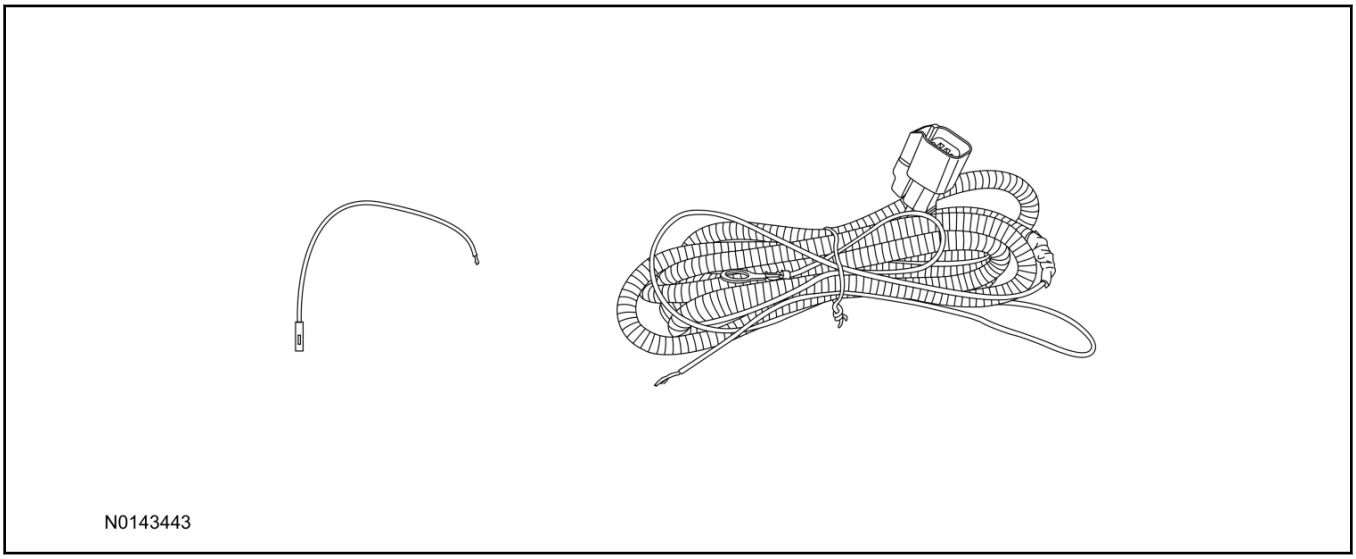
INSTALLATION (Continued)

Hood Switch Wire Harness Kit (14B504) - SE Vehicles Only



Taurus - Key Start

1. Verify correct kit number.

RMST Installation Kit Contents

2. Review the RMST kit contents.

RMST Kit

QUANTITY	DESCRIPTION
2	Key (5 Button)

Review Hood Switch Kit Contents

3. Review the Hood Switch kit contents.

Hood Switch Kit

QUANTITY	DESCRIPTION
1	Hood Switch Assembly

Review Hood Switch Wire Harness Kit Contents

4. Review the Hood Switch kit contents.

Hood Switch Wire Harness Kit

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

Vehicle Preparation

5. Verify that the vehicle is equipped with a hood switch and hood switch wire harness.
   - If the vehicle is not equipped with a hood switch or wire harness, refer to "Hood Switch Installation" within this procedure.

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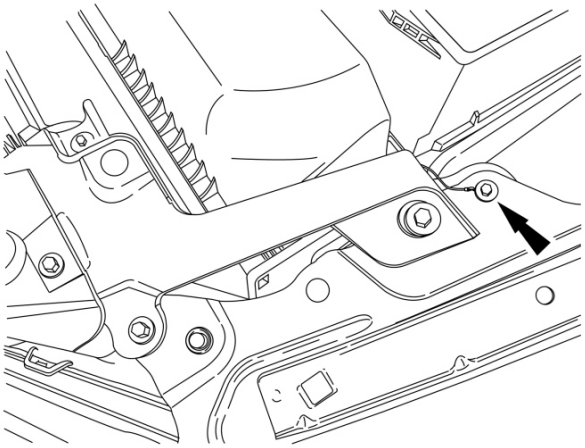
INSTALLATION (Continued)

Hood Switch Installation

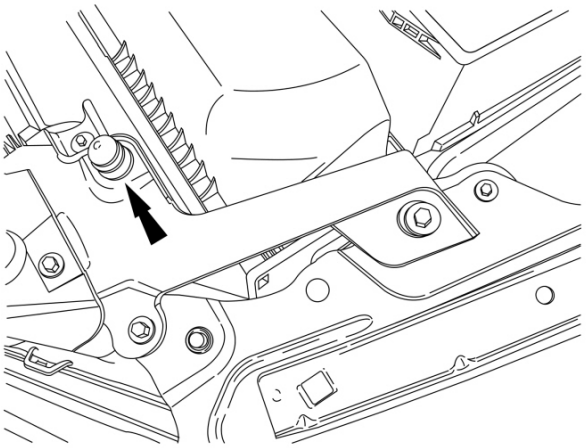
NOTE:
Hood switch installation is only required if the vehicle is not currently equipped with a hood switch.

6. Remove the fender bolt and install the hood switch ground wire.
   - Tighten to 12 Nm (106 lb-in).



N0149611

7. Install the hood switch.
   - Connect the electrical connector.



N0141925

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

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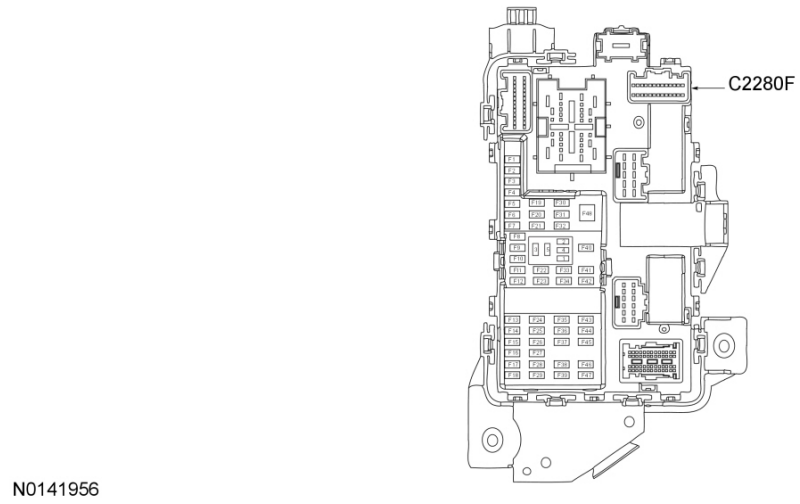
INSTALLATION (Continued)



10. If equipped, remove the pin plug from BCM connector C2280F Pin 2.
    - If the vehicle is not equipped with a hood switch from the factory C2280F will not have a wire at the Pin 2 location.
11. ***NOTICE:***
    Check that 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.
12. Connect BCM connector C2280F.

NOTICE:
Refer to "Proper Wire Splicing Techniques" before proceeding.

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

Spare Key Programming

NOTE:
Verify no related DTCs are present before beginning this procedure.

NOTE:
This procedure works only if 2 or more programmed keys are available. If 2 programmed keys are not available, alternate programming methods in the workshop manual can be found at www.fordtechservice.dealerconnection.com.

NOTE:
This procedure works only if the customer spare key programming is enabled. If customer spare key programming is disabled, refer to Key Programming — Enable/Disable Spare Key or Key Programming Using Diagnostic Equipment in the workshop manual located at www.fordtechservice.dealerconnection.com.

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INSTALLATION (Continued)

14. Cut the keys that are going to be programmed to match the existing keys.
15. Insert the first programmed Passive Anti-Theft System (PATS) key into the ignition and turn the key from the OFF position to the RUN position (maintain the key in the RUN position for approximately 3 seconds).
16. Turn the first key to the OFF position and remove the key from the ignition.
17. Within 10 seconds of turning the key to the OFF position, insert a second programmed PATS key into the ignition and turn the key from the OFF position to the RUN position (maintain the key in the RUN position for approximately 3 seconds).
18. Turn the second key to the OFF position and remove the key from the ignition.
19. **NOTE:**
    The doors lock and then unlock to confirm that each Integrated Key Transmitter (IKT) is programmed.

    Within 10 seconds of turning the second key to the OFF position, insert the new, unprogrammed PATS key into the ignition and turn the key from the OFF position to the RUN position (maintain the key in the RUN position for approximately 3 seconds).
20. If it is desired to program additional key(s) (up to a total of 4 keys can be programmed), repeat the Spare Key Programming procedure for each additional key.

Remote Start Activation

21. Verify that the IDS is updated to the most current version.
22. Connect IDS.
    - Follow the prompts to select new vehicle session.
    - Confirm VIN.
23. 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.
24. 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.

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INSTALLATION (Continued)

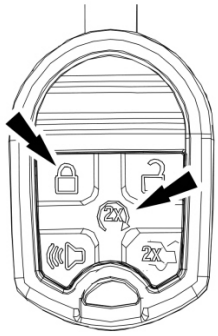
25. For vehicles equipped with advanced message center, verify that the remote start option now appears.
    - Using the Select and Arrow buttons on the steering wheel, select Settings.
    - Select Vehicle Settings.
    - Select Vehicle.
    - Select Remote Start System.
    - Verify that the remote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

Functional Test

NOTE:
Do not put a key in the ignition while performing the following steps.

26. Make sure the shift lever is in park and the ignition is in the off position. Remove all keys from the vehicle.
27. Close the hood.
28. Close all of the vehicle doors.
29. **NOTE:**
    Verify that all of the newly programed keys function properly.

    Start the vehicle by pressing the lock button once, then the remote start button 2 times on the newly programmed key.



N0149802

30. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
31. Enter the vehicle and confirm that the vehicle shuts down when attempting to shift out of park.
32. Open the hood.
33. **NOTE:**
    Vehicle doors should be closed while performing this step.

    Confirm that the vehicle will not start with the hood open.
    Please contact Ford Hotline with any issues regarding remote start functionality.

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REMOTE START SYSTEM INSTALLATION

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Troubleshooting

WIRING DIAGRAMS
Vehicle Specific Wiring Diagrams

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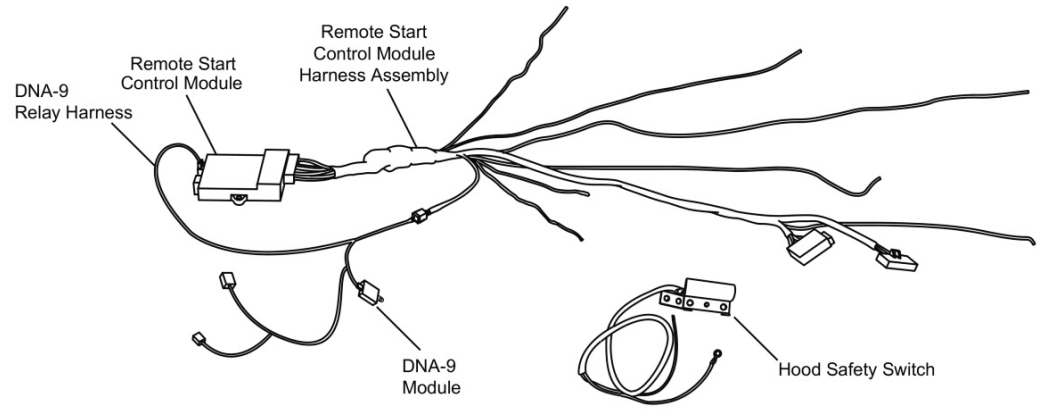
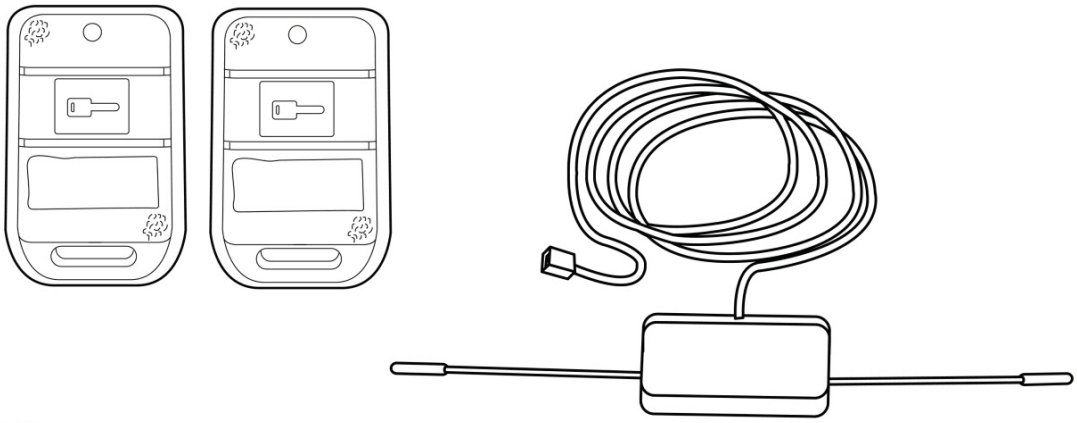
INSTALLATION

Remote Start (RMST)

RMST System Components



Additional "Standard RMST" Components



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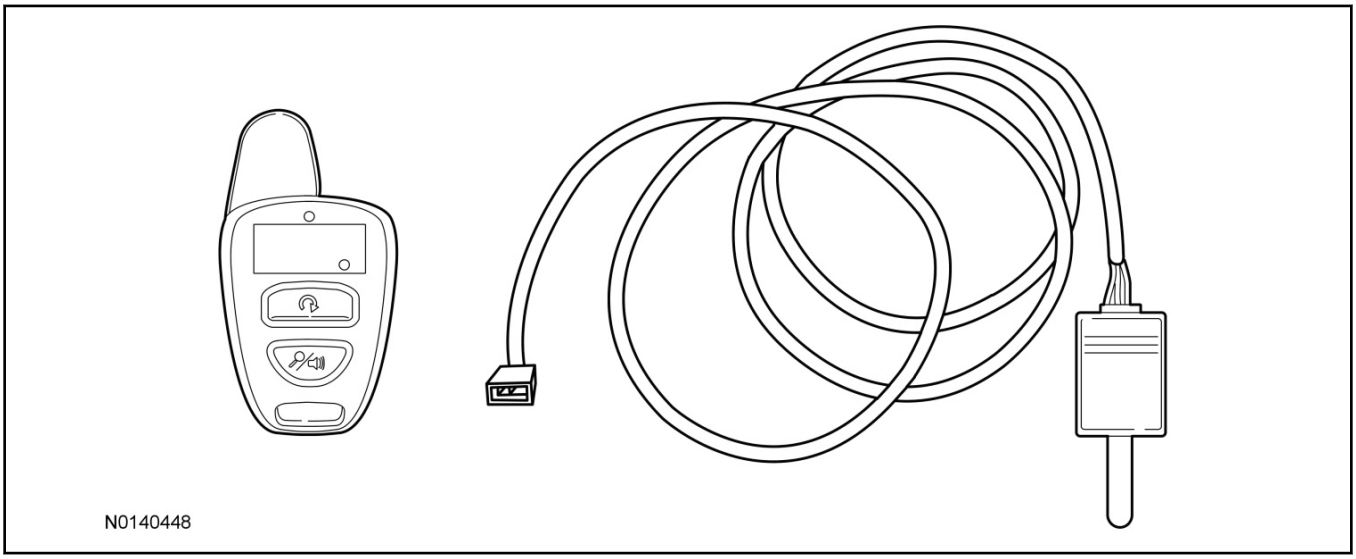
INSTALLATION (Continued)

Additional "Bi-directional RMST" Components



C-Max - Key Start

NOTICE:
Remote start systems are only applicable to vehicles with automatic transmissions.

1. Verify correct kit number.

Review RMST Installation Kit Contents

NOTE:
Kits are vehicle specific and are not interchangeable.

2. Review the RMST kit contents.

RMST System Standard Kit Type - "A"

QUANTITY	DESCRIPTION
1	RMST Module Assembly
2	1 Button Power Code Transmitter
1	RMST Custom Wiring Harness
1	Antenna
1	Hood Safety Switch Assembly
1	Installation Parts Bag
1	Operators Instructions
1	Underhood Warning Label
1	DNA-9 Module
1	DNA-9 Relay Harness
1	Wire Harness Label

3. Review the RMST bidirectional kit contents.

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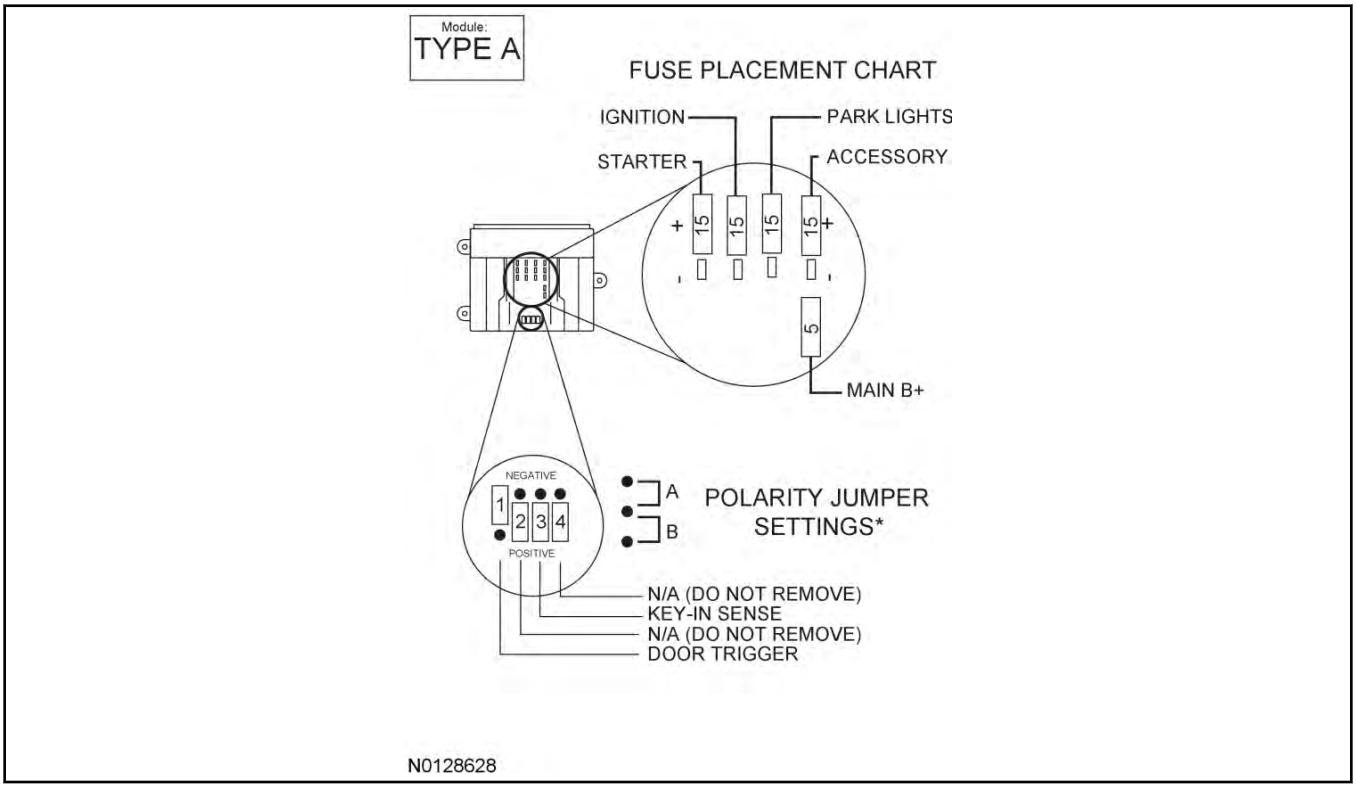
INSTALLATION (Continued)

RMST System Bidirectional Kit Type - "A"

QUANTITY	DESCRIPTION
1	RMST Module Assembly
1	2 Button Power Code Transmitter
1	RMST Custom Wiring Harness
1	Antenna
1	Antenna Harness
1	Hood Safety Switch Assembly
1	Installation Parts Bag
1	Operators Instructions
1	Underhood Warning Label
1	DNA-9 Module
1	DNA-9 Relay Harness
1	Wire Harness Label

Module Preparation

4. Remove the software cartridge from the RMST module and verify that the fuses are properly installed into the RMST control module. See Illustration.
   - If required, move the polarity jumpers to their proper locations on the control module.



5. Place the software cartridge onto the RMST control module.

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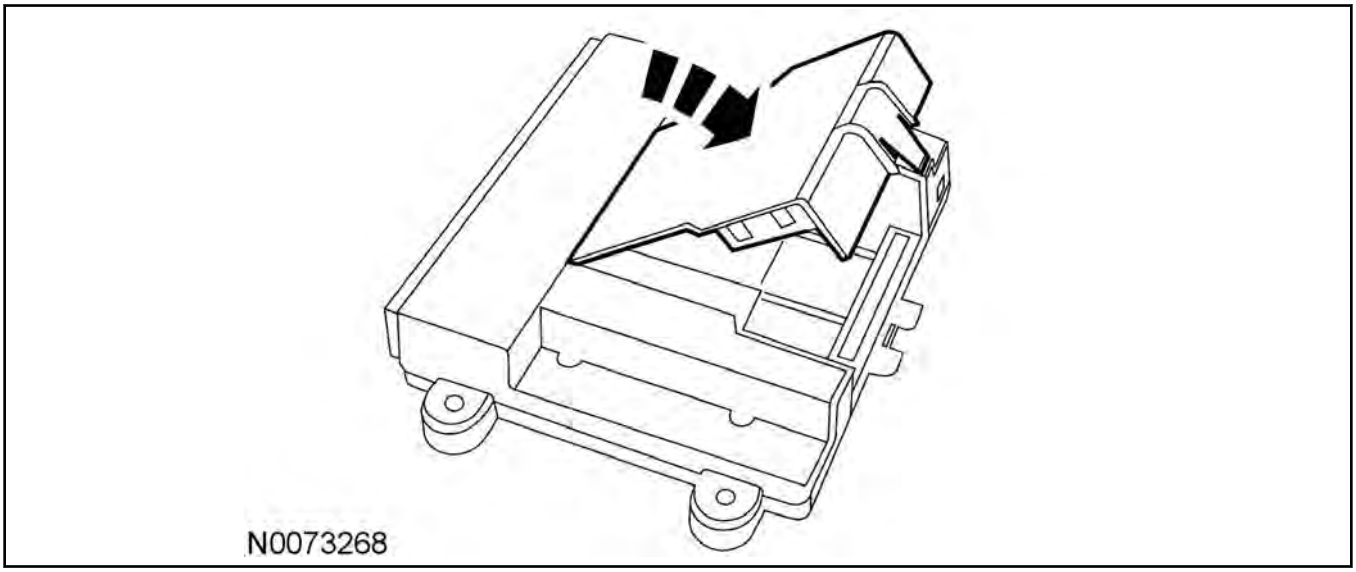
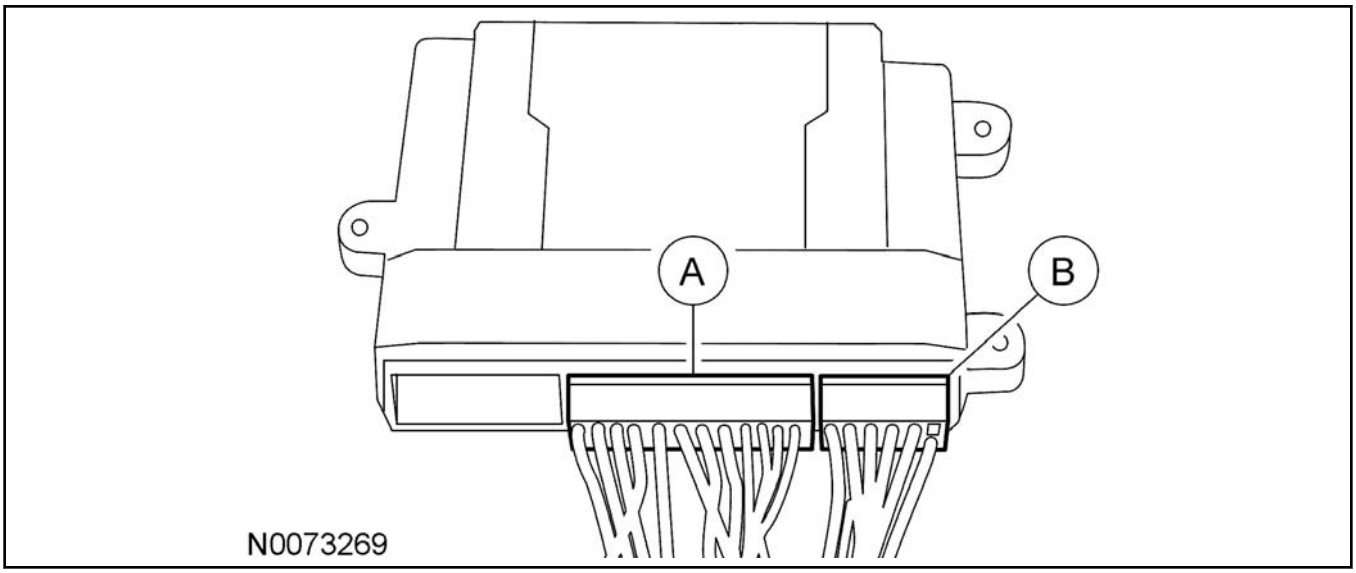
INSTALLATION (Continued)



6. Plug the wiring harness(es) into the module.
   - A - Harness: 24-way, used on all systems.
   - B - Harness: 10-way, used on all systems with RMST.



7. **NOTE:**
   Do not cut the override programming button from the harness, it is used for all installations.

   NOTE:
   Review the vehicle specific wiring diagram(s).

   Referring to the vehicle specific wiring section for the system being installed, gather all individual wires that will be routed to the same areas of the vehicle into groups. Cover each wire group with electrical tape for approximately 18". Depending on the vehicle, there will be 2 to 5 different wire groups.
   Trim all unused wires.

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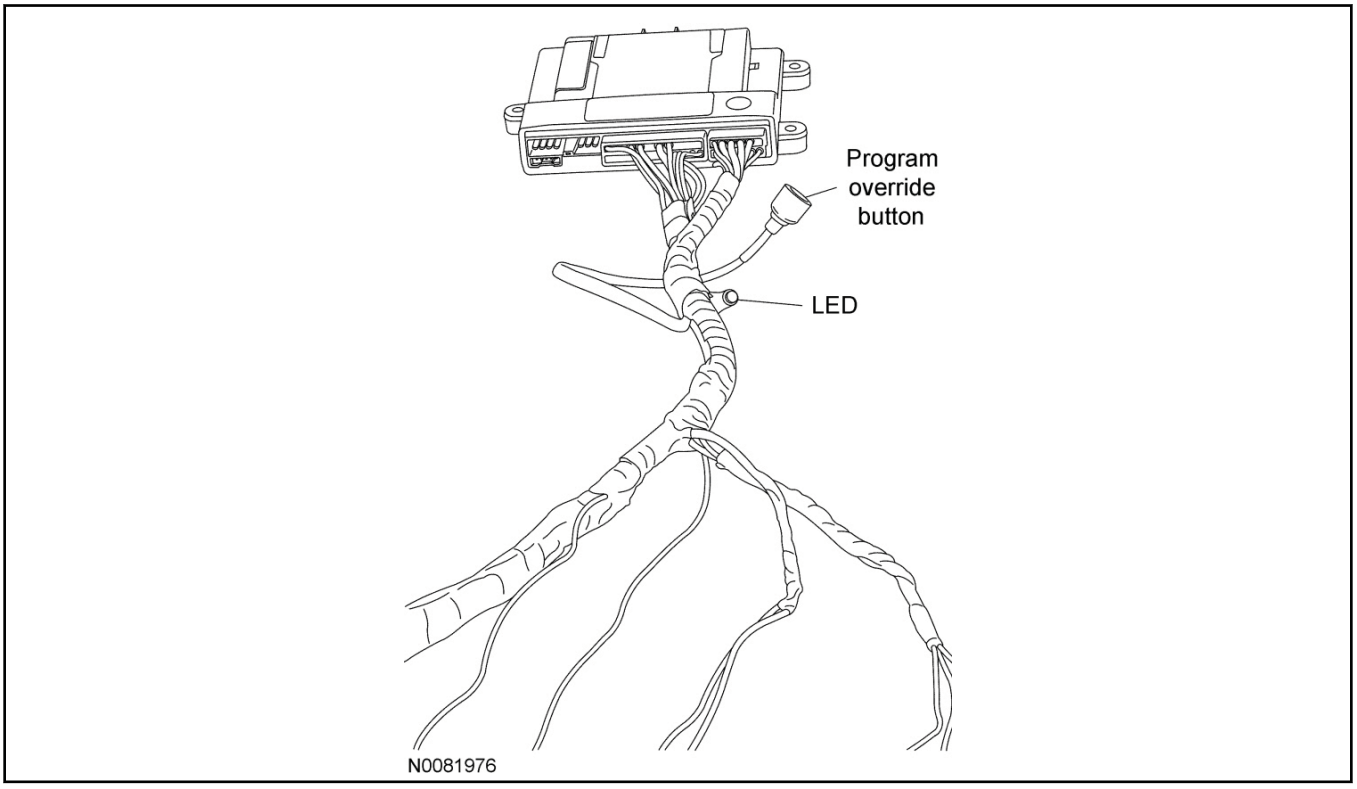
INSTALLATION (Continued)



8. Tape the harness sections together, making sure to cover all of the unused wires.

Vehicle Preparation - All Vehicles

9. **NOTE:**
   RH shown, LH similar.

   Remove the RH and LH instrument panel (IP) side trim panels.

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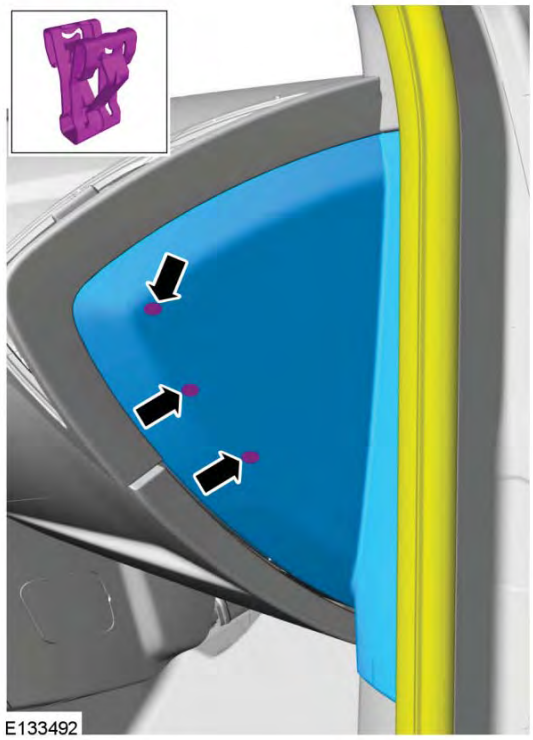
INSTALLATION (Continued)



10. **NOTE:**
    The upper steering column shroud does not need to be completely removed from the vehicle.

    Remove steering column shrouds. For additional information, refer to Workshop Manual (WSM), Section 501-05.

11. Position the weather strip aside and remove the LH side lower cowl trim panel and scuff plate.

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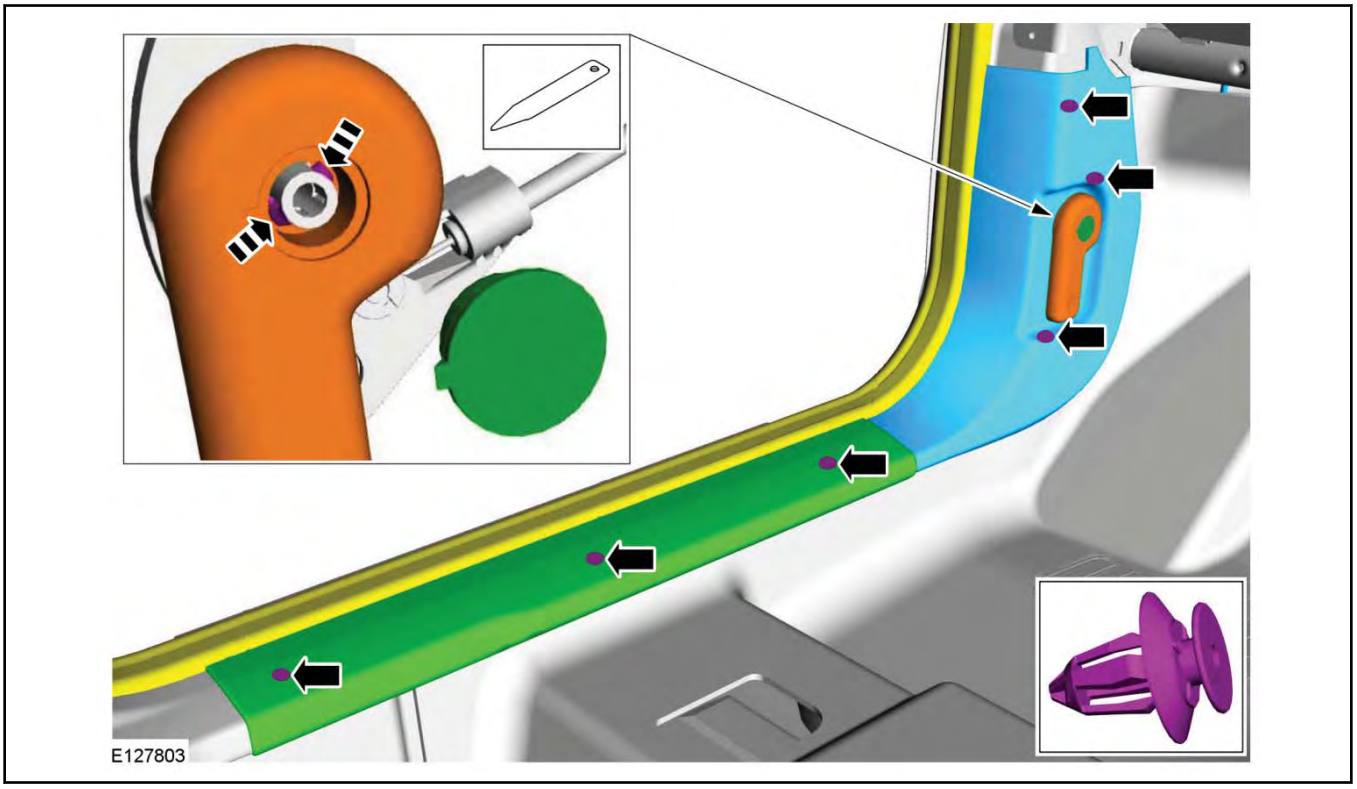
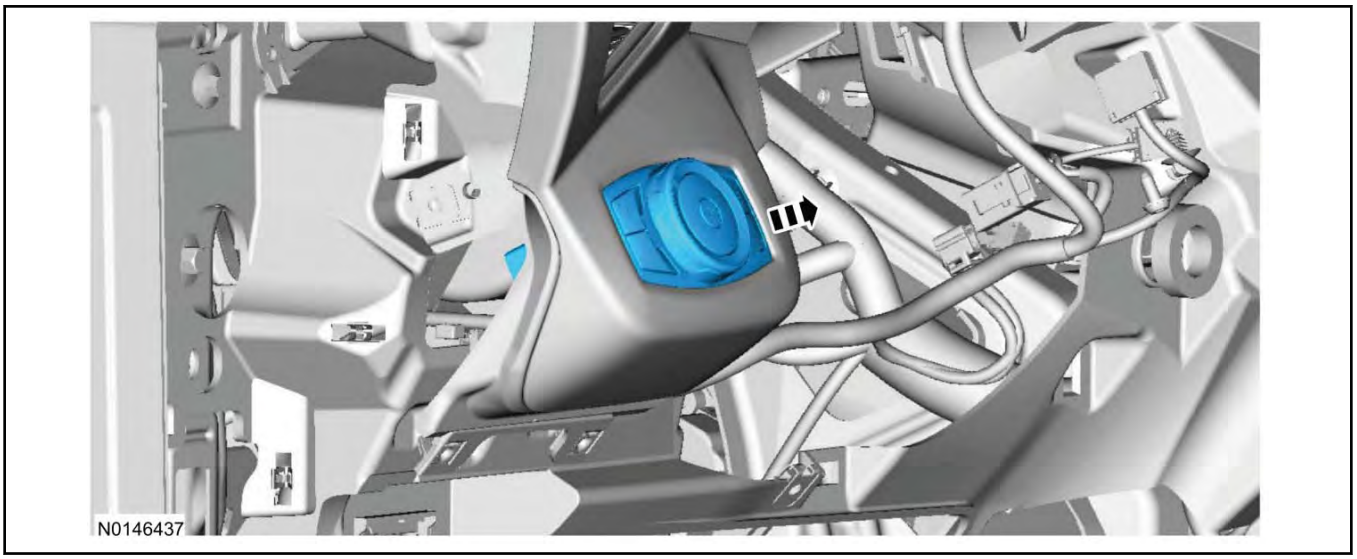
INSTALLATION (Continued)



12. Using a suitable non-marring tool, work around the outer edge of the headlamp switch to release the clips and pull the switch out through the front of the finish panel.
    - Disconnect the electrical connector.



13. Install the supplied wire harness label to the headlamp switch harness.
    - If required, fish the headlamp switch wire harness out of the instrument panel.

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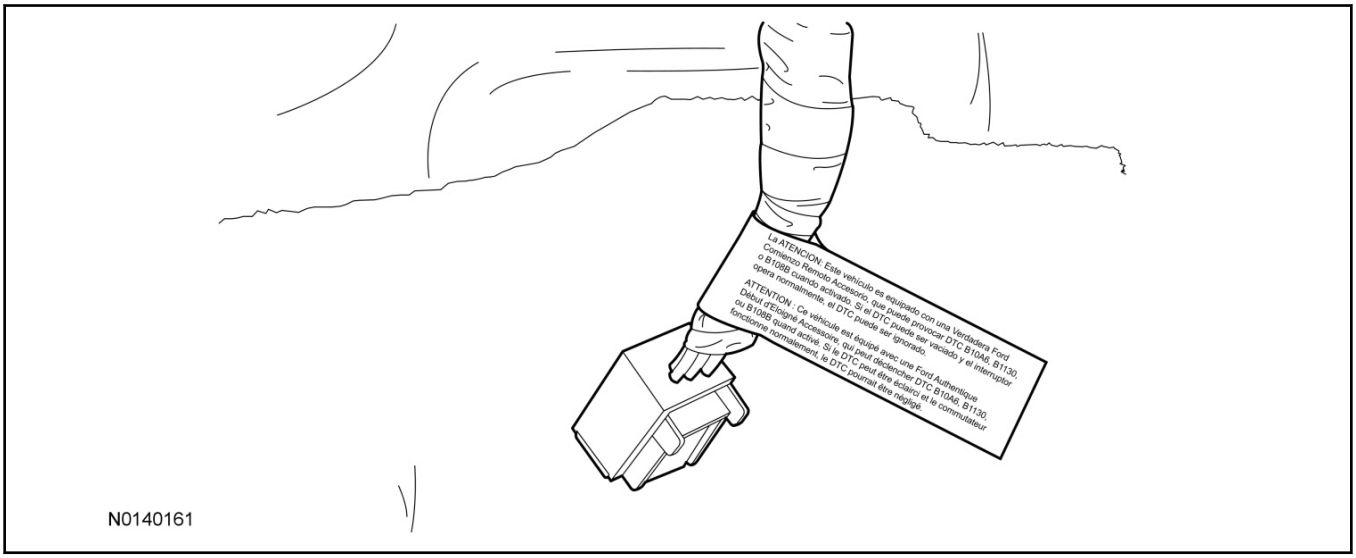
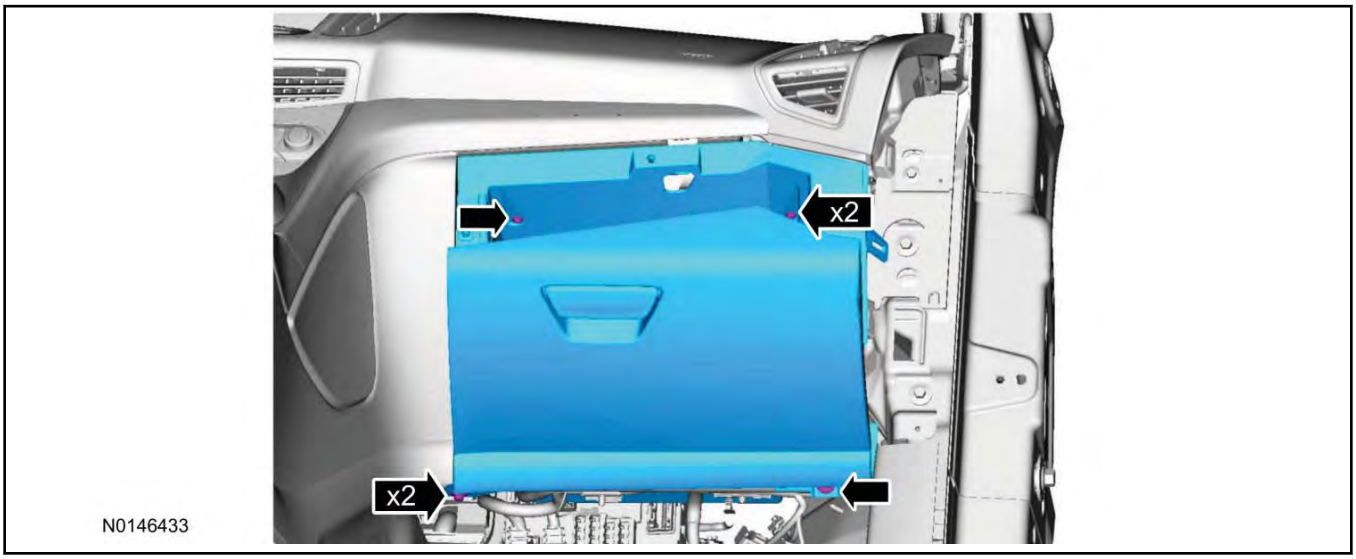
INSTALLATION (Continued)



14. Remove the 4 glove compartment screws and the glove compartment.
    - Disconnect the electrical connector.



Antenna Mounting

NOTE:
For good range of operation, the antenna must be installed correctly.

NOTE:
Keep these points in mind when selecting a location and mounting the antenna.

- Do not mount the antenna behind or on any metal film or window tinting on the windshield.
- Do not mount the antenna so that one of the antenna elements touches or crosses any vehicle wiring and/or metal.
- Do not mount the antenna close to RF devices, (EZ Pass, etc), that are installed on the windshield.
- On vehicles without metal film in the windshield around the rear view mirror, mount the antenna between the headliner and the rear view mirror.

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INSTALLATION (Continued)

- On vehicles equipped with an electronic mirror, or on vehicles with metal film around the rearview mirror, mount the antenna approximately 3 inches below the mirror attachment point to the windshield and/or mirror electronics.

15. Choose a suitable mounting location based on the guidelines above.

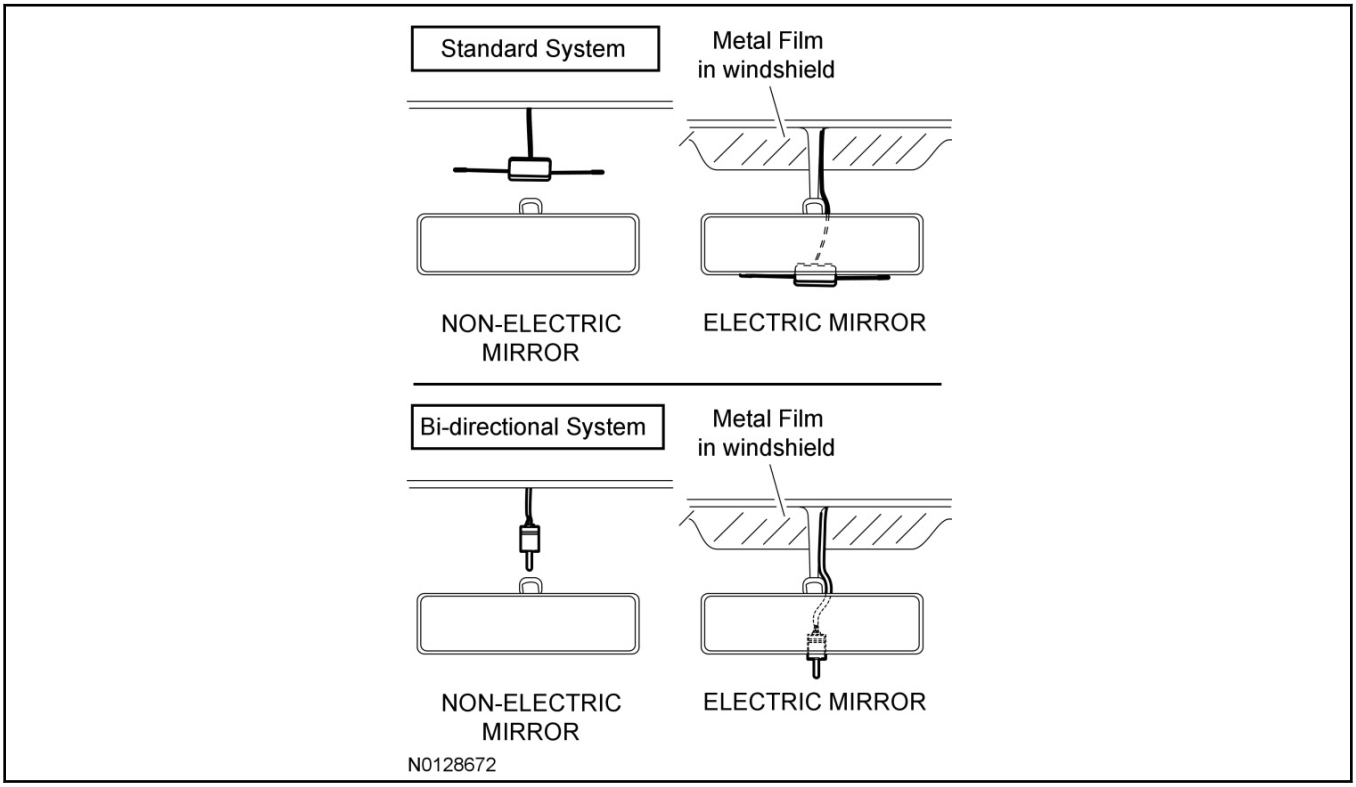
Install The Antenna

16. Clean the mounting surface using an alcohol base solution and a clean cloth.
17. **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 to the windshield.



18. 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 the air bag.

19. Route the antenna cable along the headliner and down the A-pillar towards the floor.

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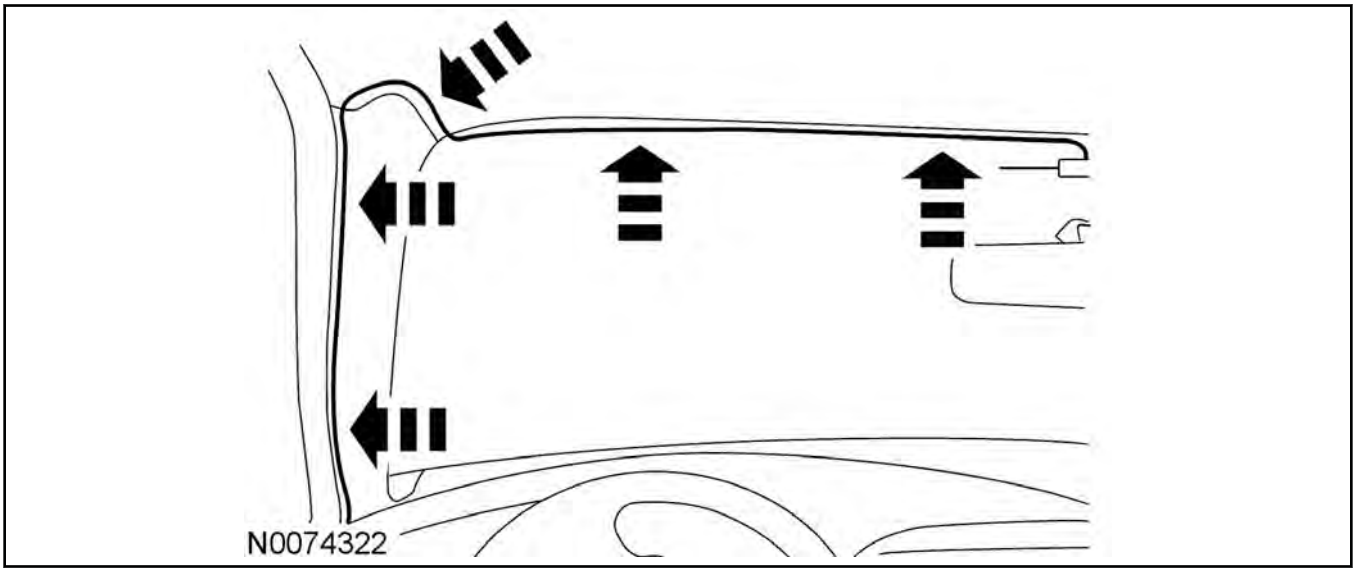


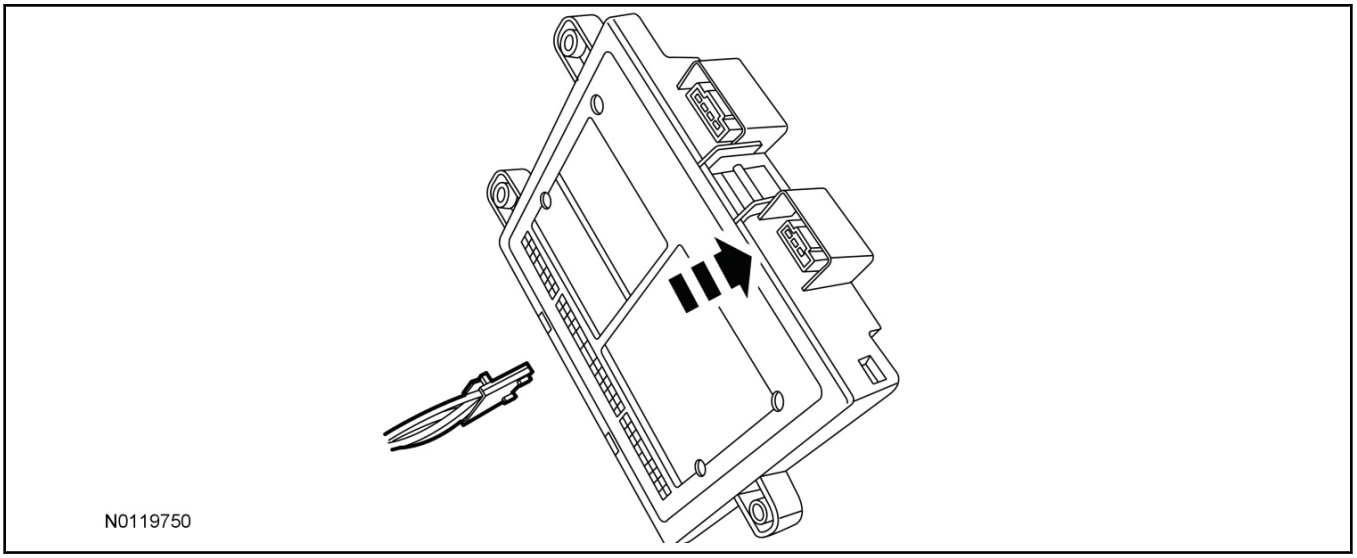
20. Reposition the A-pillar trim panel back, if necessary.

Install the Remote Start Control Module and Harness Assembly

21. Place the remote start module and harness assembly on the floor of the vehicle.

Install the DNA-9 Relay Harness and Module

22. Disconnect the Passive Anti-Theft System (PATS) transceiver electrical connector.
23. Connect the DNA-9 relay harness to the PATS transceiver electrical connector and to the vehicle harness.
24. Connect the DNA-9 relay harness to the remote start module.



25. Connect the DNA-9 Module to the relay harness.
    - Secure to the steering column wire harness with tie-straps.
26. Connect the DNA-9 relay harness to the 2-pin connector on the remote start module harness.

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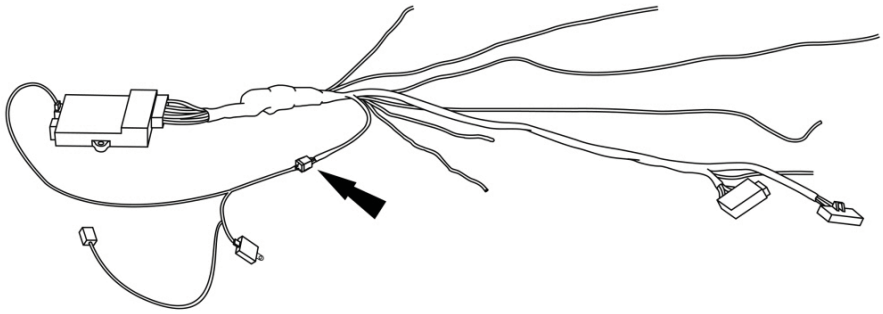
INSTALLATION (Continued)



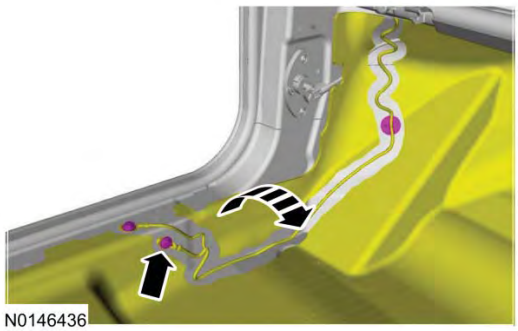
Identify Circuit Wires For Connections

NOTE:
It is recommended to identify all vehicle wires that will be connected before making any permanent connections. If all wires cannot be located, call 1-800-FORDKEY.

NOTE:
Review the vehicle specific wiring diagram(s).

NOTE:
Review the proper wire splicing techniques prior to proceeding.

27. Position aside the driver's side carpet and connect the Black ground wire from the remote start module harness to the chassis ground point.



28. Disconnect the ignition switch electrical connector.
29. Connect the remote start harness hard shell connectors to the ignition switch and ignition switch connector.
30. **NOTE:**
    A DVOM connected to the correct wire will show ~12V, then show ~0V when the horn button is held.
    A logic probe will show power on the correct wire, then show ground when the horn button is held.

    Identify the Brown horn circuit wire in the steering column harness.

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INSTALLATION (Continued)

31. Connect the Brown/Black wire from the remote start module harness to the Brown horn circuit wire in the steering column harness.
32. **NOTE:**
    A DVOM connected to the correct wire will show ~0V, then show ~12V while depressing the brake pedal.
    A logic probe will show ground on the correct wire, then show power while depressing the brake pedal.

    Identify the Green/Red brake switch circuit wire at the BCM connector C2280A pin 16.
33. Connect the Brown wire from the remote start module harness to the Green/Red brake switch circuit wire at the BCM connector C2280A pin 16.
34. **NOTE:**
    A DVOM connected to the correct wire will show ~0V with the vehicle door(s) open and the dome light ON, then show ~12V with the vehicle door(s) closed and the dome light OFF.

    NOTE:
    A logic probe connected to the correct wire will show ground with the vehicle door(s) open and the dome light ON, then show power with the vehicle door(s) closed and the dome light OFF.

    NOTE:
    Be sure that the dome light has timed out and is OFF before performing the door closed test.
    Be sure that the dome lamp is illuminated before performing the door open test.

    Identify the White/Brown dome light circuit wire at the BCM connector C2280H pin 11.
35. Connect the Green/Violet wire from the remote start module harness to the White/Brown dome light circuit wire at the BCM connector C2280H pin 11.

Relay Harness

36. Remove the circuit 87 Yellow wire and terminal from the relay harness connector.
    - Release the locking tab and pull the wire and terminal from the connector.
    - Discard the Yellow wire, it will not be used for this application.
37. Install a suitable insulated crimp terminal eyelet to the White interrupt relay wire. Attach the White relay wire to a suitable grounding location.
38. Connect the White wire from the remote start module harness to the black wire at the relay harness.
39. Identify the Lt. Green/Violet headlamp switch wire at the headlamp switch.
40. **NOTE:**
    Be sure to leave enough wire at each end of the cut wire to properly splice the relay wire to the headlamp switch harness.

    Cut the Lt. Green/Violet headlamp switch wire at the headlamp switch.
    - Connect the Blue wire from the relay harness to the feed side of the Lt. Green/Violet headlamp switch wire at the headlamp switch.
    - Connect the Red wire from the relay harness to the load side of the Lt. Green/Violet headlamp switch wire at the headlamp switch.

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INSTALLATION (Continued)

41. Connect the relay to the relay harness.
42. Secure the relay and relay harness to the steering column harness.

Install The Hood Safety Switch

43. **NOTE:**
    Route the hood safety switch wire carefully avoiding any moving parts or components that can produce excessive heat.

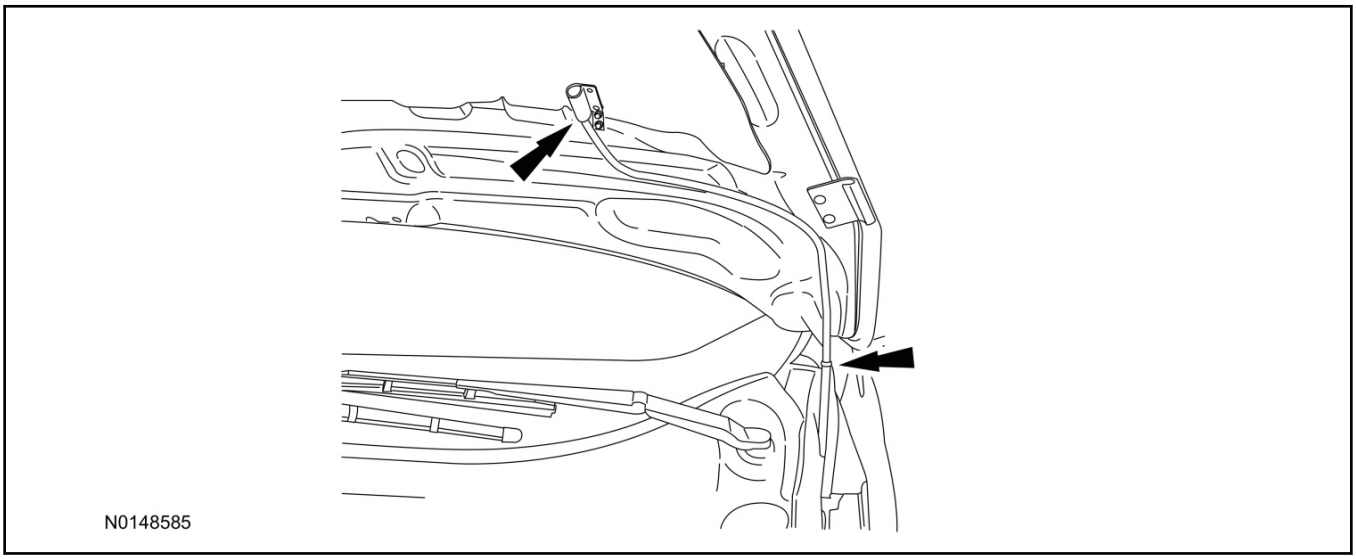
    NOTE:
    Using a piece of convolute adds to the appearance of the installation.

    NOTE:
    The switch should be positioned about 30 degrees below parallel to the ground to accommodate for parking on inclines.
    Failure to position the switch properly could result in one of the following:

    - False alarm trips
    - Non-remote start events
    - Inadvertent shutdown during remote start

    Install the hood safety switch using the supplied metal screws.

    - Apply rustproofing compound PM-13A to the screw holes.
    - Tighten the screws to 1 Nm (10 lb-in).
    - Secure the harness with tie-straps.



44. Connect the hood switch ground wire to a suitable location.
45. **NOTE:**
    Place the label on the radiator fan shroud or similar area.

    Install the underhood warning label.

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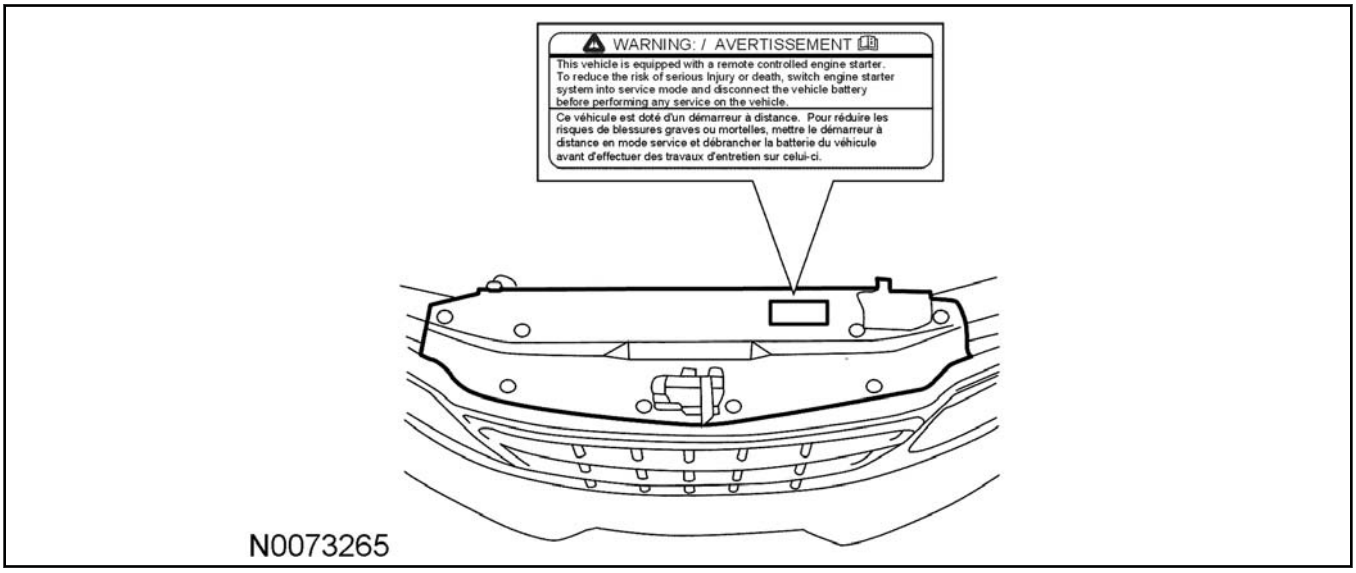
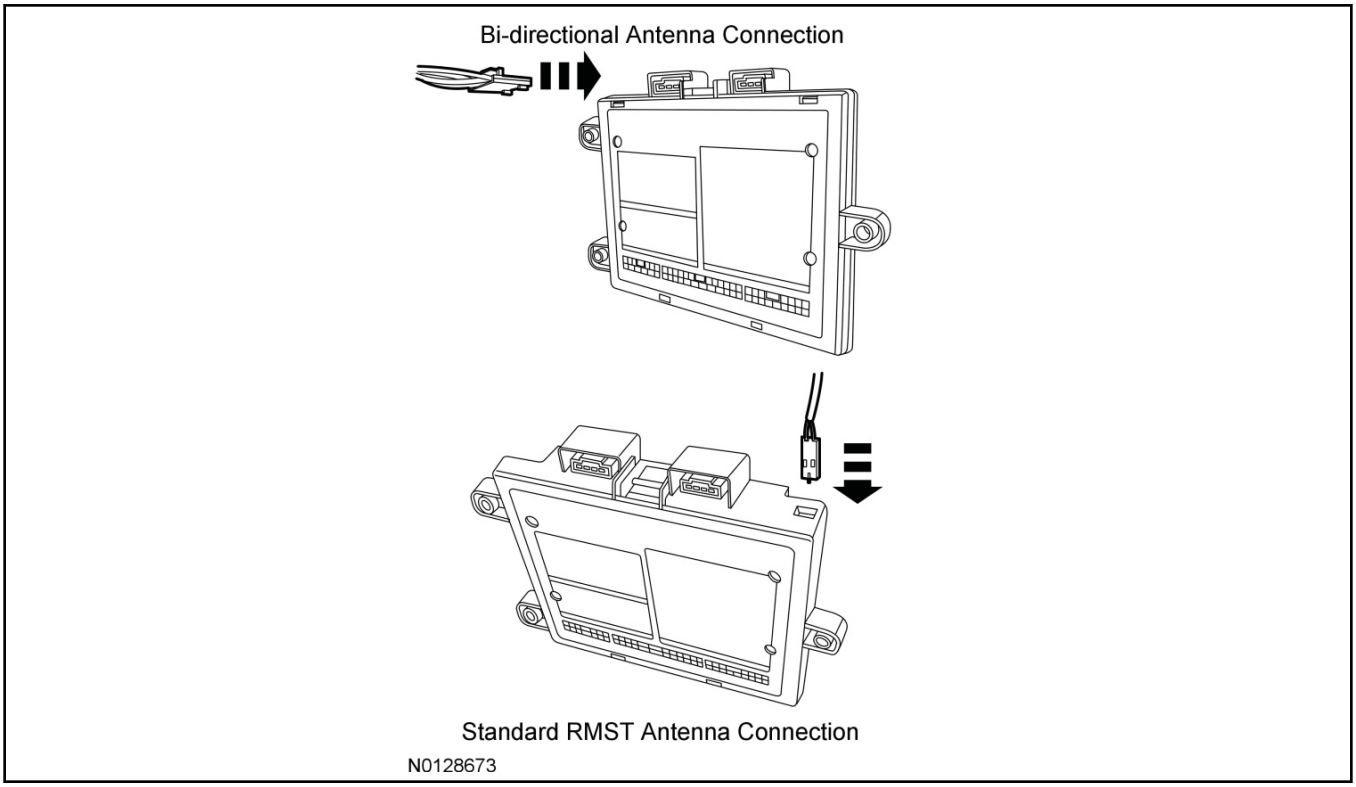
INSTALLATION (Continued)



46. Route the Gray hood safety switch wire through the bulkhead into the engine compartment and attach to the hood safety switch.

47. Connect the antenna to the RMST control module.



Program The RMST System

48. Proceed to the RMST programming section before installing trim.

Secure RMST Harness and Control Module

49. Use the supplied tie wraps to secure the RMST harness wires.

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INSTALLATION (Continued)

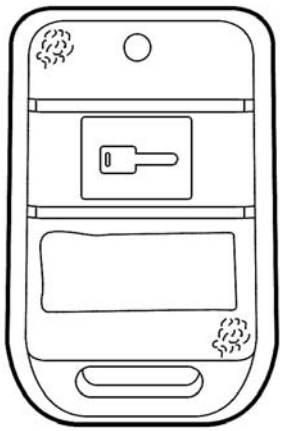
50. **NOTE:**
    Do not mount the control module in the knee bolster area.
    Secure the control module at three points to the vehicle.

    Use the supplied long tie wraps to mount the RMST control module to the underdash wiring harness, to the left of the steering column.

Install Trim

51. Install the glove compartment and install the screws
    - Connect the electrical connector.
52. Install the headlamp switch.
    - Connect the electrical connector.
53. Install the LH side lower cowl trim panel and scuff plate and position the weather strip back.
    - Install the hood latch lever and cover.
54. Install steering column shrouds. For additional information, refer to WSM, Section 501-05.
55. Install the RH and LH instrument panel (IP) side trim panels.

Programming - Standard Remote Start



STANDARD RMST FOB

N0097291

56. Use the following guidelines for programming the RMST system.
    - If the remote start options (Key-in sense polarity, door ajar polarity, or tach mode) are not programmed correctly, vehicle will not remote start or operate properly.
    - Make sure that the hood and doors are closed before proceeding.
    - The LED on the remote start harness must be visible to complete module programming.
    - The remote start override button must be accessible.

Programming the DNA-9

NOTE:
Two PATS keys are required to program the DNA-9.

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INSTALLATION (Continued)

NOTE:
IMPORTANT: Each of the following steps should be completed with no more than a 5 second delay between steps.

57. Insert the first ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the first key.
58. Insert the second ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the second key.
59. Press and hold the remote start button for 3 seconds.
    - The PATS light should stay on for 3-5 seconds before turning off, which means that the DNA-9 was successfully programmed.

NOTE:
If the PATS light blinks rapidly, repeat steps 1-3 to retry programming the SECURILOCK.

NOTE:
The engine will start if the Remote Start kit has been installed correctly, the brake is not depressed, and the hood and doors are closed.

Functional Test - Standard Remote Start

NOTE:
If during any of the steps of the functional test, the remote start system or vehicle doesn't react or perform accordingly, please refer to the remote start troubleshooting guide.

60. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
61. Press and hold the Start button on the remote control key fob for 2-3 seconds - horn should honk once indicating receipt of the start request.
62. The remote start systems should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.
63. Close the hood, and insert a key into the ignition switch.
64. Attempt to re-start the vehicle again using the key fob.
65. The remote start systems should turn on the ignition, but then honk the horn five times and shut down indicating a key is in the ignition switch.
66. Remove the key and open a door.
67. Attempt to re-start the vehicle again using the key fob.
68. The remote start systems should start the vehicle, then it will detect that a door is open and shut down.
69. Close the door.
70. Attempt to re-start the vehicle again using the key fob.
71. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.

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INSTALLATION (Continued)

72. Once all systems have been checked, open the door, or press the brake pedal - the remote start systems should shut down.

Troubleshooting

73. **NOTE:**
When attempting to remote start the vehicle, the system has several safety checks that it performs. If any of these inputs are present that should not be, the system will respond back with several horn "chirps" to help identify which input is present. These "chirps" will occur after initiating a start sequence with the transmitter. The system will turn on the ignition, but then respond back with several horn "chirps" and abort the starting process.

Example: Depress the remote start fob button for 3 seconds and then release. The vehicle horn will "chirp" one time to indicate that RMST signal was received. If the vehicle does not start and the horn "chirps" 3 times, there is a fault - "Vehicle Door is Open"

CHIRPS	PROBLEM
1 Chirp	DNA-9 not programmed correctly, or the DNA-9 harness is damaged.
2 Chirps	BRAKE is being pressed, or the HOOD is open.
3 Chirps	One of the vehicle DOORS is open.
4 Chirps	TACH not programmed.
5 Chirps	The KEY is in the ignition.
6 Chirps	The remote start system is in SERVICE/VALET mode.

Programming Bi-directional Remote Start

BI-DIRECTIONAL FOB

N0128674

74. Use the following guidelines for programming the RMST system.
    - If the remote start options (Key-in sense polarity, door ajar polarity, or tach mode) are not programmed correctly, vehicle will not remote start or operate properly.
    - Make sure that the hood and doors are closed before proceeding.
    - The LED on the remote start harness must be visible to complete module programming.
    - The remote start override button must be accessible.

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INSTALLATION (Continued)

Programming the DNA-9

NOTE:
Two PATS keys are required to program the DNA-9.

NOTE:
IMPORTANT: Each of the following steps should be completed with no more than a 5 second delay between steps.

75. Insert the first ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the first key.
76. Insert the second ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the second key.

NOTE:
If the PATS light blinks rapidly, repeat steps 1-3 to retry programming the DNA-9.

NOTE:
The engine will start if the Remote Start kit has been installed correctly, the brake is not depressed, and the hood and doors are closed.

77. Press the remote start button key icon twice within 3 seconds.
    The PATS light should stay on for 3-5 seconds before turning off, which means that the DNA-9 was successfully programmed.

Functional Test - Bi-directional Remote Start

NOTE:
If during any of the steps of the functional test the remote start system or vehicle doesn't react or perform accordingly, please refer to the remote start troubleshooting guide.

78. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
79. Press the Start button on the remote control key fob twice within 3 seconds - horn should honk once indicating receipt of the start request.
80. The remote start systems should start the vehicle, then it will detect that a door is open and shut down.
81. Close the hood, and insert a key into the ignition switch.
82. Attempt to re-start the vehicle again using the key fob.
83. The remote start systems should turn on the ignition, but then honk the horn five times and shut down indicating a key is in the ignition.
84. Remove the key and open a door.
85. Attempt to re-start the vehicle again using the key fob.
86. The remote start systems should turn on the ignition, but then honk the horn three times and shut down indicating a door is open.
87. Close the door.
88. Attempt to re-start the vehicle again using the key fob.

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INSTALLATION (Continued)

89. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.
90. Once all systems have been checked, open the door or press the brake pedal - the remote start systems should shut down.

Troubleshooting

91. **NOTE:**
    When attempting to remote start the vehicle, the system has several safety checks that it performs. If any of these inputs are present that should not be, the system will respond back with several horn "chirps" to help identify which input is present. These "chirps" will occur after initiating a start sequence with the transmitter. The system will turn on the ignition, but then respond back with several horn "chirps" and abort the starting process.

    Example: Depress the remote start fob button for 3 seconds and then release. The vehicle horn will "chirp" one time to indicate that RMST signal was received. If the vehicle does not start and the horn "chirps" 3 times, there is a fault - "Vehicle Door is Open"

CHIRPS	PROBLEM
1 Chirp	DNA-9 not programmed correctly, or the DNA-9 harness is damaged.
2 Chirps	BRAKE is being pressed, or the HOOD is open.
3 Chirps	One of the vehicle DOORS is open.
4 Chirps	TACH not programmed.

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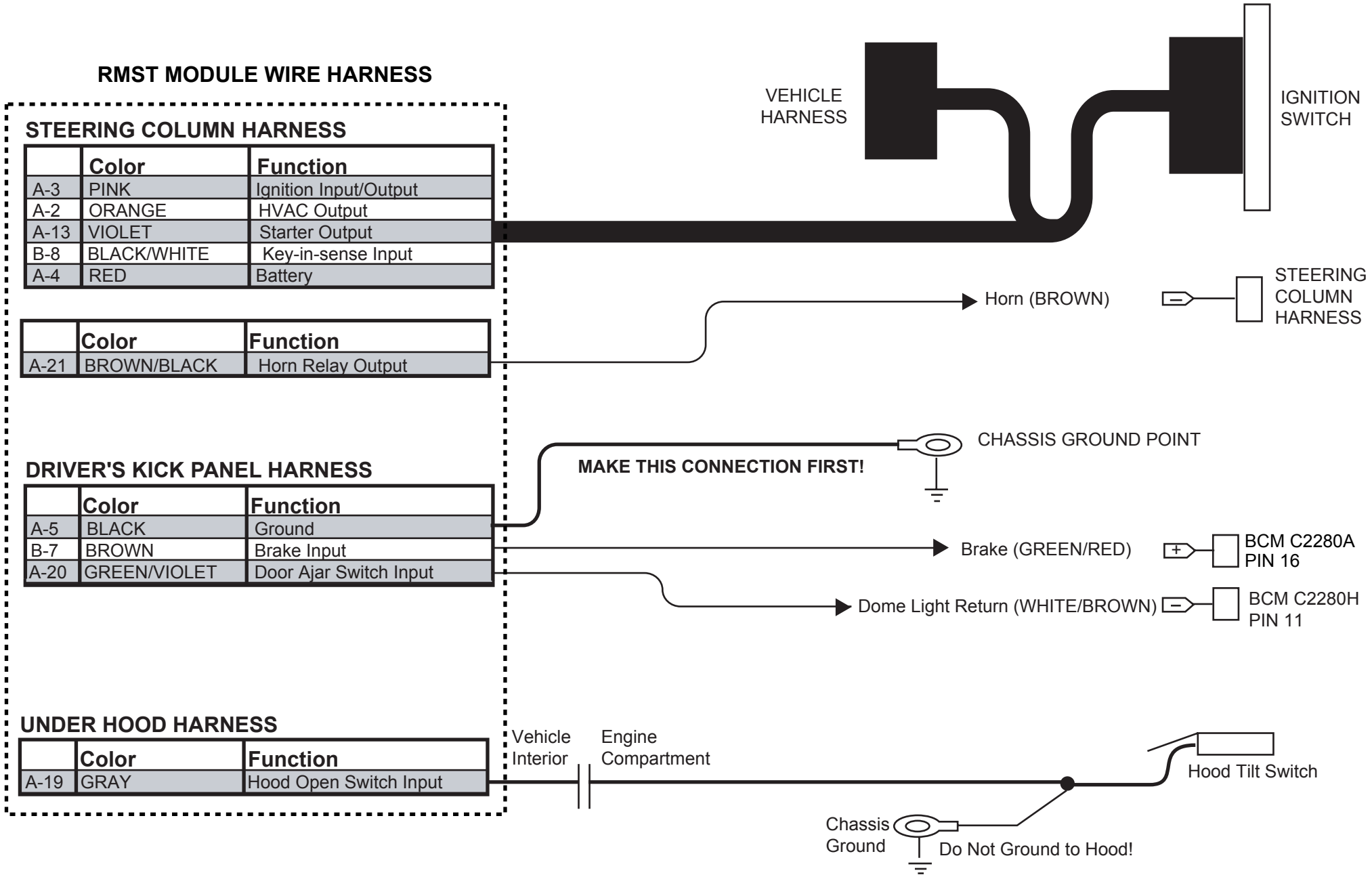
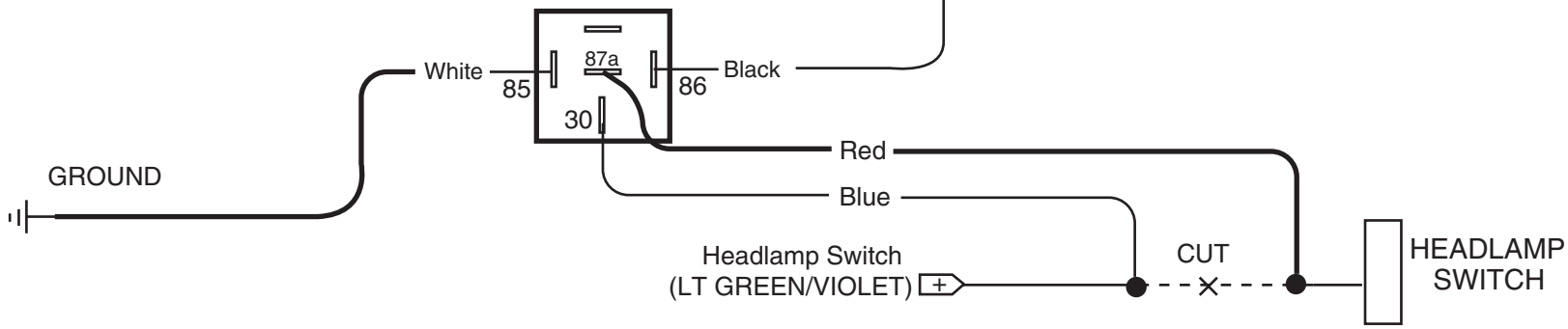
NOTE: It is recommended to identify all vehicle wires that will be connected before making any permanent connections. If all wires cannot be located, call 1-800-FORDKEY



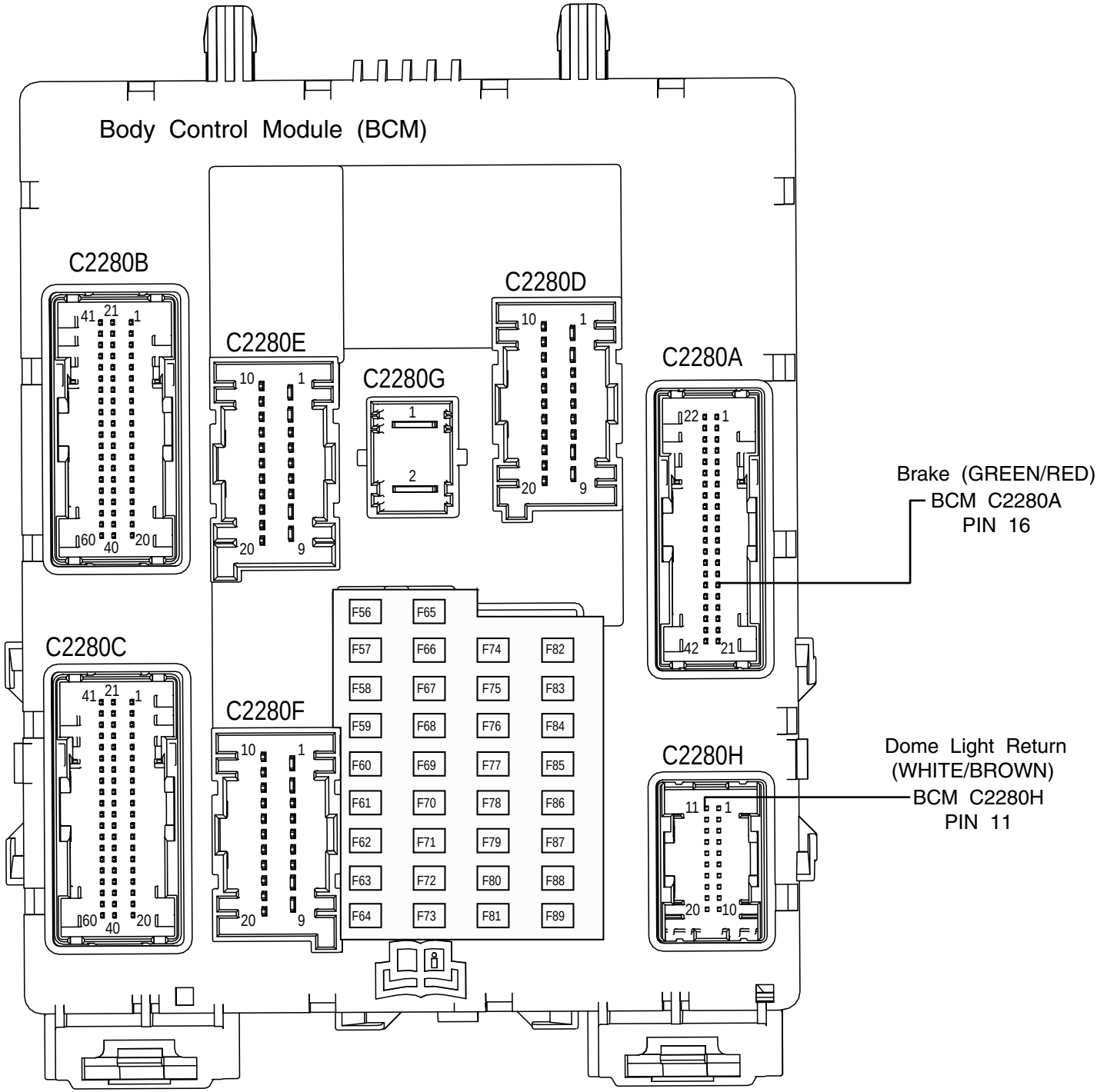
INTERRUPT RELAY

RMST MODULE WIRE HARNESS

	Color	Function
A-1	WHITE	Parking Light Output



NOTE: REMOVE THE YELLOW WIRE AND TERMINAL FROM THE RELAY SOCKET


Body Control Module (BCM)
C2280B
C2280E
C2280G
C2280D
C2280A
C2280C
C2280F
C2280H
Brake (GREEN/RED)
BCM C2280A
PIN 16
Dome Light Return
(WHITE/BROWN)
BCM C2280H
PIN 11

Manual Table of Contents

REMOTE START SYSTEM INSTALLATION

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INSTALLATION
Remote Start

GENERAL PROCEDURES
Proper Wire Splicing Techniques
Programming - Standard
Functional Test - Standard
Programming - Bi-Directional
Functional Test - Bi-Directional
Troubleshooting

WIRING DIAGRAMS
Vehicle Specific Wiring Diagrams

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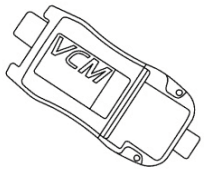
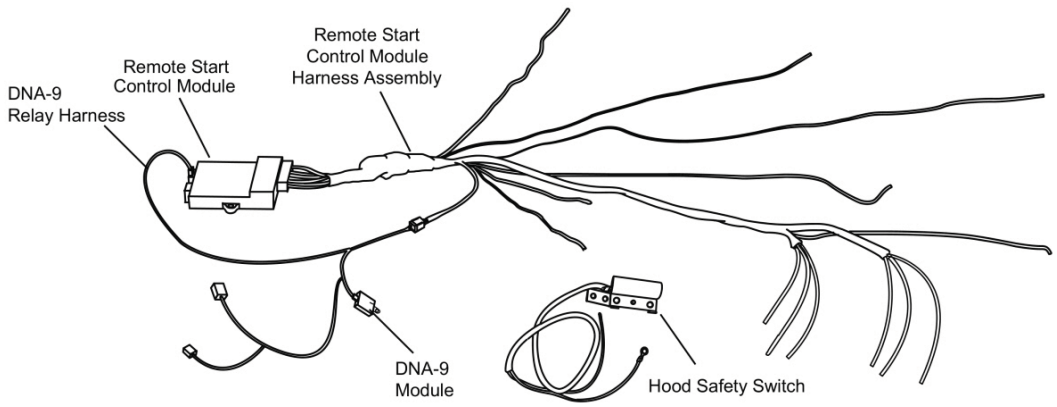
INSTALLATION

Remote Start (RMST)

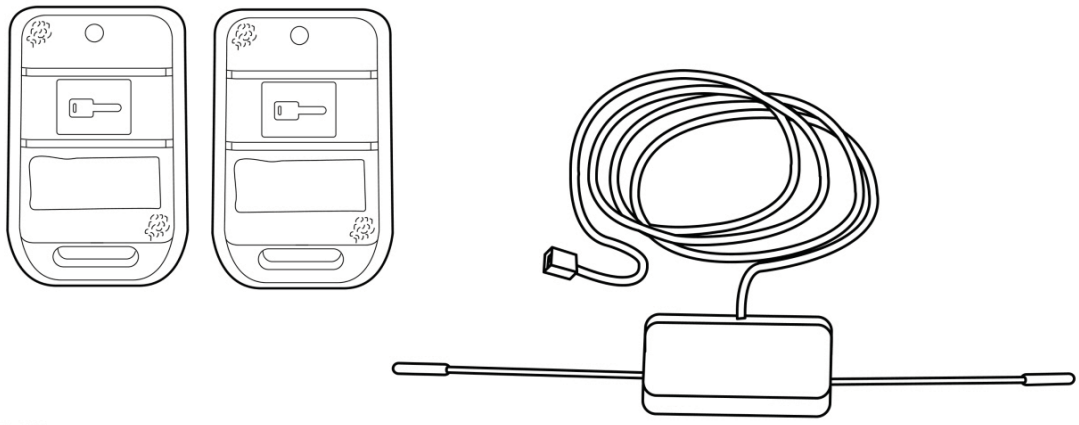
Special Tool(s)

 ST2834-A	Vehicle Communication Module (VCM) and Integrated Diagnostic System (IDS) software with appropriate hardware, or equivalent scan tool

RMST Components



Additional "Standard RMST" Components



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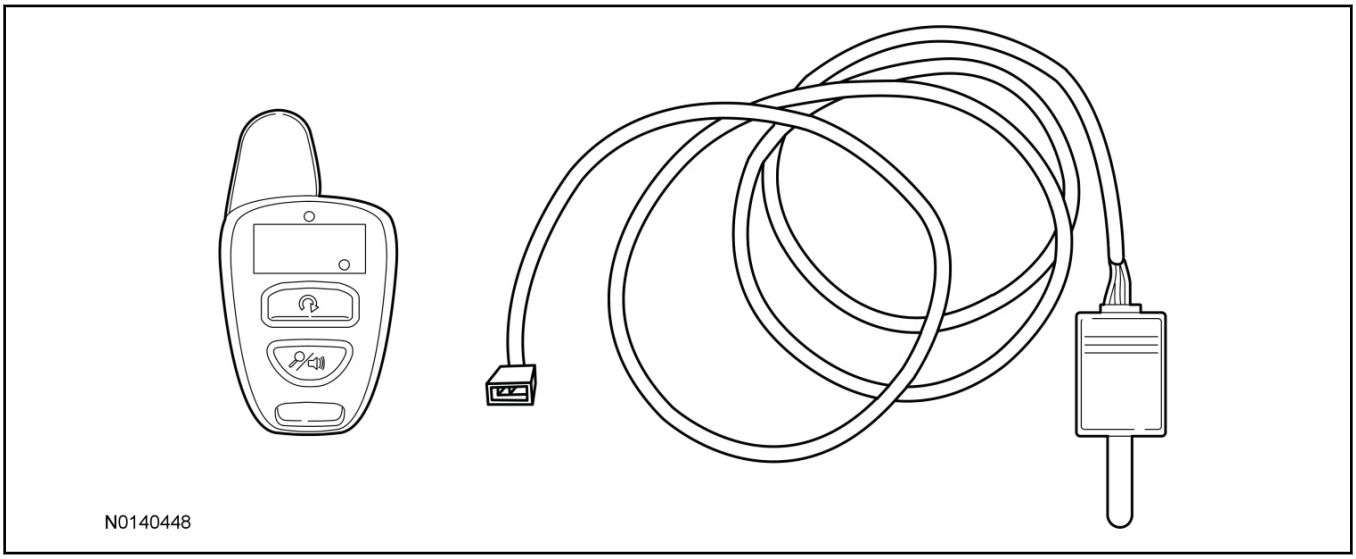
INSTALLATION (Continued)

Additional "Bi-directional RMST" Components



C-Max - Push Button Start

NOTICE:
Remote start systems are only applicable to vehicles with automatic transmissions.

1. Verify correct kit number.

Review RMST Installation Kit Contents

NOTE:
Kits are vehicle specific and are not interchangeable.

2. Review the RMST kit contents.

RMST System Standard Kit Type - "A"

QUANTITY	DESCRIPTION
1	RMST Module Assembly
2	1 Button Power Code Transmitter
1	RMST Custom Wiring Harness
1	Antenna
1	Hood Safety Switch Assembly
1	Installation Parts Bag
1	Operators Instructions
1	Underhood Warning Label
1	DNA-9 Module
1	DNA-9 Relay Harness
2	Wire Harness Label

3. Review the RMST bidirectional kit contents.

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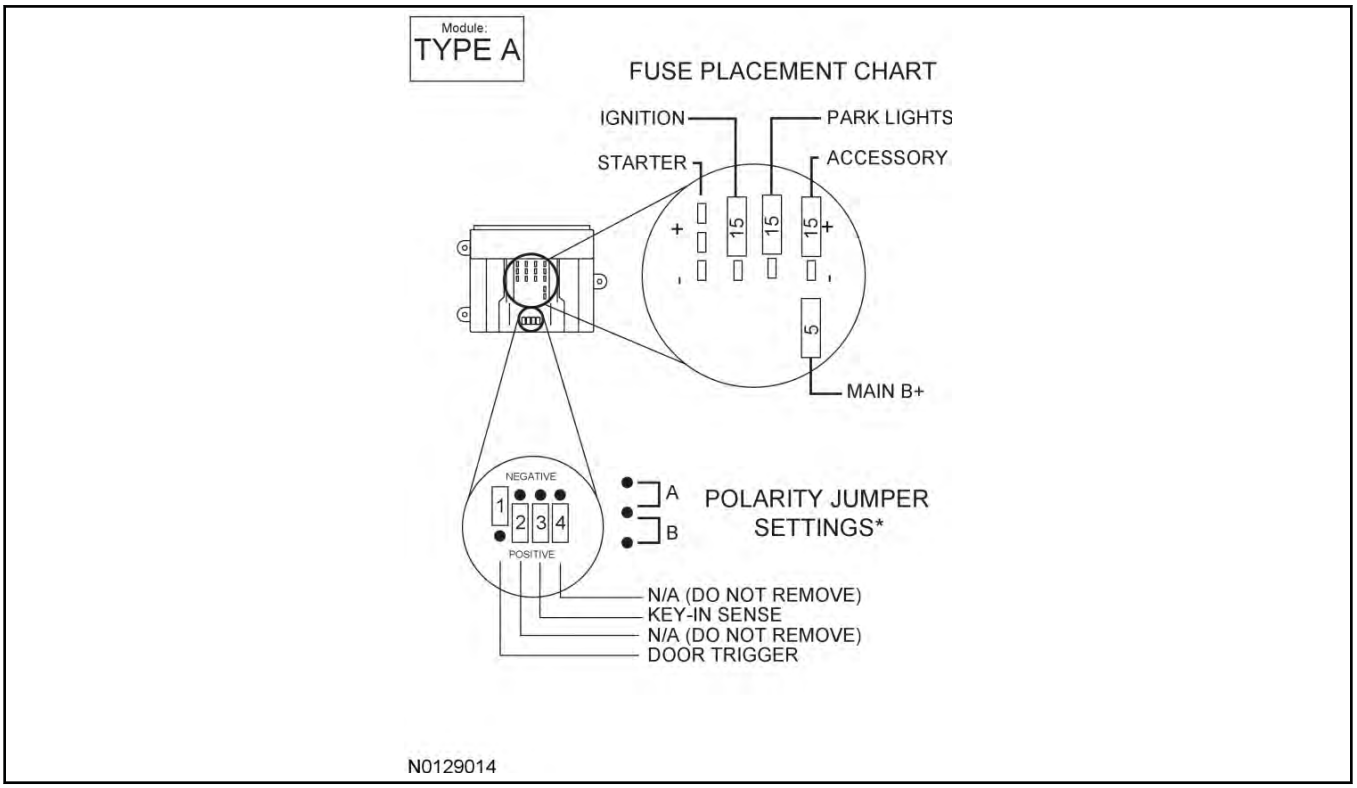
INSTALLATION (Continued)

RMST System Bidirectional Kit Type - "A"

QUANTITY	DESCRIPTION
1	RMST Module Assembly
1	2 Button Power Code Transmitter
1	RMST Custom Wiring Harness
1	Antenna
1	Antenna Harness
1	Hood Safety Switch Assembly
1	Installation Parts Bag
1	Operators Instructions
1	Underhood Warning Label
1	DNA-9 Module
1	DNA-9 Relay Harness
1	Rear-View Mirror Information card
2	Wire Harness Label

Module Preparation

4. Remove the software cartridge from the RMST module and verify that the fuses are properly installed into the RMST control module. See Illustration.
   - If required, move the polarity jumpers to their proper locations on the control module.



5. Place the software cartridge onto the RMST control module.

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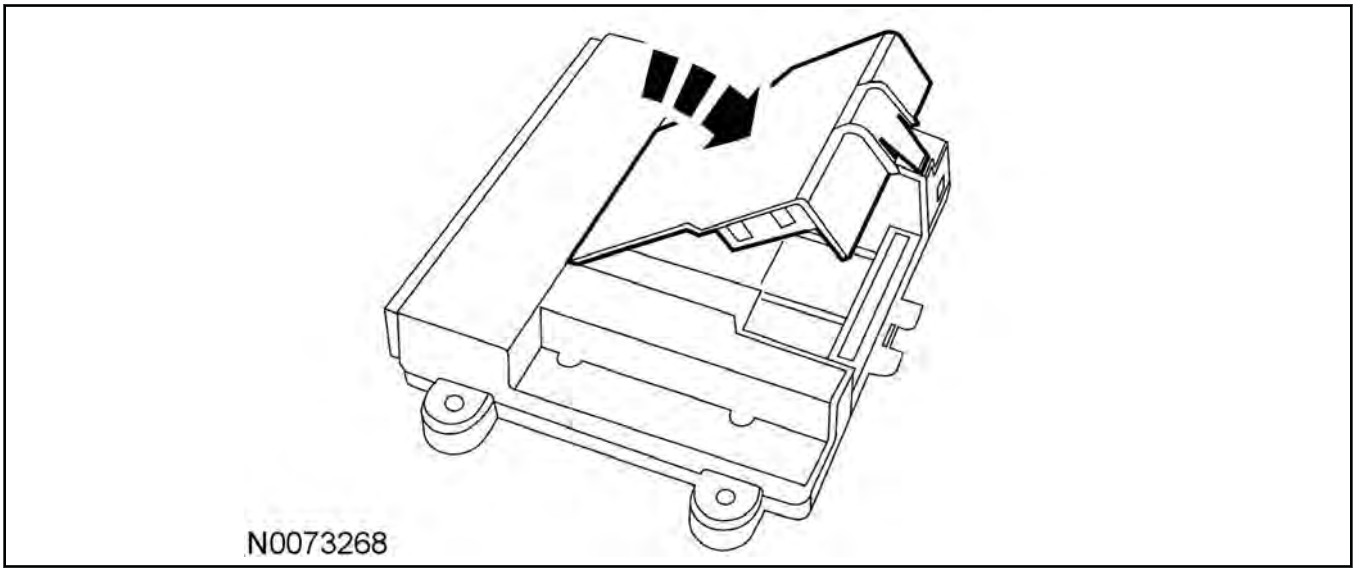
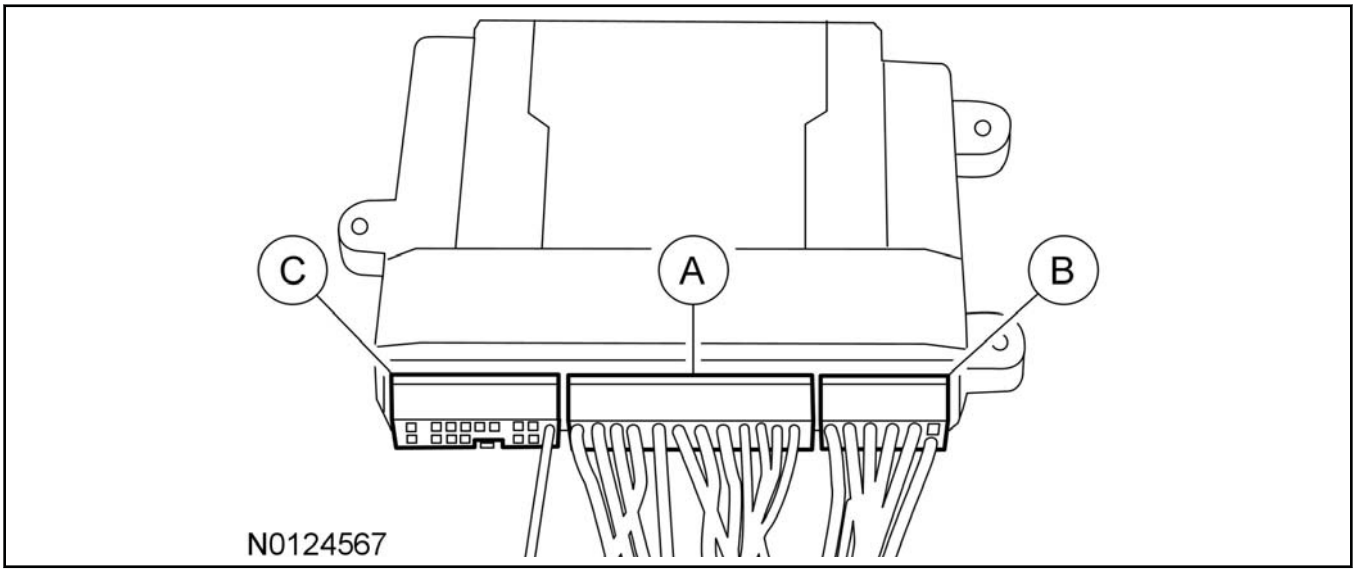
INSTALLATION (Continued)



6. Plug the wiring harness(es) into the module.
   - A - Harness: 24-way, used on all systems.
   - B - Harness: 10-way, used on all systems with RMST.
   - C - Harness: 16-way, used on all systems with RMST.



7. **NOTE:**
   Do not cut the override programming button from the harness, it is used for all installations.

   NOTE:
   Review the vehicle specific wiring diagram(s).

   Referring to the vehicle specific wiring section for the system being installed, gather all individual wires that will be routed to the same areas of the vehicle into groups. Cover each wire group with electrical tape for approximately 18". Depending on the vehicle, there will be 2 to 5 different wire groups.
   Trim all unused wires.

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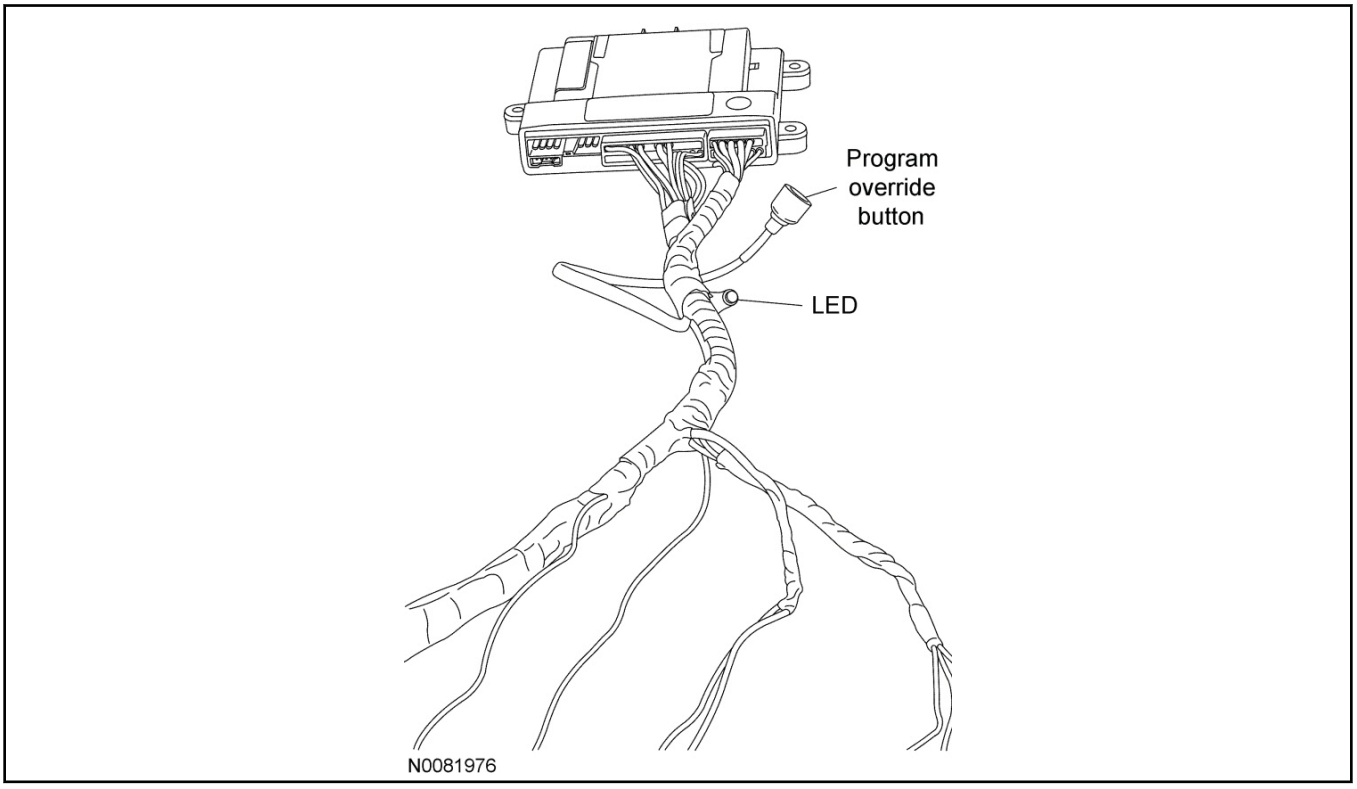
INSTALLATION (Continued)



8. Tape the harness sections together, making sure to cover all of the unused wires.

Vehicle Preparation - All Vehicles

9. **NOTE:**
   RH shown, LH similar.

   Remove the RH and LH instrument panel (IP) side trim panels.

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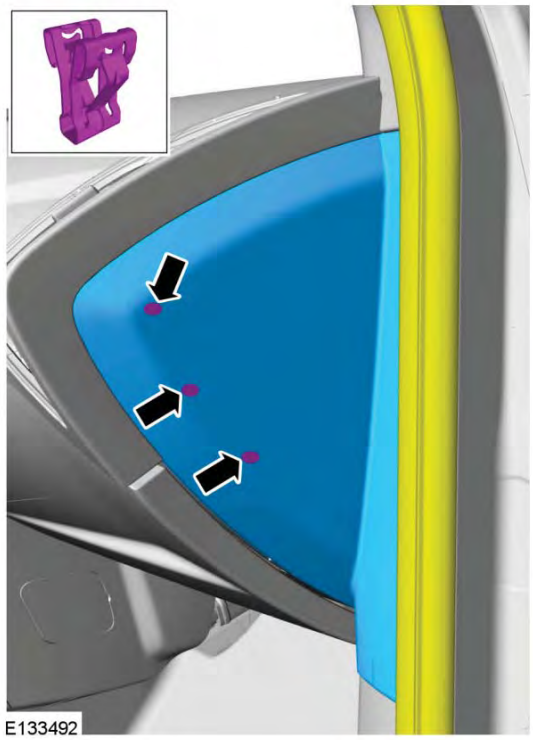
INSTALLATION (Continued)



10. **NOTE:**
    The upper steering column shroud does not need to be completely removed from the vehicle.

    Remove steering column shrouds. For additional information, refer to Workshop Manual (WSM), Section 501-05.

11. Position the weather strip aside and remove the RH side lower cowl trim panel and scuff plate.

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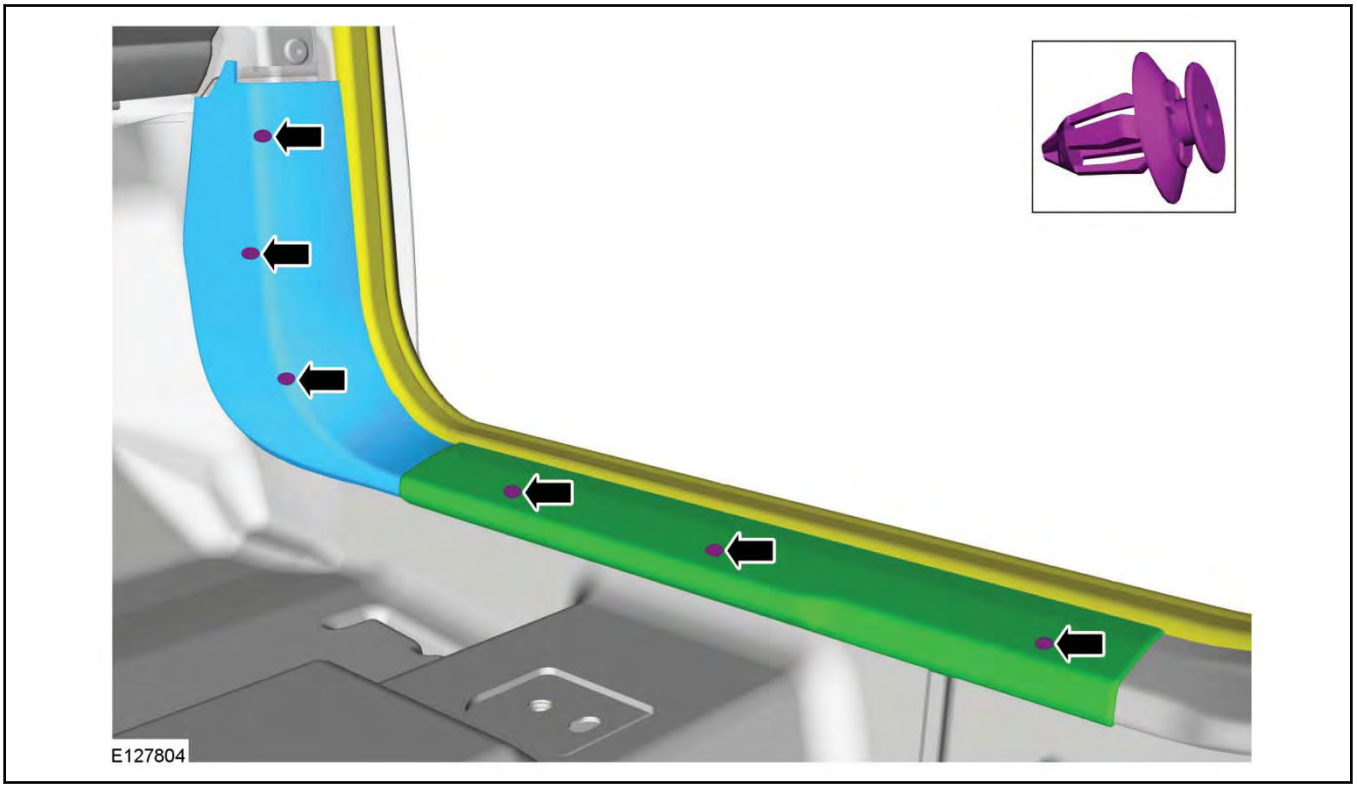
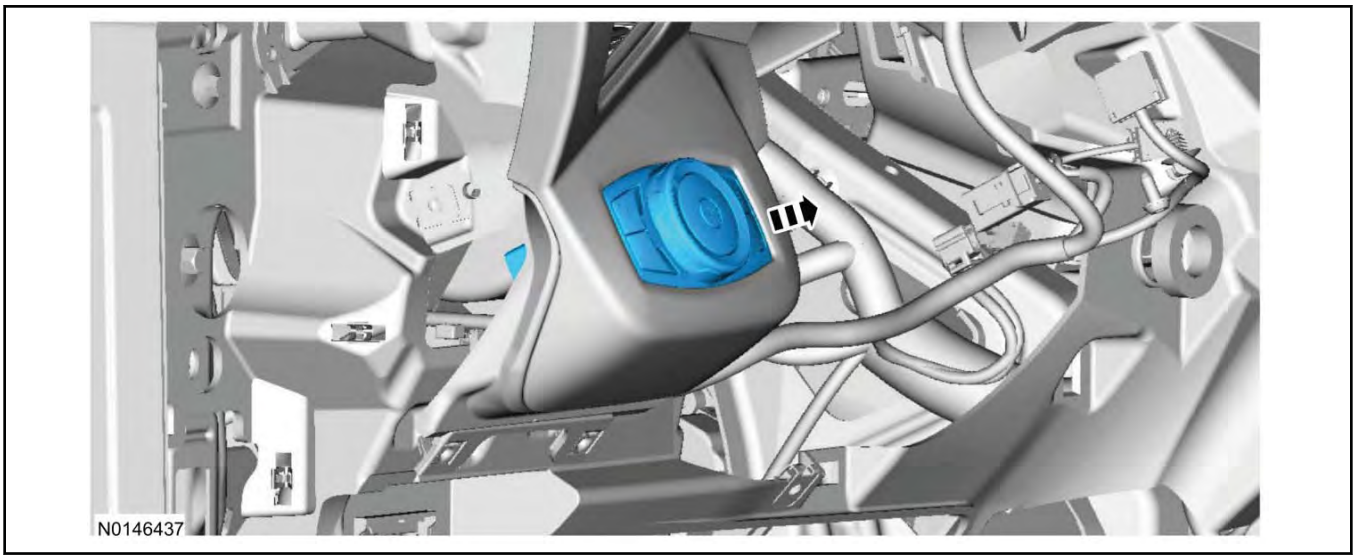
INSTALLATION (Continued)



12. Using a suitable non-marring tool, work around the outer edge of the headlamp switch to release the clips and pull the switch out through the front of the finish panel.
    - Disconnect the electrical connector.



13. Install the supplied wire harness label to the headlamp switch harness.
    - If required, fish the headlamp switch wire harness out of the instrument panel.

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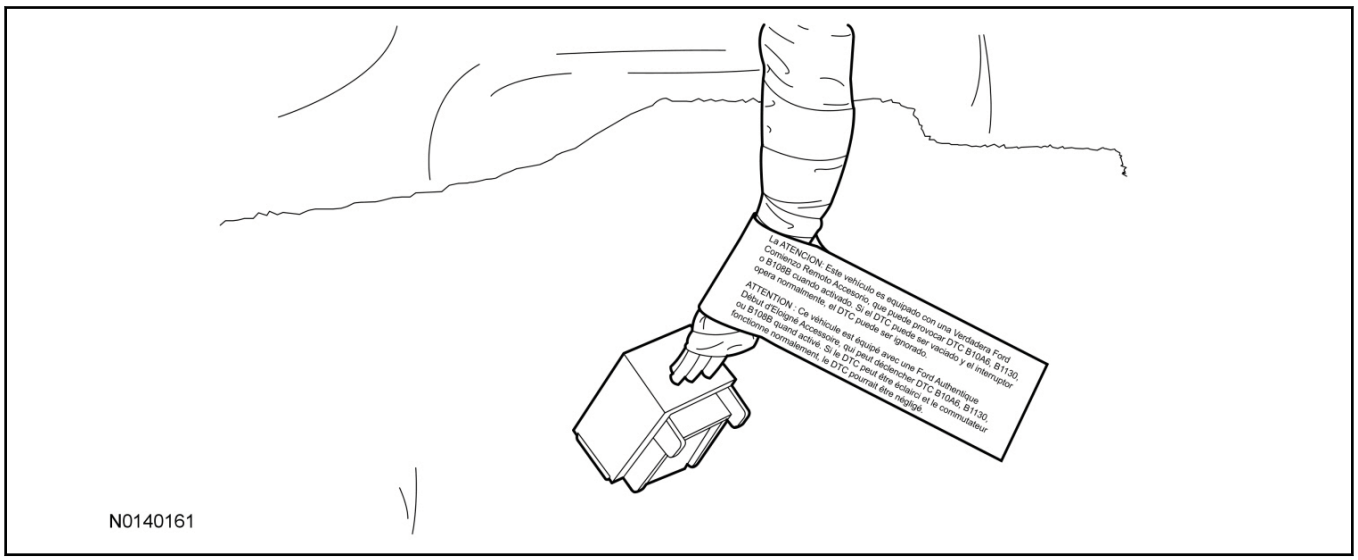
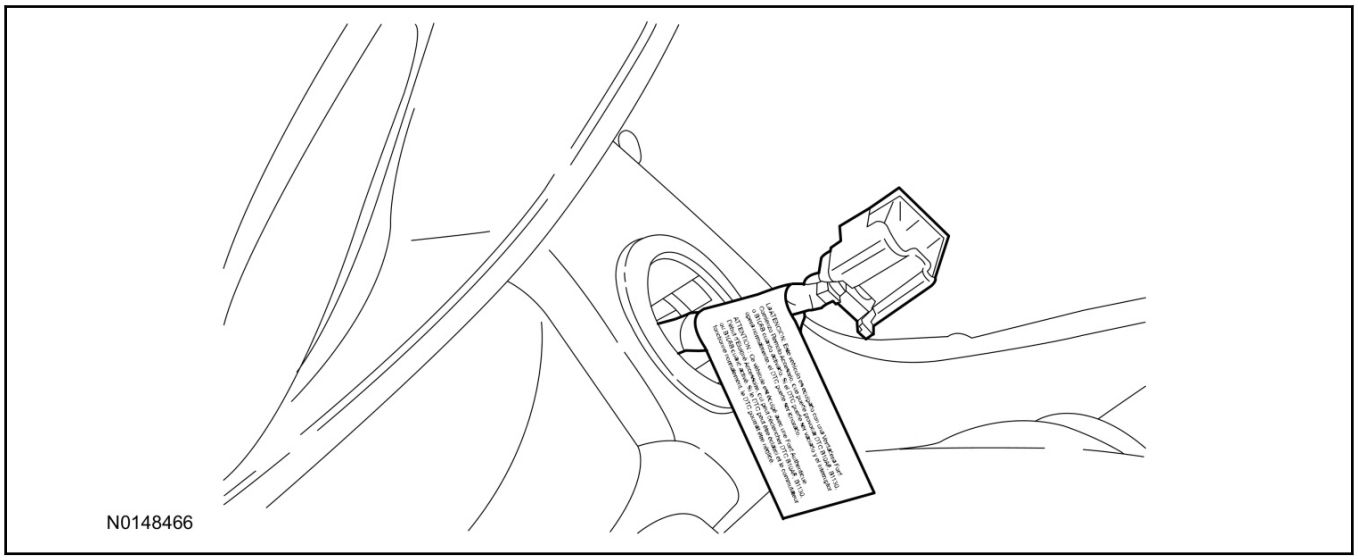
INSTALLATION (Continued)



14. Remove the start/stop switch. For additional Information, refer to Workshop Manual (WSM), Section 211-05.
15. Install the supplied wire harness label to the start/stop switch harness.



16. Remove the 4 glove compartment screws and the glove compartment.
    - Disconnect the electrical connector.

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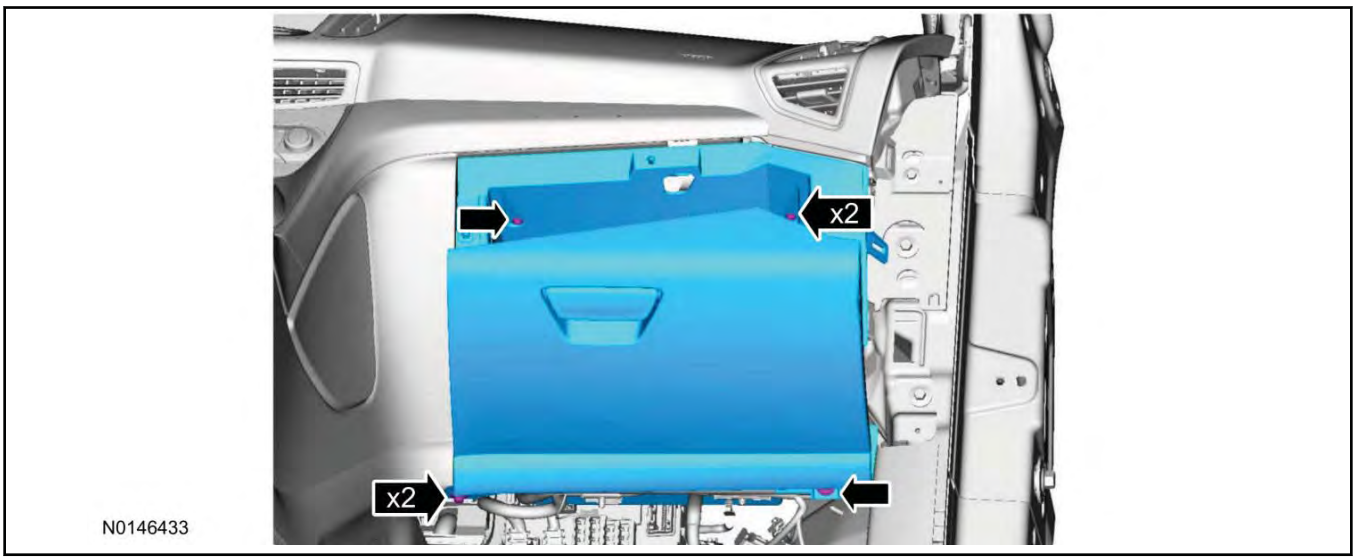
INSTALLATION (Continued)



Antenna Mounting

NOTE:
For good range of operation, the antenna must be installed correctly.

NOTE:
Keep these points in mind when selecting a location and mounting the antenna.

- Do not mount the antenna behind or on any metal film or window tinting on the windshield.
- Do not mount the antenna so that one of the antenna elements touches or crosses any vehicle wiring and/or metal.
- Do not mount the antenna close to RF devices, (EZ Pass, etc), that are installed on the windshield.
- On vehicles without metal film in the windshield around the rear view mirror, mount the antenna between the headliner and the rear view mirror.
- On vehicles equipped with an electronic mirror, or on vehicles with metal film around the rearview mirror, mount the antenna approximately 3 inches below the mirror attachment point to the windshield and/or mirror electronics.

17. Choose a suitable mounting location based on the guidelines above.

Install the Antenna

18. Clean the mounting surface using an alcohol base solution and a clean cloth.
19. **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 to the windshield.

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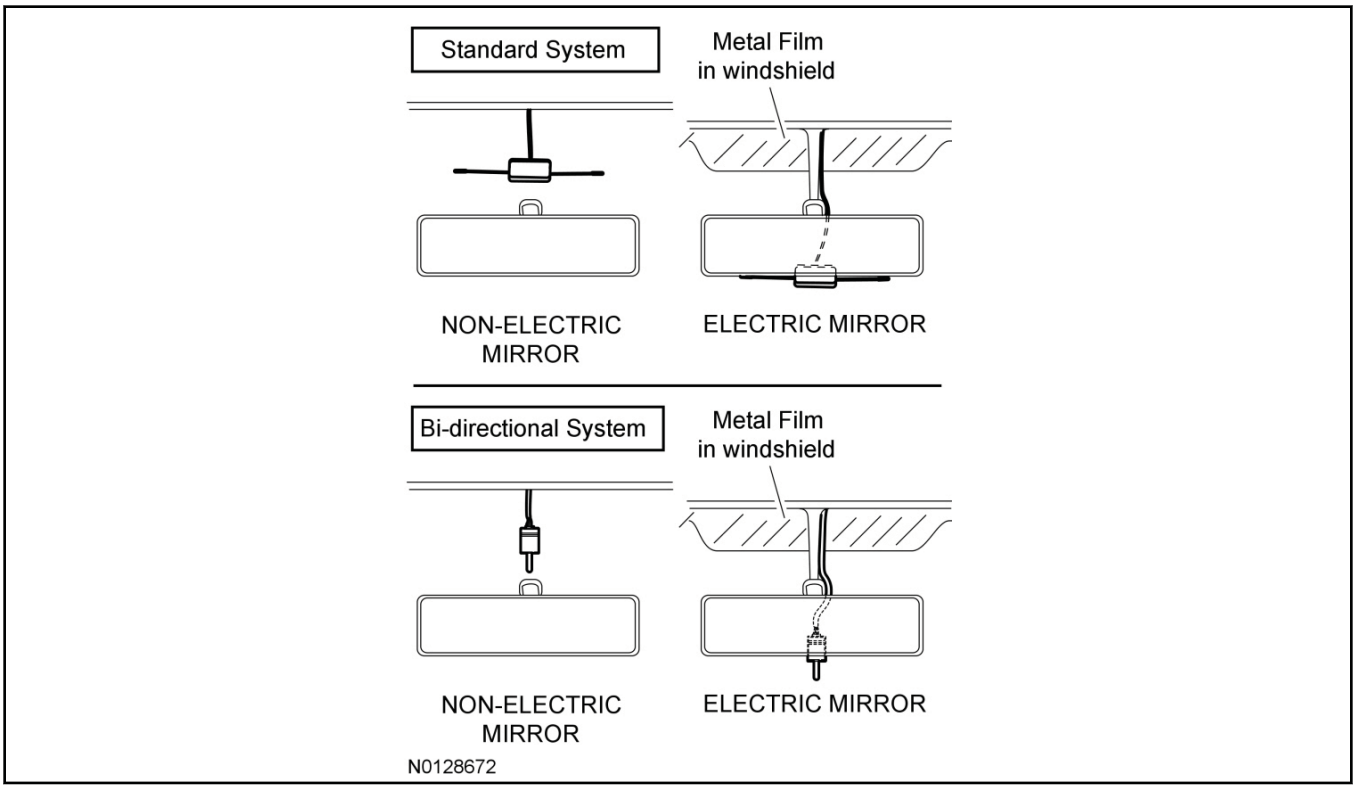
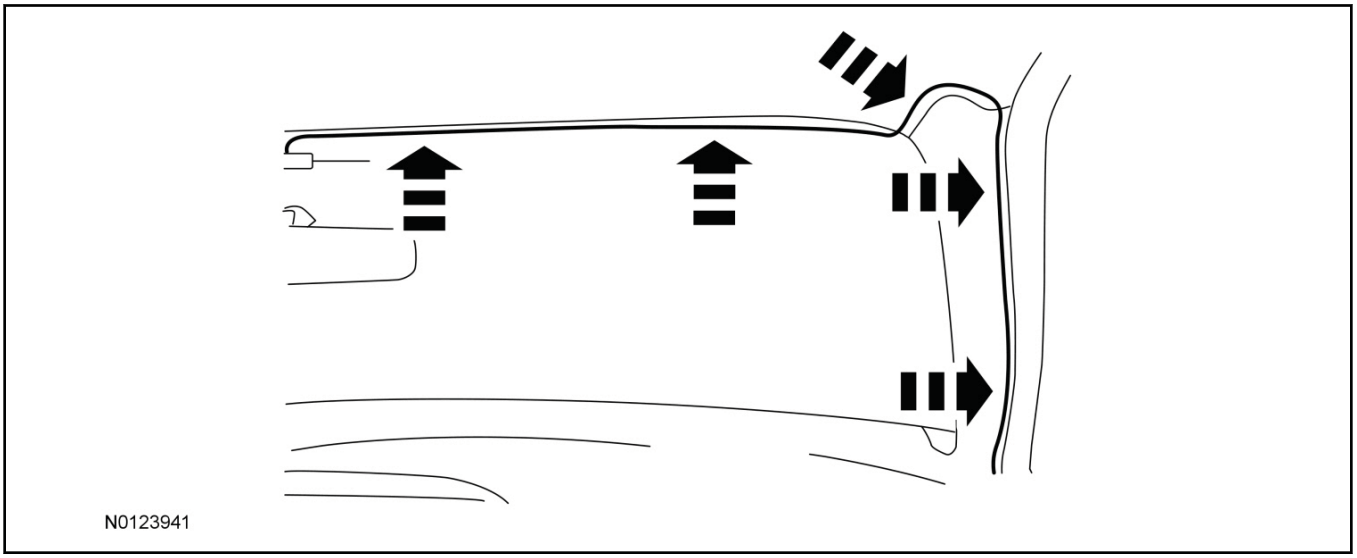
INSTALLATION (Continued)



20. 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 the air bag.

21. Route the antenna cable along the headliner and down the A-pillar towards the floor.



22. Reposition the A-pillar trim panel, if necessary.

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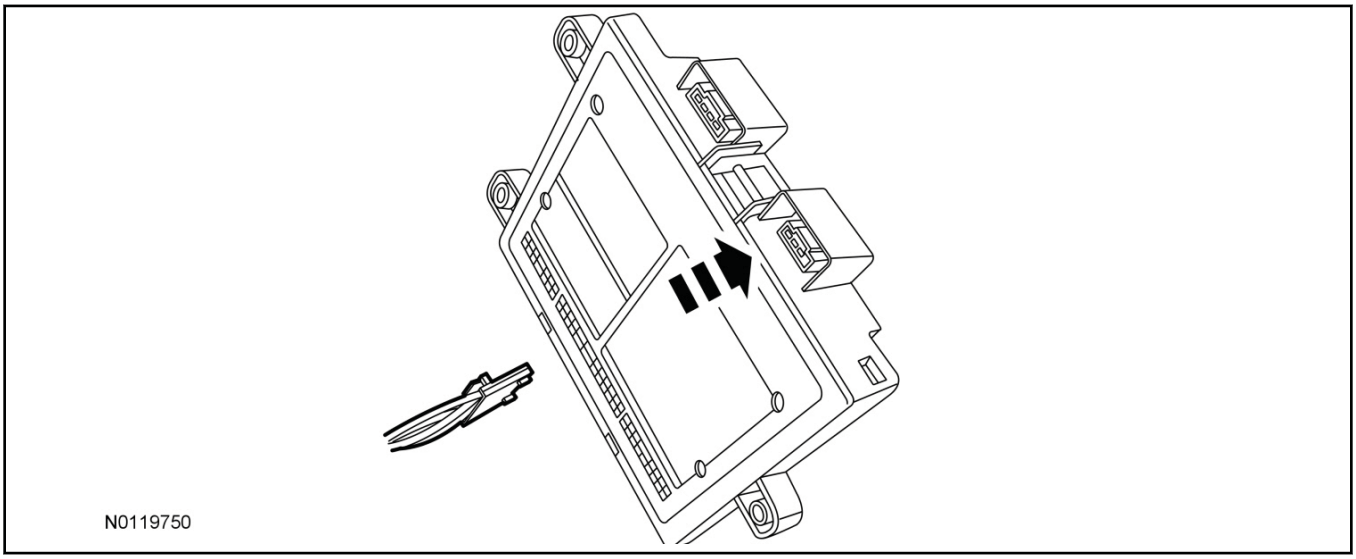
INSTALLATION (Continued)

Install the Remote Start Control Module and Harness Assembly

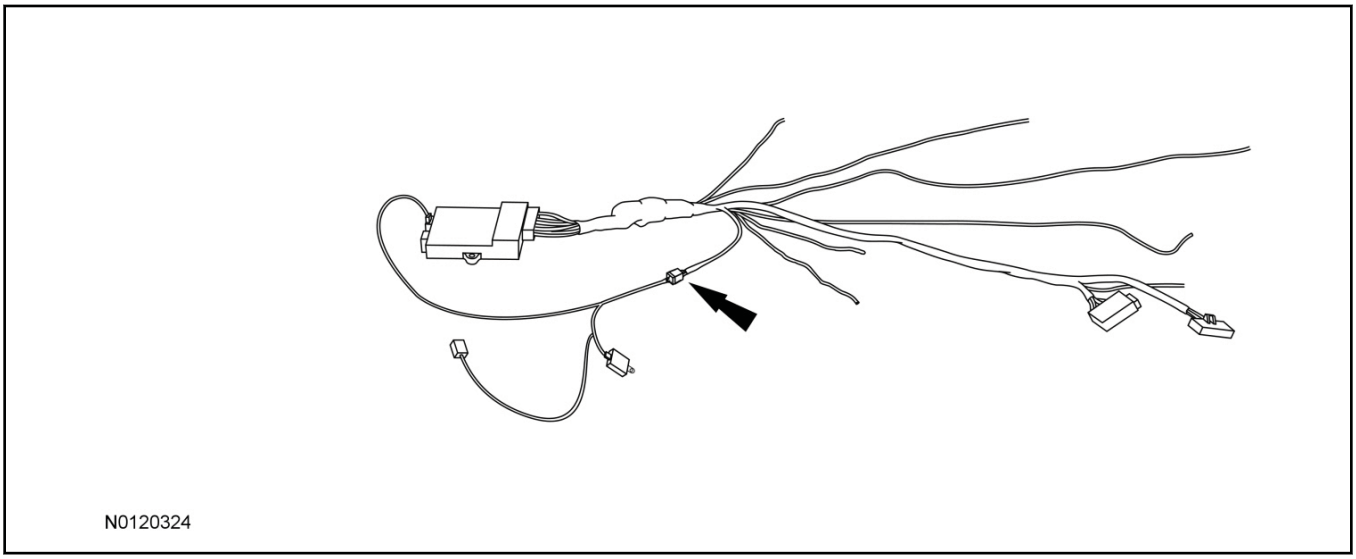
23. Place the remote start module and harness assembly on the passenger side floor.

Install the DNA-9 Relay Harness and Module

24. Disconnect the Passive Anti-Theft System (PATS) transceiver electrical connector.
25. Connect the DNA-9 relay harness to the PATS transceiver electrical connector and to the vehicle harness.
26. Connect the DNA-9 relay harness to the remote start module.



27. Connect the DNA-9 module to the relay harness.
    - Secure to the steering column wire harness with tie-straps.
28. Connect the DNA-9 relay harness to the 2-pin connector on the remote start module harness.



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INSTALLATION (Continued)

Identify Circuit Wires For Connections

NOTE:
It is recommended to identify all vehicle wires that will be connected before making any permanent connections. If all wires cannot be located, call 1-800-FORDKEY.

NOTE:
Review the vehicle specific wiring diagram(s).

NOTE:
Review the proper wire splicing techniques prior to proceeding.

29. Fasten the Black ground wire from the remote start module harness to the sheet metal at the passenger side kick panel, using one of the self-tapping screws provided in the kit.
30. **NOTE:**
    A DVOM connected to the correct wire will show ~12V, then show ~0V when the horn button is held.
    A logic probe will show power on the correct wire, then show ground when the horn button is held.

    Identify the Brown horn circuit wire at the Body Control Module (BCM) connector C2280C pin 50.
31. Connect the Brown/Black wire from the remote start module harness to the Brown horn circuit wire at the BCM connector C2280C pin 50.
32. **NOTE:**
    A DVOM connected to the correct wire will show ~0V, then show ~12V while depressing the brake pedal.
    A logic probe will show ground on the correct wire, then show power while depressing the brake pedal.

    Identify the Green/Red brake switch circuit wire at the BCM connector C2280A pin 16.
33. Connect the Brown wire from the remote start module harness to the Green/Red brake switch circuit wire at the BCM connector C2280A pin 16.
34. **NOTE:**
    A DVOM connected to the correct wire will show ~0V with the vehicle door(s) open and the dome light ON, then show ~12V with the vehicle door(s) closed and the dome light OFF.

    NOTE:
    A logic probe connected to the correct wire will show ground with the vehicle door(s) open and the dome light ON, then show power with the vehicle door(s) closed and the dome light OFF.

    NOTE:
    Be sure that the dome light has timed out and is OFF before performing the door closed test.
    Be sure that the dome lamp is illuminated before performing the door open test.

    Identify the White/Brown dome light circuit wire at the BCM connector C2280H pin 11.
35. Connect the Green/Violet wire from the remote start module harness to the White/Brown dome light circuit wire at the BCM connector C2280H pin 11.

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INSTALLATION (Continued)

36. **NOTE:**
    A DVOM connected to the correct wire will show near ~0V then show ~12V when the ignition switch is pressed.

    NOTE:
    A logic probe will show open/low power and then power when the ignition switch is pressed.

    Identify the Blue ignition switch circuit wire at the BCM connector C2280D pin 9.

37. Connect the Pink wire from the remote start module harness to the Blue ignition switch circuit wire at the BCM connector C2280D pin 9.

38. **NOTE:**
    A DVOM connected to the correct wire will show ~0V with the vehicle off and then show ~12v when the ignition switch is pressed.

    NOTE:
    A logic probe will show ground with the vehicle off, then power when the ignition switch is pressed.

    Identify the Red starter circuit wire at the BCM connector C2280C pin 28.

39. Connect the Violet wire from the remote start module harness to the Red starter circuit wire at the BCM connector C2280C pin 28.

40. **NOTE:**
    Review the vehicle specific wiring diagram(s).

    NOTE:
    A DVOM connected to the correct wire will show ~0V, then show power when the driver door is open.
    A logic probe will show ground on the correct wire, then show power when the driver door is open.

    Identify the Green/Violet door ajar circuit wire at the BCM connector C2280B pin 45.

41. Cut the Green/Violet door ajar circuit wire at the BCM connector C2280B pin 45.

42. Splice one of the following wires to each side of the previously cut Green/Violet door ajar circuit wire at the BCM connector C2280B pin 45.
    - Orange/Black wire from the remote start module harness.
    - Orange wire from the remote start module harness.

Relay Harness

43. Remove the circuit 87 Yellow wire and terminal from the relay harness connector.
    - Release the locking tab and pull the wire and terminal from the connector.
    - Discard the Yellow wire, it will not be used for this application.

44. Install a suitable insulated crimp terminal eyelet to the White interrupt relay wire. Attach the White relay wire to a suitable grounding location.

45. Connect the White wire from the remote start module harness to the black wire at the relay harness.

46. Identify the Lt. Green/Violet headlamp switch wire at the headlamp switch.

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INSTALLATION (Continued)

47. **NOTE:**
    Be sure to leave enough wire at each end of the cut wire to properly splice the relay wire to the headlamp switch harness.

    Cut the Lt. Green/Violet headlamp switch wire at the headlamp switch.
    - Connect the Blue wire from the relay harness to the feed side of the Lt. Green/Violet headlamp switch wire at the headlamp switch.
    - Connect the Red wire from the relay harness to the load side of the Lt. Green/Violet headlamp switch wire at the headlamp switch.
48. Connect the relay to the relay harness.
49. Secure the relay and relay harness to the steering column harness.

Power Connection

50. **NOTE:**
    A DVOM connected to the correct wire will show ~12V with the ignition in the OFF position.

    NOTE:
    A logic probe will show power with the ignition in the OFF position.

    Identify the Yellow battery circuit wire at the BCM connector C2280G pin 1.
51. Connect the Red wire from the remote start module harness to the Yellow battery circuit wire at the BCM connector C2280G pin 1.

Install The Hood Safety Switch

52. **NOTE:**
    Route the hood safety switch wire carefully avoiding any moving parts or components that can produce excessive heat.

    NOTE:
    Using a piece of convolute adds to the appearance of the installation.

    NOTE:
    The switch should be positioned about 30 degrees below parallel to the ground to accommodate for parking on inclines.
    Failure to position the switch properly could result in one of the following:

    - False alarm trips
    - Non-remote start events
    - Inadvertent shutdown during remote start

    Install the hood safety switch using the supplied metal screws.
    - Apply rustproofing compound PM-13A to the screw holes.
    - Tighten the screws to 1 Nm (10 lb-in).
    - Secure the harness with tie-straps.

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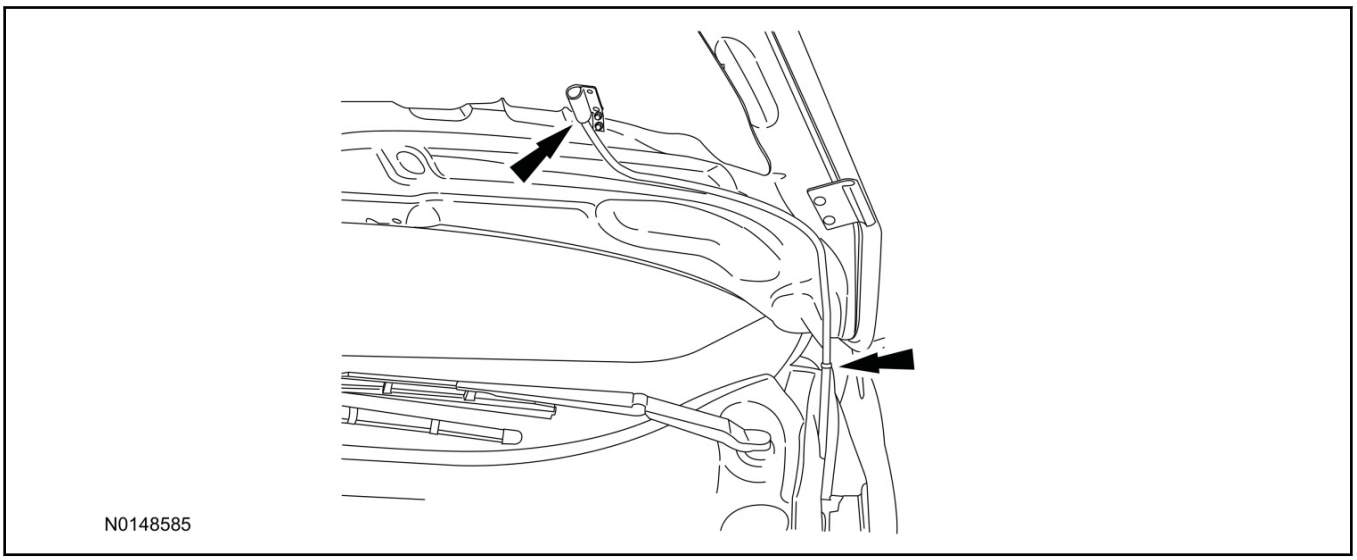
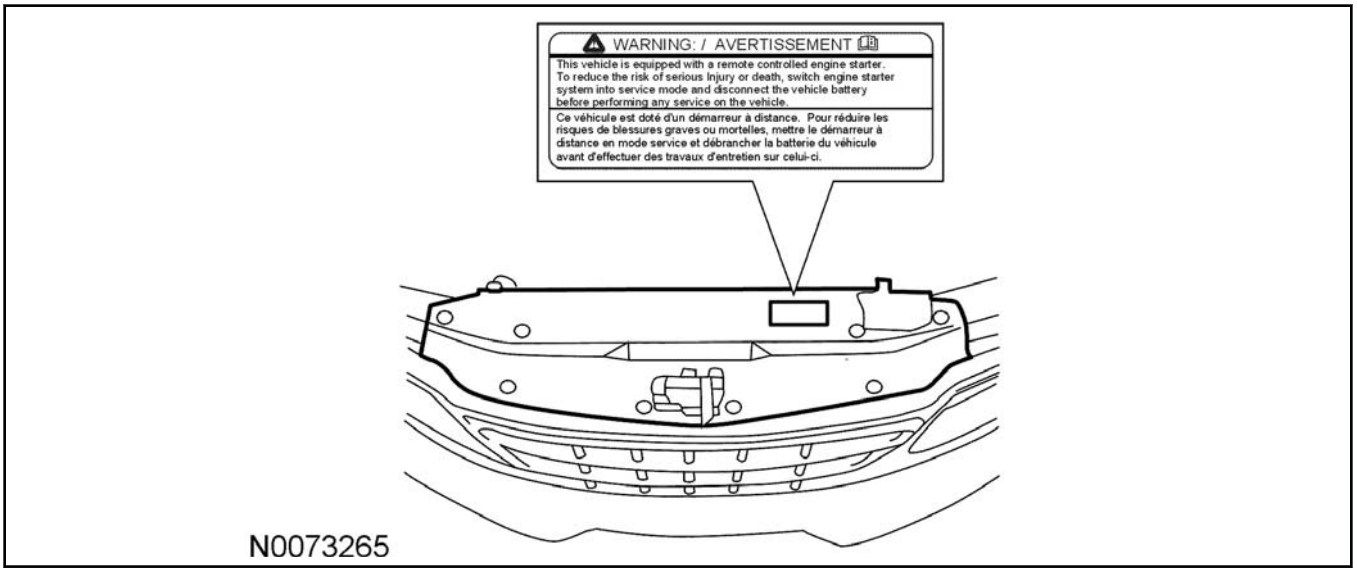
INSTALLATION (Continued)



53. Connect the hood switch ground wire to a suitable location.
54. **NOTE:**
    Place the label on the radiator fan shroud or similar area.

    Install the underhood warning label.



55. Route the Gray hood safety switch wire through the bulkhead into the engine compartment and attach to the hood safety switch.
56. Connect the antenna to the RMST control module.

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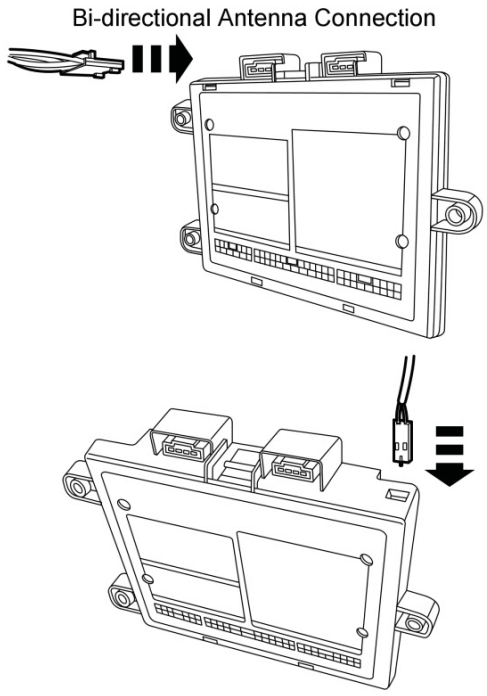
INSTALLATION (Continued)



Program the RMST System

57. Proceed to the RMST programming section before installing trim.

Secure RMST Harness and Control Module

58. Use the supplied tie-straps to secure the RMST harness wires.
59. **NOTE:**
    Do not mount the control module in the knee bolster area.
    Secure the control module at three points to the vehicle.

    Use the supplied long tie-straps to mount the RMST control module to the bulkhead, to the right of the BCM.

Install Trim

60. Install the glove compartment and install the screws
    - Connect the electrical connector.
61. Install the start/stop switch. For additional Information, refer to WSM, Section 211-05.
62. Install the headlamp switch.
    - Connect the electrical connector.
63. Install the RH side lower cowl trim panel and scuff plate and position the weather strip back.
64. Install steering column shrouds. For additional information, refer to WSM, Section 501-05.
65. Install the RH and LH IP side trim panels.

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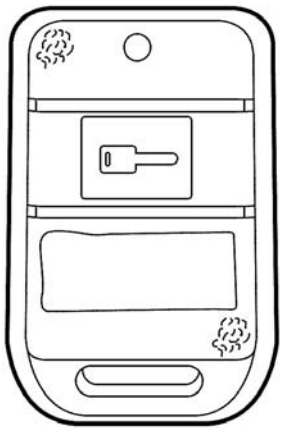
INSTALLATION (Continued)

Programming - Standard Remote Start



STANDARD RMST FOB

N0097291

66. **NOTE:**
    If the remote start options (Key-in sense polarity, door ajar polarity, or tach mode) are not programmed correctly, vehicle will not remote start or operate properly.

    NOTE:
    Make sure that the hood and doors are closed before proceeding.

    NOTE:
    The LED on the remote start harness must be visible to complete module programming.

    NOTE:
    The remote start override button must be accessible.

Programming the DNA-9 Using Diagnostic Equipment

NOTE:
This procedure only programs the Passive Anti-Theft System (PATS) portion of the key into the Instrument Panel Cluster (IPC).

67. With an Intelligent Access key in the vehicle, turn the ignition on by pushing the Start button without depressing the brake.
68. From the scan tool, enter TOOLBOX. Select Body>Security>PATS Functions and follow the Integrated Diagnostic System (IDS) on-screen instructions to enter PATS security access.
69. Remove the Intelligent Access key from the vehicle and place on a workbench 10 feet from the vehicle.
70. Once security access is granted, prepare the remote start module for PATS programming. Press and hold the brake pedal.
71. Press and hold the remote start system override button on the remote start harness for at least 10 seconds.
    - After 10 seconds the horn will honk 3 times, indicating the system is now in the learn mode.
    - Release the brake pedal and the remote start override button.

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INSTALLATION (Continued)

72. Press and release the override button 1 time. The horn should honk 4 times.
73. Quickly press and release the Remote Start button on the remote start key fob 1 time. Verify that the LED has turned on. This indicates that the remote start module is ready for programming to the vehicle PATS system.

NOTE:
You may need to perform the following step **TWICE** in order to successfully program the Remote Start system.

NOTE:
The IDS will prompt to hold the new fob against the flat part of the steering column. This prompt should be disregarded.

74. From the scan tool menu, select "Program additional transponder key". Follow the on-screen prompts to program additional keys and to program the remote start system to the vehicle.
75. Disconnect the scan tool, and turn off the ignition when complete.

Functional Test - Standard Remote Start

NOTE:
If during any of the steps of the functional test, the remote start system or vehicle doesn't react or perform accordingly, please refer to the remote start troubleshooting guide.

76. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
77. Press and hold the Start button on the remote control key fob for 2-3 seconds. The horn should honk once indicating receipt of the start request.
78. The remote start system should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.
79. Attempt to re-start the vehicle again using the key fob.
80. Remove the key and open a door.
81. Attempt to re-start the vehicle again using the key fob.
82. The remote start system should start the vehicle, then it will detect that a door is open and shut down.
83. Close the door.
84. Attempt to re-start the vehicle again using the key fob.
85. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.
86. Once all systems have been checked, open the door, or press the brake pedal. The remote start system should shut down.
87. Re-start the vehicle then unlock and open the door. The remote start system should shut down.
88. Verify that the vehicle can be re-started with the Intelligent Access key, 3-5 seconds after engine shutdown.

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INSTALLATION (Continued)

Troubleshooting

89. **NOTE:**When attempting to remote start the vehicle, the system has several safety checks that it performs. If any of these inputs are present that should not be, the system will respond back with several horn "chirps" to help identify which input is present. These "chirps" will occur after initiating a start sequence with the transmitter. The system will turn on the ignition, but then respond back with several horn "chirps" and abort the starting process.
Example: Depress the remote start fob button for 3 seconds and then release. The vehicle horn will "chirp" one time to indicate that RMST signal was received. If the vehicle does not start and the horn "chirps" 3 times, there is a fault - "Vehicle Door is Open"

CHIRPS	PROBLEM
1 Chirp	DNA-9 not programmed correctly, or the DNA-9 harness is damaged.
2 Chirps	BRAKE is being pressed, or the HOOD is open.
3 Chirps	One of the vehicle DOORS is open.
4 Chirps	TACH is not programmed.
5 Chirps	The KEY is in the ignition.
6 Chirps	The remote start system is in SERVICE/VALET mode.

Programming Bi-directional Remote Start

BI-DIRECTIONAL FOB

N0128674

90. **NOTE:**
If the remote start options (Key-in sense polarity, door ajar polarity, or tach mode) are not programmed correctly, vehicle will not remote start or operate properly.

NOTE:
Make sure that the hood and doors are closed before proceeding.

NOTE:
The LED on the remote start harness must be visible to complete module programming.

NOTE:
The remote start override button must be accessible.

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INSTALLATION (Continued)

Programming the DNA-9 Using Diagnostic Equipment

NOTE:
This procedure only programs the Passive Anti-Theft System (PATS) portion of the key into the Instrument Panel Cluster (IPC).

91. With an Intelligent Access key in the vehicle, turn the ignition on by pushing the Start button without depressing the brake.
92. From the scan tool, enter TOOLBOX. Select Body>Security>PATS Functions and follow the Integrated Diagnostic System (IDS) on-screen instructions to enter PATS security access.
93. Remove the Intelligent Access key from the vehicle and place on a workbench 10 feet from the vehicle.
94. Once security access is granted, prepare the remote start module for PATS programming. Press and hold the brake pedal.
95. Press and hold the remote start system override button on the remote start harness for at least 10 seconds.
    - After 10 seconds the horn will honk 3 times, indicating the system is now in the learn mode.
    - Release the brake pedal and the remote start override button.
96. Press and release the override button 1 time. The horn should honk 4 times.
97. Quickly press and release the Remote Start button on the remote start key fob 1 time. Verify that the LED has turned on. This indicates that the remote start module is ready for programming to the vehicle PATS system.

NOTE:
You may need to perform the following step **TWICE** in order to successfully program the Remote Start system.

NOTE:
The IDS will prompt to hold the new fob against the flat part of the steering column. This prompt should be disregarded.

98. From the scan tool menu, select "Program additional transponder key". Follow the on-screen prompts to program additional keys and to program the remote start system to the vehicle.
99. Disconnect the scan tool, and turn off the ignition when complete.

Functional Test - Bi-directional Remote Start

NOTE:
If during any of the steps of the functional test, the remote start system or vehicle doesn't react or perform accordingly, please refer to the remote start troubleshooting guide.

100. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
101. Press and hold the Start button on the remote control key fob for 2-3 seconds. The horn should honk once indicating receipt of the start request.
102. The remote start system should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.

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INSTALLATION (Continued)

103. Attempt to re-start the vehicle again using the key fob.
104. Remove the key and open a door.
105. Attempt to re-start the vehicle again using the key fob.
106. The remote start system should start the vehicle, then it will detect that a door is open and shut down.
107. Close the door.
108. Attempt to re-start the vehicle again using the key fob.
109. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.
110. Once all systems have been checked, open the door, or press the brake pedal. The remote start system should shut down.
111. Re-start the vehicle then unlock and open the door. The remote start system should shut down.
112. Verify that the vehicle can be re-started with the Intelligent Access key, 3-5 seconds after engine shutdown.

Troubleshooting

113. **NOTE:** When attempting to remote start the vehicle, the system has several safety checks that it performs. If any of these inputs are present that should not be, the system will respond back with several horn "chirps" to help identify which input is present. These "chirps" will occur after initiating a start sequence with the transmitter. The system will turn on the ignition, but then respond back with several horn "chirps" and abort the starting process.
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CHIRPS	PROBLEM
1 Chirp	DNA-9 not programmed correctly, or the DNA-9 harness is damaged.
2 Chirps	BRAKE is being pressed, or the HOOD is open.
3 Chirps	One of the vehicle DOORS is open.
4 Chirps	TACH is not programmed.

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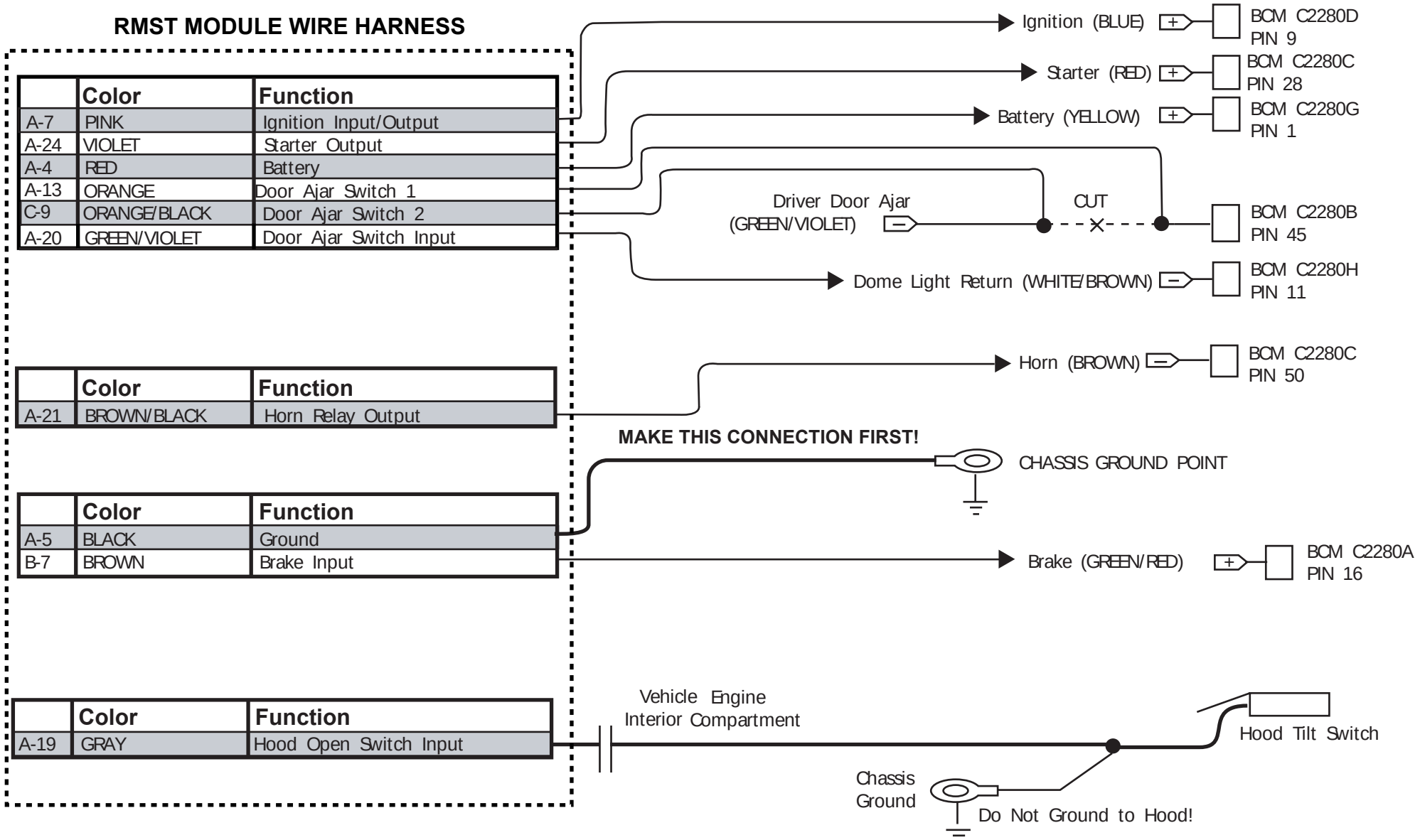
NOTE: It is recommended to identify all vehicle wires that will be connected before making any permanent connections. If all wires cannot be located, call 1-800-FORDKEY



	Color	Function
A-7	PINK	Ignition Input/Output
A-24	VIOLET	Starter Output
A-4	RED	Battery
A-13	ORANGE	Door Ajar Switch 1
C-9	ORANGE/BLACK	Door Ajar Switch 2
A-20	GREEN/VIOLET	Door Ajar Switch Input

	Color	Function
A-21	BROWN/BLACK	Horn Relay Output

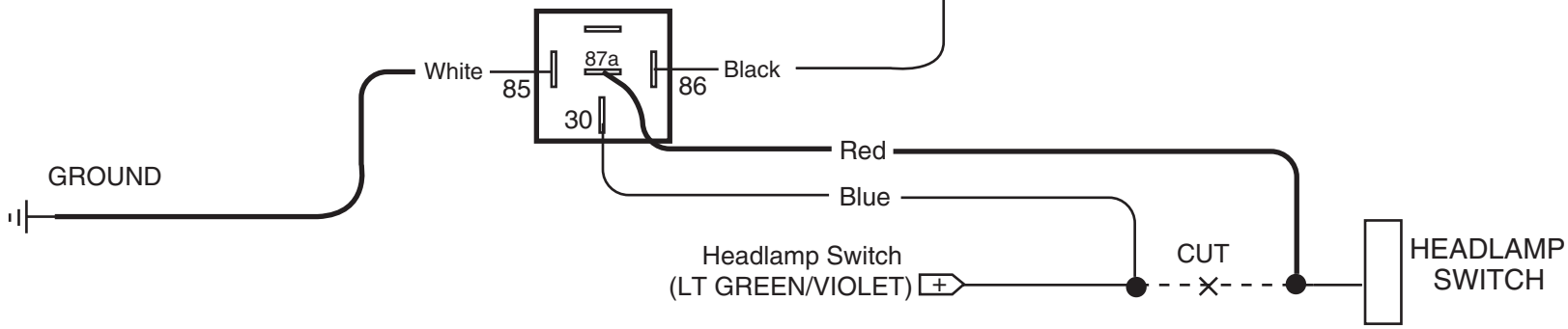
	Color	Function
A-5	BLACK	Ground
B-7	BROWN	Brake Input

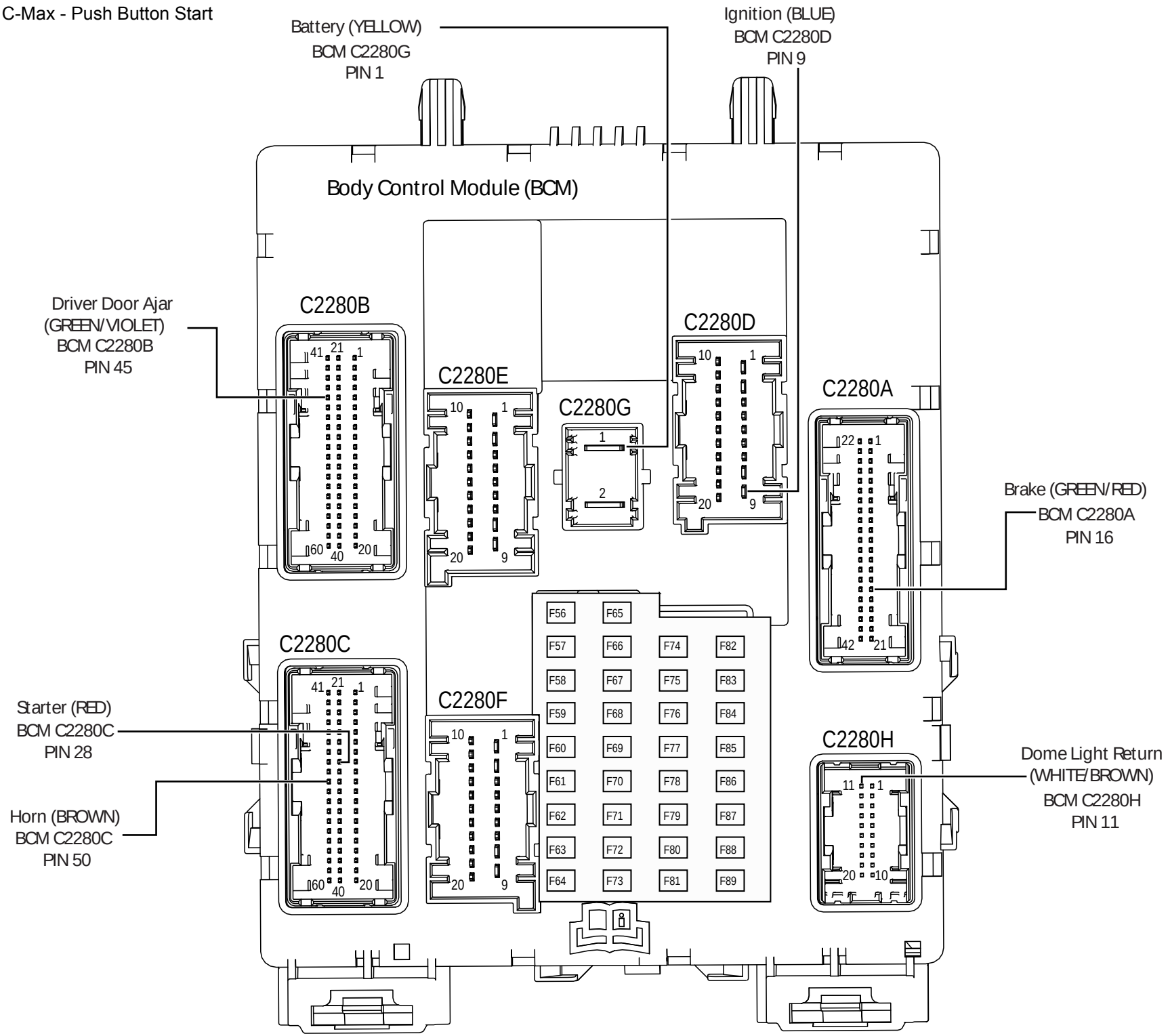
	Color	Function
A-19	GRAY	Hood Open Switch Input

INTERRUPT RELAY

RMST MODULE WIRE HARNESS

	Color	Function
A-1	WHITE	Parking Light Output



NOTE: REMOVE THE YELLOW WIRE AND TERMINAL FROM THE RELAY SOCKET

2013 C-Max - Push Button Start