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.

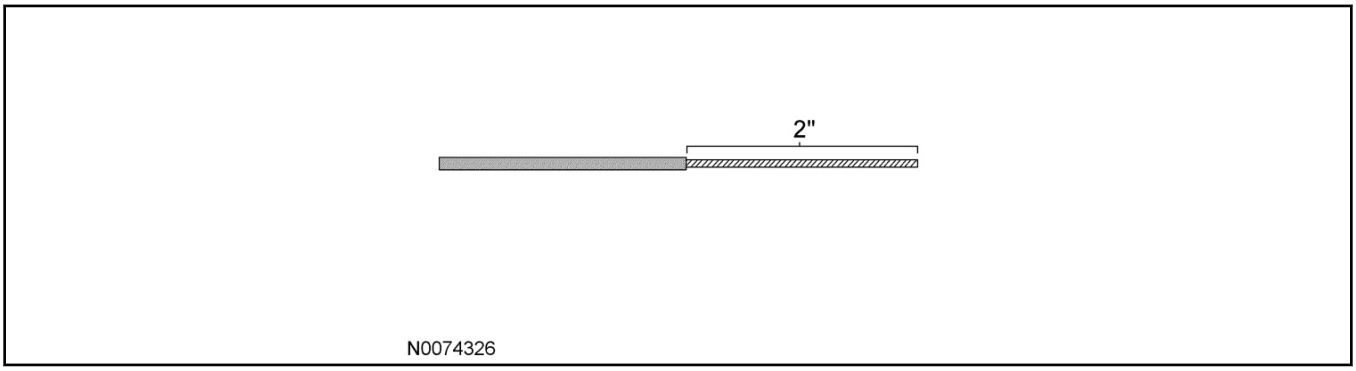
NOTE:
This procedure contains multiple splicing techniques.

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

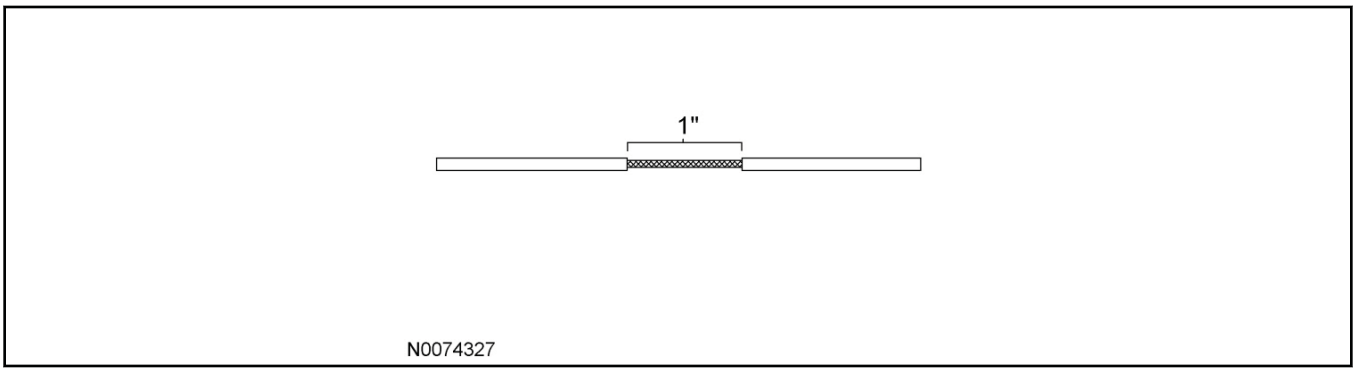
2-Wire Solder "Center Splice" With No Wire Cutting

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

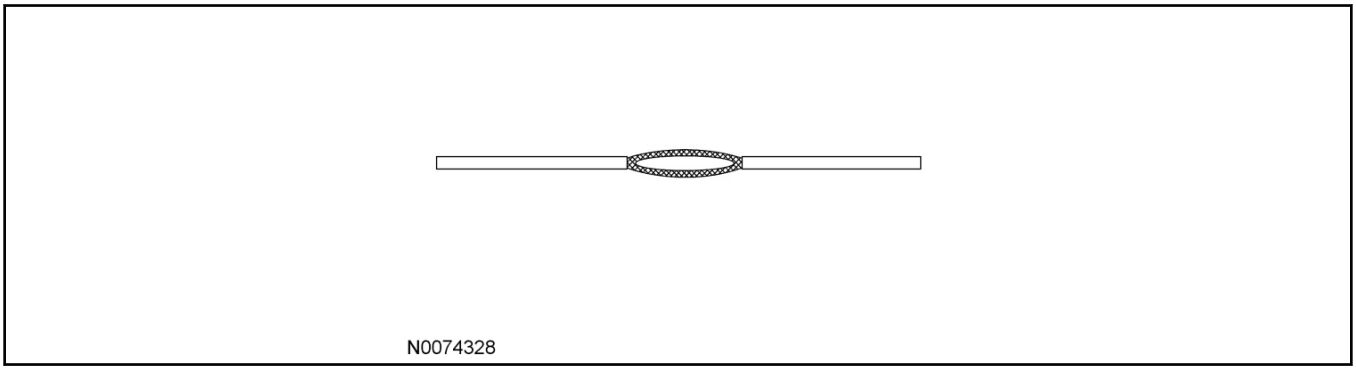
1. Strip approximately two inches of insulation from the wire to be installed in the vehicle.



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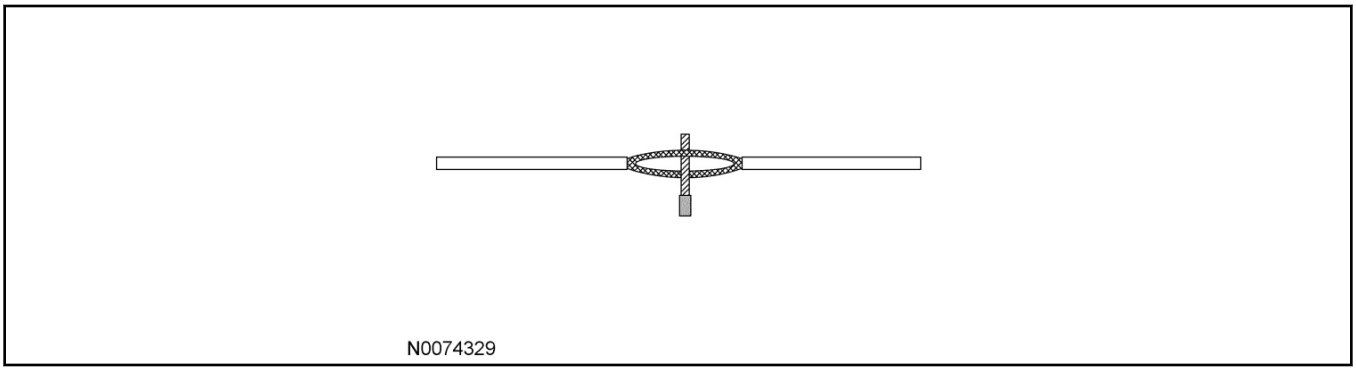
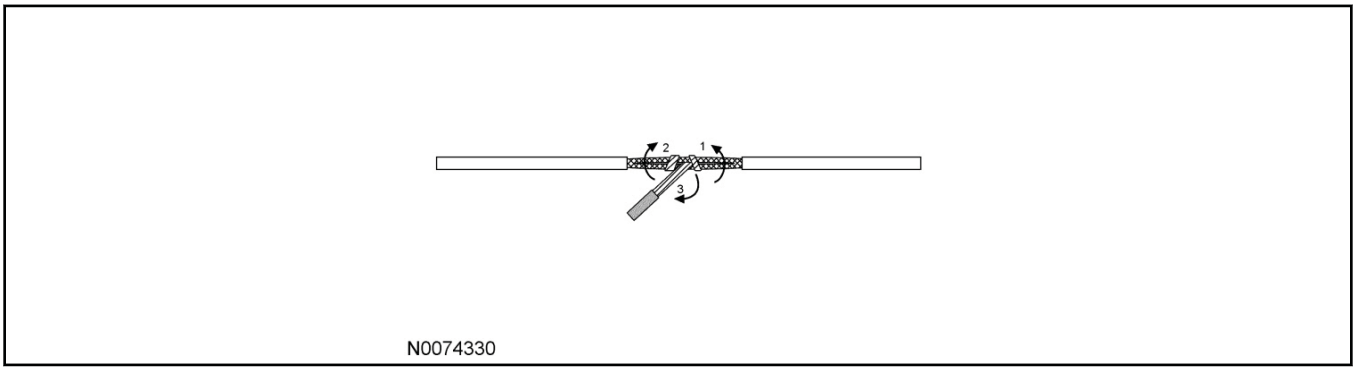
4. Insert the new wire between the parted strands. If more than one wire is being spliced, wrap them in opposite directions.



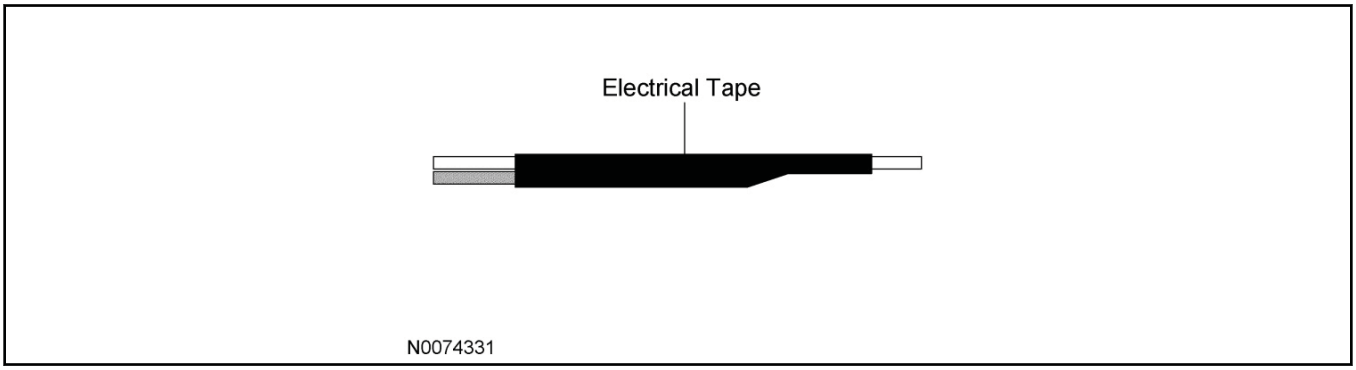
NOTE:
Use Rosin Core Mildly-Activated (RMA) Solder. Do not use Acid Core Solder.

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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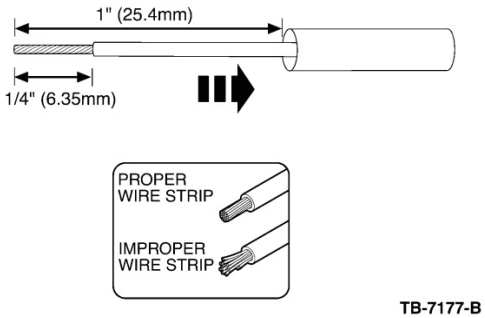
2-Wire Solder Splice/Ratcheting Crimp Tool Splice Procedure

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

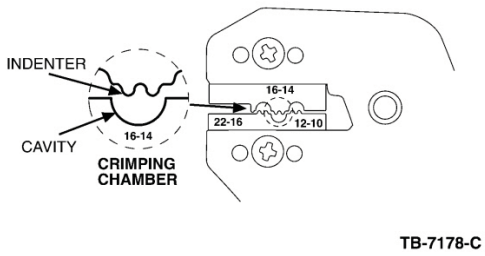
NOTE:
For Splicing Procedure Use Wire Splice Tool Kit (164-R5903).

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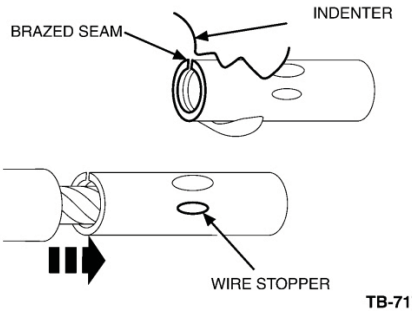
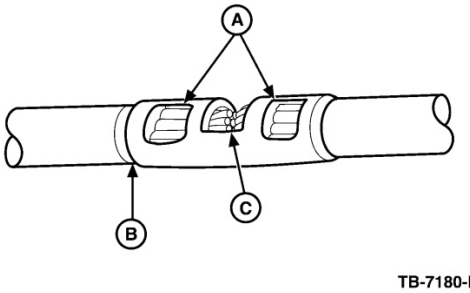
9. Center one (1) end of the butt splice on the appropriate crimping chamber. If visible, be sure to place the brazed seam of the butt splice toward the indenter. Hold the butt splice in place and squeeze the tool handles together until the ratchet engages sufficiently to hold the butt splice in position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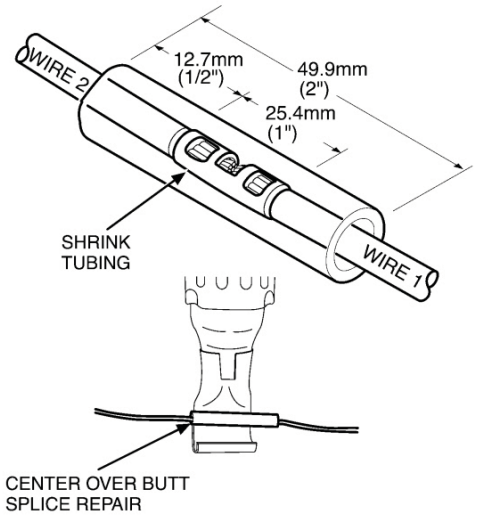
11. **NOTE:**
    Overlap heat shrink tubing on both wires.

    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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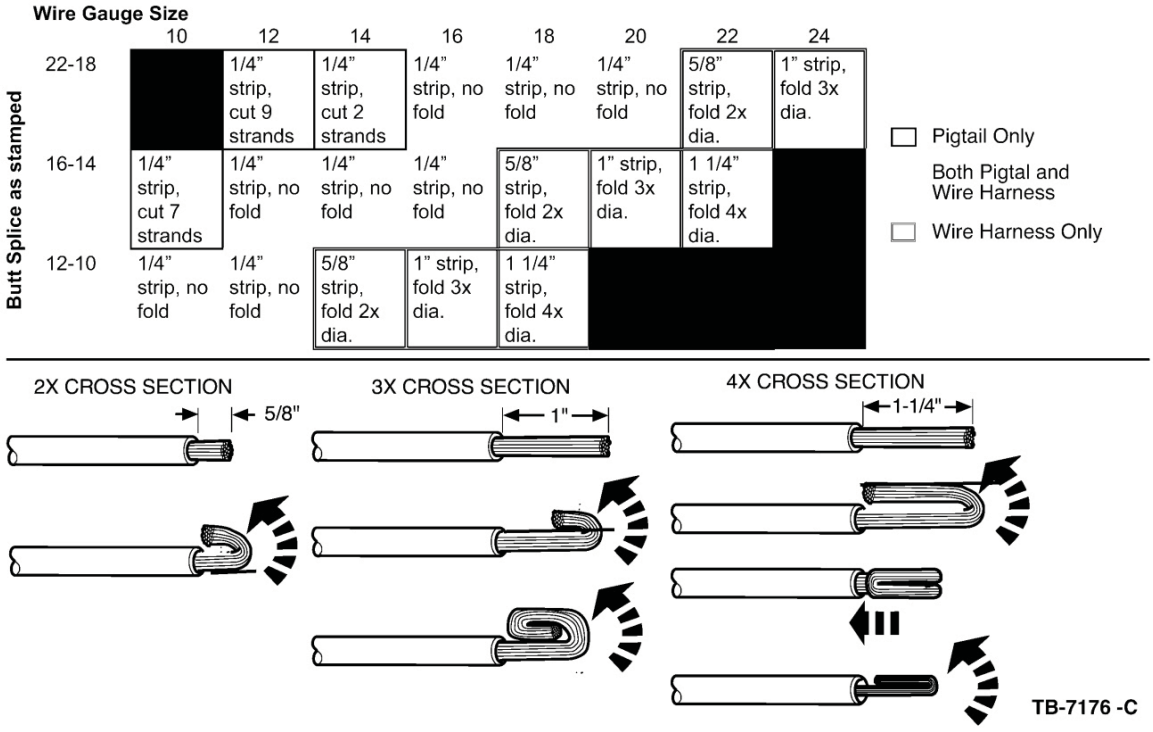
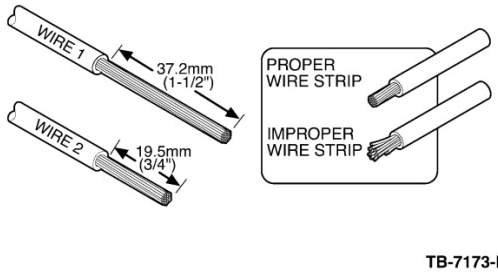
Wire Stripping Lengths and Application Techniques.



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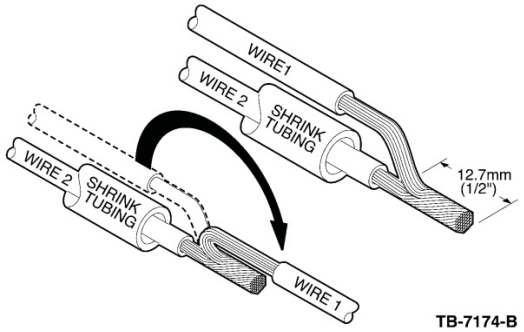
13. **NOTE:**
    Use rosin core mildly activated (RMS) solder. do not use acid core solder for wire repair.

    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.

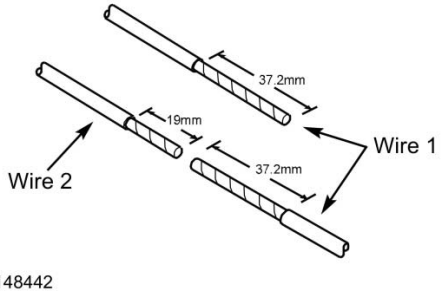
    NOTE:
    The hot melt forms an adhesive seal between the wire insulation and the heat shrink tubing, which prevents air and moisture from entering the solder point.

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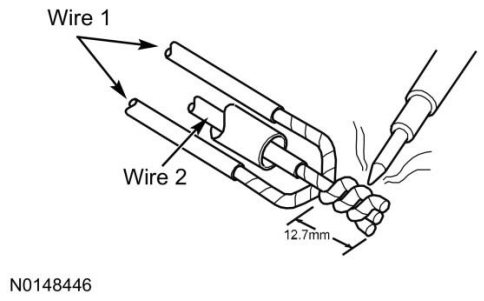
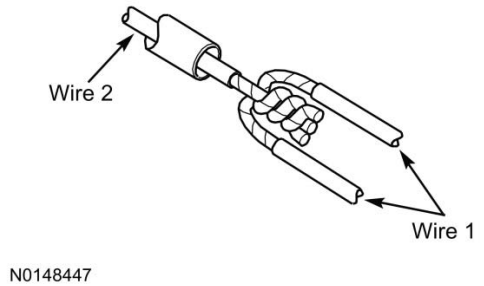
15. **NOTE:**
    Wait for solder to cool before moving wires.

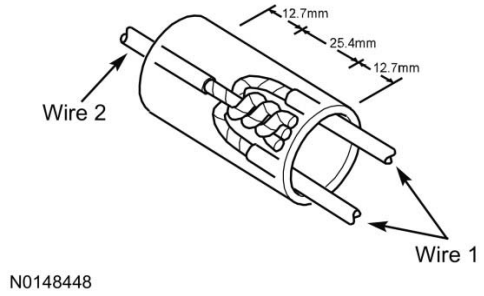
    Apply heat shrink tubing to Wire #2. Twist both ends of Wire #1 around Wire #2. Solder wires together.



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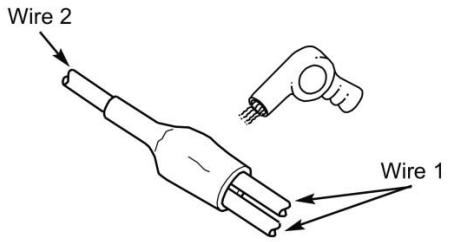
18. **NOTE:**
    Durability of a heat shrink tubing splice is dependent on the hot melt that will appear from both ends of the tube.

    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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WIRING DIAGRAMS
Vehicle Specific Wiring Diagrams

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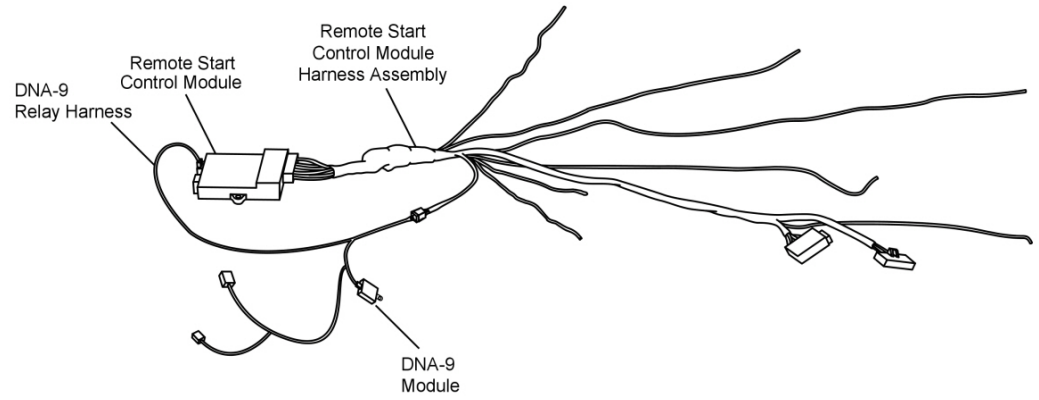
INSTALLATION

Remote Start - Transit

RMST System Components



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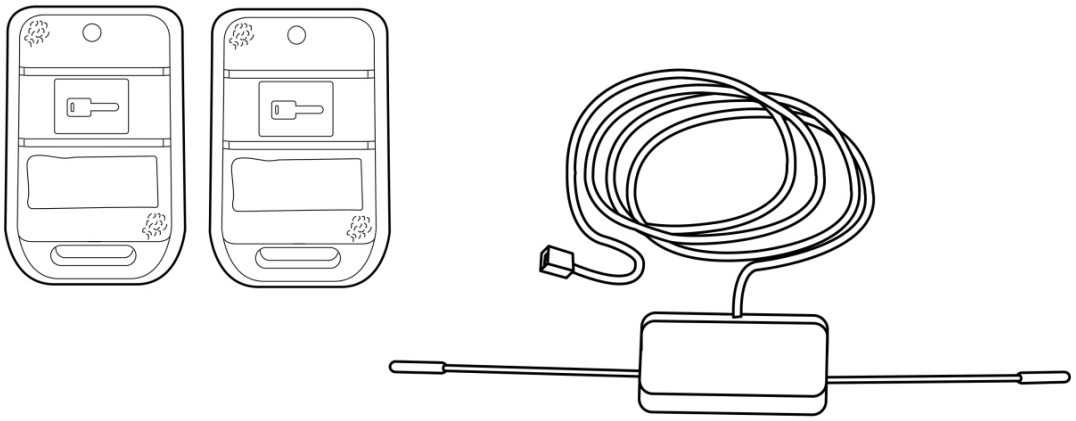
Additional "Standard RMST" Components



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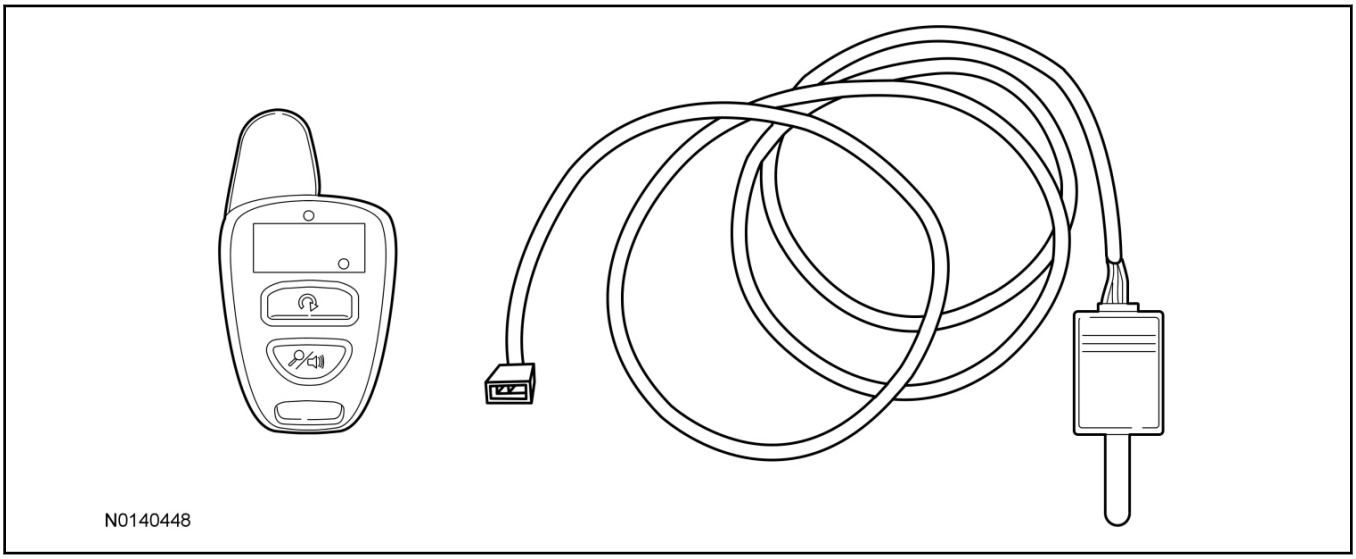
INSTALLATION (Continued)

Additional "Bi-directional RMST" Components



Remote Start - Transit

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
1	DNA-9 Relay Harness

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INSTALLATION (Continued)

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

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

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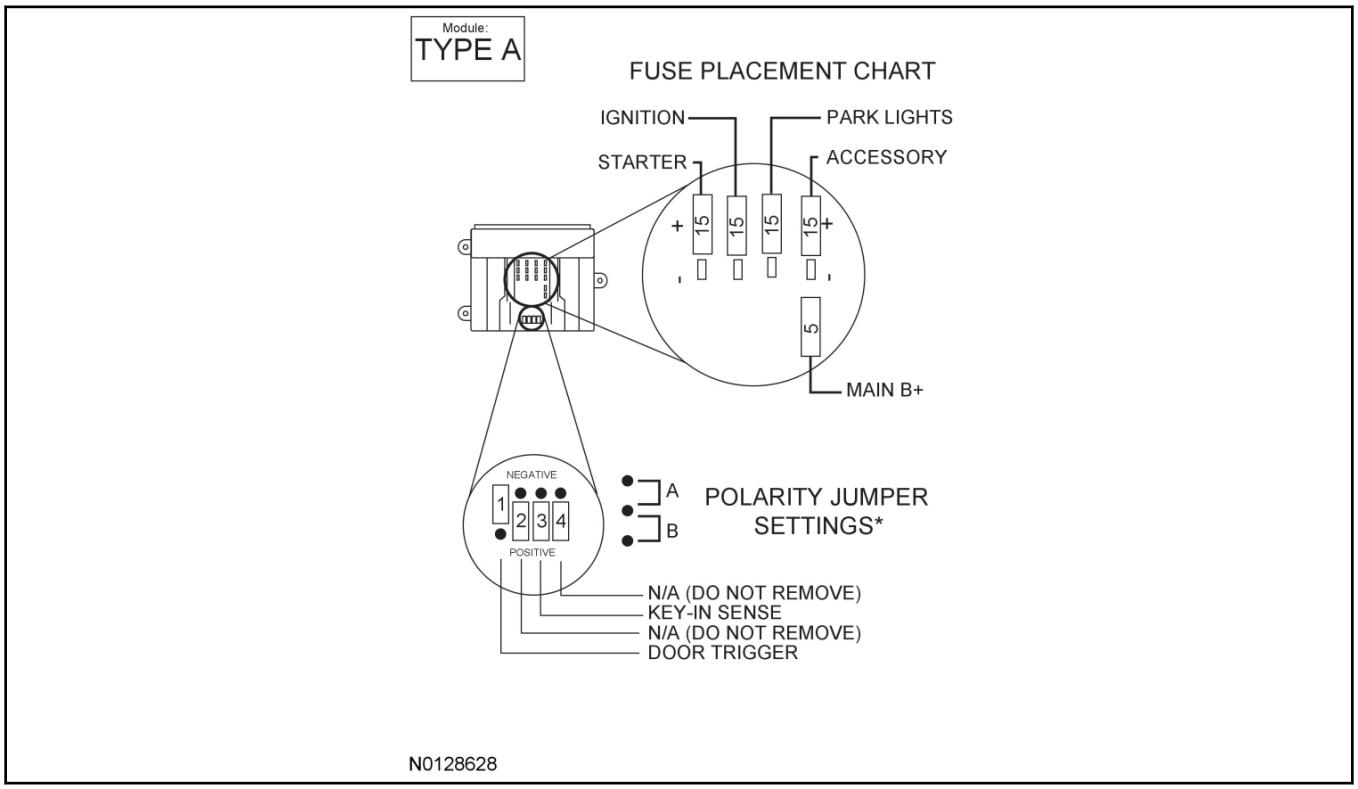
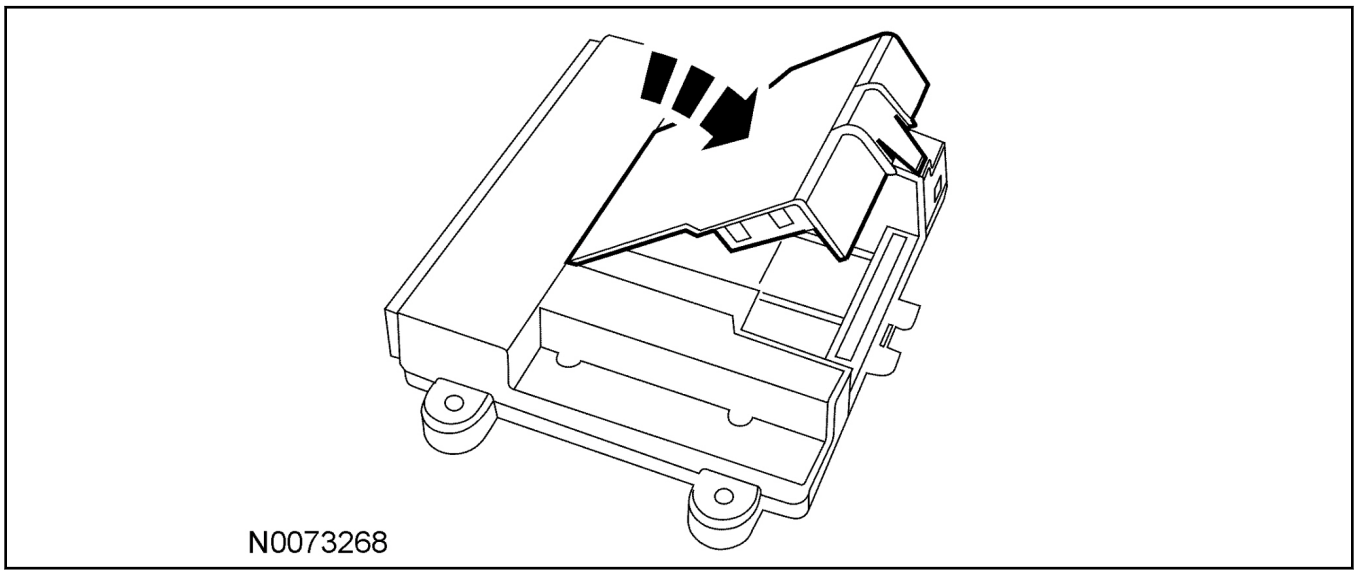
INSTALLATION (Continued)

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.



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



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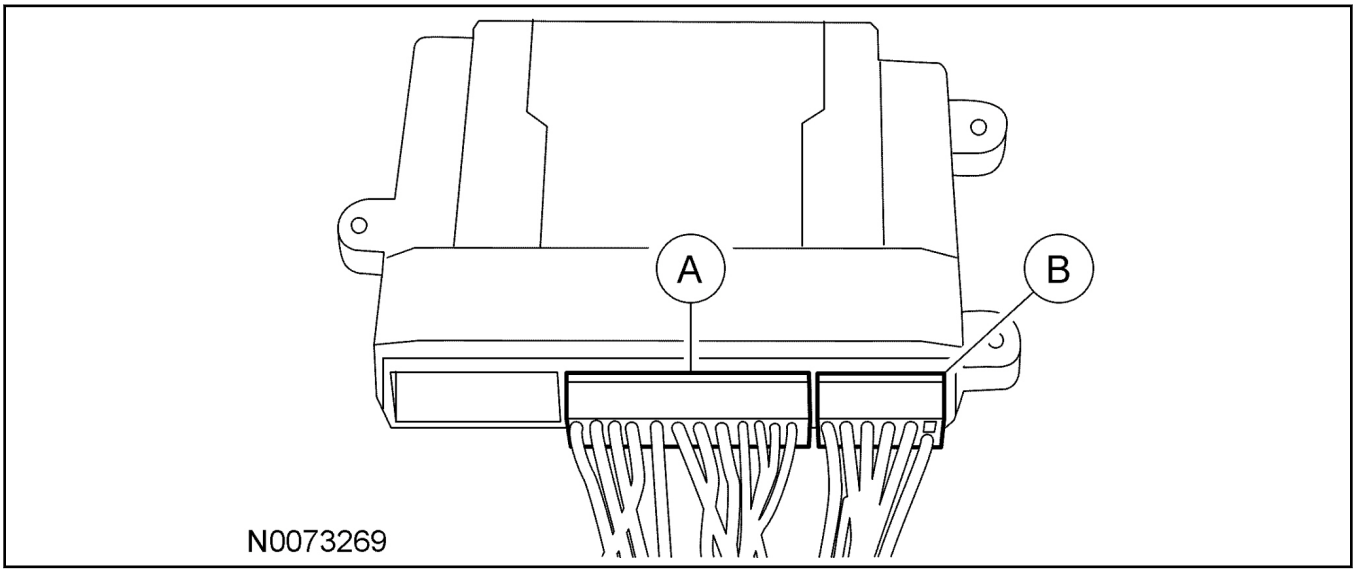
INSTALLATION (Continued)

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) before proceeding.

   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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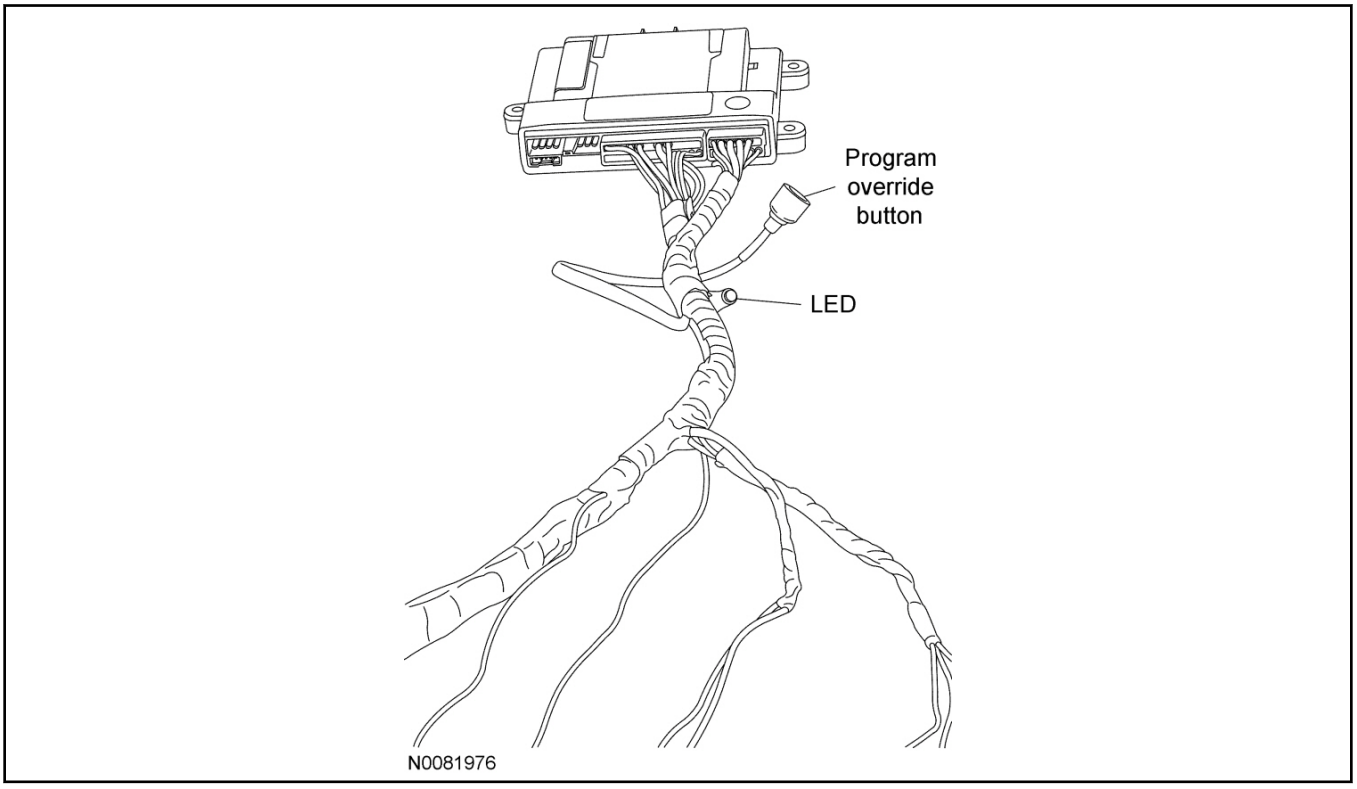
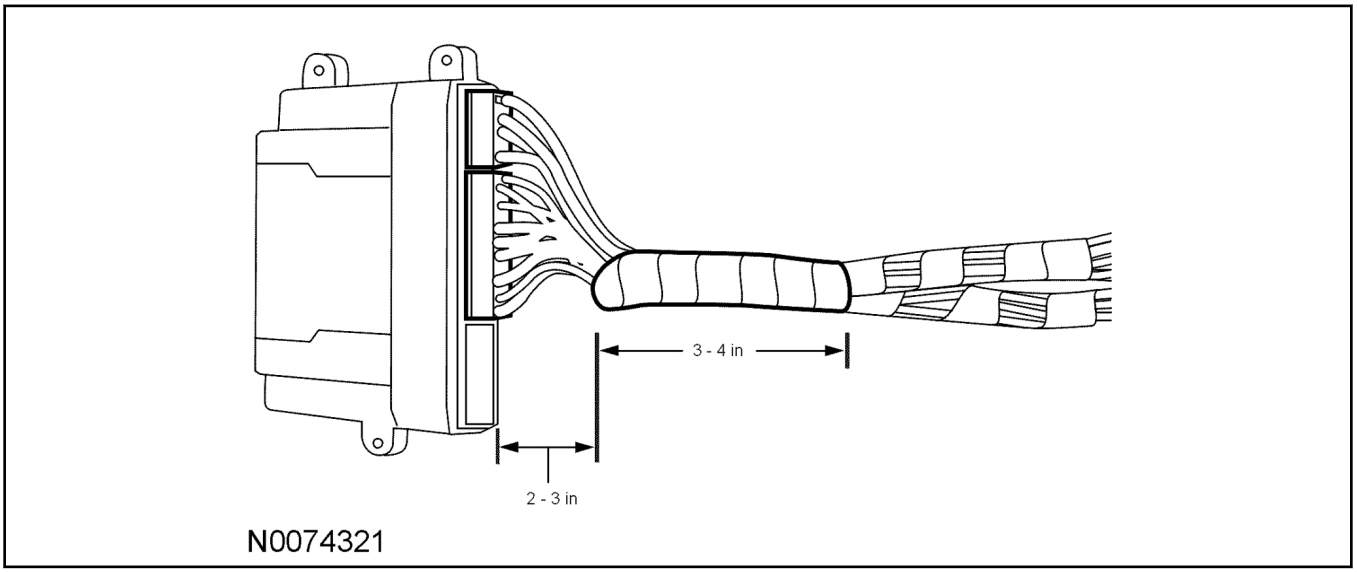
INSTALLATION (Continued)



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



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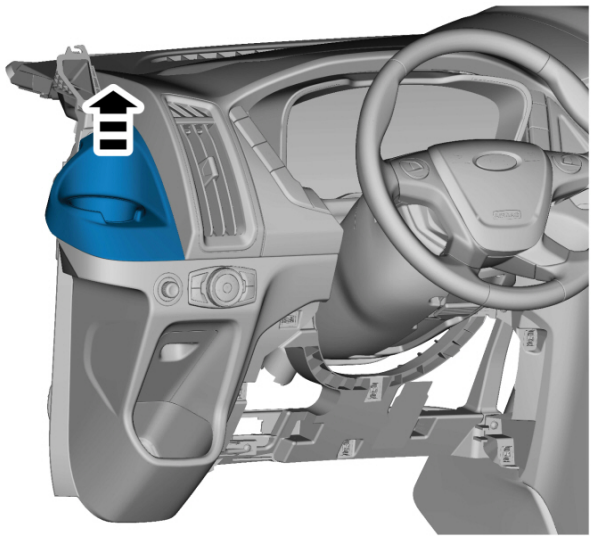
INSTALLATION (Continued)

Vehicle Preparation

9. Remove the driver's side steering column opening trim panel.

10. Remove the LH side cup holder from the instrument panel.



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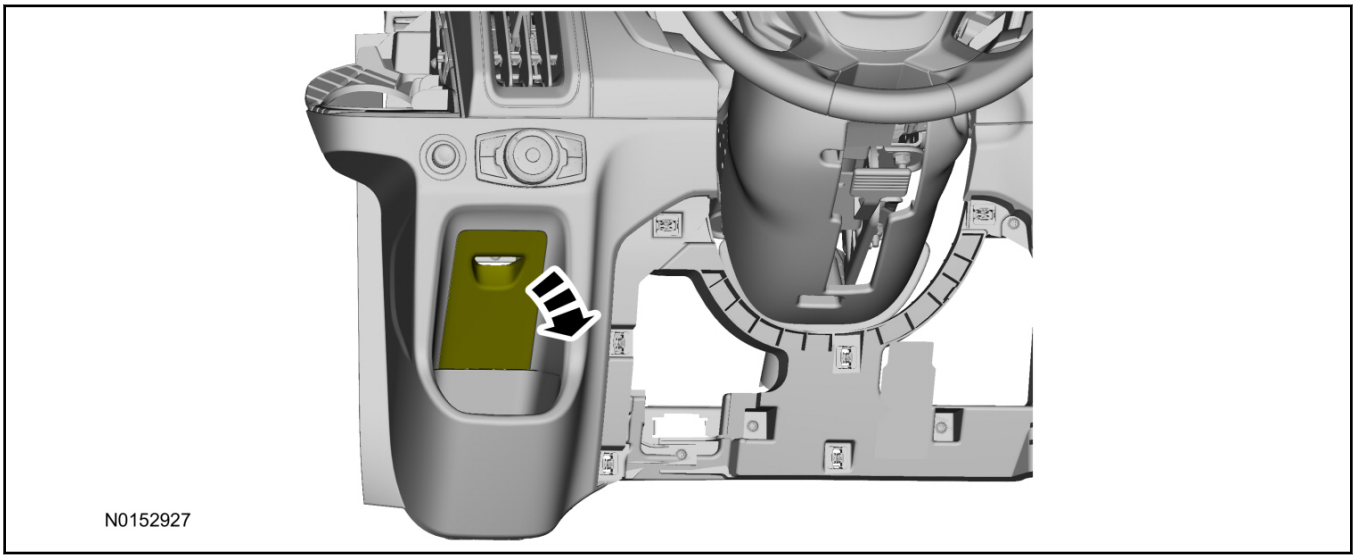
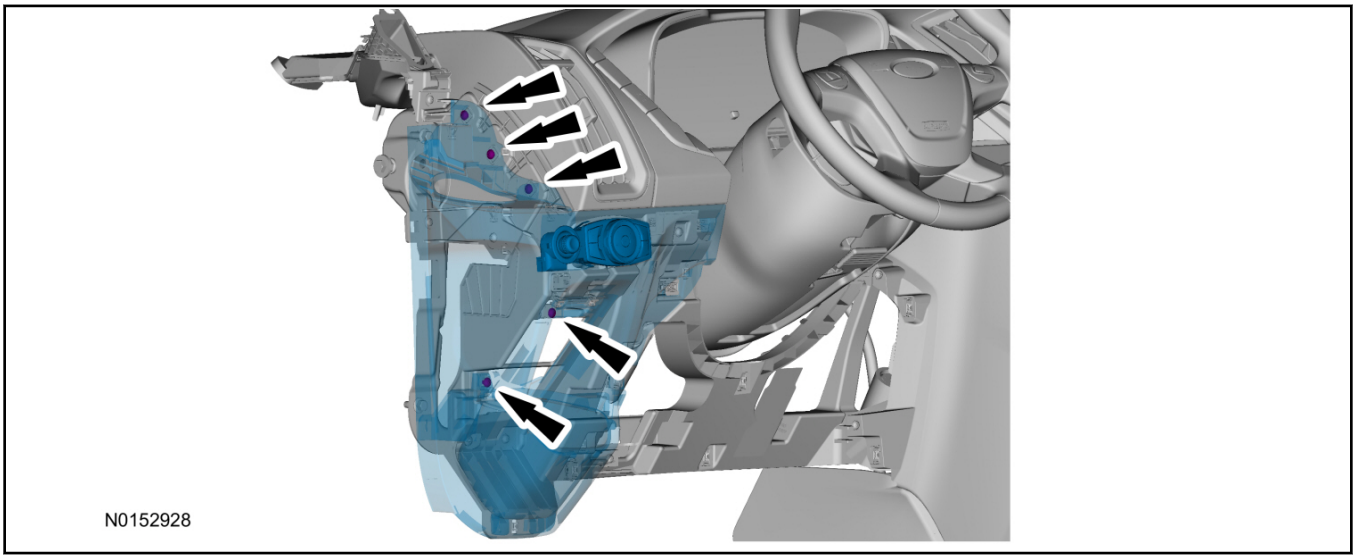
INSTALLATION (Continued)

11. Fold down the access panel.



12. Remove the LH instrument panel finish panel.
    1 Remove the five screws.
    2 Disconnect the headlamp switch electrical connectors.



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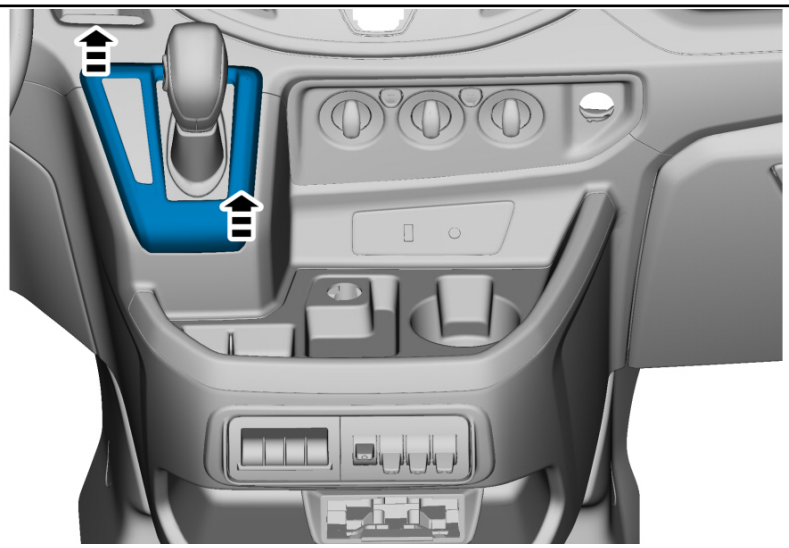
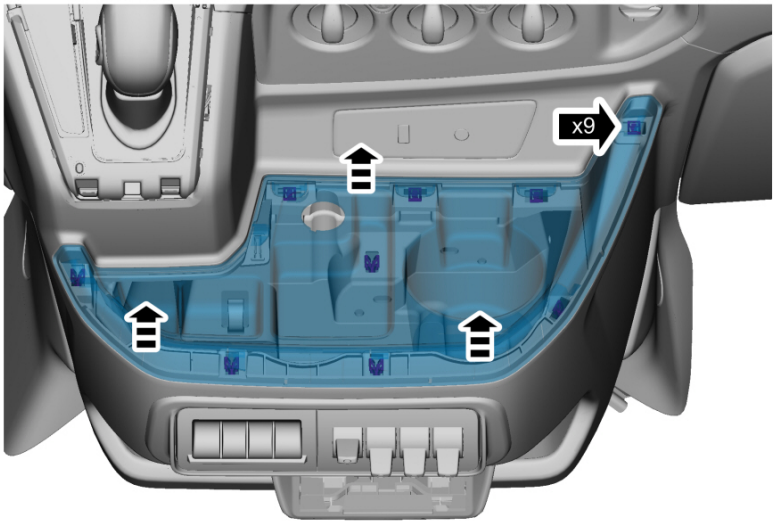
INSTALLATION (Continued)

13. Remove the shifter bezel.



14. Remove the cup holder tray from the center console.



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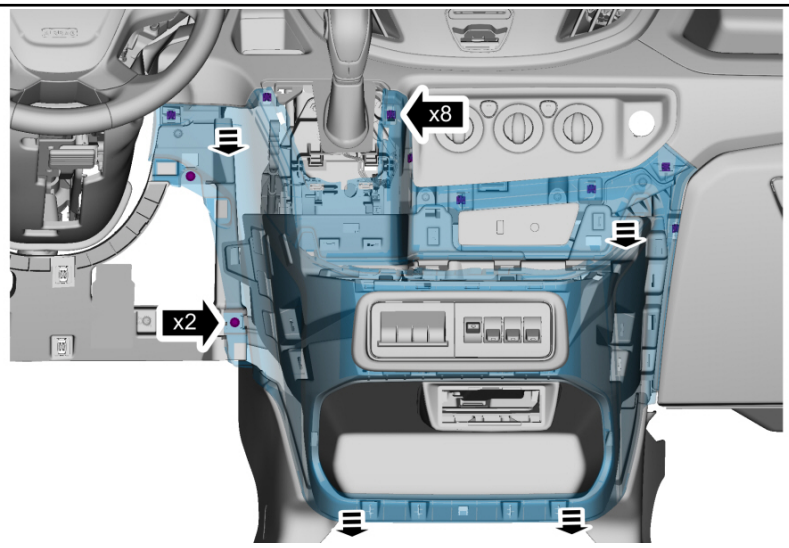
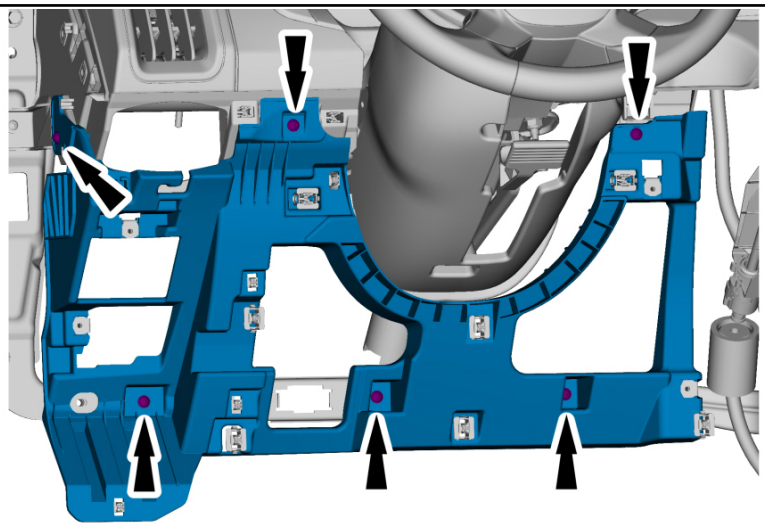
INSTALLATION (Continued)

15. Remove the two screws, pull to release the eight clips and remove the center console finish panel.



16. Remove the steering column opening reinforcement panel.



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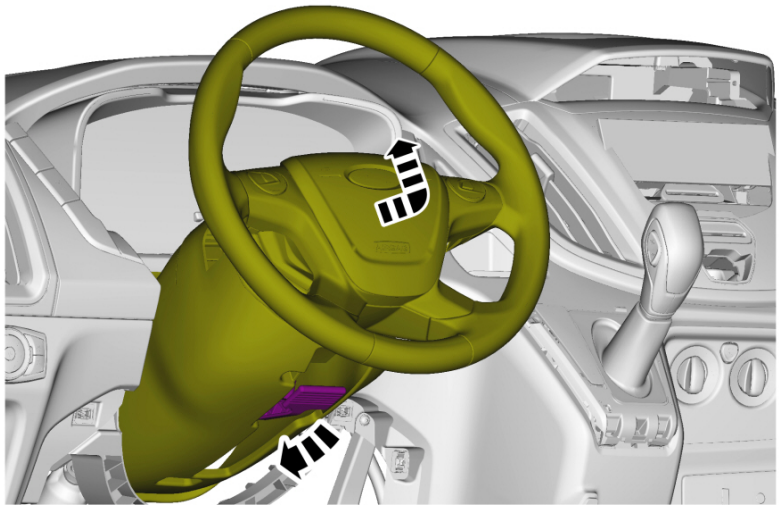
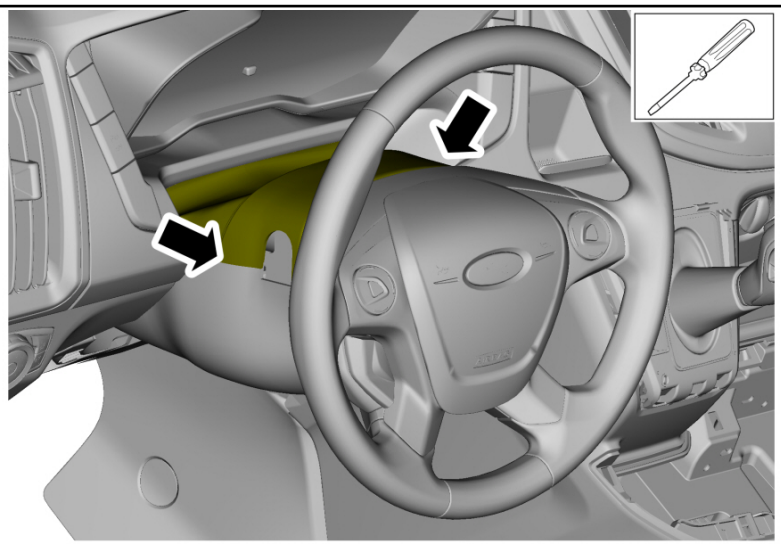
INSTALLATION (Continued)

17. Position the steering column to the fully outward and upward position.



18. Position steering wheel and disengage upper shroud from lower shroud.



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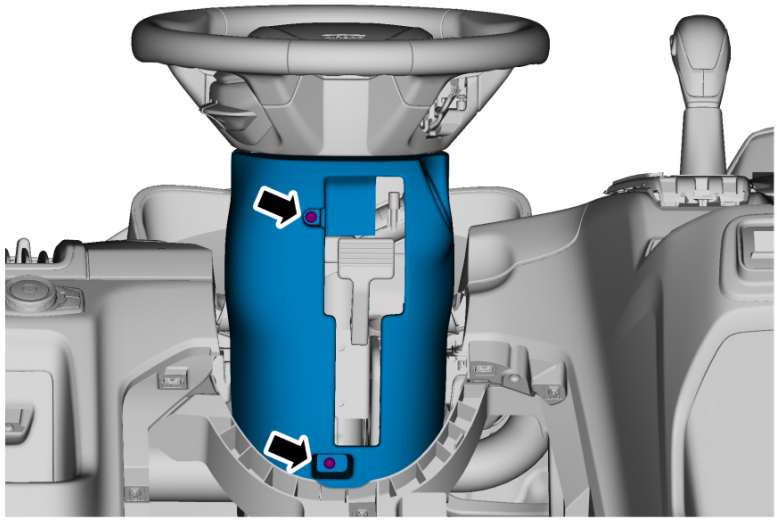
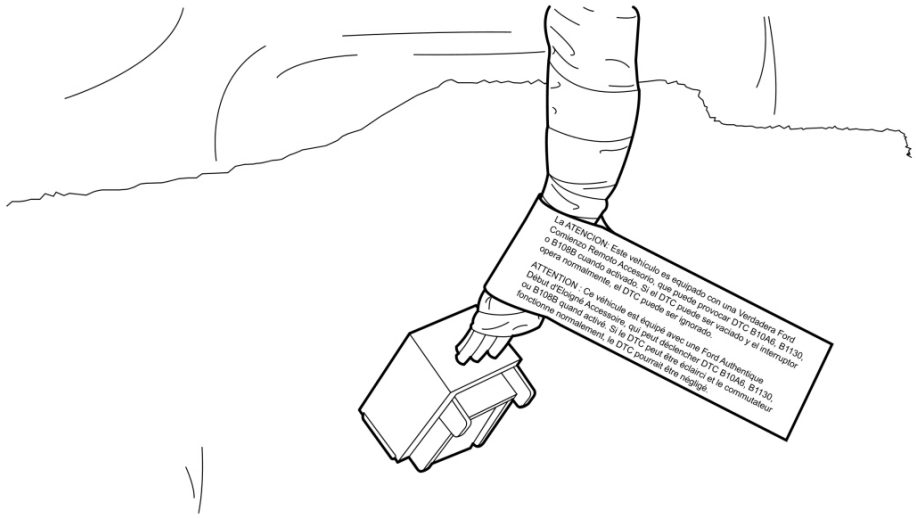
INSTALLATION (Continued)

19. Remove screws and the lower shroud.



20. Install the supplied wire harness label to the headlamp switch harness.



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.

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

Install The Antenna

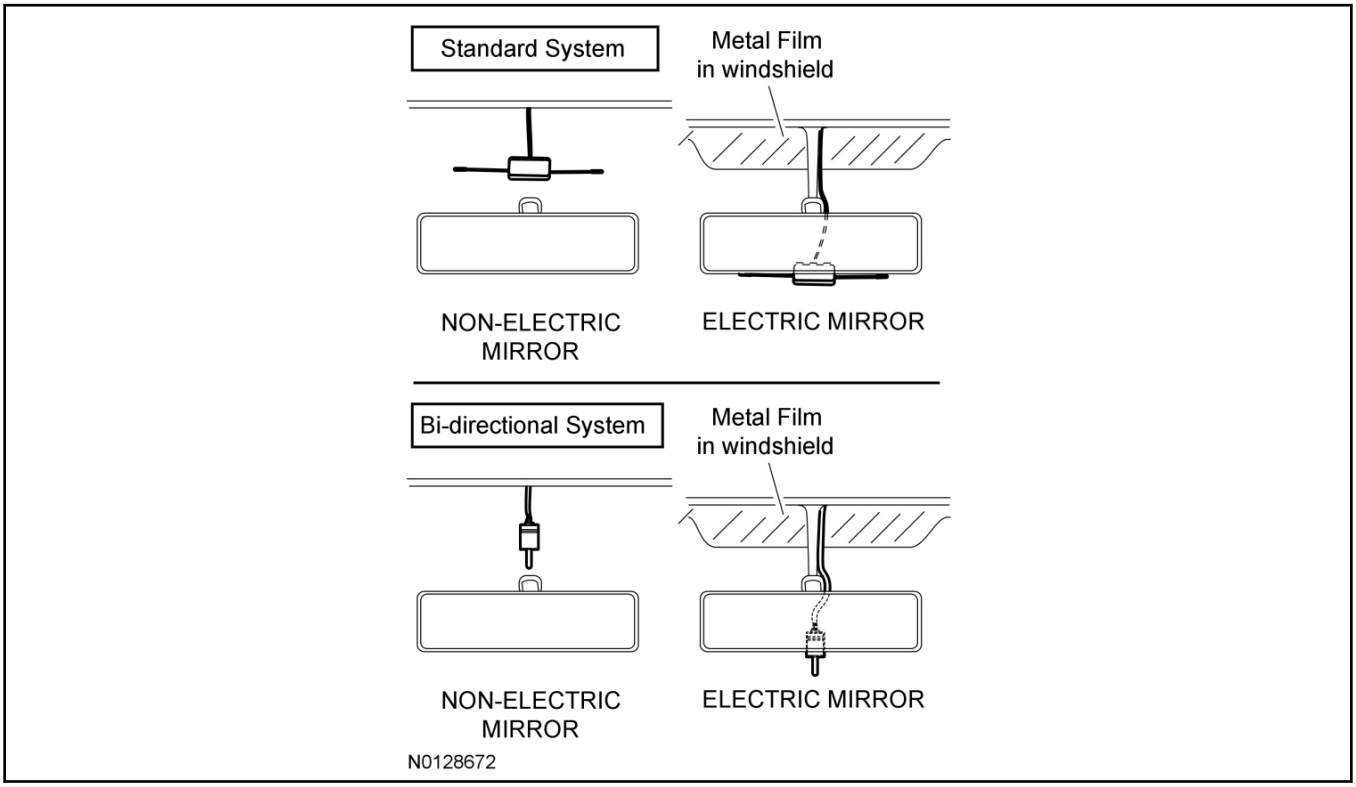
22. Clean the mounting surface using an alcohol base solution and a clean cloth.

23. **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.



24. 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.

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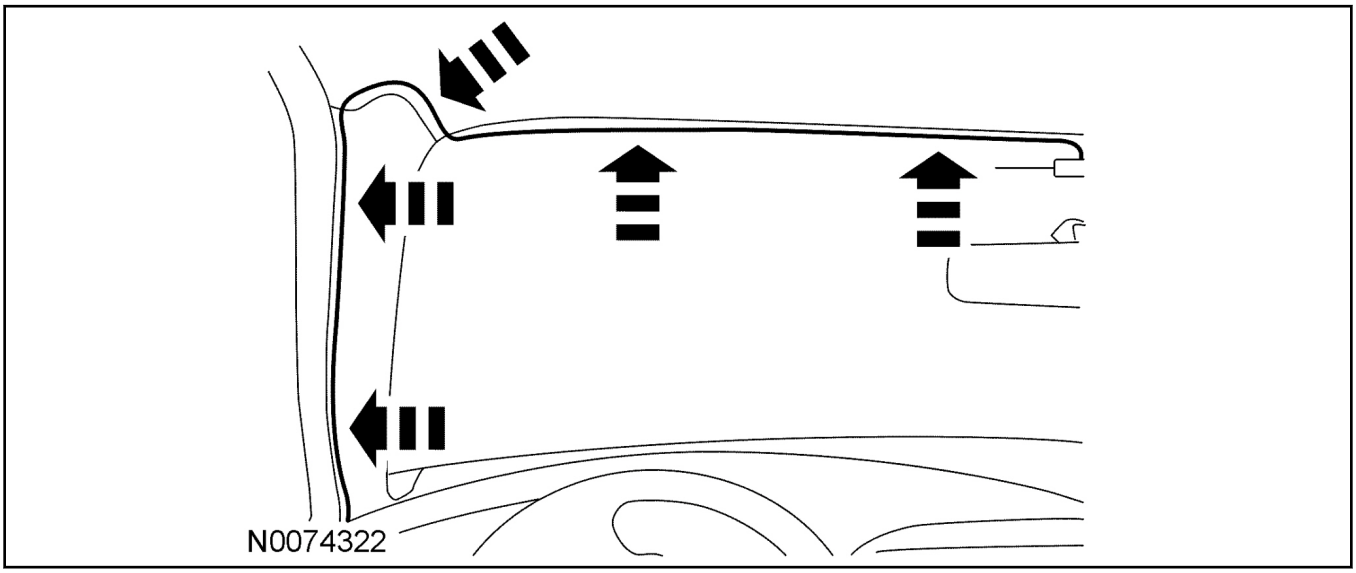
INSTALLATION (Continued)

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



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

Install the Remote Start Control Module and Harness Assembly

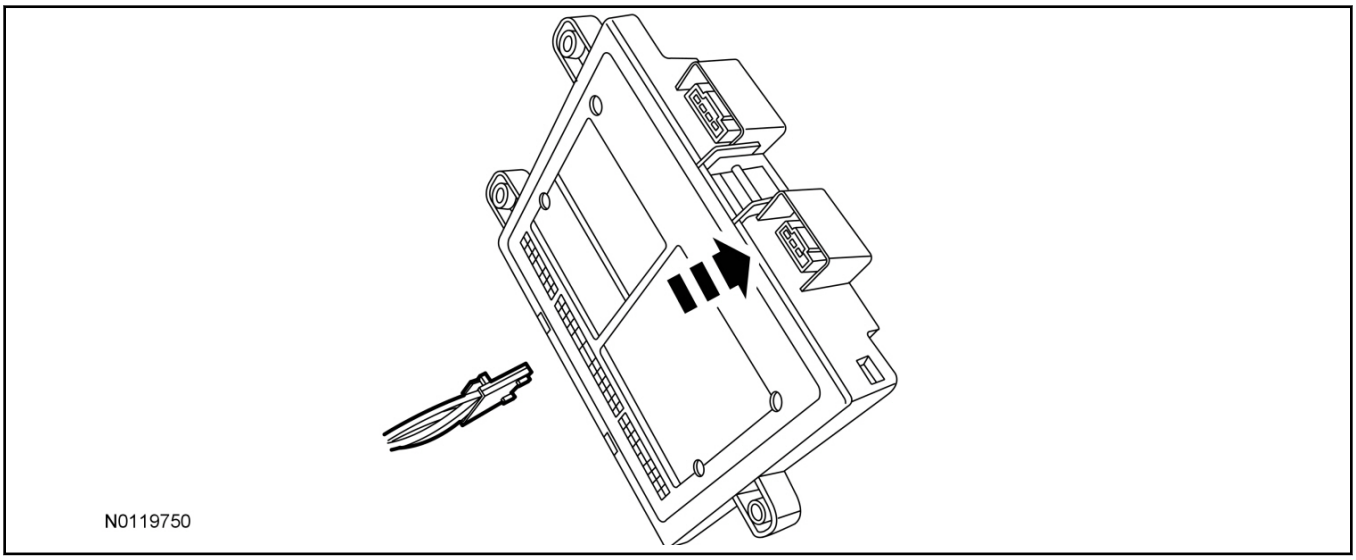
27. Place the remote start module and harness assembly on the floor of the vehicle.

Install the DNA-9 Relay Harness and Module

NOTE:

DNA-9 relay harness and module installation is not necessary for vehicles without a Passive Anti-Theft System (PATS).

28. Disconnect the PATS transceiver electrical connector.
29. Connect the DNA-9 relay harness to the PATS transceiver electrical connector and to the vehicle harness.
30. Connect the DNA-9 relay harness to the remote start module.



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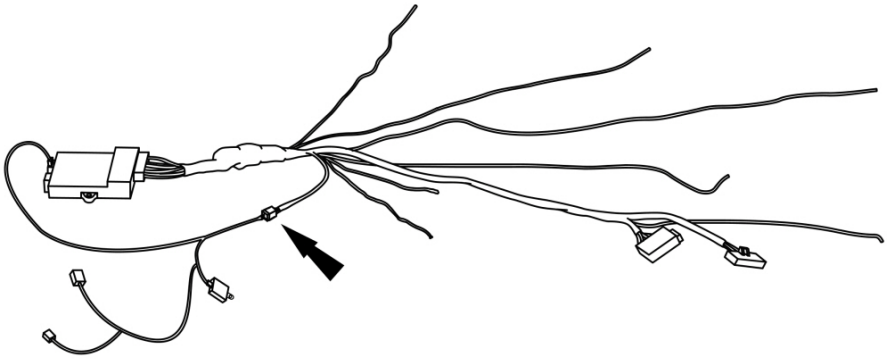
INSTALLATION (Continued)

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



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) before proceeding.

NOTE:
Review the proper wire splicing techniques before proceeding.

33. Connect the Black ground wire from the remote start module harness to a chassis ground point on the driver's side.
    - Attach the ground wire using the kit provided screw.
34. Disconnect the ignition switch electrical connector.
35. Connect the remote start harness hard shell connectors to the ignition switch and ignition switch connector.
36. **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 at BCM connector C2280D Pin 17.
37. Connect the Brown/Black wire from the remote start module harness to the Blue/White horn circuit wire at BCM connector C2280D Pin 17.

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38. **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 Violet/White brake switch circuit wire at BCM connector C2280C Pin 58.
39. Connect the Brown wire from the remote start module harness to the Violet/White brake switch circuit wire at BCM connector C2280C Pin 58.
40. **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 door ajar circuit wire at BCM connector C2280B Pin 2.
41. Connect the Green/Violet wire from the remote start module harness to the Yellow/Gray door ajar circuit wire at BCM connector C2280B Pin 2.
42. **NOTE:**
    A DVOM connected to the correct wire will show ~12V, then show ~0V while depressing the lock button.

    NOTE:
    A logic probe will show power on the correct wire, then show ground while depressing the lock button.

    Identify the Gray/Yellow door lock circuit wire at BCM connector C2280C Pin 25.
43. Connect the Blue wire from the remote start module harness to the Gray/Yellow door lock circuit wire at BCM connector C2280C Pin 25.

Relay Harness

44. 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.
45. Install a suitable insulated crimp terminal eyelet to the Black interrupt relay wire. Attach the Black relay wire to a suitable grounding location.
46. Connect the White wire from the remote start module harness to the White wire at the relay harness.

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47. **NOTE:**
A DVOM connected to the correct wire will show ~12V, then show ~0V with the headlamp switch in the ON position.

NOTE:
A logic probe will show power on the correct wire, then show ground with the headlamp switch in the ON position.

Identify the Green/Violet headlamp switch wire at BCM connector C2280D Pin 36.

48. **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 Green/Violet headlamp switch wire at BCM connector C2280D Pin 36.

- Connect the Blue wire from the relay harness to the headlamp switch side of the Green/Violet headlamp switch wire at BCM connector C2280D Pin 36.
- Connect the Red wire from the relay harness to the BCM side of the Green/Violet headlamp switch wire at BCM connector C2280D Pin 36.

49. Connect the relay to the relay harness.
50. Secure the relay and relay harness near the BCM with tie-straps.

Install The Hood Safety Switch

51. **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.

52. Connect the hood switch ground wire to a suitable location.

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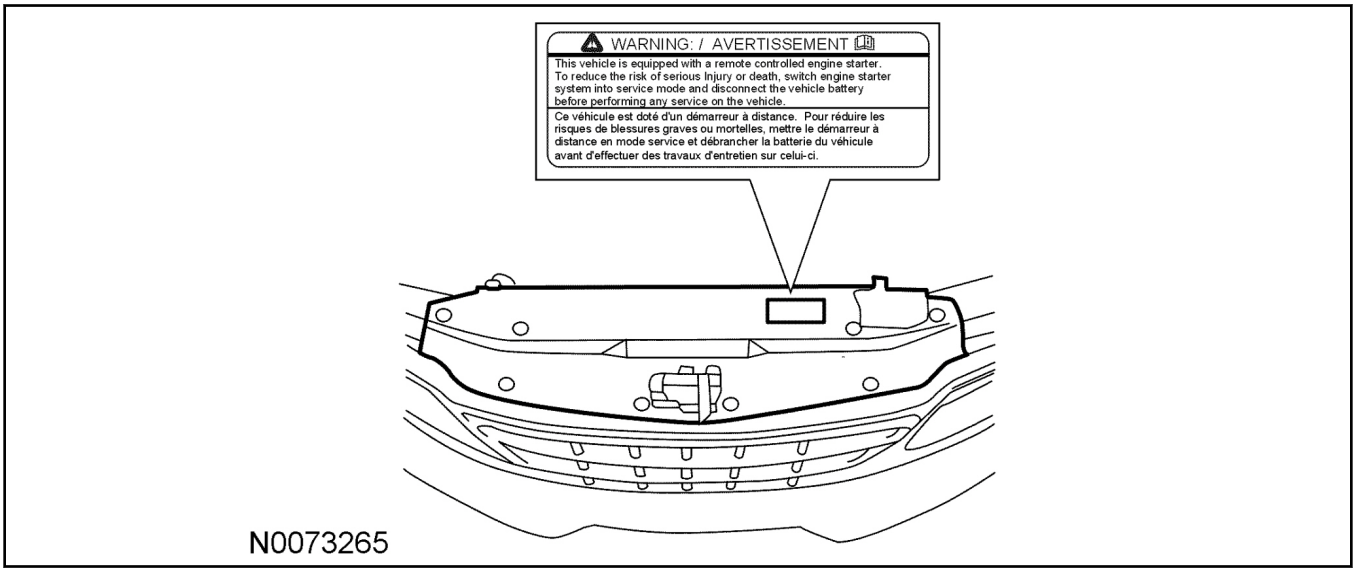
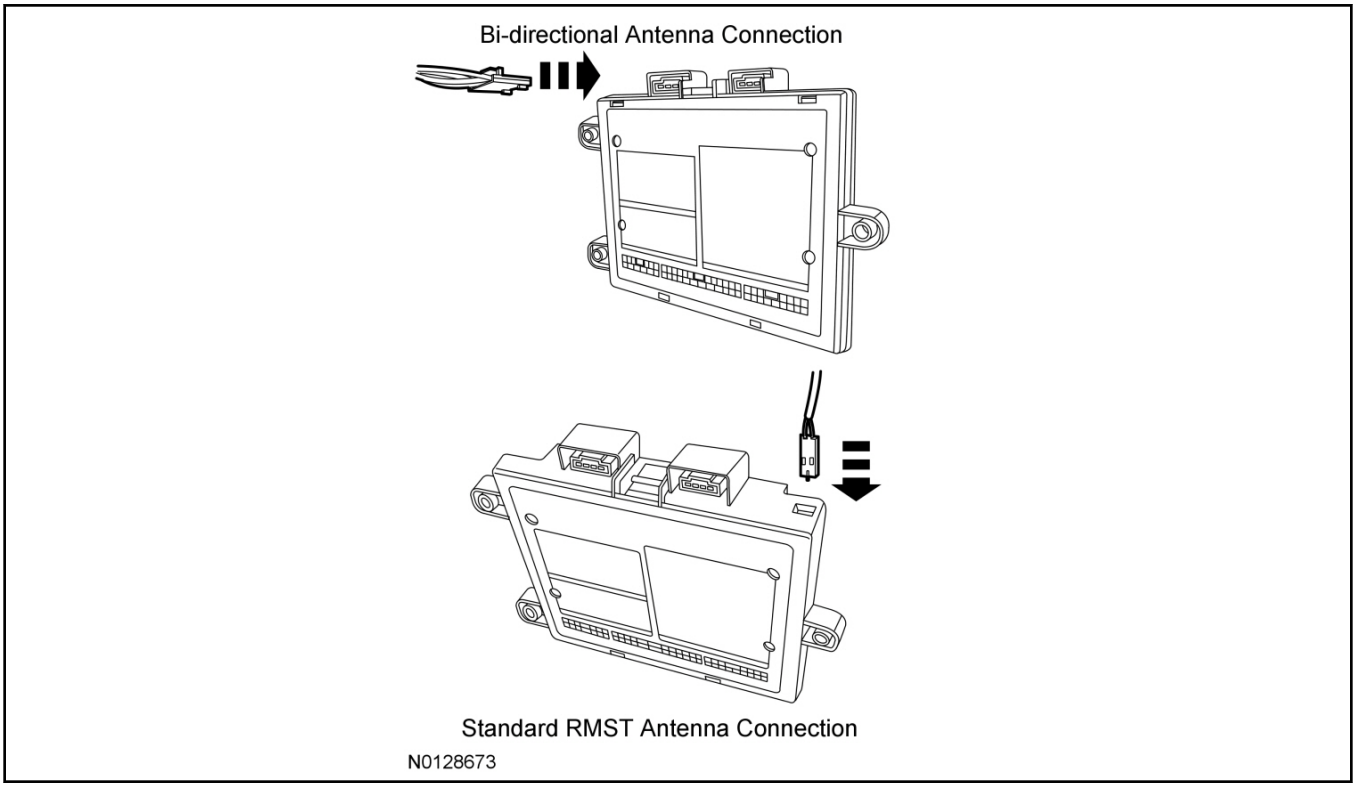
INSTALLATION (Continued)

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

    Install the underhood warning label.



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



Program The RMST System

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

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INSTALLATION (Continued)

Secure RMST Harness and Control Module

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

58. **NOTE:**

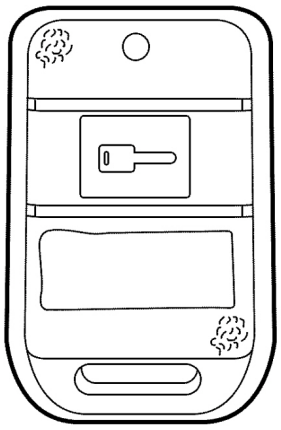
    Do not mount the control module in the knee bolster area.
    Secure the control module at three points to the vehicle.

    Use the supplied long tie wraps to mount the RMST control module at a suitable location under the IP.

Install Trim

59. Reverse the removal procedure to install the trim.

Programming - Standard Remote Start



STANDARD RMST FOB

N0097291

60. 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

61. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCRIPTION	LED
2	1	TACHLESS MODE	ON

62. Press and hold the brake pedal.

63. Turn the ignition key to the RUN position.
    - The dome light will turn off.

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INSTALLATION (Continued)

64. 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.
65. 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 Gray 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.

66. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.
67. 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.

68. 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.

69. Remove the ignition key.

Programming the DNA-9

NOTE:
DNA-9 module programming is not required for vehicles without PATS.

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.

70. Insert the first ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the first key.
71. Insert the second ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the second key.
72. 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.

73. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
74. 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.
75. The remote start systems should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.
76. Close the hood, and insert a key into the ignition switch.
77. Attempt to re-start the vehicle again using the key fob.
78. 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.
79. Remove the key and open a door.
80. Attempt to re-start the vehicle again using the key fob.
81. The remote start systems should start the vehicle, then it will detect that a door is open and shut down.
82. Close the door.
83. Attempt to re-start the vehicle again using the key fob.

NOTE:
The doors will not be automatically locked by the remote start system.

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

Troubleshooting

86. **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

87. 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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Programming Options: Entering Programming Mode

88. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCRIPTION	LED
2	1	TACHLESS MODE	ON

89. Press and hold the brake pedal.
90. Turn the ignition key to the RUN position.
    The dome light will turn off.
91. 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.
92. 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 Gray 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.

93. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.
94. 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.

95. 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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INSTALLATION (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.

96. Remove the ignition key.

Programming the DNA-9

NOTE:
DNA-9 module programming is not required for vehicles without PATS.

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.

97. Insert the first ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the first key.
98. 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.

99. 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.

100. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
101. Press the Start button on the remote control key fob twice within 3 seconds - horn should honk once indicating receipt of the start request.
102. The remote start systems should start the vehicle, then it will detect that a door is open and shut down.

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INSTALLATION (Continued)

103. Close the hood, and insert a key into the ignition switch.
104. Attempt to re-start the vehicle again using the key fob.
105. 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.
106. Remove the key and open a door.
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 three times and shut down indicating a door is open.
109. Close the door.
110. Attempt to re-start the vehicle again using the key fob.

NOTE:
The doors will not be automatically locked by the remote start system.

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

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.

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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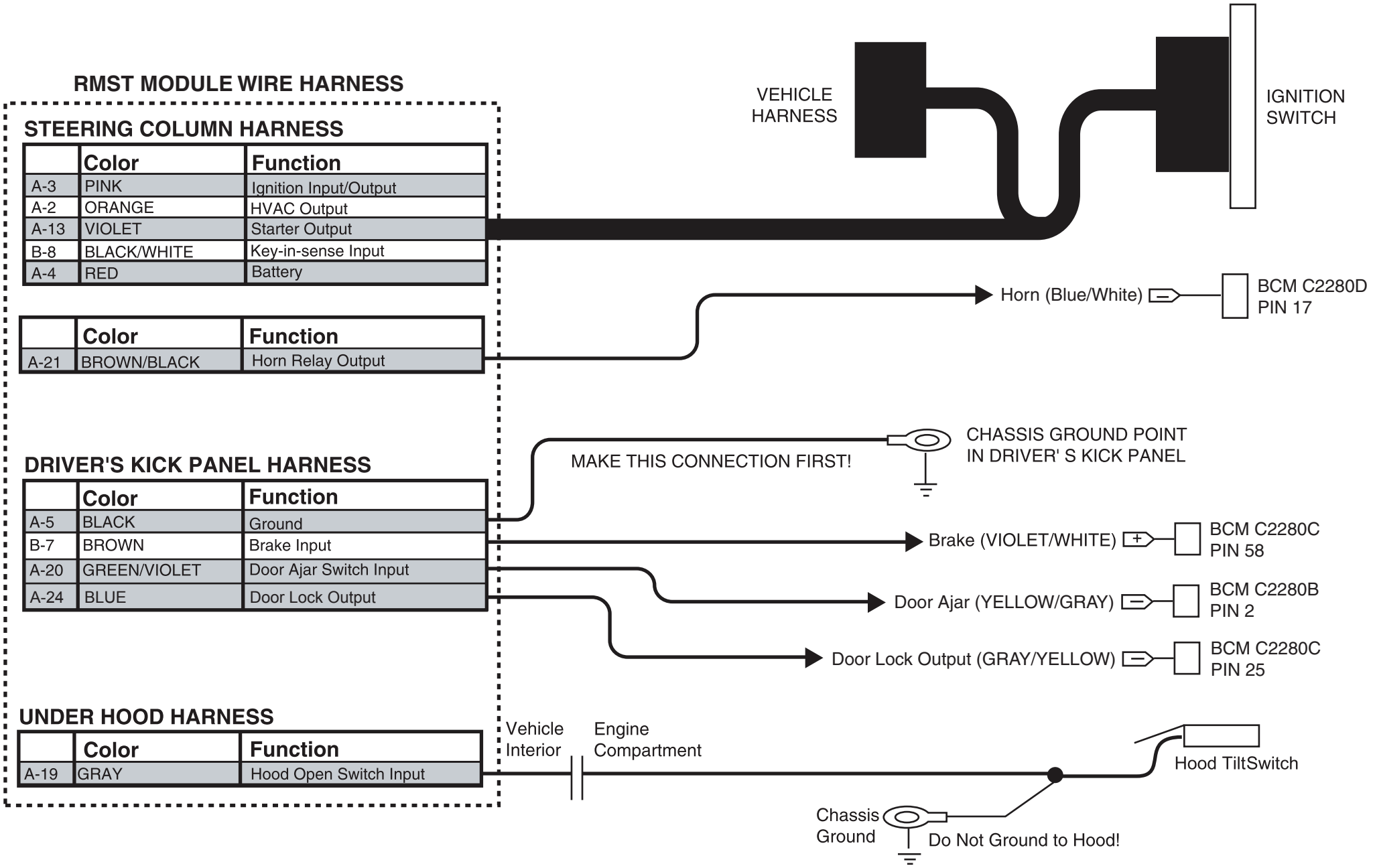
2015 Transit

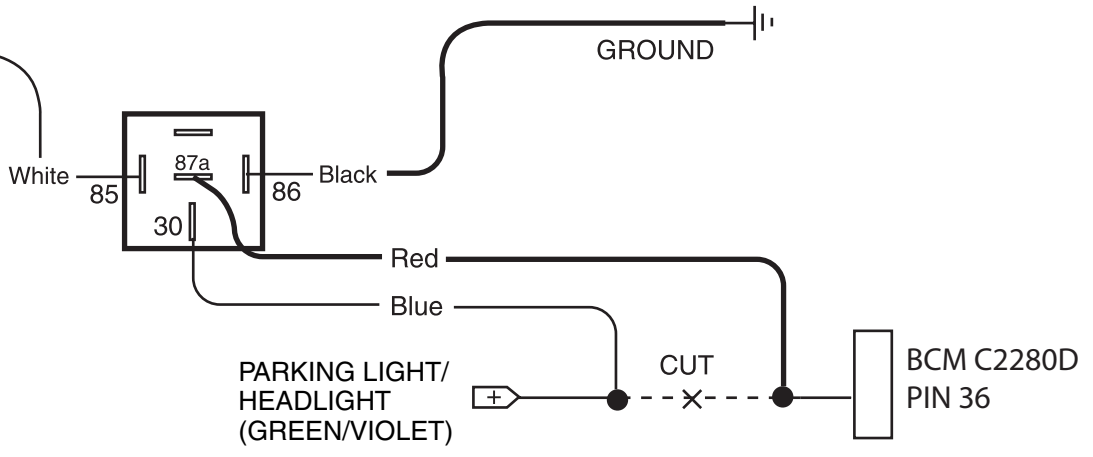


2015 Transit

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

REMOTE START SYSTEM INSTALLATION

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Functional Test - Standard
Programming - Bi-Directional
Functional Test - Bi-Directional
Troubleshooting

WIRING DIAGRAMS
Vehicle Specific Wiring Diagrams

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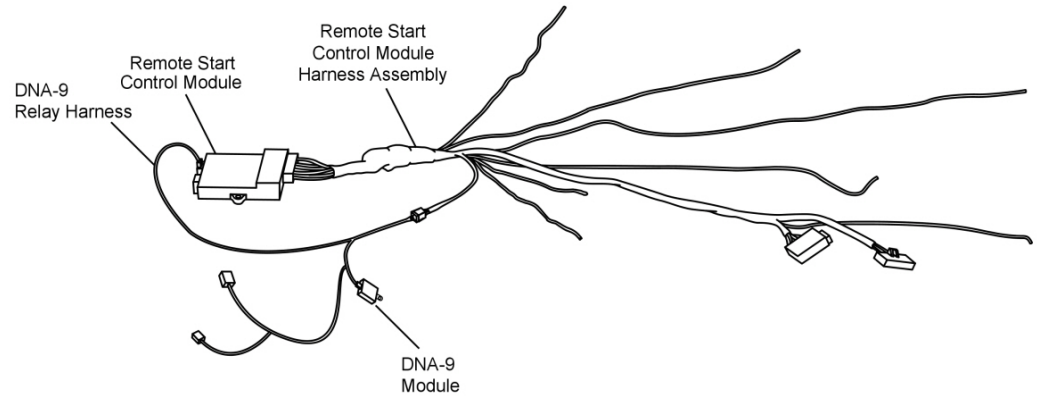
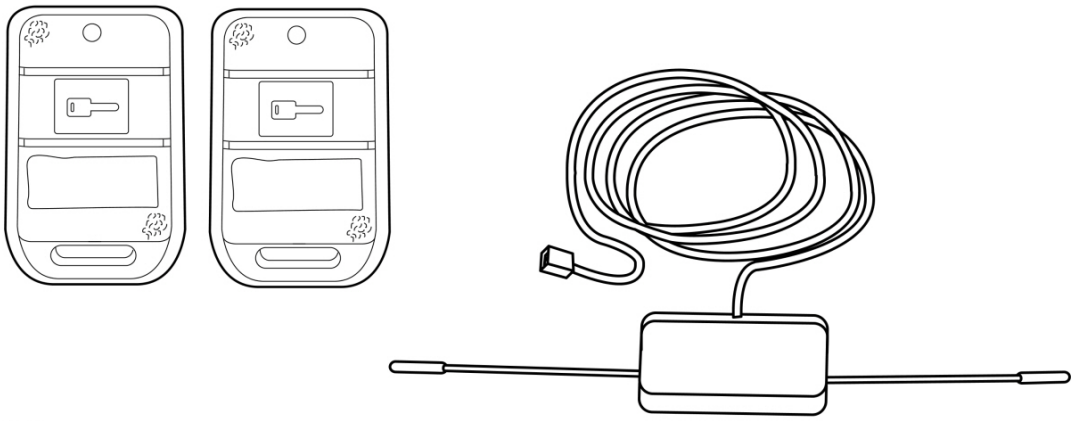
INSTALLATION

Remote Start

RMST System Components



Additional "Standard RMST" Components



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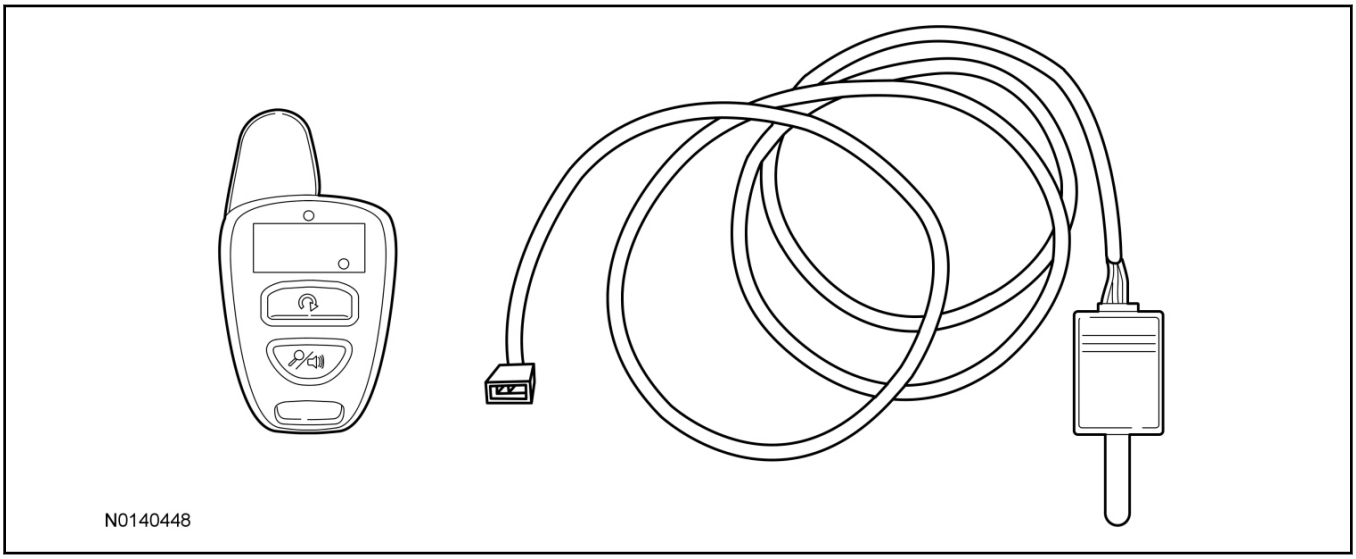
INSTALLATION (Continued)

Additional "Bi-directional RMST" Components



Transit Connect - 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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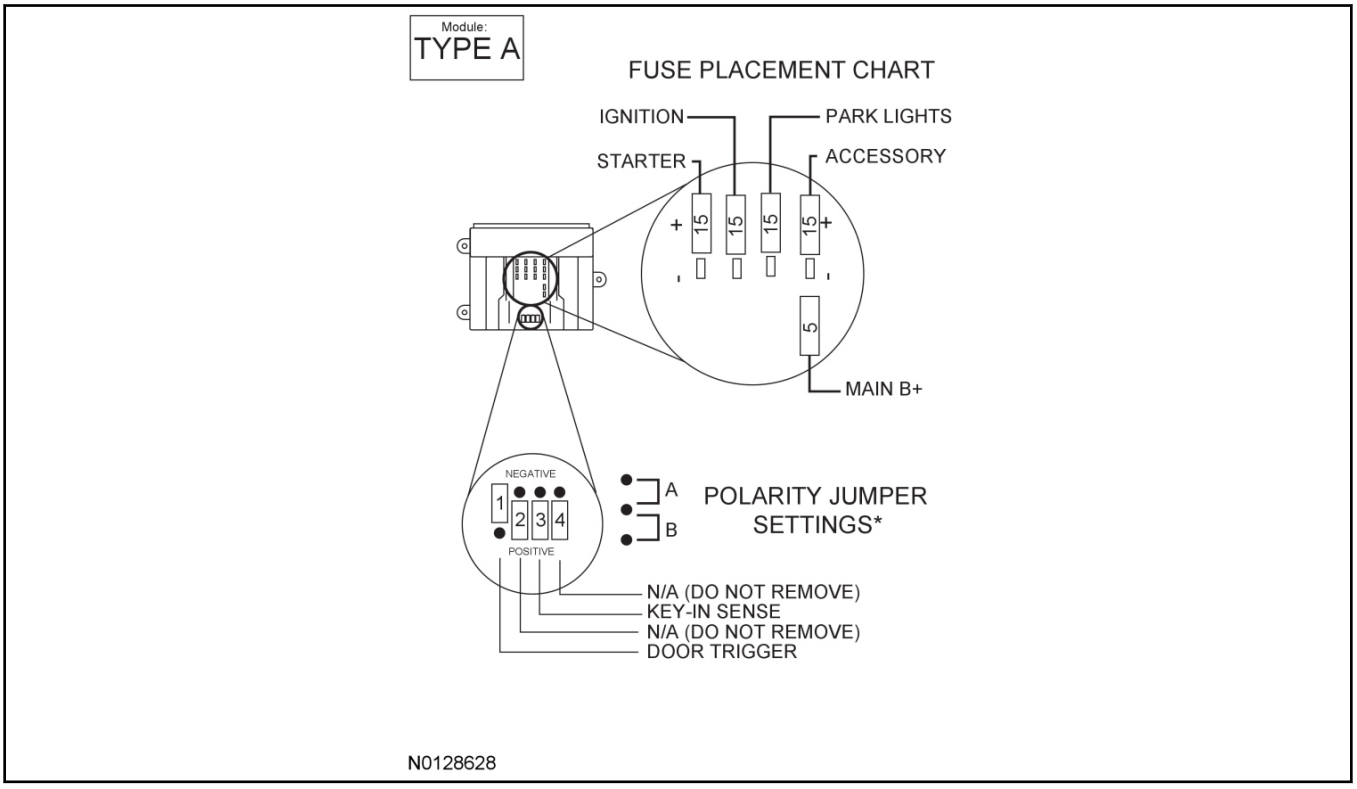
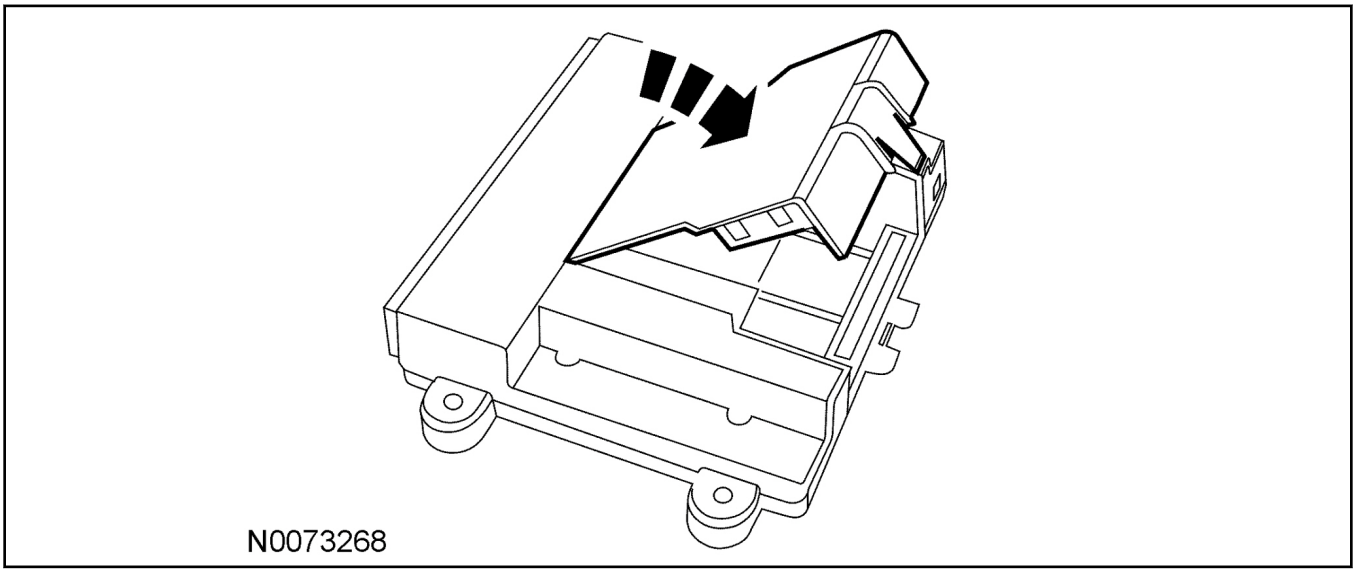
INSTALLATION (Continued)



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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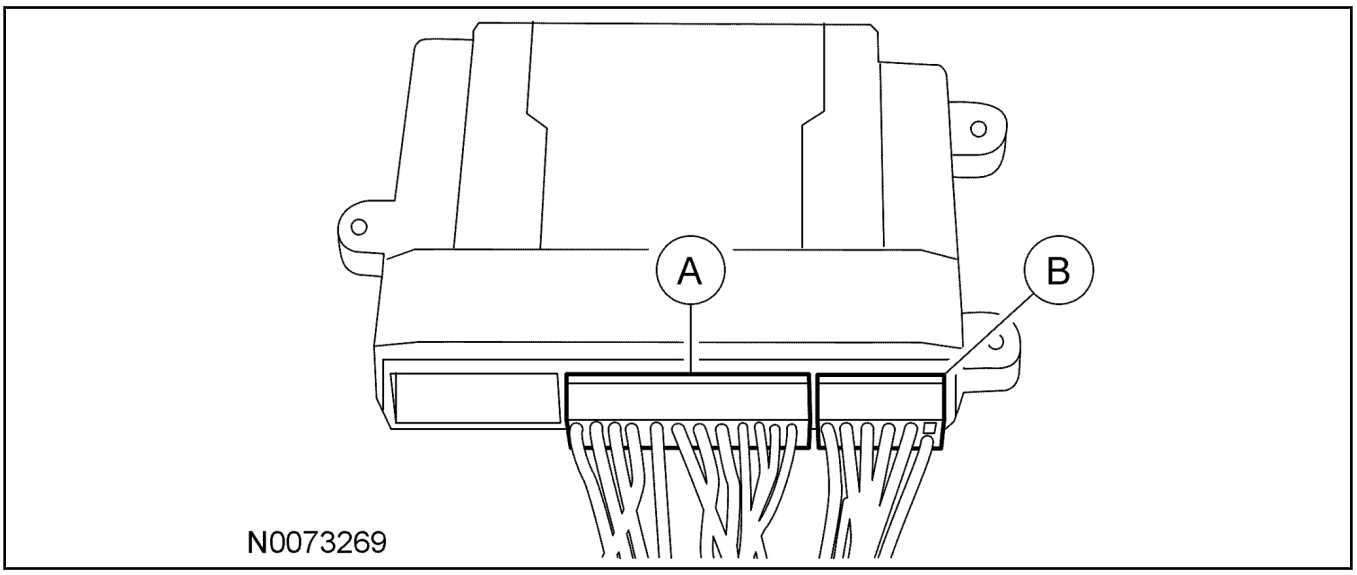
INSTALLATION (Continued)



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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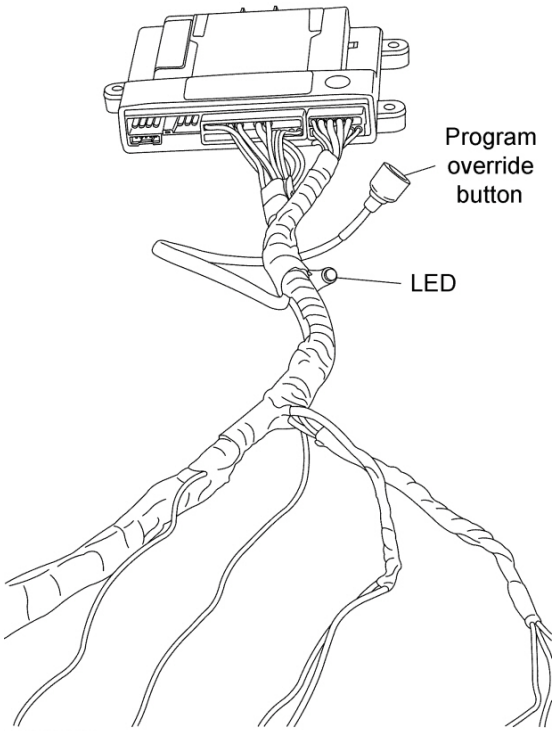
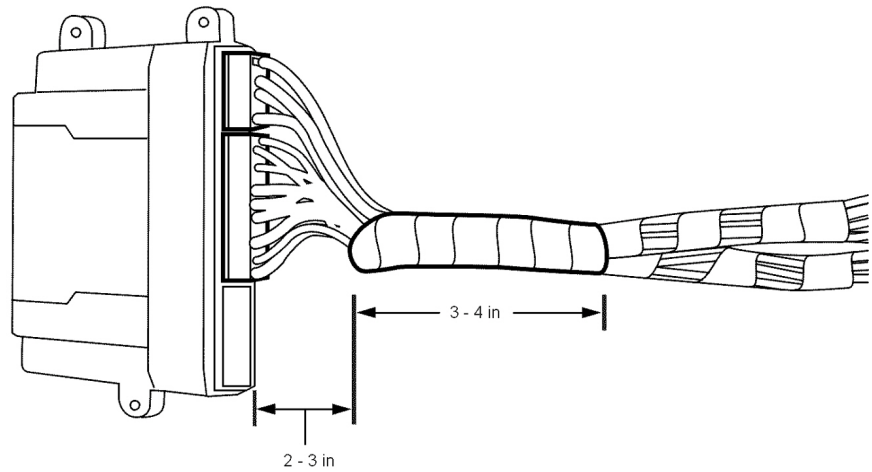
INSTALLATION (Continued)



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



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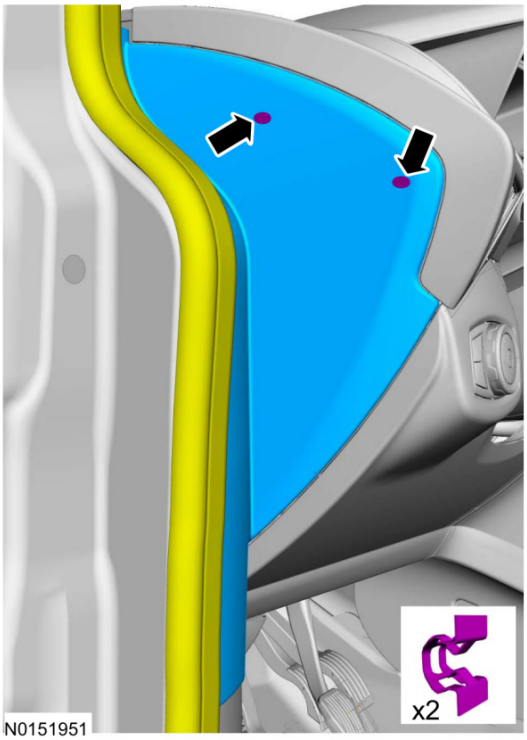
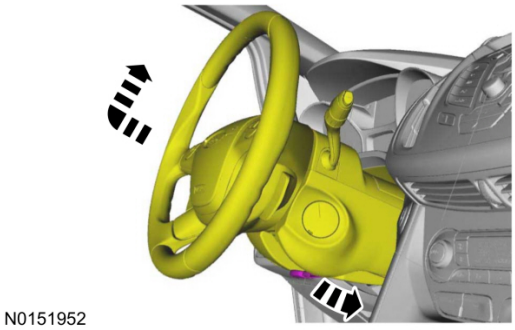
Vehicle Preparation - All Vehicles

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

   Remove the LH and RH instrument panel side trim panels.



10. Position the steering column to the fully outward and upward position.



11. Detach the upper steering column shroud from the lower shroud.

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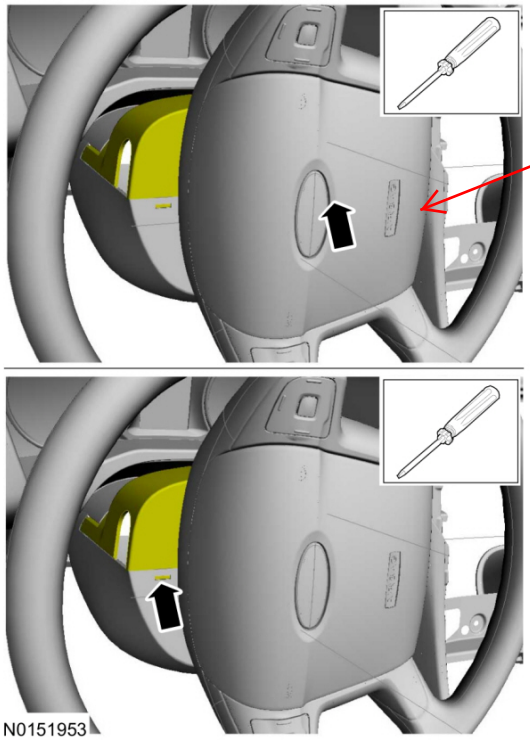
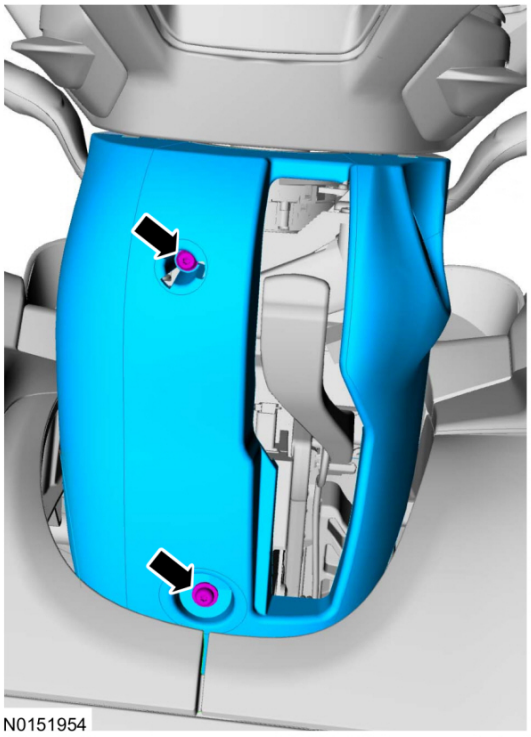
INSTALLATION (Continued)



12. Remove the lower steering column shroud.
    1 Remove the 2 screws.
    2 Detach and remove the lower steering column shroud.



13. Remove the RH lower instrument panel insulator.
    - Remove the 2 retainers.

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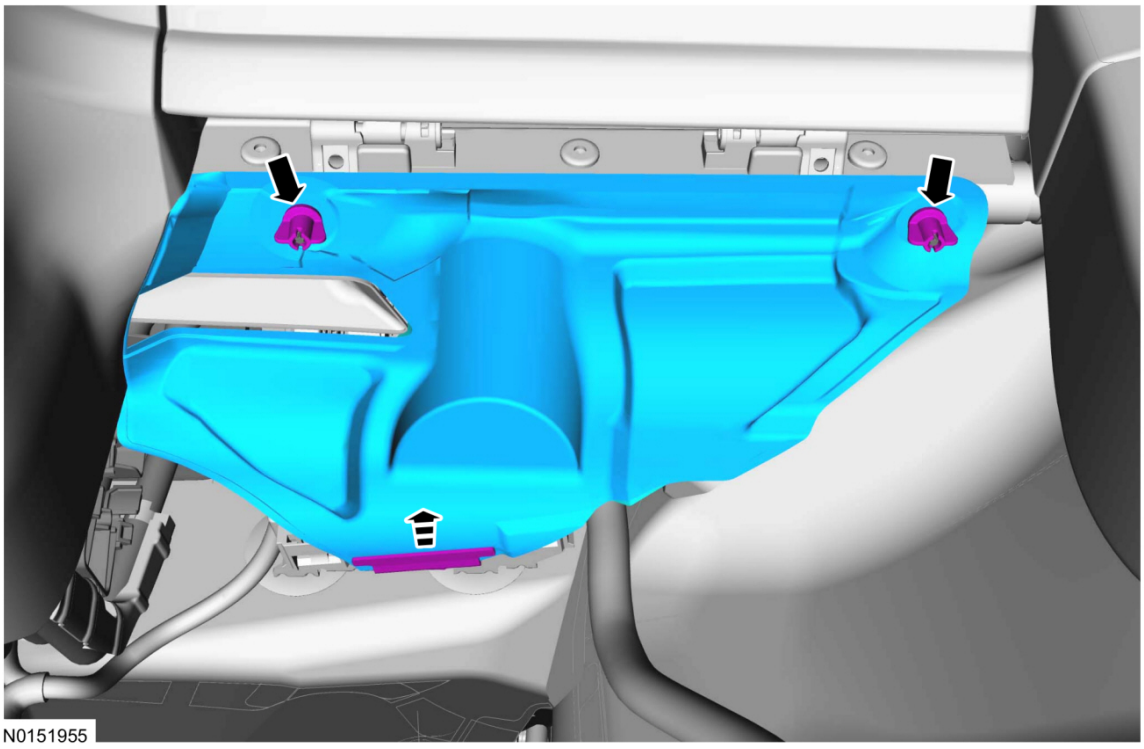
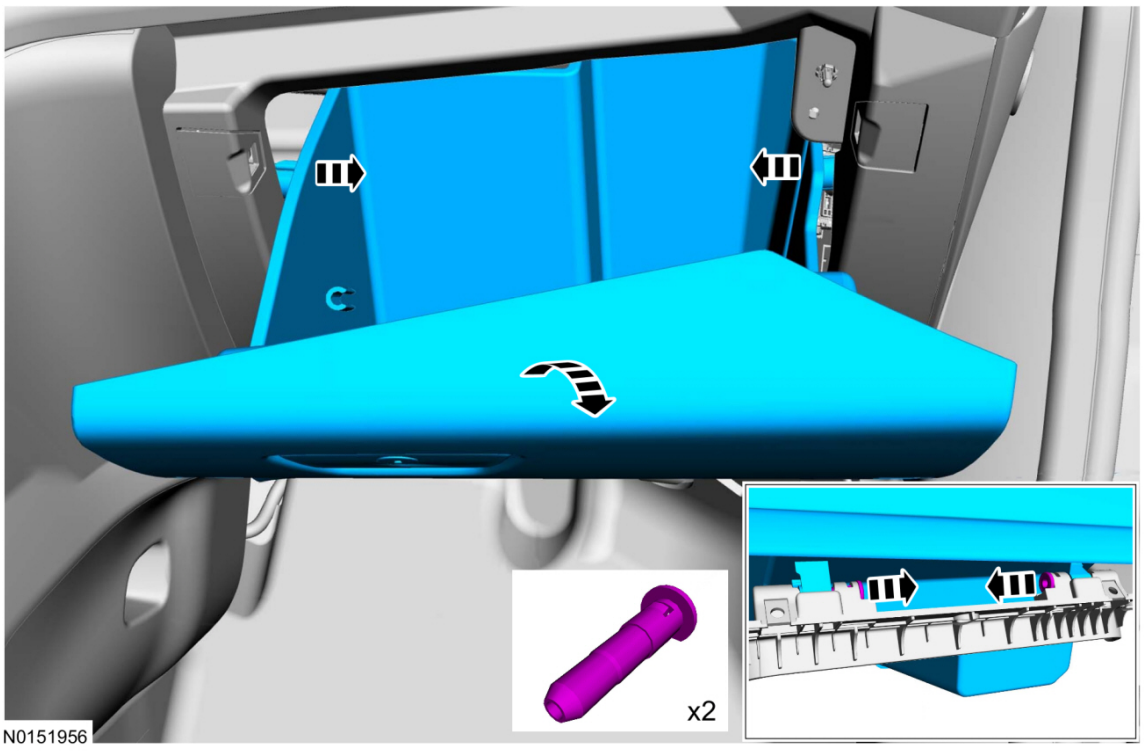
INSTALLATION (Continued)



14. Remove the glove compartment.



15. Disconnect the headlamp switch electrical connector.

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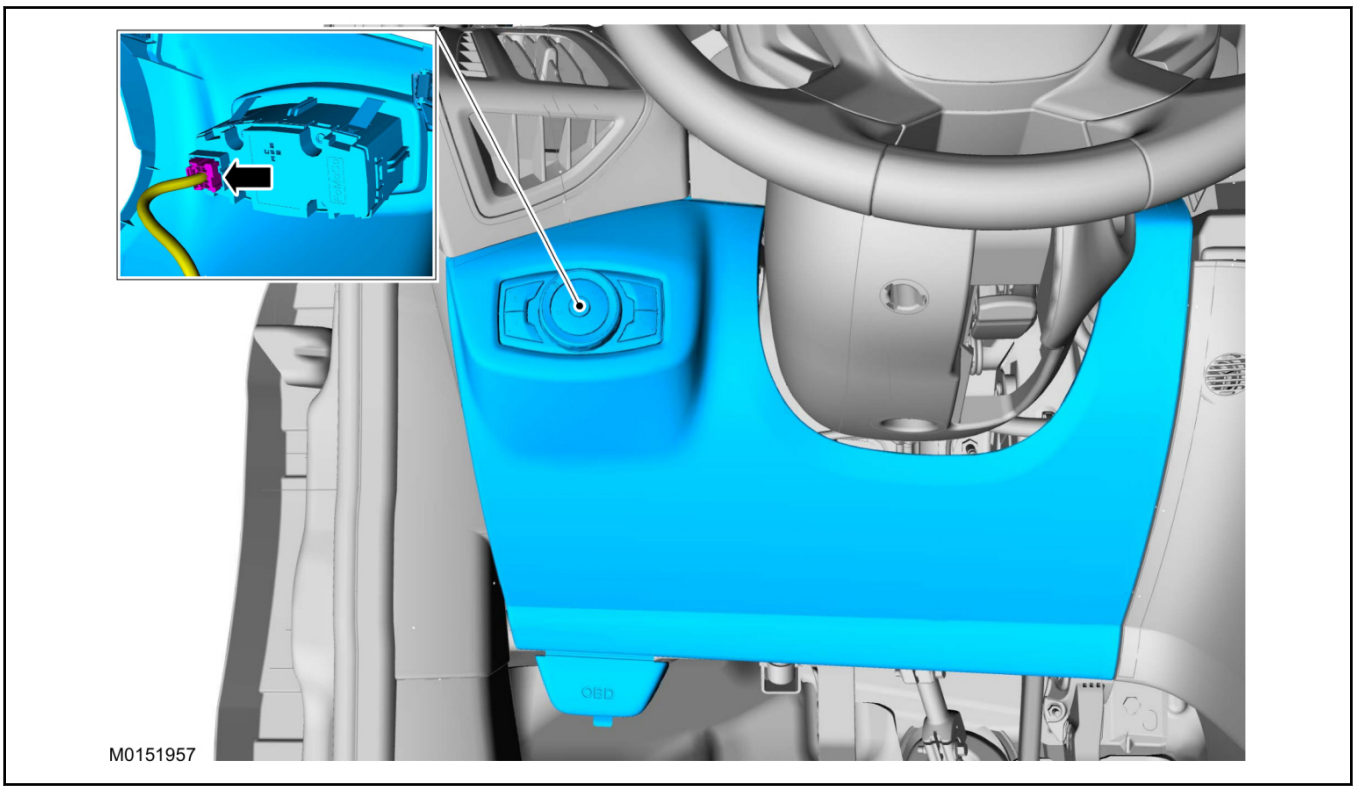
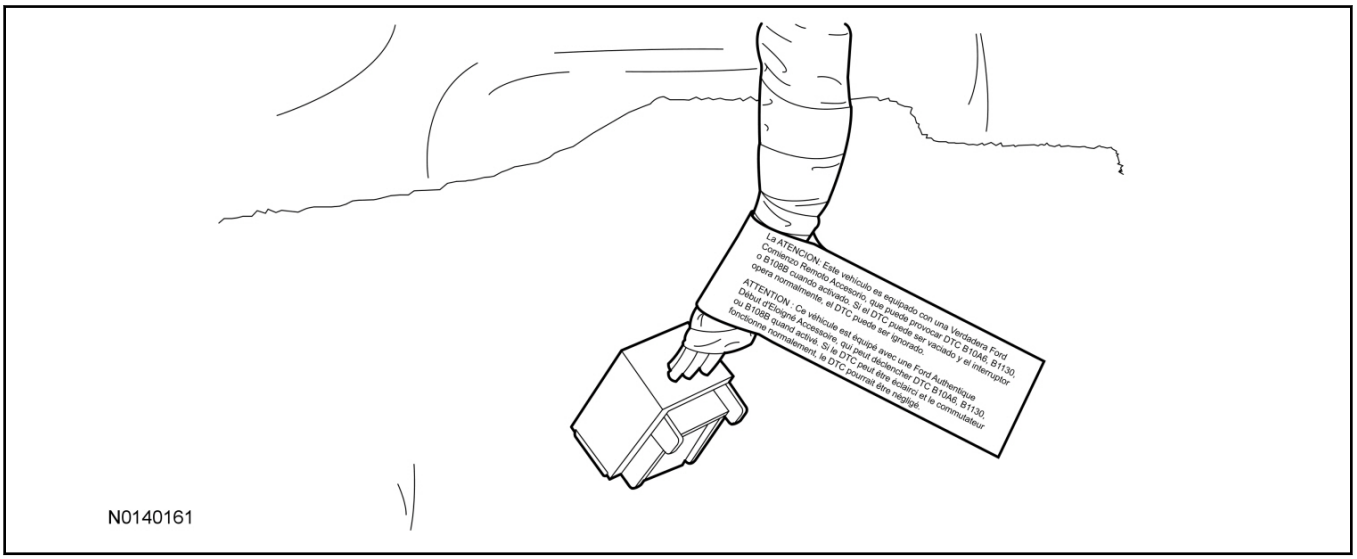
INSTALLATION (Continued)



16. Install the supplied wire harness label to the headlamp switch harness.



17. 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.

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.

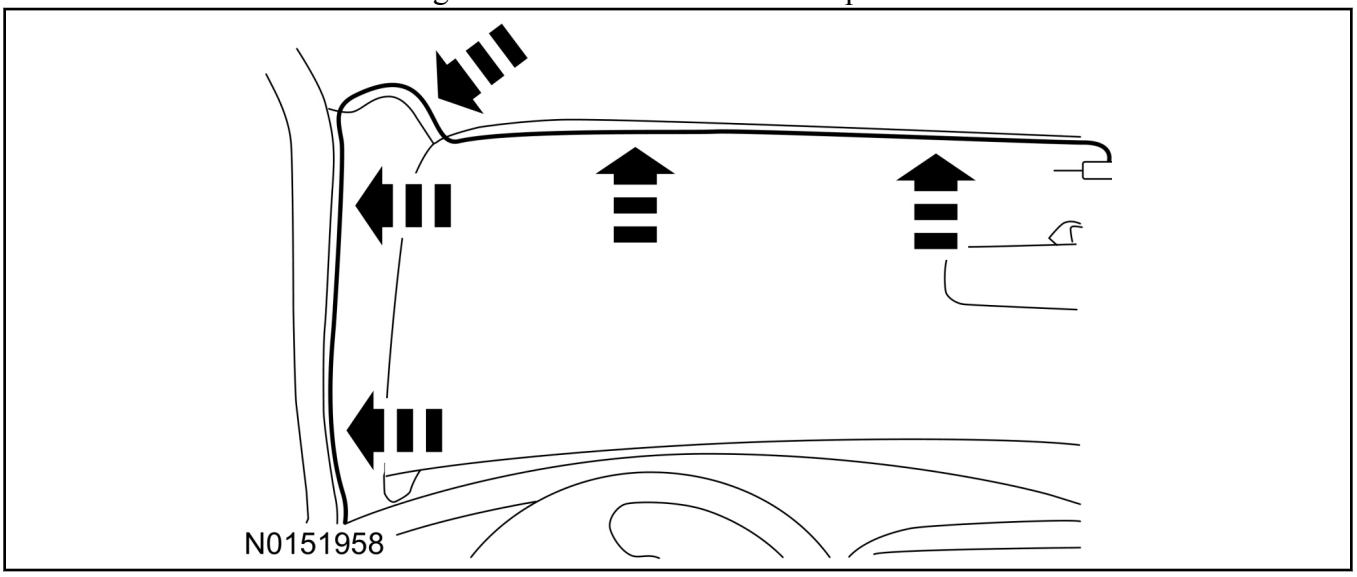
    NOTE:
    Make sure that the long wire on the antenna is pointing towards the top of the windshield since this wire will be routed along the headliner.

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

    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 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.



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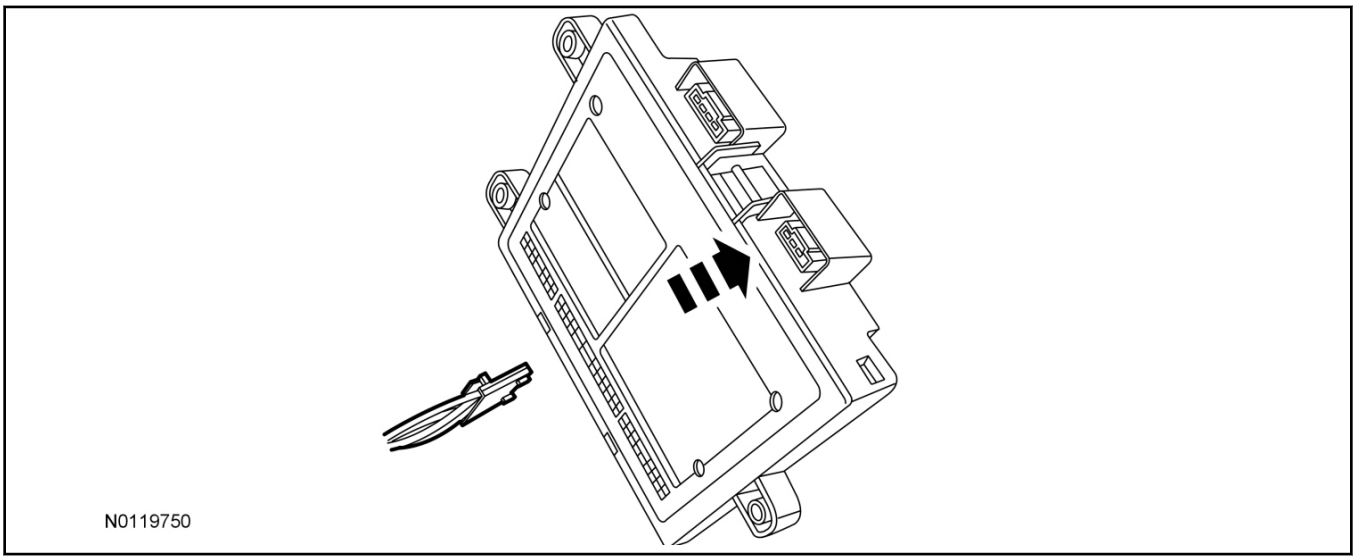
INSTALLATION (Continued)

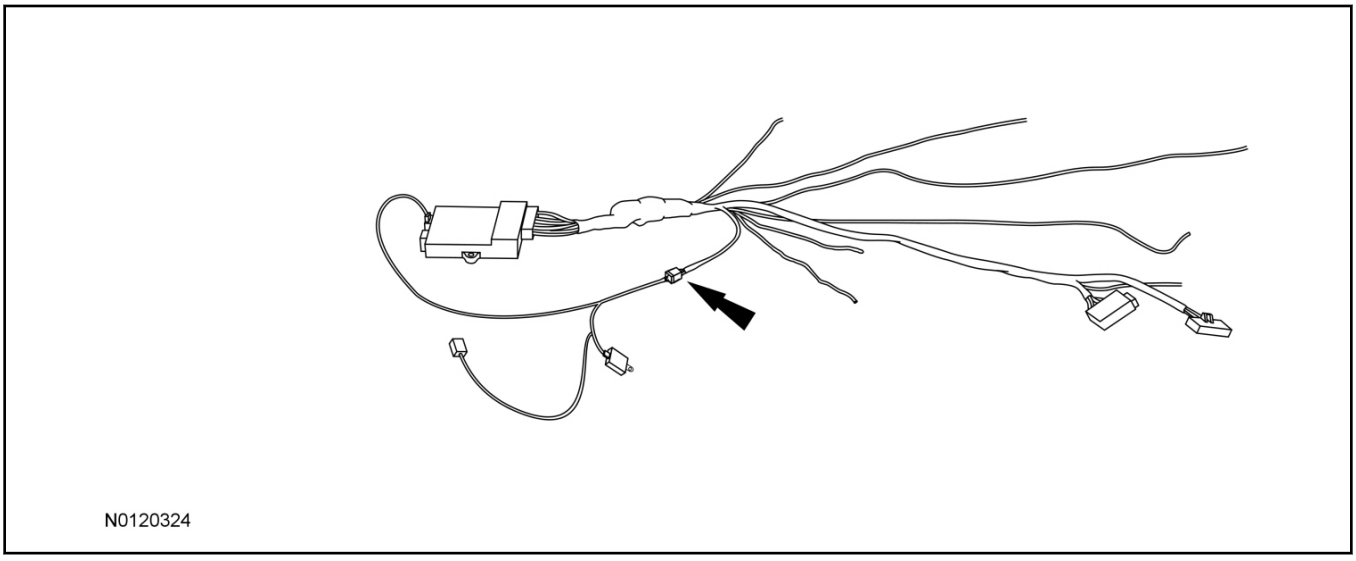
23. Reposition the A-pillar trim panel back, if necessary.

Install the Remote Start Control Module and Harness Assembly

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



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



30. Connect the antenna to the RMST control module.

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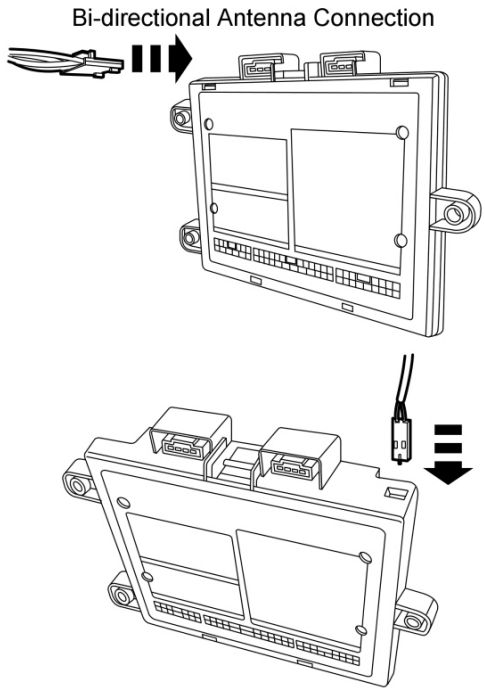
INSTALLATION (Continued)



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.

31. Connect the Black ground wire from the remote start module harness to a chassis ground point on the driver's side.
    - Attach the ground wire with kit provided screw.
32. Disconnect the steering column harness electrical connector on the steering column.
33. Connect the remote start harness T-harness connectors to the steering column and steering column harness electrical connectors.
34. **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)

35. Connect the Brown/Black wire from the remote start module harness to the Brown horn circuit wire in the steering column harness.
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.
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.

Relay Harness

40. 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.
41. Install a suitable insulated crimp terminal eyelet to the Black interrupt relay wire. Attach the Black relay wire to a suitable grounding location.
42. Connect the White wire from the remote start module harness to the White wire at the relay harness.
43. Identify the Green/Violet headlamp switch wire at the BCM connector C2280C Pin 4.
44. **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 Green/Violet headlamp switch wire at the BCM connector C2280C Pin 4.
    - Connect the Blue wire from the relay harness to the switch side of the Green/Violet headlamp switch wire at the BCM connector C2280C Pin 4.
    - Connect the Red wire from the relay harness to the BCM side of the Green/Violet headlamp switch wire at the BCM connector C2280C Pin 4.

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INSTALLATION (Continued)

45. Connect the relay to the relay harness.
46. Secure the relay and relay harness near the BCM with tie-straps.

Install The Hood Safety Switch

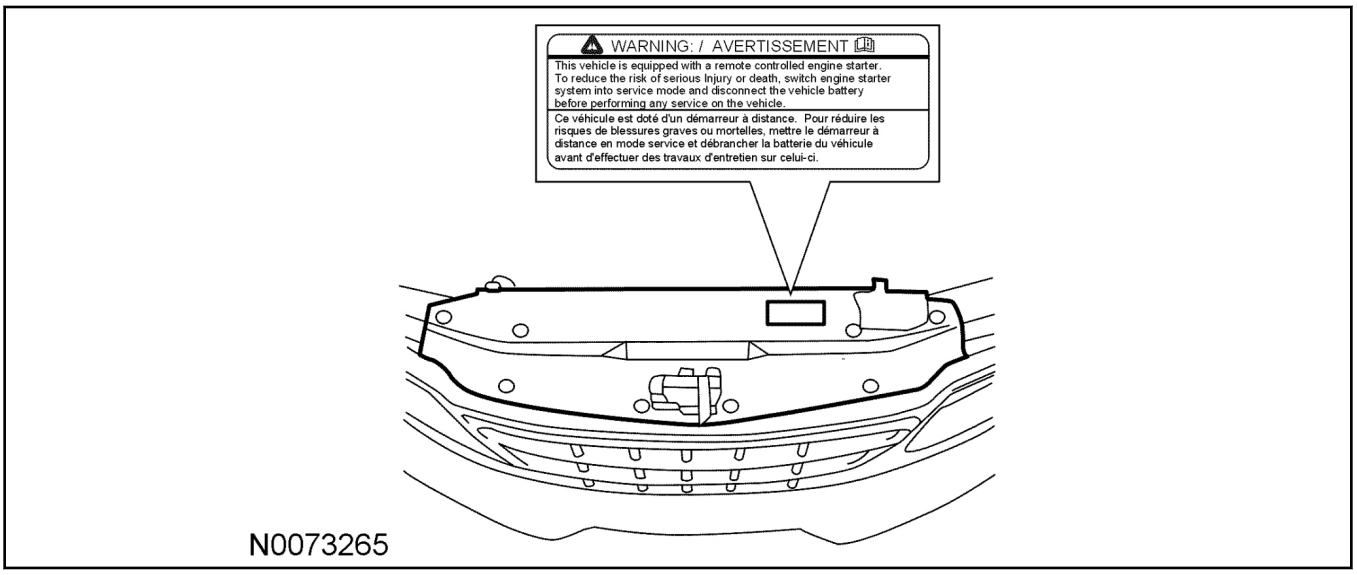
47. **NOTE:**
    Route the hood safety switch wire carefully avoiding any moving parts or components that can produce excessive heat.

    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 a suitable location above the driver side hood hinge and install the hood safety switch, using the supplied metal screws.
48. Apply rustproofing compound PM-13A to the drilled hole and tighten the screw to 1 Nm (10 lb-in).
49. Connect the hood switch ground wire to a suitable location on the bulkhead.
50. Install the underhood warning label.



51. Route the Gray hood safety switch wire from the RMST module through the bulkhead, into the engine compartment and attach to the hood safety switch.

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INSTALLATION (Continued)

Program The RMST System

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

Secure RMST Harness and Control Module

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

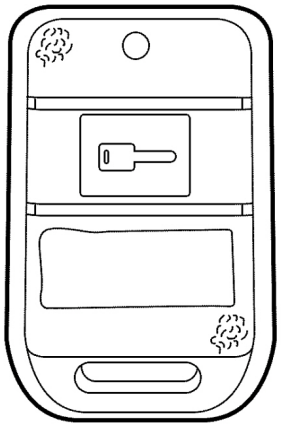
54. **NOTE:**
    Do not mount the control module in the knee bolster area.
    Secure the control module at three points to the vehicle.

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

Install Trim

55. Reverse the removal procedure to install the trim.

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 Options: Entering Programming Mode

57. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCRIPTION	LED
2	1	TACHLESS MODE	ON

58. Press and hold the brake pedal.

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INSTALLATION (Continued)

59. Turn the ignition key to the RUN position.
    - The dome light will turn off.
60. 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.
61. 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.

62. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.
63. 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.

64. 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.

65. 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.

66. Insert the first ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the first key.
67. Insert the second ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the second key.
68. 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.

69. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
70. 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.
71. The remote start systems should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.
72. Close the hood, and insert a key into the ignition switch.
73. Attempt to re-start the vehicle again using the key fob.
74. 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.
75. Remove the key and open a door.
76. Attempt to re-start the vehicle again using the key fob.
77. The remote start systems should start the vehicle, then it will detect that a door is open and shut down.
78. Close the door.
79. Attempt to re-start the vehicle again using the key fob.
80. 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)

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

Troubleshooting

82. **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

83. 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 Options: Entering Programming Mode

84. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCRIPTION	LED
2	1	TACHLESS MODE	ON

85. Press and hold the brake pedal.
86. Turn the ignition key to the RUN position.
    The dome light will turn off.
87. 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.
88. 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.

89. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.
90. 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.

91. 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.

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INSTALLATION (Continued)

NOTE:
The remote start module is now programmed.

92. 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.

93. Insert the first ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the first key.
94. 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.

95. 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.

96. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
97. Press the Start button on the remote control key fob twice within 3 seconds - horn should honk once indicating receipt of the start request.
98. The remote start systems should start the vehicle, then it will detect that a door is open and shut down.
99. Close the hood, and insert a key into the ignition switch.
100. Attempt to re-start the vehicle again using the key fob.
101. 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.
102. Remove the key and open a door.
103. Attempt to re-start the vehicle again using the key fob.

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INSTALLATION (Continued)

104. The remote start systems should turn on the ignition, but then honk the horn three times and shut down indicating a door is open.
105. Close the door.
106. Attempt to re-start the vehicle again using the key fob.
107. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.
108. Once all systems have been checked, open the door or press the brake pedal - the remote start systems should shut down.

Troubleshooting

109. **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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2015 Transit Connect - Key Start

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

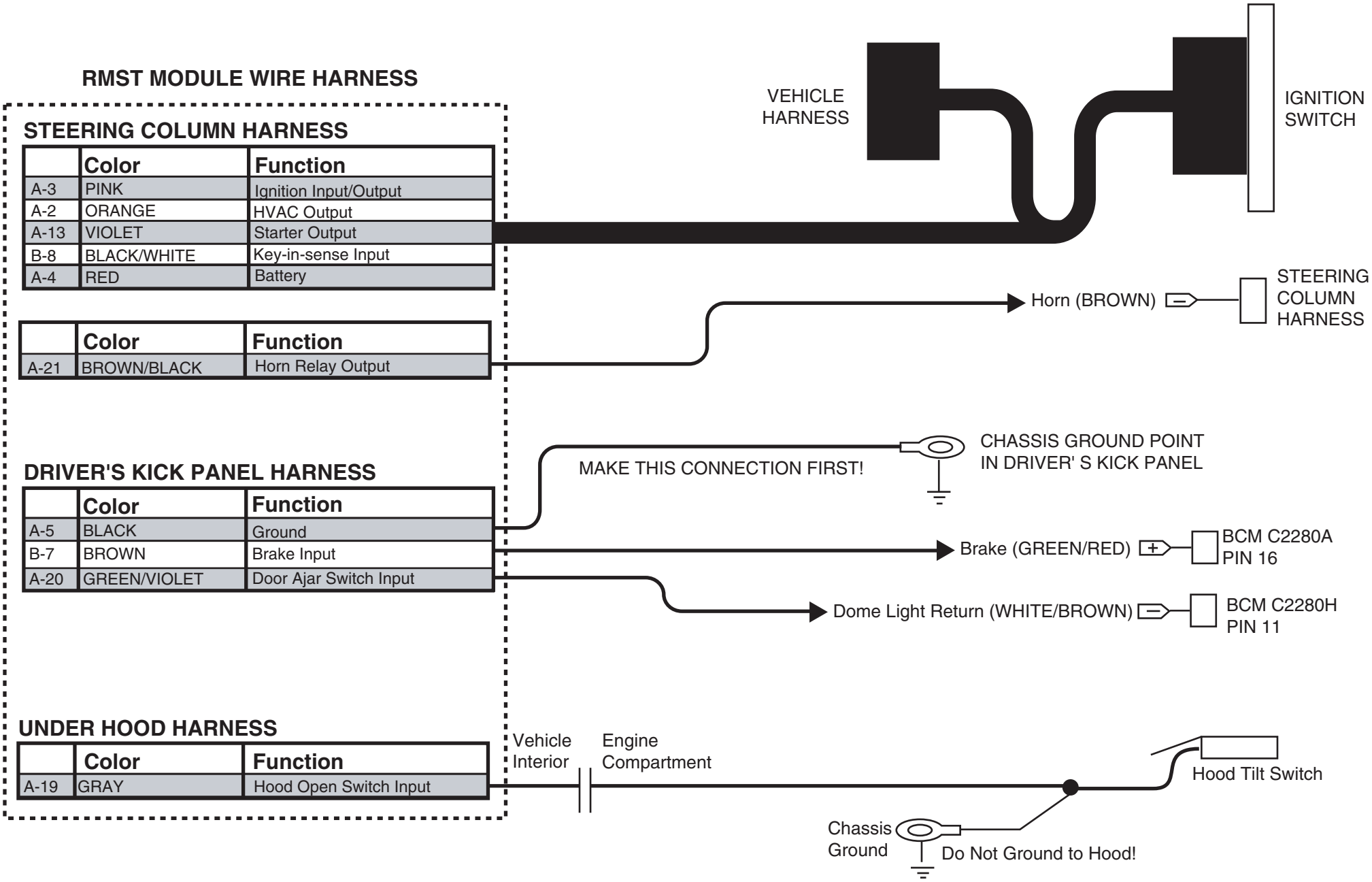
	Color	Function
A-21	BROWN/BLACK	Horn Relay Output

DRIVER'S KICK PANEL HARNESS

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

UNDER HOOD HARNESS

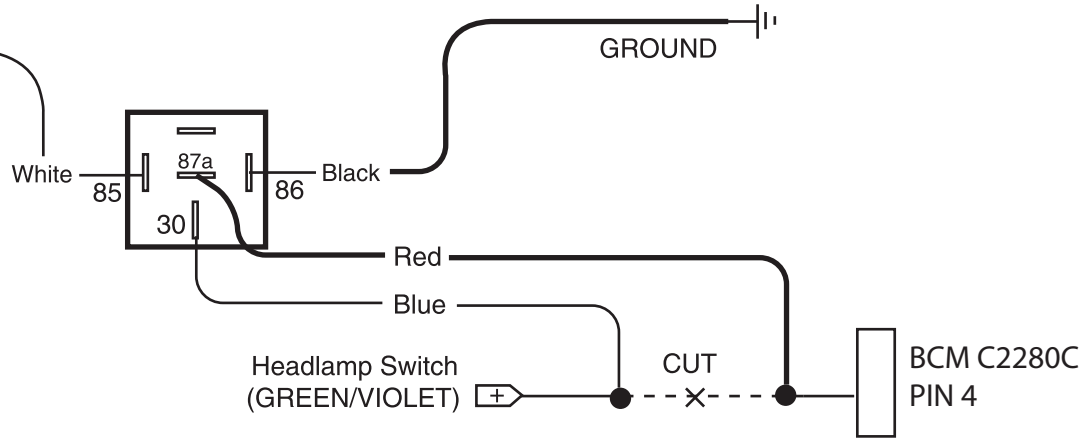
	Color	Function
A-19	GRAY	Hood Open Switch Input



INTERRUPT RELAY

RMST MODULE WIRE HARNESS

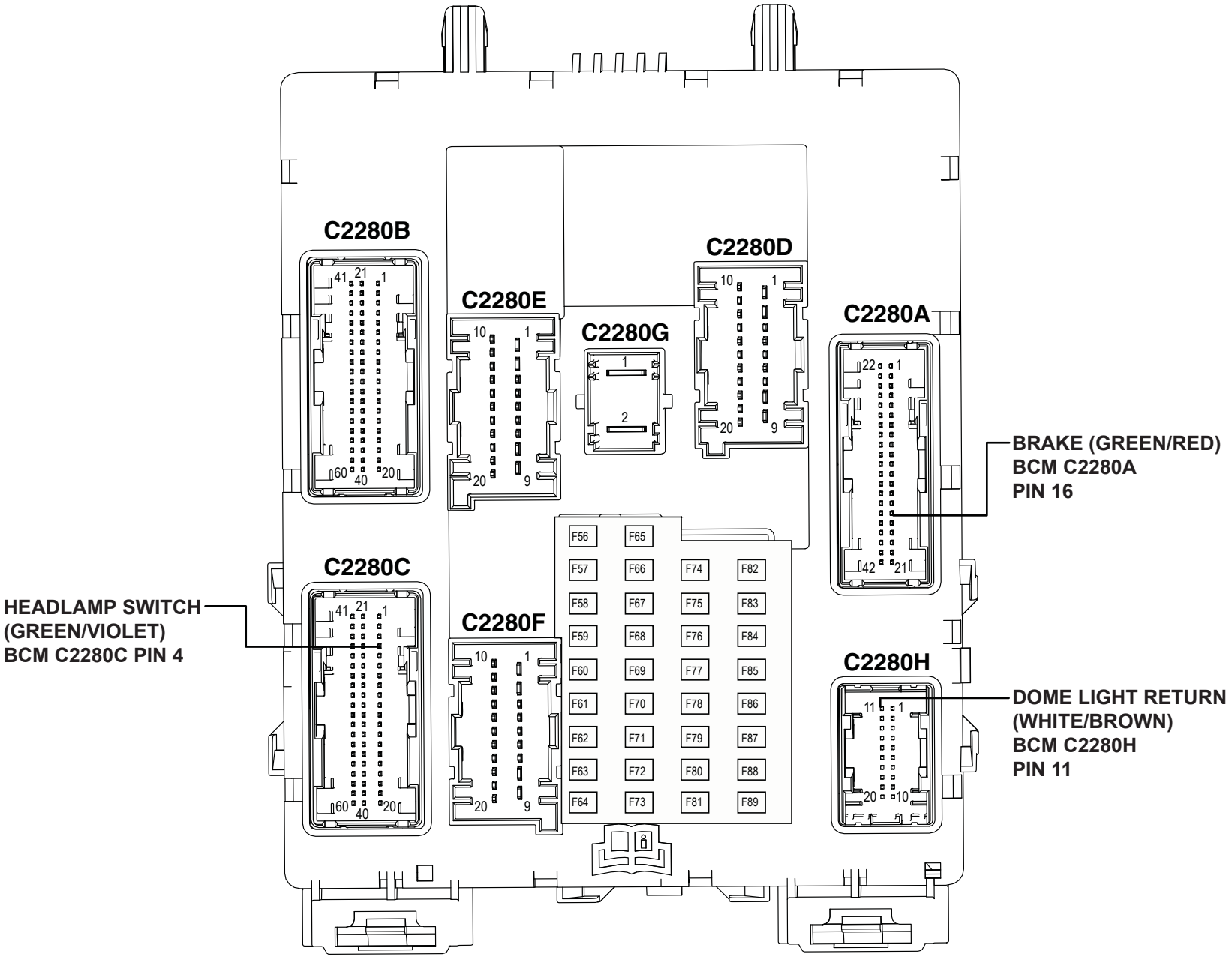
	Color	Function
A-1	WHITE	Parking Light Output



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

BCM Connector Locations

2015 Transit Connect - Key Start



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Troubleshooting

WIRING DIAGRAMS
Vehicle Specific Wiring Diagrams

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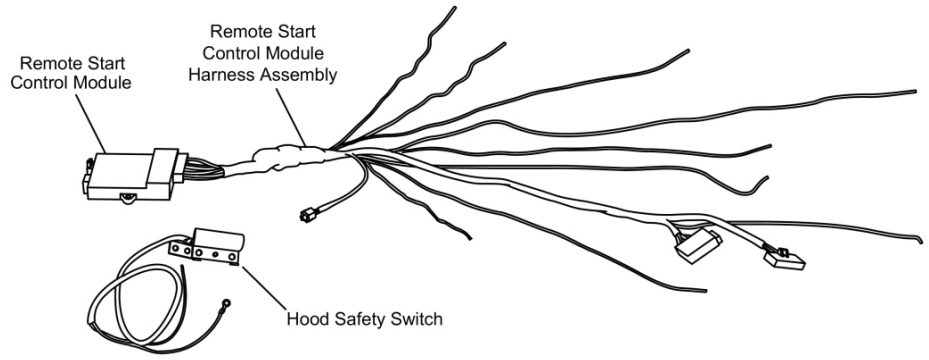
INSTALLATION

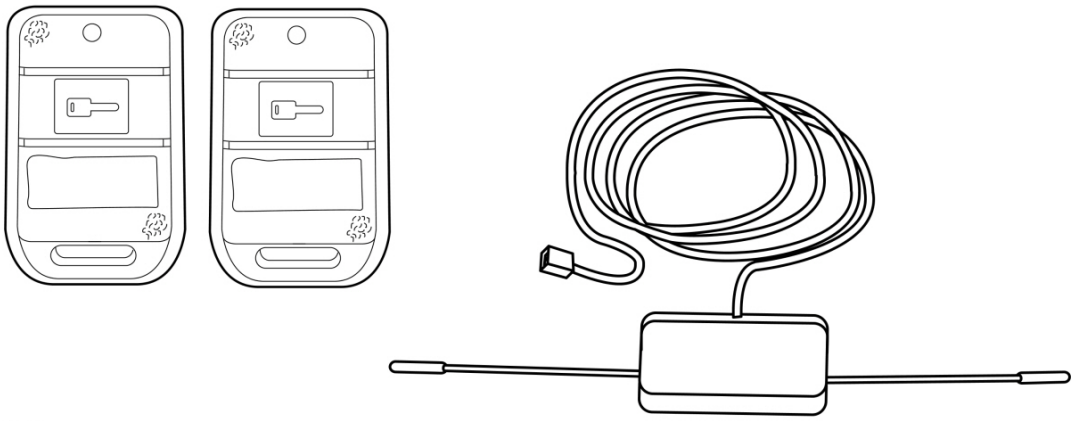
Remote Start (RMST) - E-Series

RMST System Components



N0148587

Additional "Standard RMST" Components



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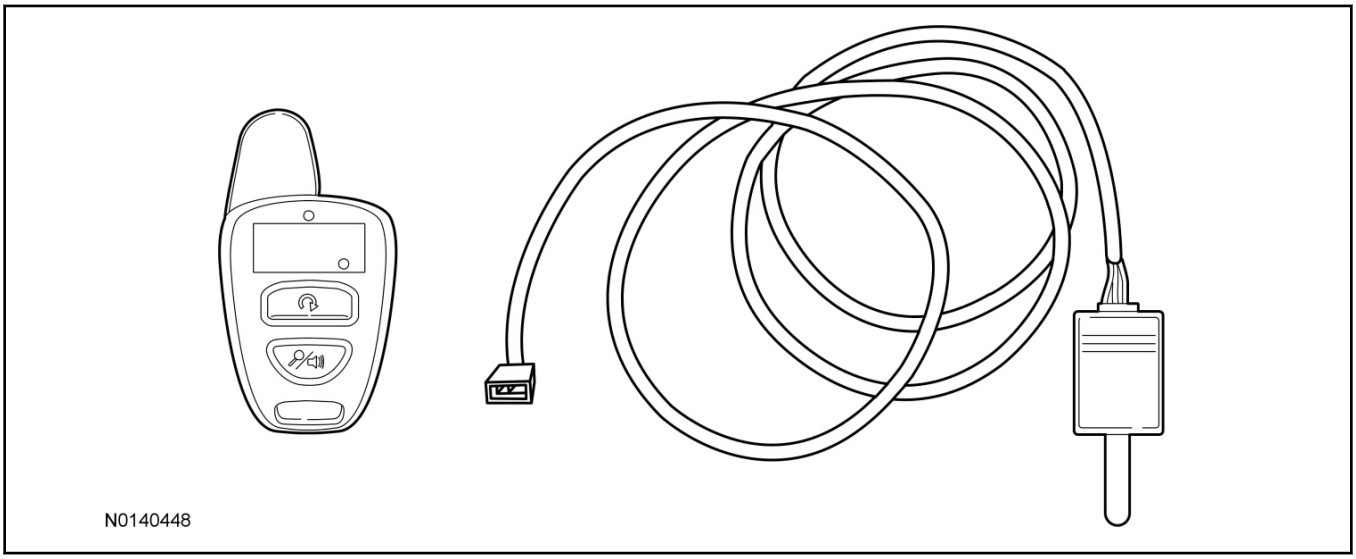
INSTALLATION (Continued)

Additional "Bi-directional RMST" Components



E-Series

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 - "B"

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	Operators Quick Reference Wallet Card
1	Underhood Warning Label
1	Securilock Interface Kit (Sold Separately And Required For Vehicles W/Pats)
1	Relay

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INSTALLATION (Continued)

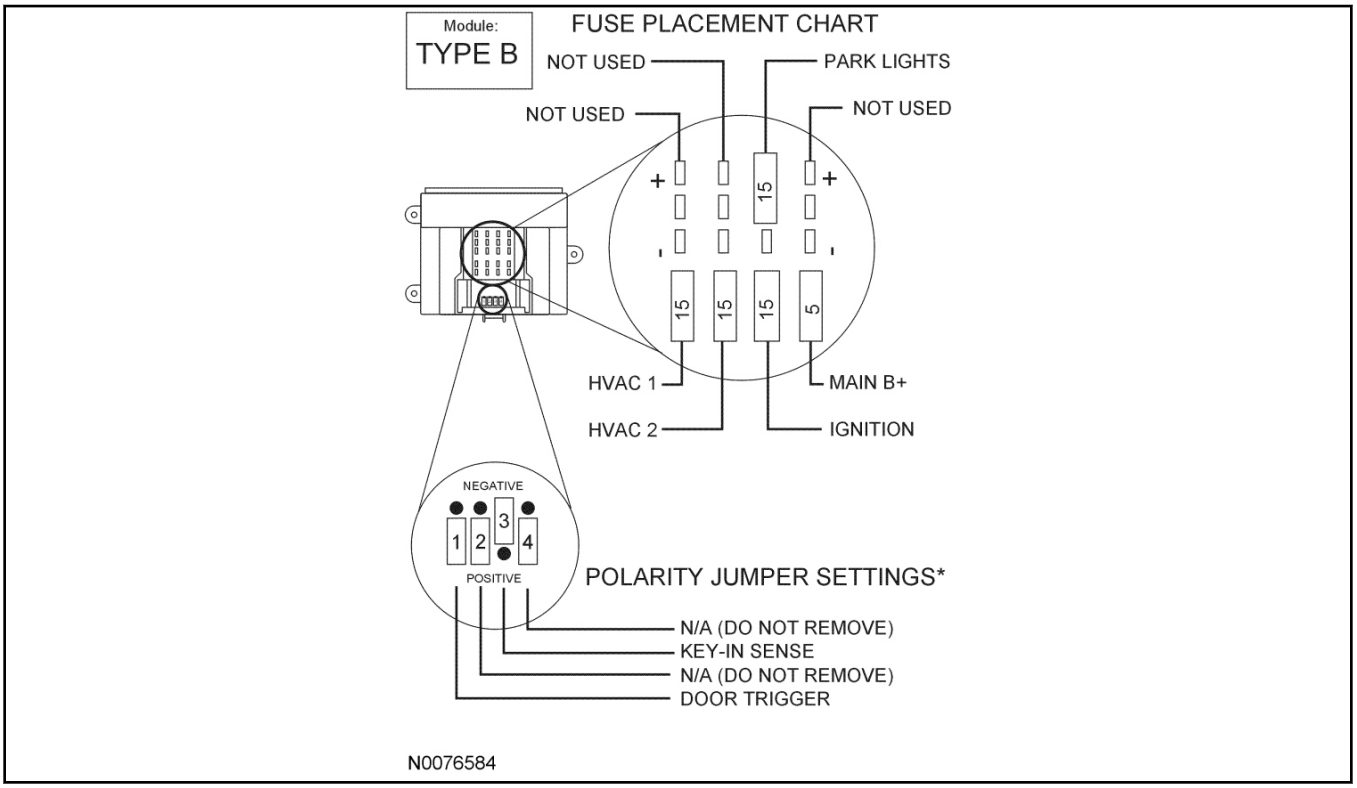
3. Review the RMST bidirectional kit contents.

RMST System Bidirectional Kit Type - "B"

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	Operators Quick Reference Wallet Card
1	Underhood Warning Label
1	Securilock Interface Kit (Sold Separately and Required for Vehicles W/PATs)
1	Relay

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.



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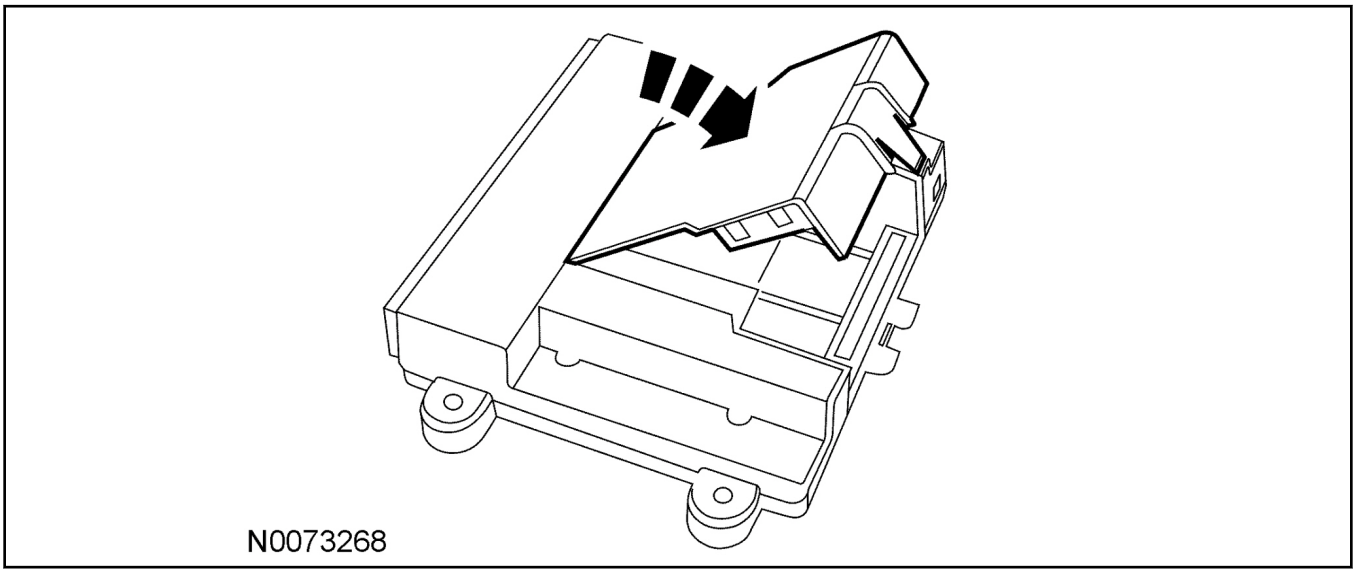
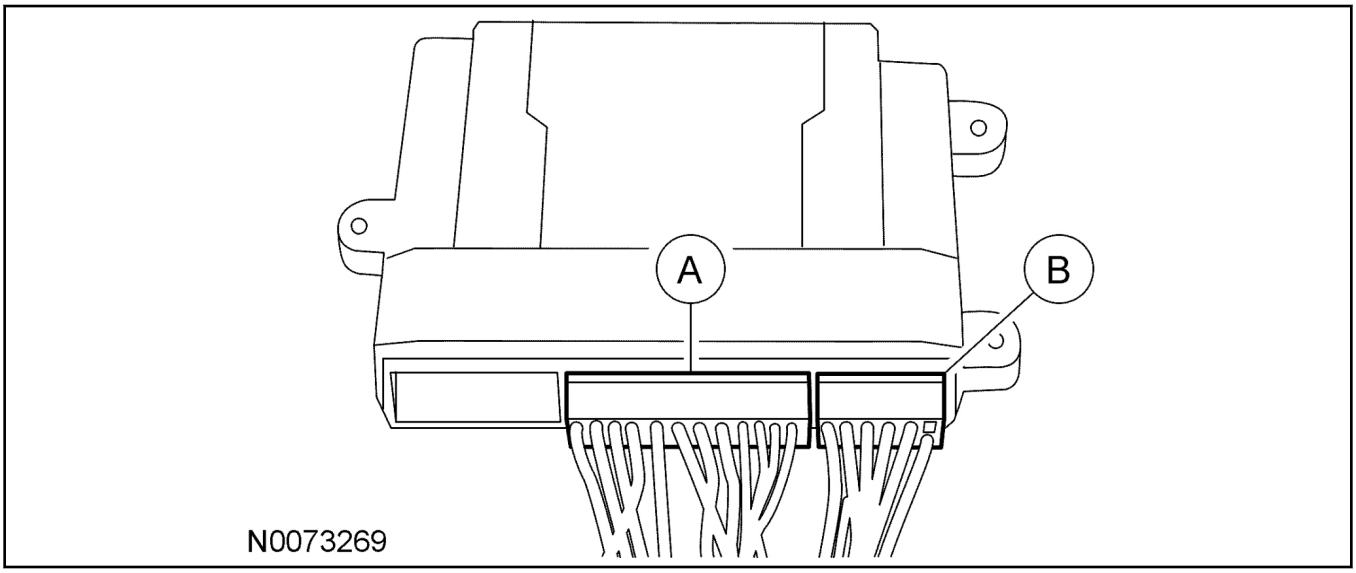
INSTALLATION (Continued)

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 from the harness, it is used for all installations.

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

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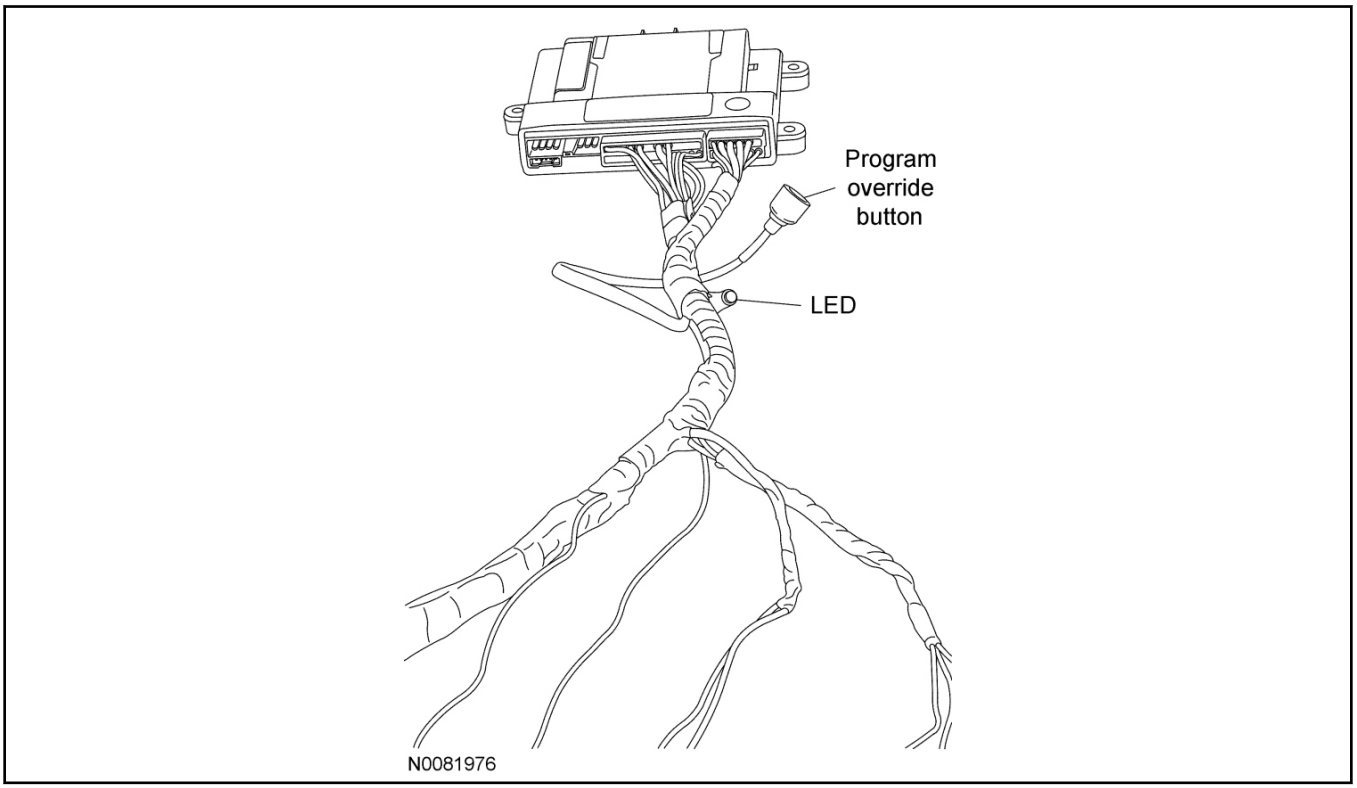
INSTALLATION (Continued)

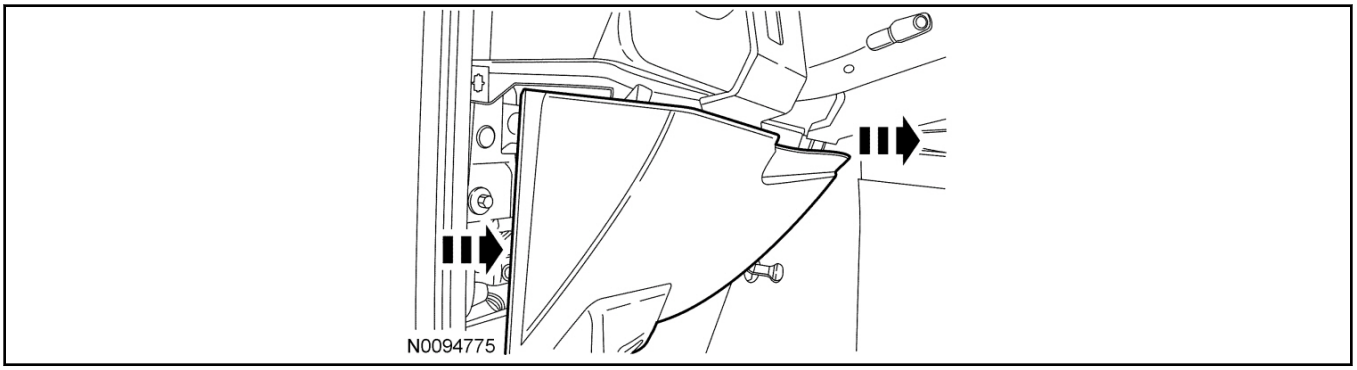
Referring to the vehicle specific wiring section for the system being installed, gather all individual wires that will be routed to the same areas of the vehicle into groups. Cover each wire group with electrical tape for approximately 18". Depending on the vehicle, there will be 2 to 5 different wire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



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

Vehicle Preparation

9. Pull the steering column opening cover off the lower instrument panel.



10. Remove the lower steering column shroud.
11. Remove the left hand scuff plate and cowl trim panel.

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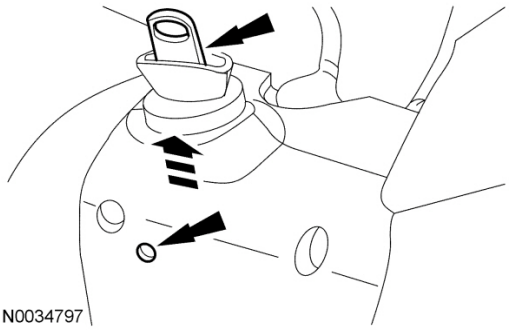
INSTALLATION (Continued)

12. Remove the ignition switch lock cylinder.
    - Insert the ignition key into the lock cylinder and turn the ignition switch to the RUN position.
    - Push the ignition switch lock cylinder release tab with a punch while pulling out the ignition switch lock cylinder.



13. If equipped, remove the tilt release lever handle.
14. Remove the (3) screws and the steering column shrouds.

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.

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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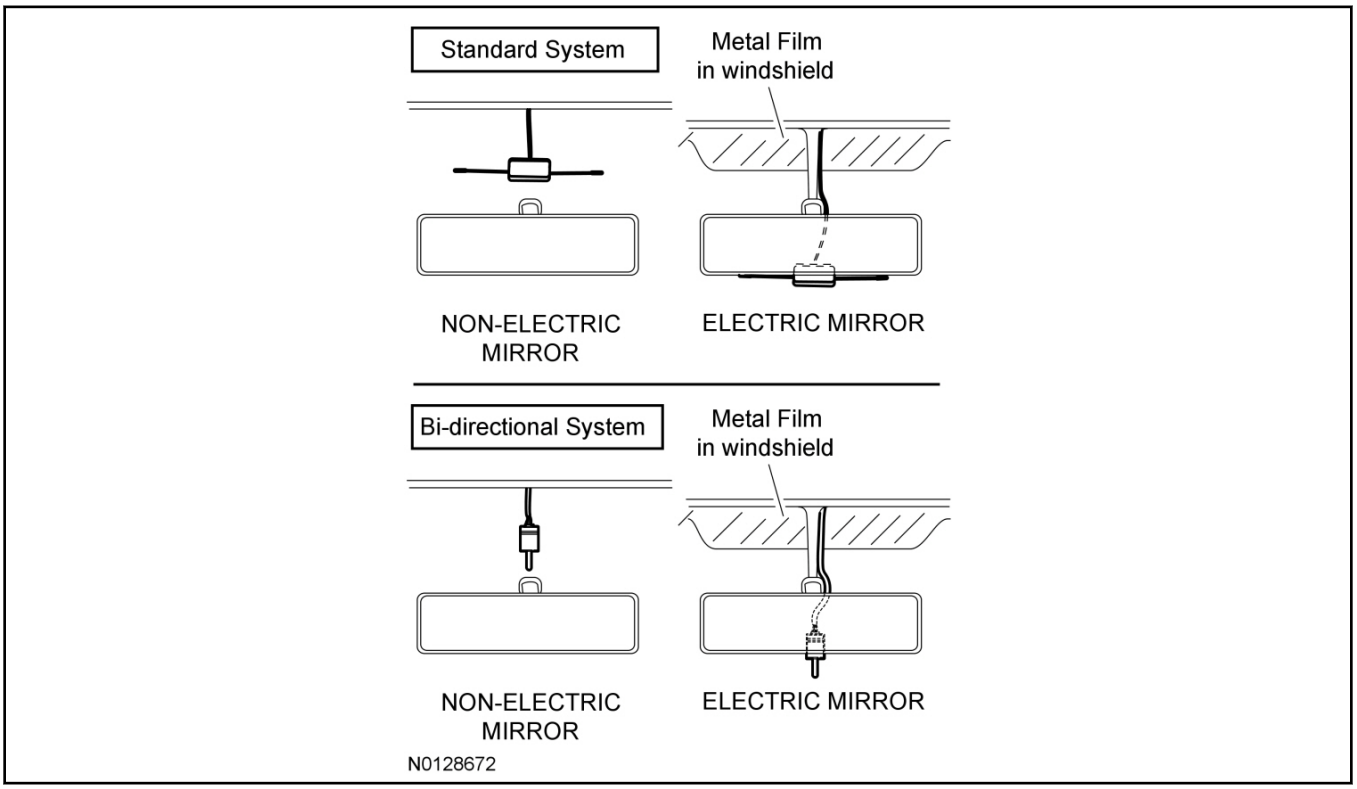
INSTALLATION (Continued)

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

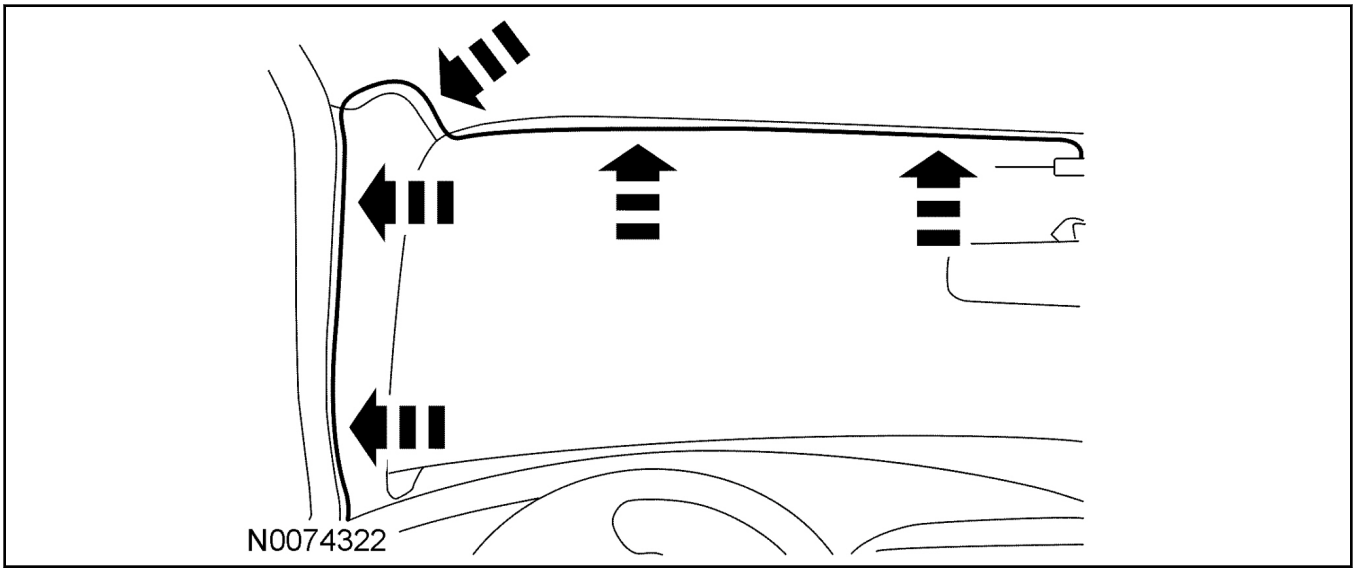
Remove the protective backing from the adhesive on the antenna and firmly press the body of the antenna to the windshield.



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.



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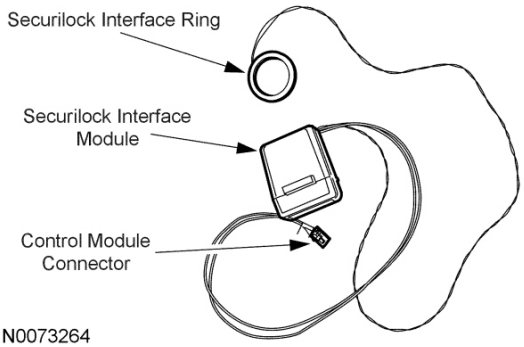
INSTALLATION (Continued)

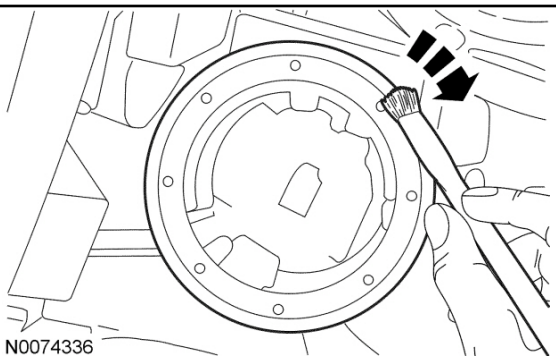
20. Reposition the A-pillar trim panel back, if necessary.

Install the SECURILOCK Interface Kit

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



22. 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.



23. ***NOTICE:***
    Do not damage the transceiver ring during installation or while installing the steering column shrouds.
    A damaged transceiver ring will result in an inoperable remote start system.

    Remove the protective backing from the adhesive on the antenna ring, place the ring over the PATS transceiver and press firmly in place.

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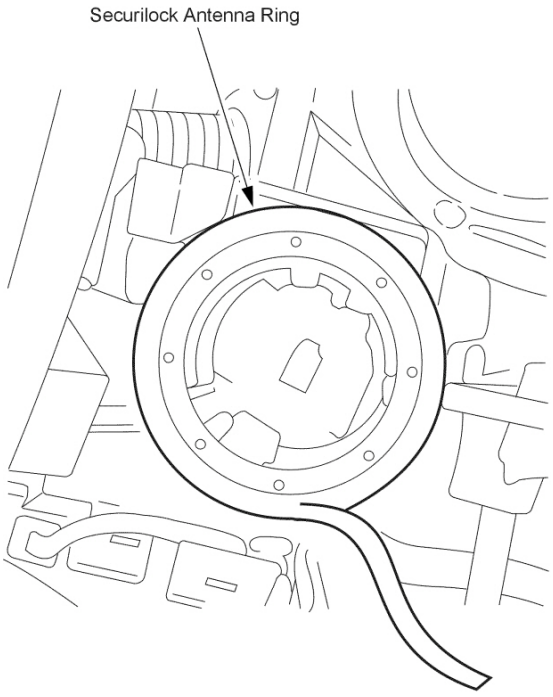
INSTALLATION (Continued)



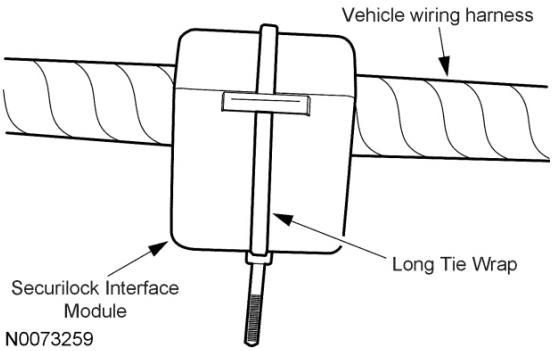
Install The SECURILOCK Interface Module

24. **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 and underdash wiring harness using one of the supplied long tie wraps.

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

    Route the harness and connector to the module mounting location.



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INSTALLATION (Continued)

Install the Remote Start Control Module and Harness Assembly

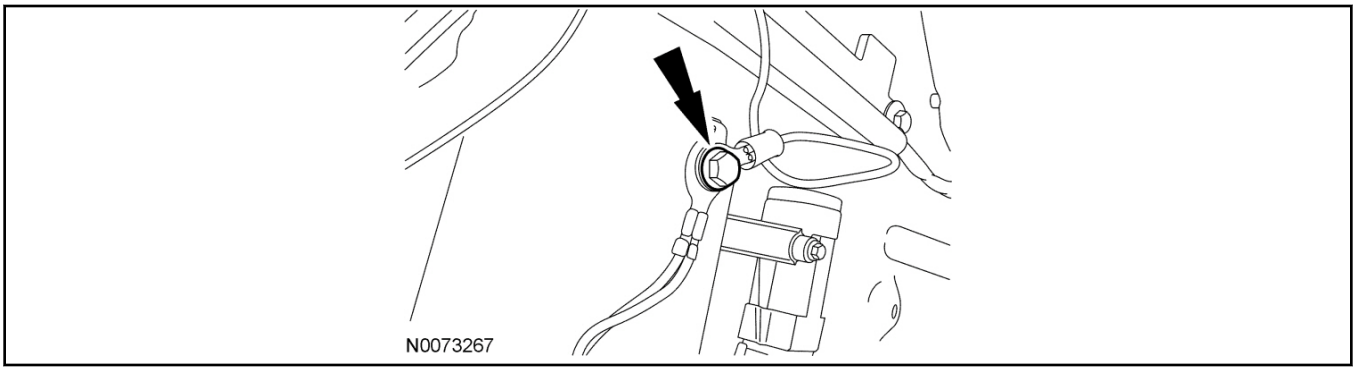
26. Install the ignition lock cylinder.
27. Place the remote start module and harness assembly in the vehicle.

Identify Circuit Wires For Connections

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

NOTE:
Review the proper splicing techniques prior to proceeding.

28. Connect the Black ground wire from the remote start module harness to the chassis ground point in the driver kick panel.
29. Disconnect the ignition switch electrical connector.
30. Connect the hard shell harness connectors at the ignition switch and ignition switch connector.



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 Blue/White horn circuit wire at the Brown connector at the right side of the steering column.
32. Connect the Brown/Black wire from the remote start module harness to the Blue/White horn circuit wire at the Gray connector at the right side of the steering column.
33. **NOTE:**
    A DVOM connected to the correct wire will show 12V with the key removed, then show 0V when the key installed.
    A logic probe will show power on the correct wire when the key is removed, then show ground when the key is installed.

    Identify the Blue/Gray Key-in-Sense circuit wire at the Gray connector at the right side of the steering column.
34. Connect the Black/White wire from the remote start module harness to the Blue/Gray Key-in-Sense circuit wire at the Brown connector at the right side of the steering column.

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INSTALLATION (Continued)

35. **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:
    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 Violet dome light circuit wire at the driver kick panel.

36. Connect the Violet wire from the remote start module harness to the Violet dome light circuit wire at the driver kick panel.

37. **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.

    Identify the Gray/Yellow power door lock circuit wire at the driver kick panel harness.

38. Connect the Blue wire from the remote start module harness to the Gray/Yellow power door lock circuit at the driver kick panel harness.

39. **NOTE:**
    A DVOM connected to the correct wire will show 0V with the switch in the OFF position and 12V with the switch in the parking lights ON position.
    A logic probe connected to the correct wire will show ground with the switch in the OFF position and power with the switch in the parking lights ON position.

    Identify the Violet parking lights on circuit wire at the SJB.

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

41. **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 Violet/White brake switch circuit wire at the brake switch.

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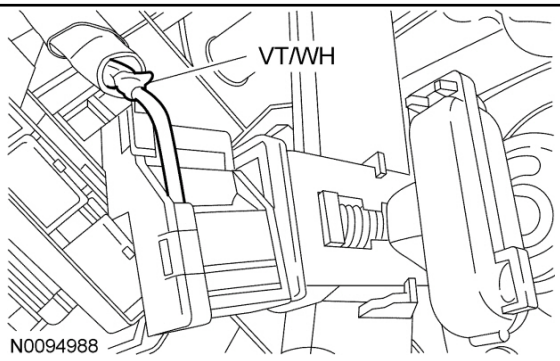
INSTALLATION (Continued)

42. Connect the Brown wire from the remote start module harness to the Violet/White brake switch circuit wire at the brake switch.



Install The Hood Safety Switch

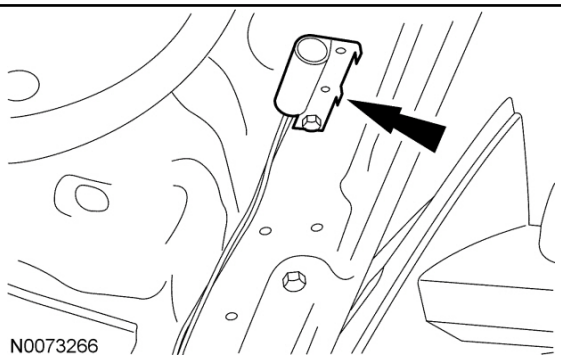
43. **NOTE:**
Route the hood safety switch wire carefully avoiding any moving parts or components that can produce excessive heat.

NOTE:
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.

44. Apply rustproofing compound to the drilled hole and torque the screw to 1.00 Nm (10 lb-in).



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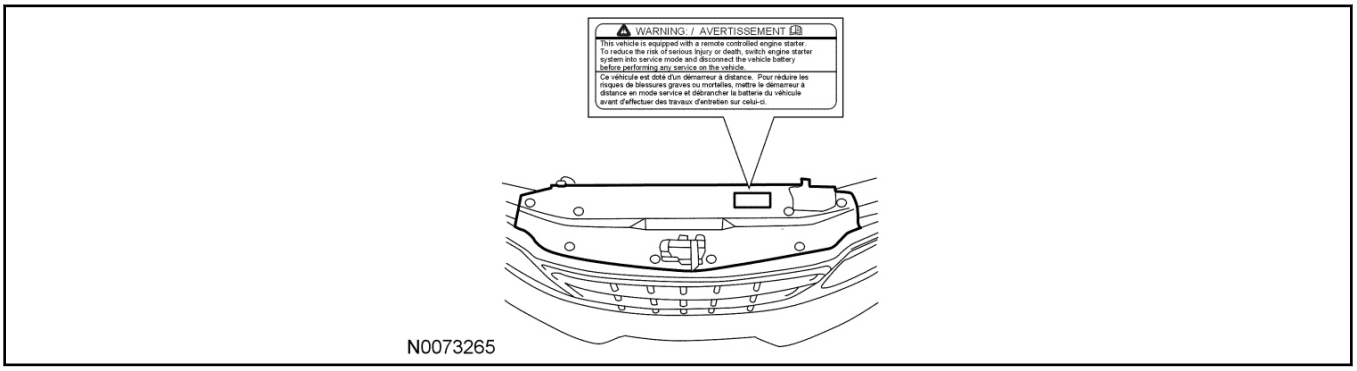
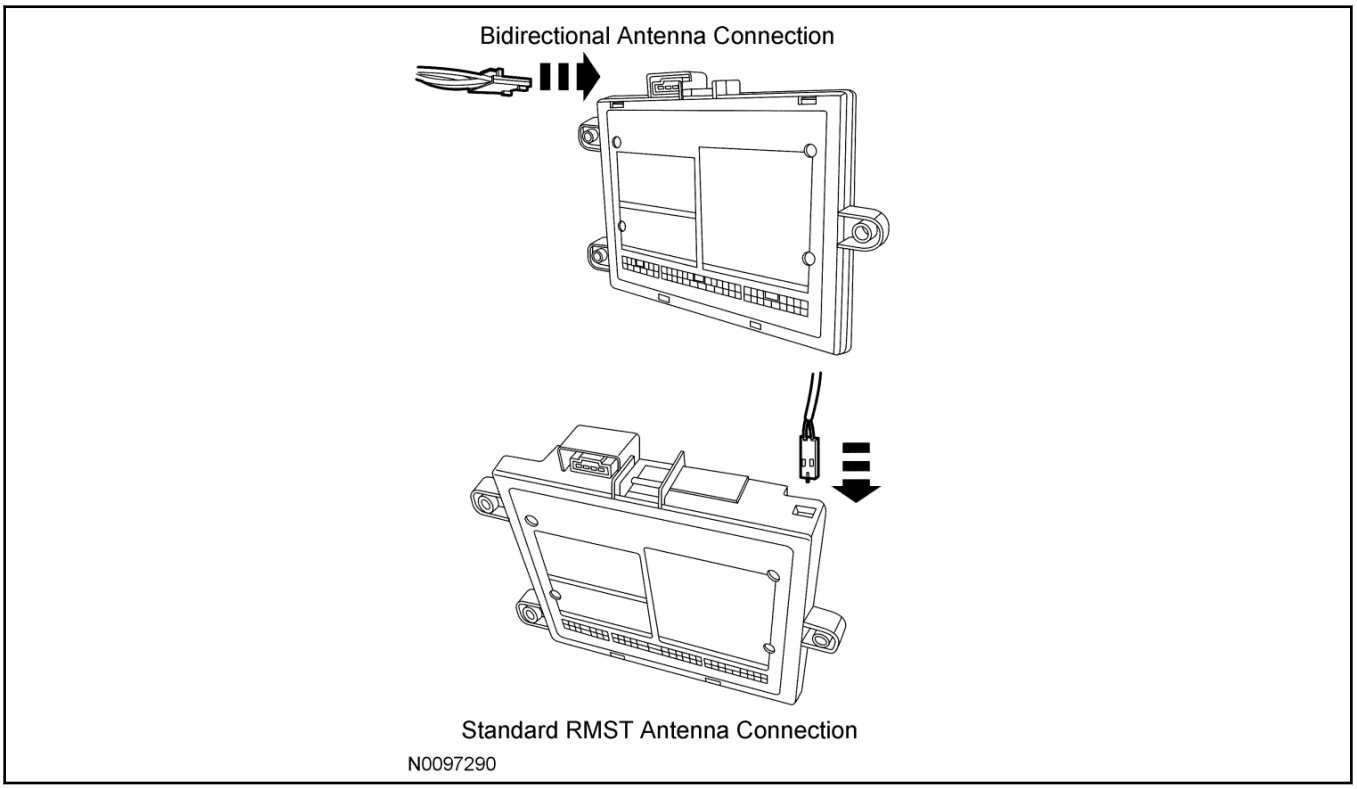
INSTALLATION (Continued)

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

    Install the underhood warning label



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



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

Program The RMST System

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

Secure RMST Harness and Control Module

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

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INSTALLATION (Continued)

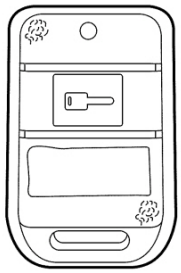
51. **NOTE:**
    Do not mount the control module in the knee bolster area.
    To ensure the best performance of the built-in shock sensor, secure the control module at three points to the vehicle.

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

Install Trim

52. Install the (3) screws and the steering column shroud.
53. If equipped, install the tilt release lever handle.
54. Install the lower instrument panel steering column cover.
55. Install the left hand scuff plate and cowl trim panel.

Programming - Standard Remote Start



STANDARD RMST FOB

N0097291

56. **NOTE:**
    If the remote start module 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

57. See chart below for programming information.

Gas Engine Only: Program Bank 1 Chart (4 Honks)

BANK	OPTIONS	DESCR	LED
1	2	DOOR AJAR INVERT	ON
1	3	KEY-IN SENSE INVERT	ON

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INSTALLATION (Continued)

Gas Engine Only: Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCR	LED

Gas Engine Only: Program Bank 2 Chart (5 Honks)(Continued)

2	1	TACHLESS MODE	ON

Diesel Engine Only: Program Bank 1 Chart (4 Honks)

BANK	OPTIONS	DESCR	LED
1	2	DOOR AJAR INVERT	ON
1	3	KEY-IN SENSE	ON

Diesel Engine Only: Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCR	LED
2	1	TACHLESS MODE	ON
2	5	DIESEL TIMER	ON

58. Press and hold the brake pedal.
59. Turn the ignition key to the RUN position. The dome light will turn off.
60. 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.
61. If you do not get 3 confirmation chirps, check the following items.
    - 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.

62. Press and release the override button. The horn will honk 4 times indicating the system has entered the first program bank.
63. Press and release the brake pedal.
    The horn will honk 2 times indicating the system has entered the option 2 of the first program bank.

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INSTALLATION (Continued)

NOTICE:

When turning the LED on or off using the remote start fob button, press and immediately release the remote start button.

64. The LED must be on for option 2. If the LED is illuminated no action is required. If the LED is not illuminated, press and release the remote start fob button and verify the LED illuminates.

NOTE:

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

65. Press and release the brake pedal.
    The horn will honk 3 times indication the system has entered the option 3 of the first program bank.
66. The LED must be on for option 3. 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.
67. Press and release the override button. The horn will honk 5 times indicating the system has entered the second option bank.
68. Press and release the brake pedal.
    The horn will honk 1 time indication the system has entered the option 1 of the second program bank.
69. The LED must be ON for option 1. If the LED is illuminated ON, action is required. If the LED is not illuminated press the remote start fob and verify the LED illuminates.

NOTE:

Vehicles equipped with a diesel engine go to the next step. Vehicles equipped with a gas engine skip this step.

70. Press and release the brake pedal until the horn honks 5 times.
    The LED must be ON for option 5. If the LED is ON no action is required. If the LED is OFF, press the remote start fob button to verity that the LED is OFF.

NOTE:

The remote start module is now programmed.

71. 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.

72. 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)

73. Insert the second ignition key and turn to the run position.
    Watch for the PATS light to turn off. Remove the second key.
74. Press and hold the remote start button key pic 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 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.

75. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
76. 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.
77. The remote start systems should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.
78. Close the hood, and insert a key into the ignition switch.
79. Attempt to re-start the vehicle again using the key fob.
80. 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.
81. Remove the key and open a door.
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 three times and shut down indicating a door is open.
84. Close the door.
85. Attempt to re-start the vehicle again using the key fob.
86. Once the vehicle starts, verify that all heat and A/C functions operate normally and that the doors have locked.
87. Once all systems have been checked, press the brake pedal - the remote start systems should shut down.

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Troubleshooting

88. **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.
5 Chirps	The KEY is in the ignition.
6 Chirps	The remote start system is in SERVICE/VALET mode.

Programming - Bi-directional Remote Start

BIDIRECTIONAL FOB

N0097292

89. **NOTE:**
If the remote start module 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 Options: Entering Programming Mode

90. See chart below for programming information.

Gas Engine Only: Program Bank 1 Chart (4 Honks)

BANK	OPTIONS	DESCR	LED

Gas Engine Only: Program Bank 1 Chart (4 Honks)(Continued)

1	2	DOOR AJAR INVERT	ON
1	3	KEY-IN SENSE INVERT	ON

Gas Engine Only: Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCR	LED
2	1	TACHLESS MODE	ON

Diesel Engine Only: Program Bank 1 Chart (4 Honks)

BANK	OPTIONS	DESCR	LED
1	2	DOOR AJAR INVERT	ON
1	3	KEY-IN SENSE	ON

Diesel Engine Only: Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCR	LED
2	1	TACHLESS MODE	ON
2	5	DIESEL TIMER	ON

91. Press and hold the brake pedal.
92. Turn the ignition key to the RUN position. The dome light will turn off.
93. 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.
94. If you do not get 3 confirmation chirps, check the following items.
    - 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.

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INSTALLATION (Continued)

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

95. Press and release the override button. The horn will honk 4 times indicating the system has entered the first program bank.
96. Press and release the brake pedal.
    The horn will honk 2 times indicating the system has entered the option 2 of the first program bank.

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

97. The LED must be on for option 2. If the LED is illuminated no action is required. If the LED is not illuminated, press and release the remote start fob button and verify the LED illuminates.

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

98. Press and release the brake pedal.
    The horn will honk 3 times indication the system has entered the option 3 of the first program bank.
99. The LED must be on for option 3. 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.
100. Press and release the override button. The horn will honk 5 times indicating the system has entered the second option bank.
101. Press and release the brake pedal.
    The horn will honk 1 time indication the system has entered the option 1 of the second program bank.
102. The LED must be ON for option 1. If the LED is illuminated ON, action is required. If the LED is not illuminated press the remote start fob and verify the LED illuminates.

NOTE:
Vehicles equipped with a diesel engine go to the next step. Vehicles equipped with a gas engine skip step this step.

103. Press and release the brake pedal until the horn honks 5 times.
    The LED must be ON for option 5. If the LED is ON no action is required. If the LED is OFF, press the remote start fob button to verity that the LED is OFF.

NOTE:
The remote start module is now programmed.

104. Remove the ignition key.

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INSTALLATION (Continued)

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.

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

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

107. Press and hold the remote start button key pic 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 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 - 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.

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

109. 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.

110. The remote start systems should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.

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

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

113. 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.

114. Remove the key and open a door.

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

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

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INSTALLATION (Continued)

117. Close the door.

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

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

120. Once all systems have been checked, press the brake pedal - the remote start systems should shut down.

Troubleshooting

121. **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.
5 Chirps	The KEY is in the ignition.
6 Chirps	The remote start system is in SERVICE/VALET mode.

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TYPE "B" CUSTOM WIRE HARNESS

RMST MODULE WIRE HARNESS

STEERING COLUMN HARNESS

	Color	Function
A-7	PINK	Ignition Input/Output
B-3	PINK/WHITE	Ignition 2 Output
B-4	ORANGE	HVAC 1 Output
B-5	ORANGE/WHITE	HVAC 2 Output
A-8	VIOLET	Starter Output
A-4	RED	Battery
B-2	RED	Battery
B-1	BLUE	Battery

DRIVER'S KICK PANEL HARNESS

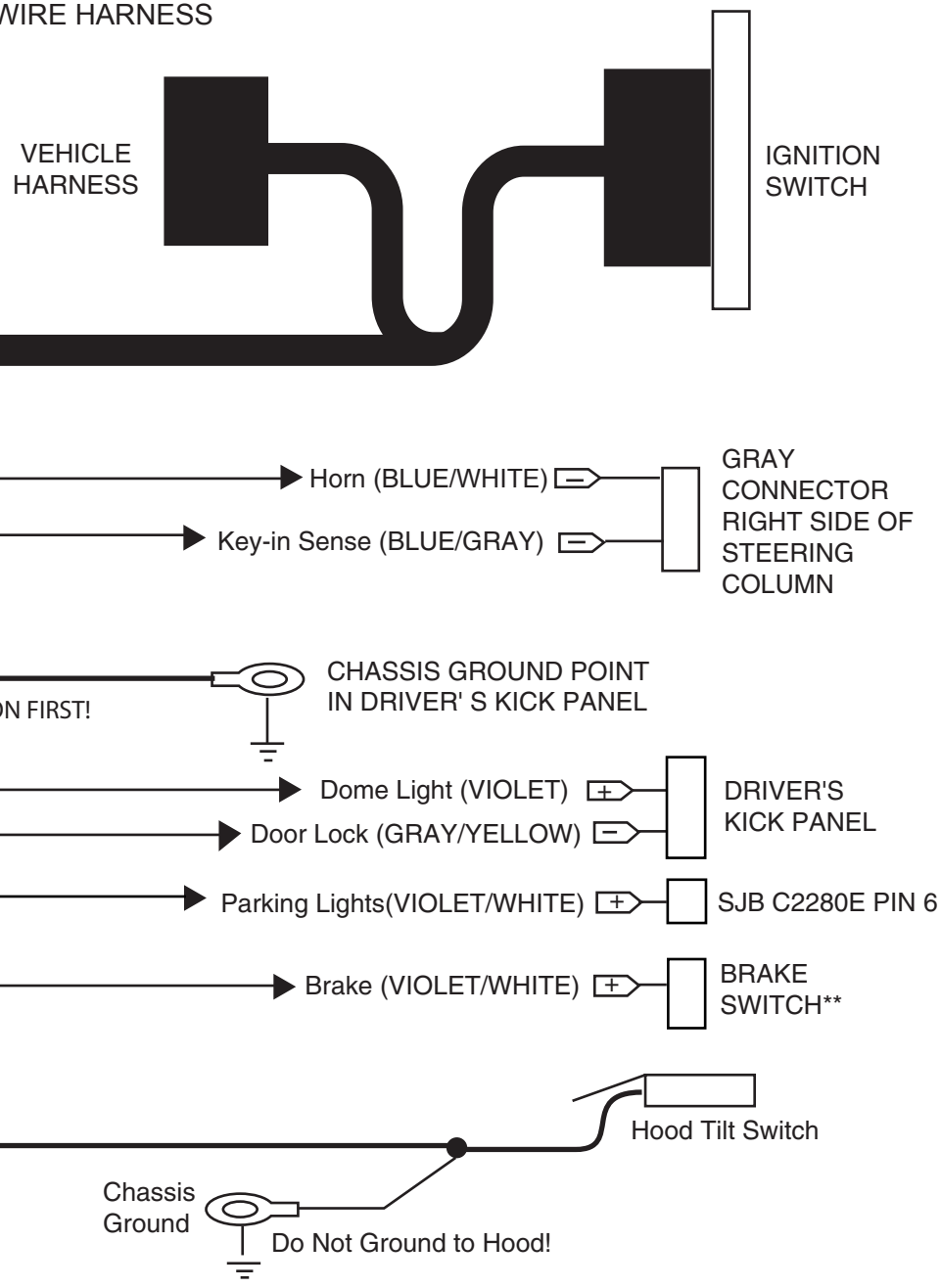
	Color	Function
A-21	BROWN/BLACK	Horn Relay Output
B-8	BLACK/WHITE	Key-in-sense Input

DRIVER'S KICK PANEL HARNESS

	Color	Function
A-5	BLACK	Ground
A-20	VIOLET	Door Ajar Switch Input
A-24	BLUE	Door Lock Output
A-1	WHITE	Parking Light Output
B-7	BROWN	Brake Input

UNDER HOOD HARNESS

	Color	Function
A-19	GRAY	Hood Open Switch Input



** Alternate color and location: LT. GREEN located in Driver's Side Kick Panel

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REMOTE START SYSTEM INSTALLATION

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Remote Start

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Proper Wire Splicing Techniques
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Troubleshooting

WIRING DIAGRAMS
Vehicle Specific Wiring Diagrams

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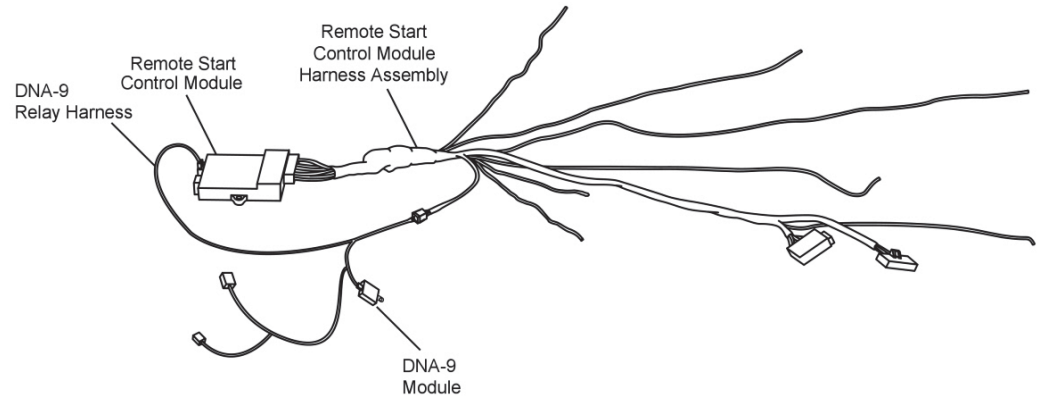
INSTALLATION

Remote Start

RMST System Components



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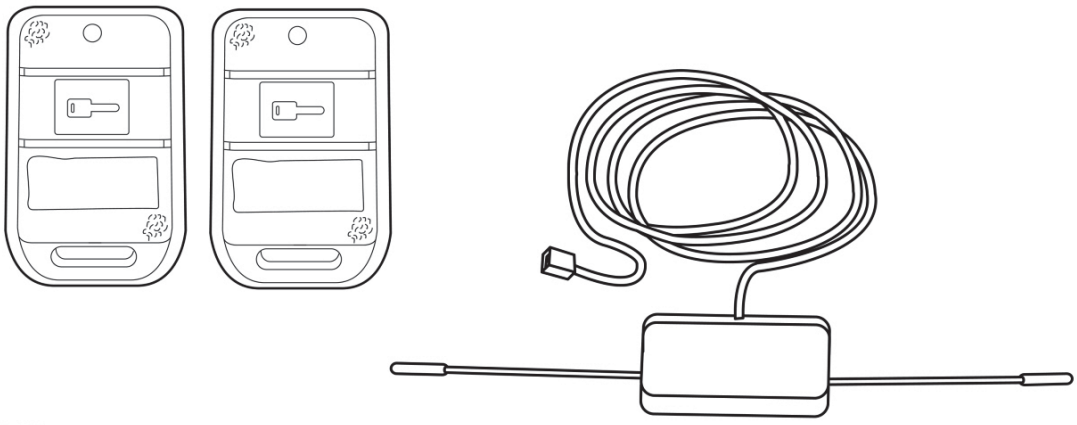
Additional "Standard RMST" Components



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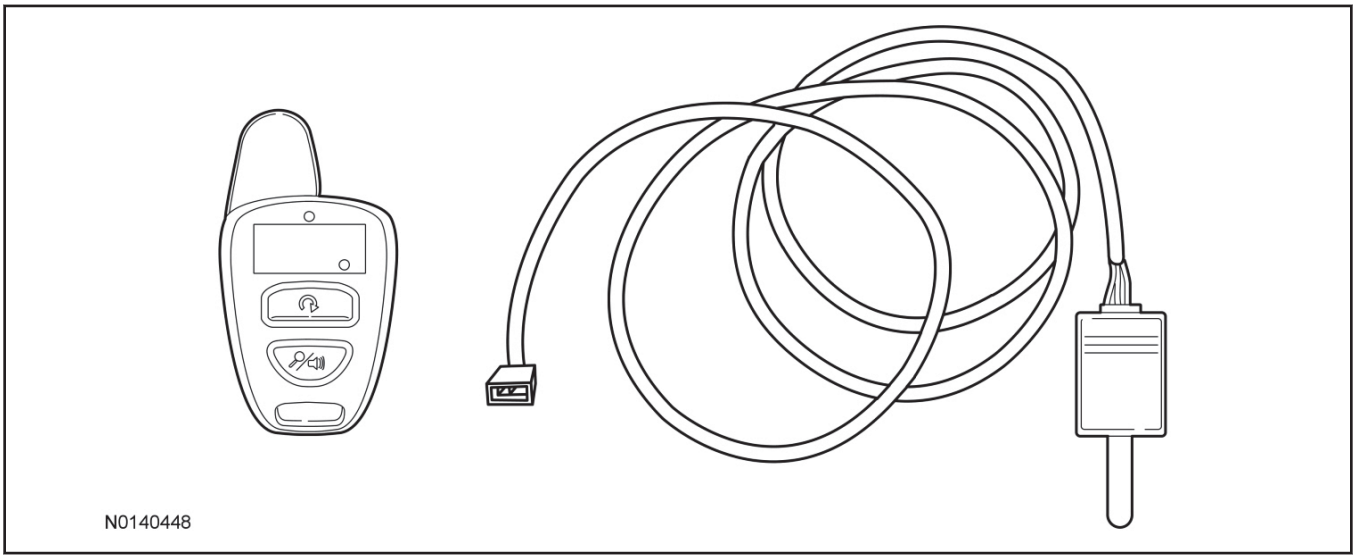
INSTALLATION (Continued)

Additional "Bi-directional RMST" Components



Escape - 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
1	DNA-9 Relay Harness

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INSTALLATION (Continued)

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

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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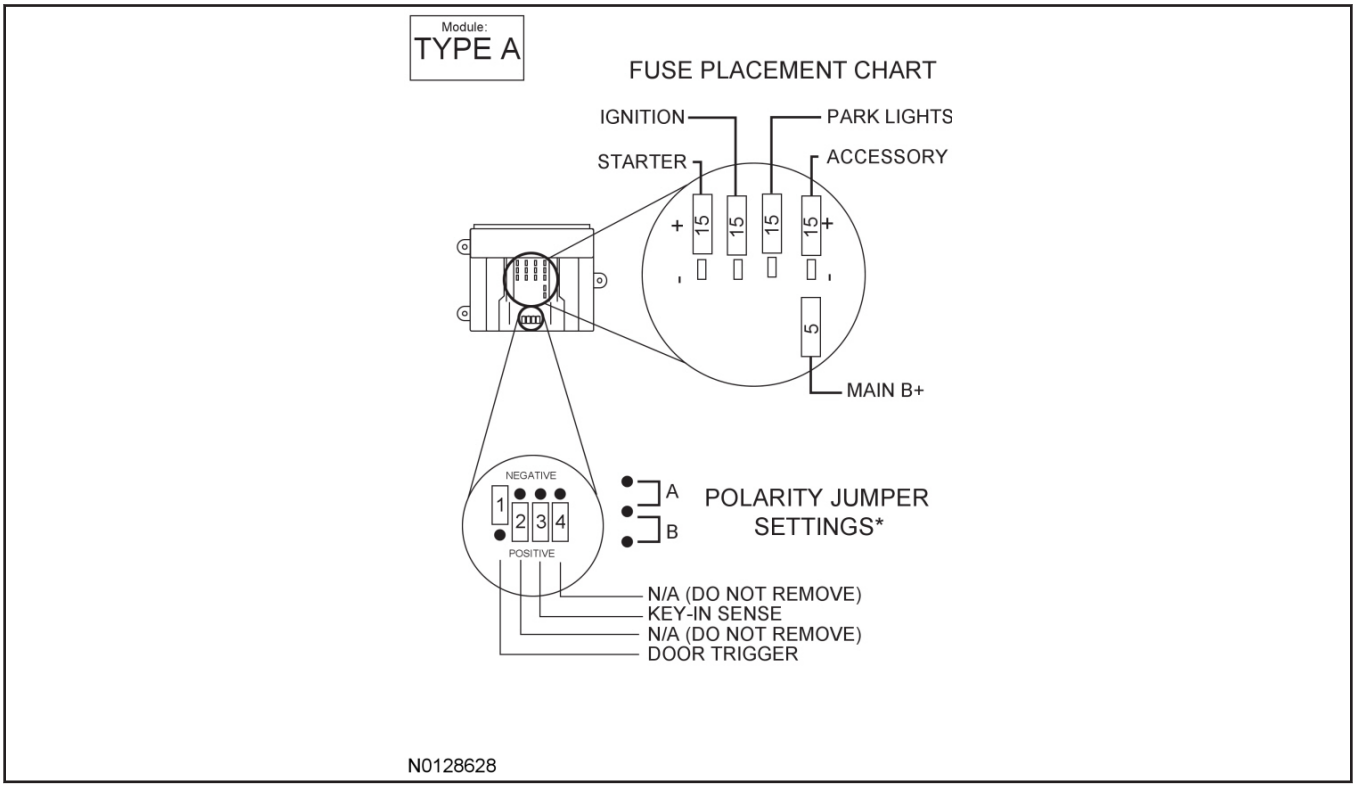
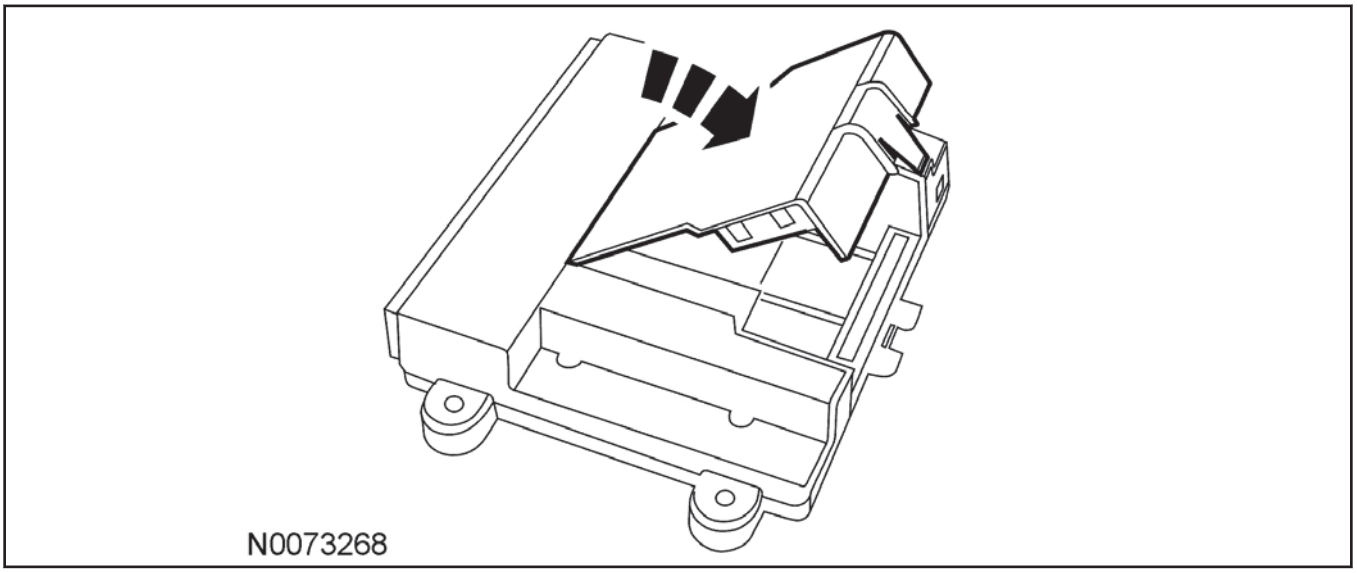
INSTALLATION (Continued)



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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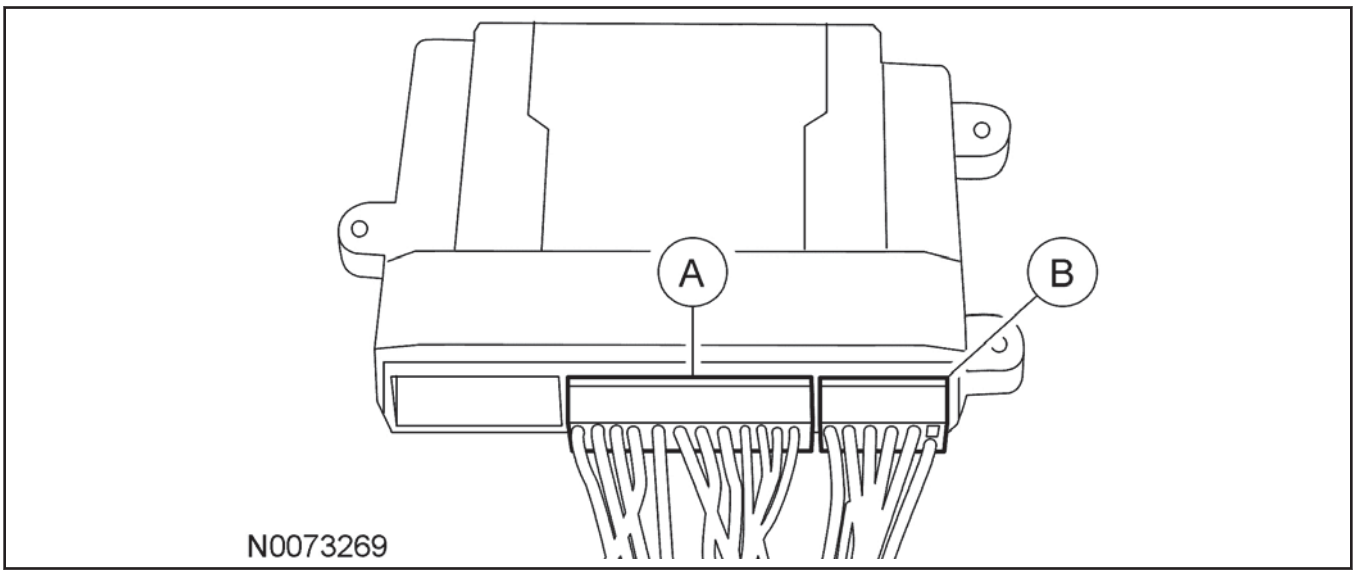
INSTALLATION (Continued)



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) before proceeding.

   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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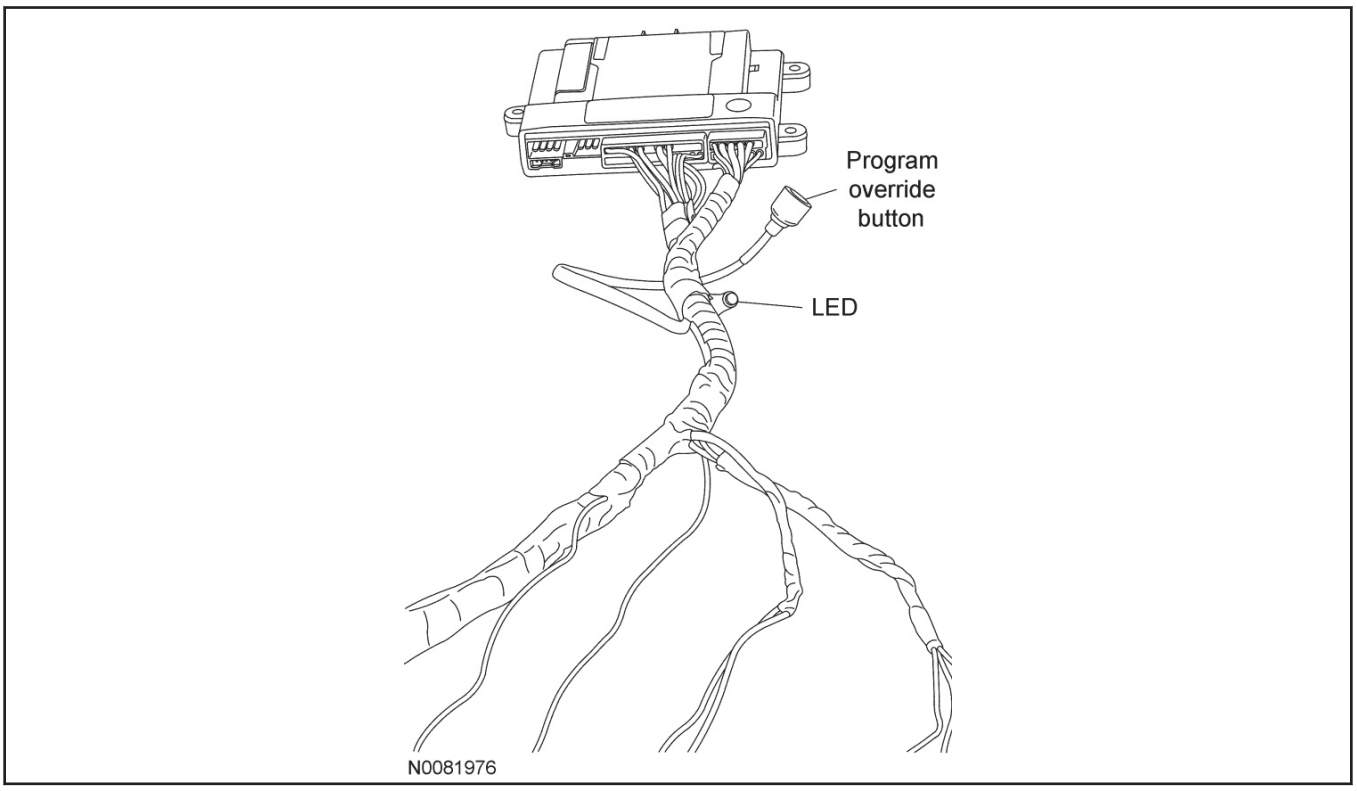
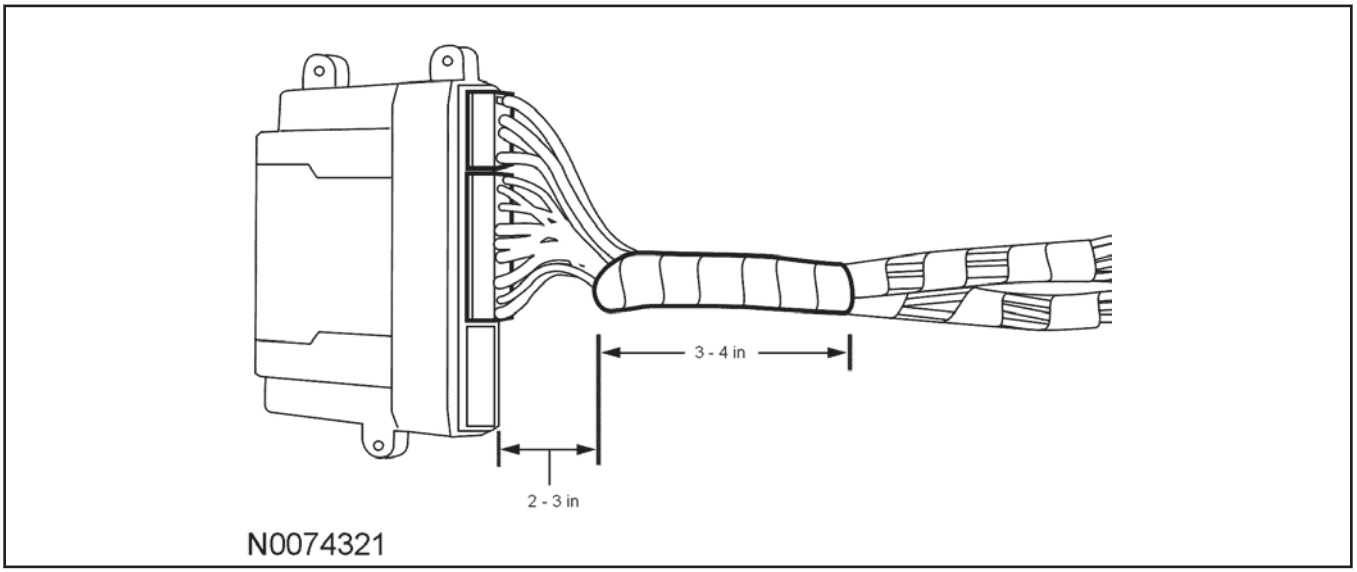
INSTALLATION (Continued)



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



Vehicle Preparation

9. Remove the steering column shrouds. For additional information, refer to Workshop Manual (WSM), Section 211-04.
10. Position the weather strip aside and remove the LH side lower cowl trim panel and scuff plate.

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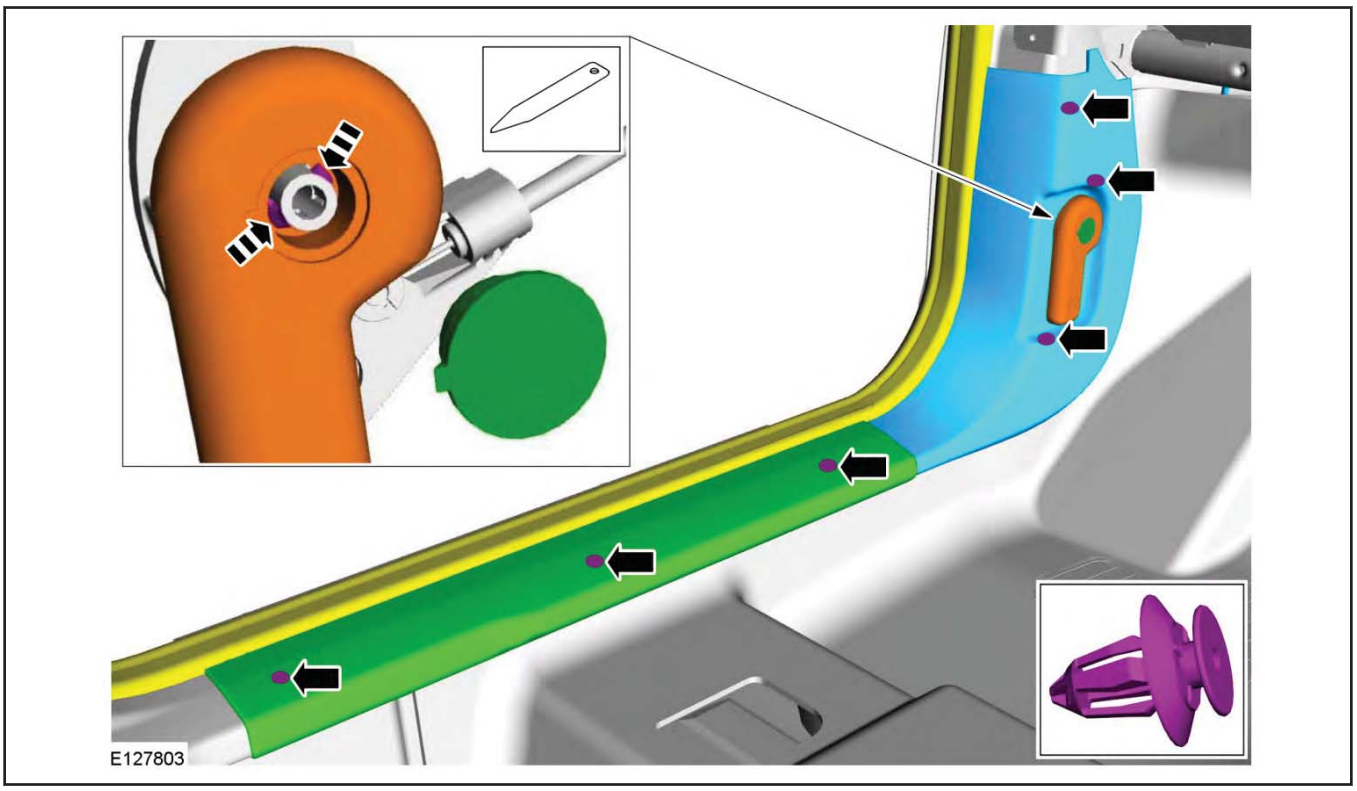
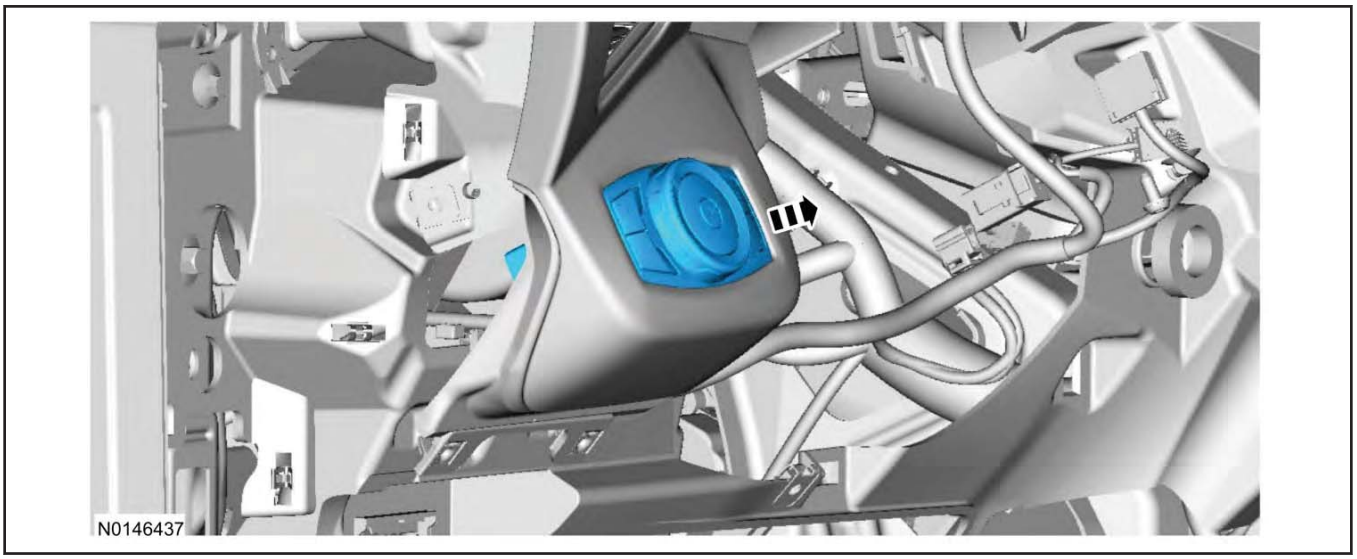
INSTALLATION (Continued)



11. 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.



12. 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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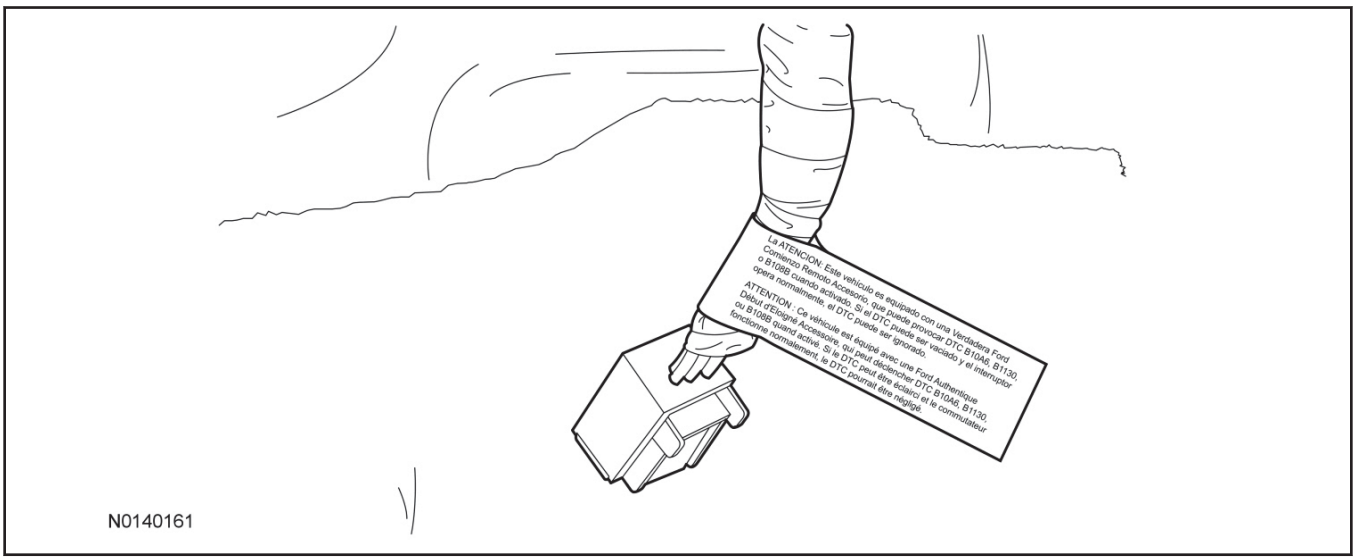
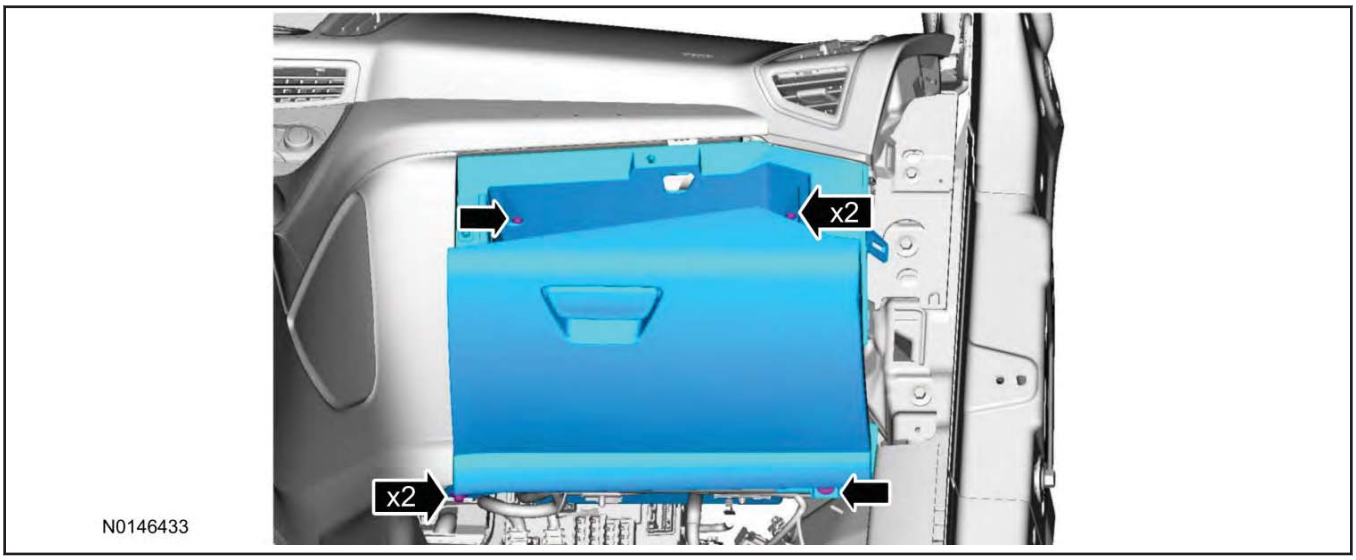


13. Remove the 4 glove compartment screws and the glove compartment.



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.

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

Install The Antenna

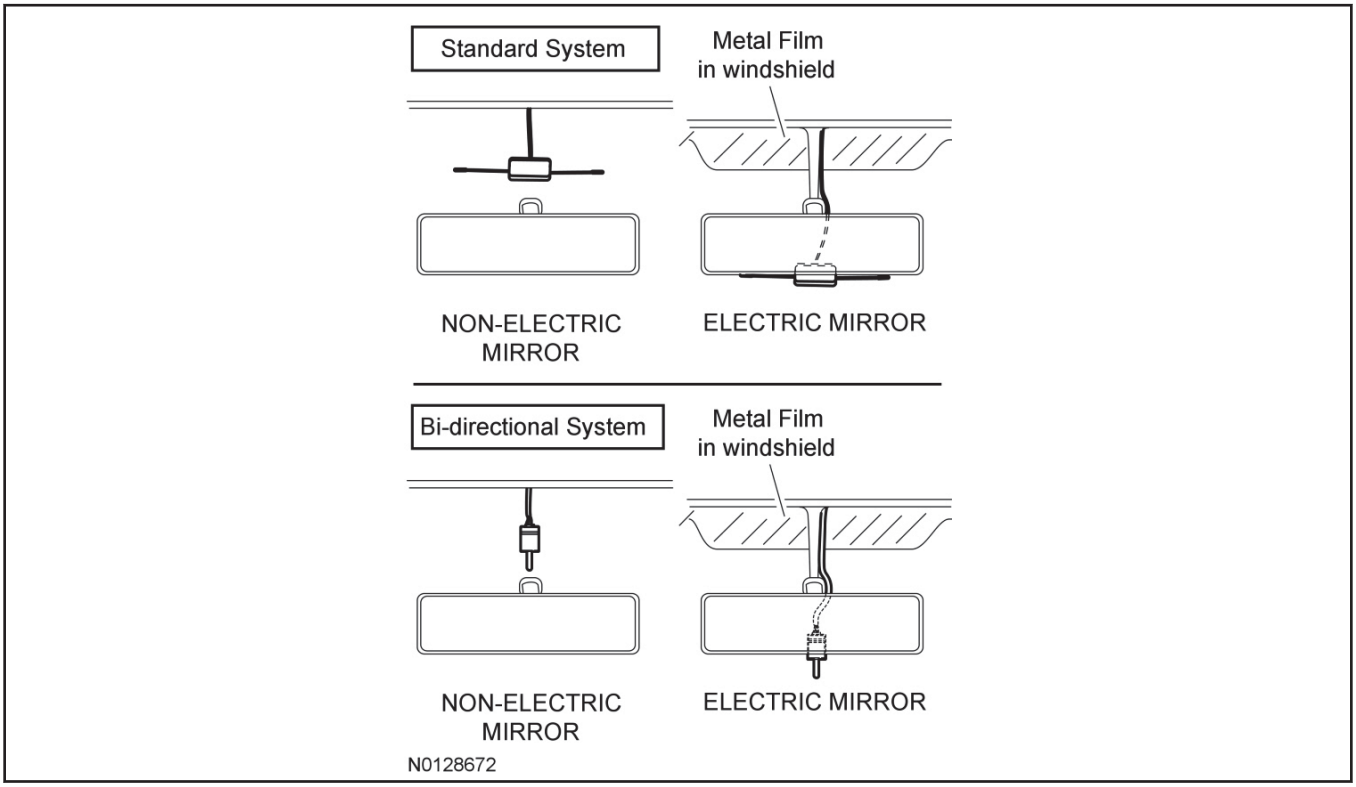
15. Clean the mounting surface using an alcohol base solution and a clean cloth.

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.

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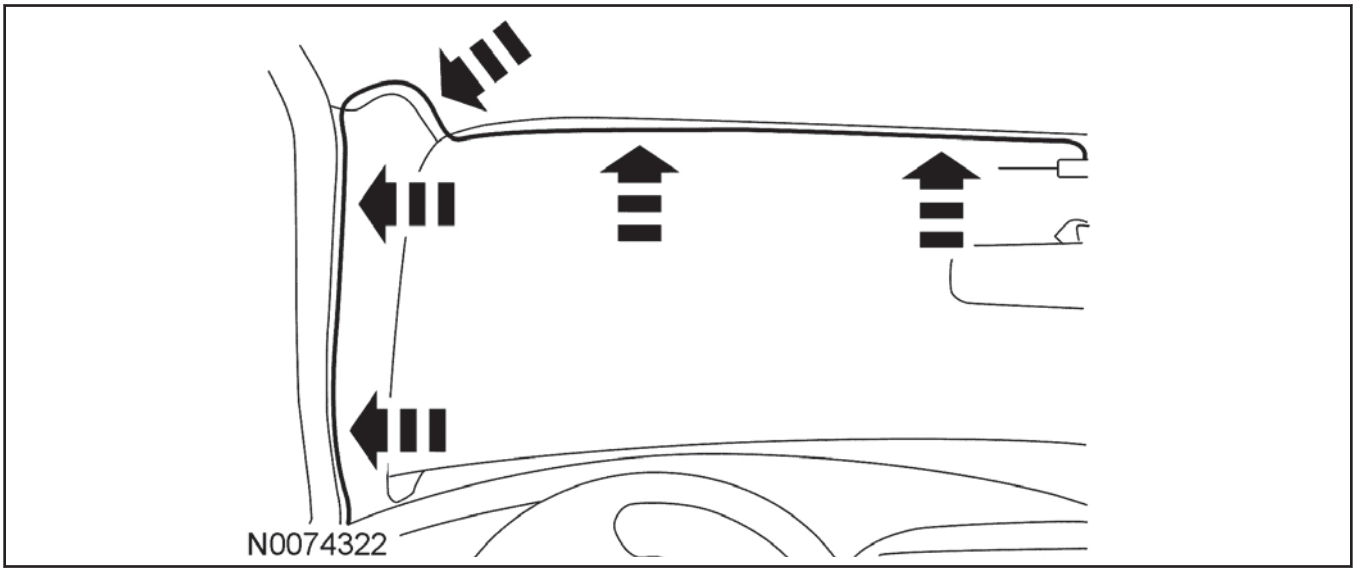


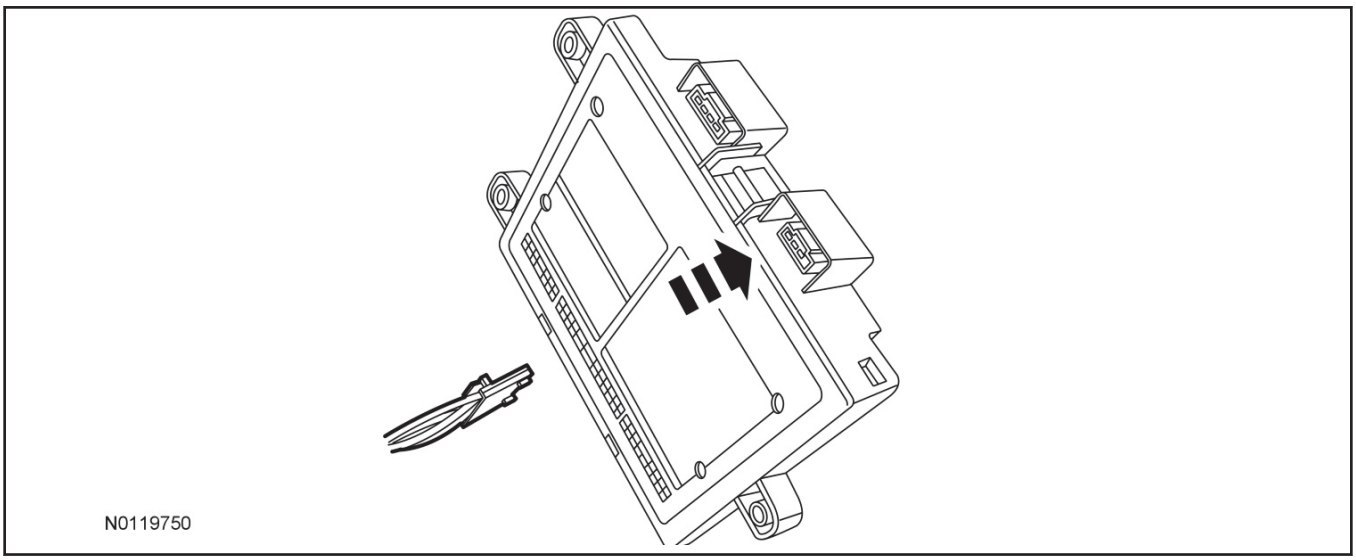
19. Reposition the A-pillar trim panel back, if necessary.

Install the Remote Start Control Module and Harness Assembly

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

Install the DNA-9 Relay Harness and Module

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



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

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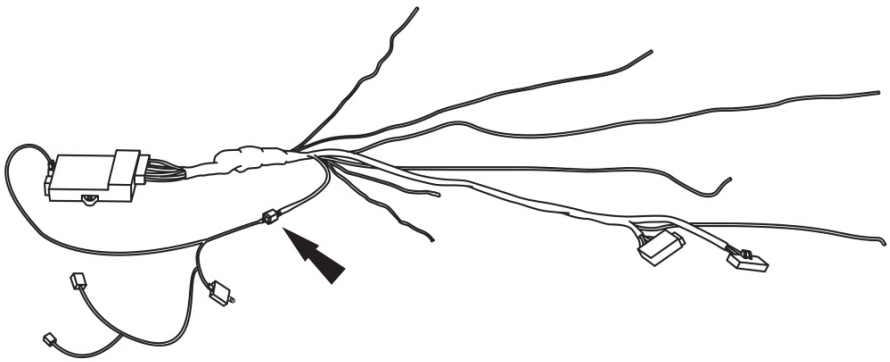
INSTALLATION (Continued)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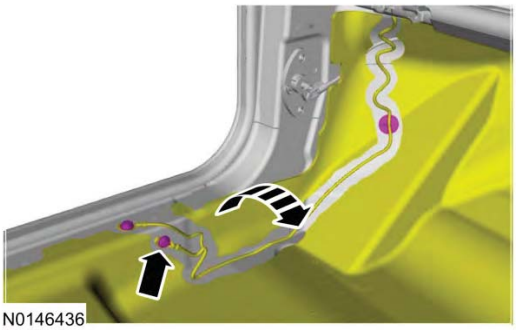
Identify Circuit Wires For Connections

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) before proceeding.

NOTE:
Review the proper wire splicing techniques before proceeding.

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


N0146436

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

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INSTALLATION (Continued)

30. Connect the Brown/Black wire from the remote start module harness to the Brown horn circuit wire in the steering column harness.
31. **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 Violet/White brake switch circuit wire at the BCM connector C2280A pin 16.
32. Connect the Brown wire from the remote start module harness to the Violet/White brake switch circuit wire at the BCM connector C2280A pin 16.
33. **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 Gray/Violet dome light circuit wire at the BCM connector C2280H pin 11.
34. Connect the Green/Violet wire from the remote start module harness to the Gray/Violet dome light circuit wire at the BCM connector C2280H pin 11.

Relay Harness

35. 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.
36. Install a suitable insulated crimp terminal eyelet to the White interrupt relay wire. Attach the White relay wire to a suitable grounding location.
37. Connect the White wire from the remote start module harness to the black wire at the relay harness.
38. Identify the Green/Violet headlamp switch wire at the headlamp switch.
39. **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 Green/Violet headlamp switch wire at the headlamp switch.
    - Connect the Blue wire from the relay harness to the feed side of the Green/Violet headlamp switch wire at the headlamp switch.

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INSTALLATION (Continued)

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

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

Install The Hood Safety Switch

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

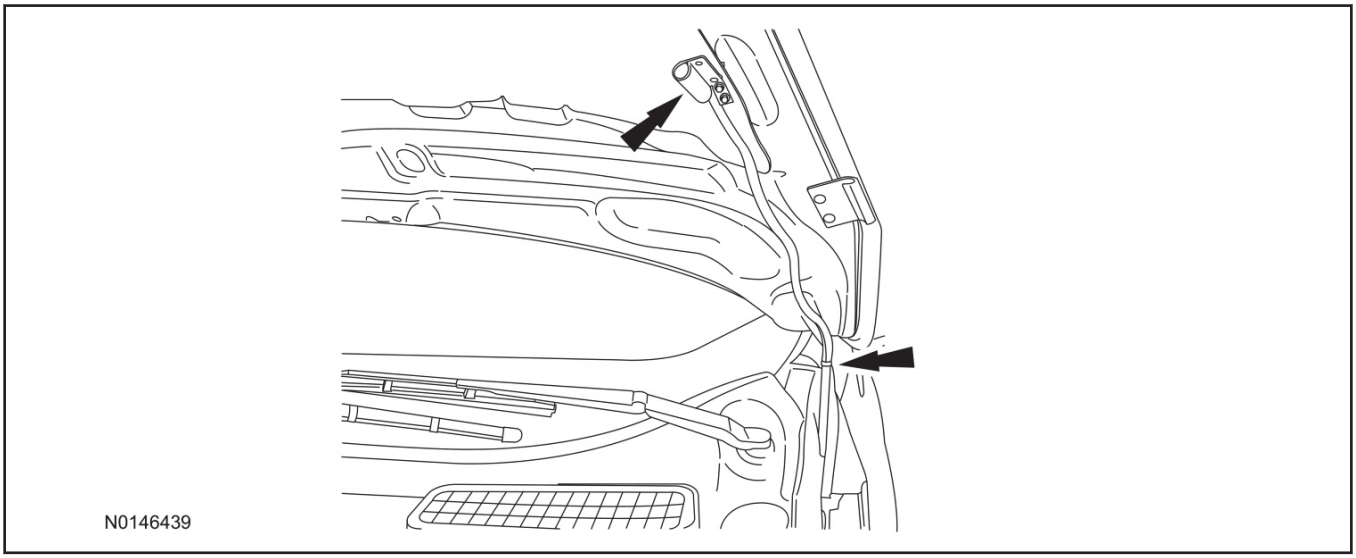
    NOTE:
    Using a piece of convolute adds to the appearance of the installation.

    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.



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

    Install the underhood warning label.

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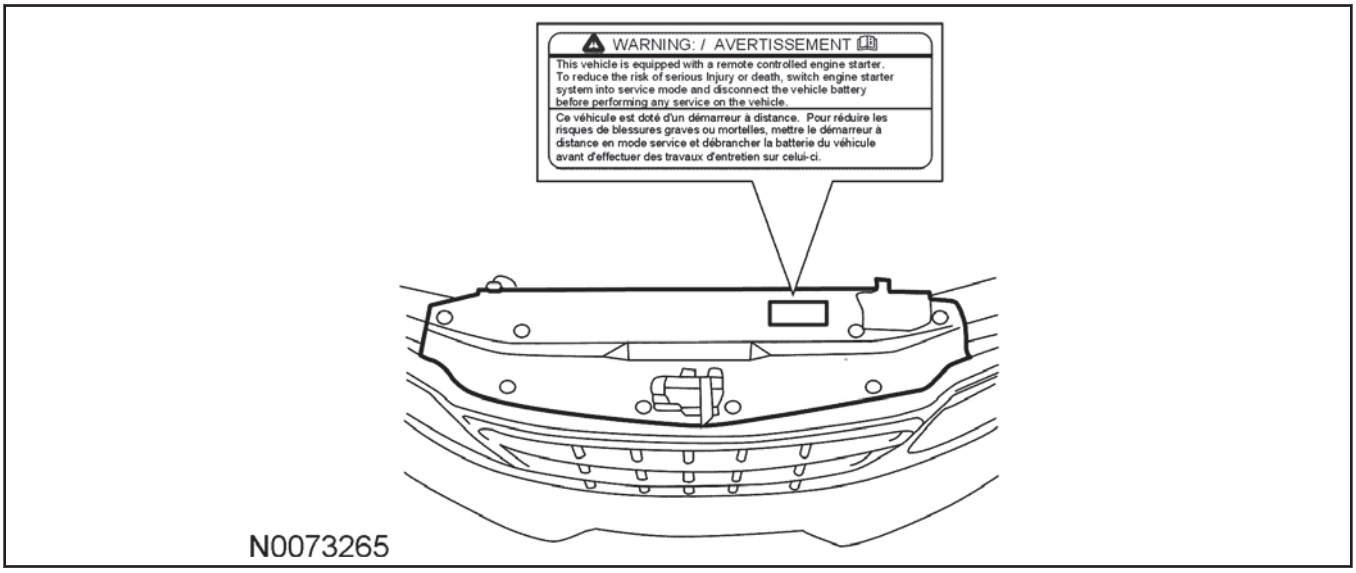
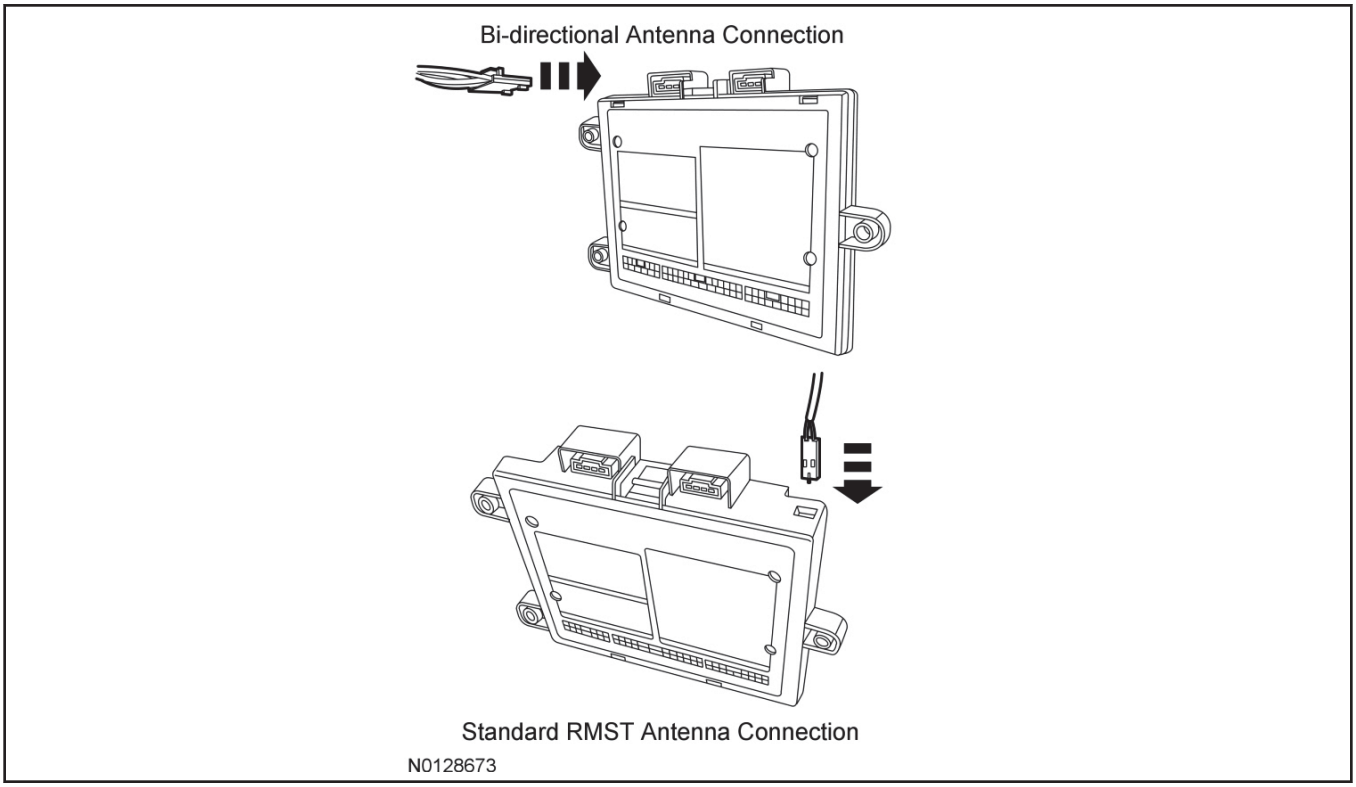
INSTALLATION (Continued)



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

46. Connect the antenna to the RMST control module.



Program The RMST System

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

Secure RMST Harness and Control Module

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

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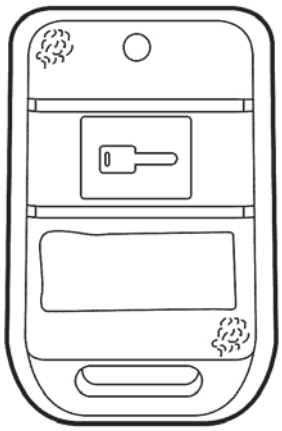
Do not mount the control module in the knee bolster area.
Secure the control module at three points to the vehicle.

Use the supplied long tie wraps to mount the RMST control module at a suitable location under the IP.

Install Trim

50. Install the glove compartment and the 4 screws.
    - Tighten to 2 Nm (18 lb-in).
51. Connect and install the headlamp switch.
52. Install the LH side lower cowl trim panel and scuff plate and position the weather strip back.
53. Install the steering column shrouds. For additional information, refer to WSM, Section 211-04.

Programming - Standard Remote Start



STANDARD RMST FOB

N0097291

54. 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

55. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCRIPTION	LED
2	1	TACHLESS MODE	ON

56. Press and hold the brake pedal.

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INSTALLATION (Continued)

57. Turn the ignition key to the RUN position.
    - The dome light will turn off.
58. 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.
59. 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.

60. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.
61. 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.

62. 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.

63. 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.

64. Insert the first ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the first key.
65. Insert the second ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the second key.
66. 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.

67. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
68. 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.
69. The remote start systems should turn on the ignition, but then honk the horn twice and shut down indicating the hood is open.
70. Close the hood, and insert a key into the ignition switch.
71. Attempt to re-start the vehicle again using the key fob.
72. 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.
73. Remove the key and open a door.
74. Attempt to re-start the vehicle again using the key fob.
75. The remote start systems should start the vehicle, then it will detect that a door is open and shut down.
76. Close the door.
77. Attempt to re-start the vehicle again using the key fob.

NOTE:
The doors will not be automatically locked by the remote start system.

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INSTALLATION (Continued)

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

Troubleshooting

80. **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

81. 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 Options: Entering Programming Mode

82. See chart below for programming information.

Program Bank 2 Chart (5 Honks)

BANK	OPTIONS	DESCRIPTION	LED
2	1	TACHLESS MODE	ON

83. Press and hold the brake pedal.
84. Turn the ignition key to the RUN position.
    The dome light will turn off.
85. 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.
86. 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.

87. Press and release the override button again. The horn will honk 5 times indicating the system has entered the second program bank.
88. 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.

89. 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.

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INSTALLATION (Continued)

NOTE:
The remote start module is now programmed.

90. 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.

91. Insert the first ignition key and turn to the RUN position.
    - Watch for the PATS light to turn off. Remove the first key.
92. 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.

93. 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.

94. Make sure all doors are closed but hood is open and windows are down (doors will be locking).
95. Press the Start button on the remote control key fob twice within 3 seconds - horn should honk once indicating receipt of the start request.
96. The remote start systems should start the vehicle, then it will detect that a door is open and shut down.
97. Close the hood, and insert a key into the ignition switch.
98. Attempt to re-start the vehicle again using the key fob.
99. 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.
100. Remove the key and open a door.

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INSTALLATION (Continued)

101. Attempt to re-start the vehicle again using the key fob.
102. The remote start systems should turn on the ignition, but then honk the horn three times and shut down indicating a door is open.
103. Close the door.
104. Attempt to re-start the vehicle again using the key fob.

NOTE:
The doors will not be automatically locked by the remote start system.

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

Troubleshooting

107. **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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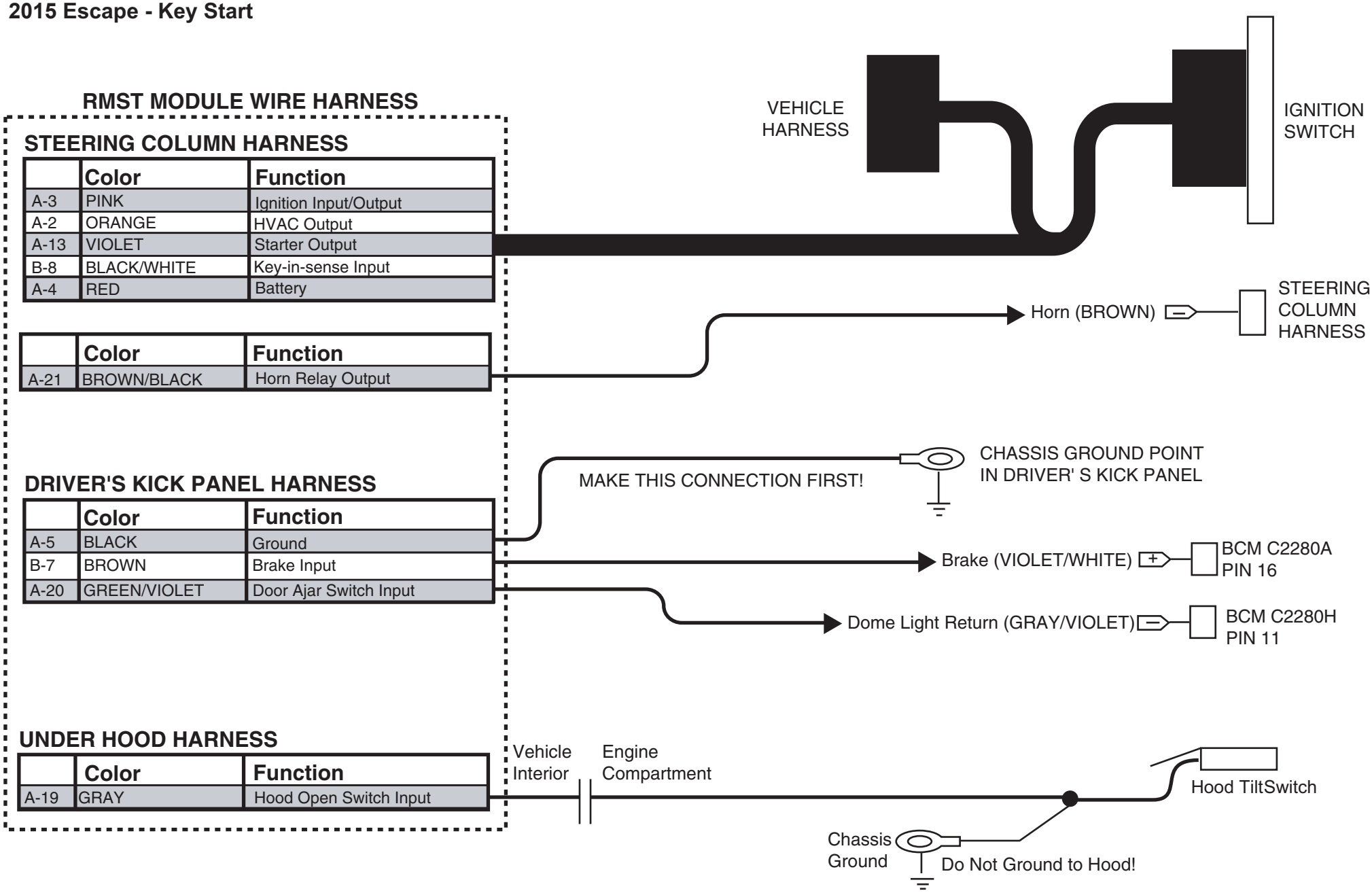
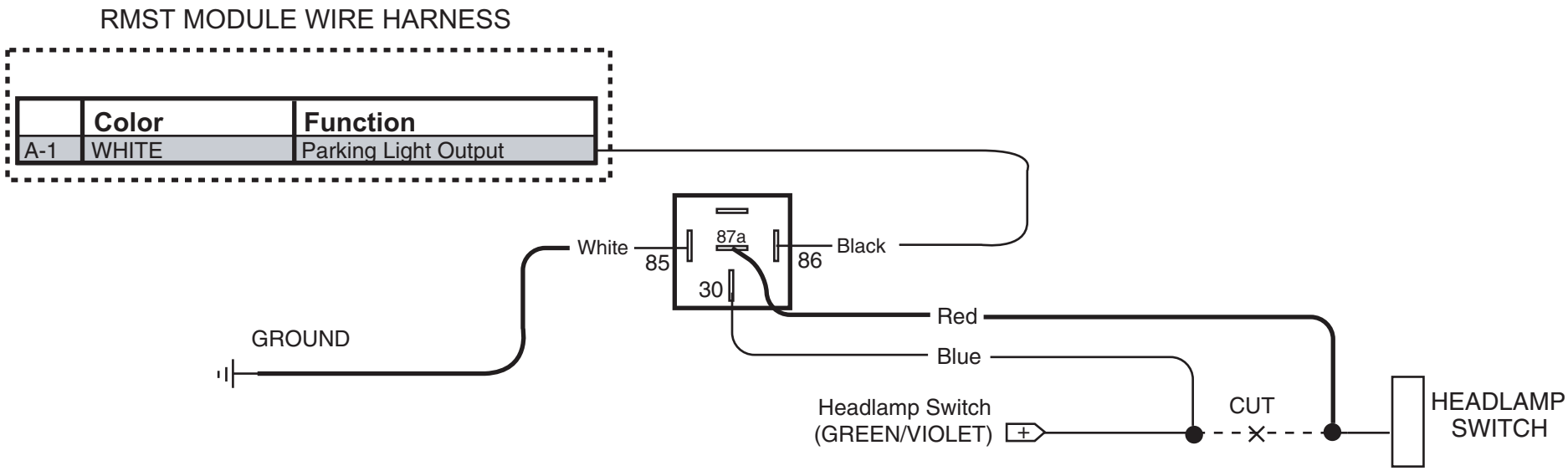
2015 Escape - Key Start



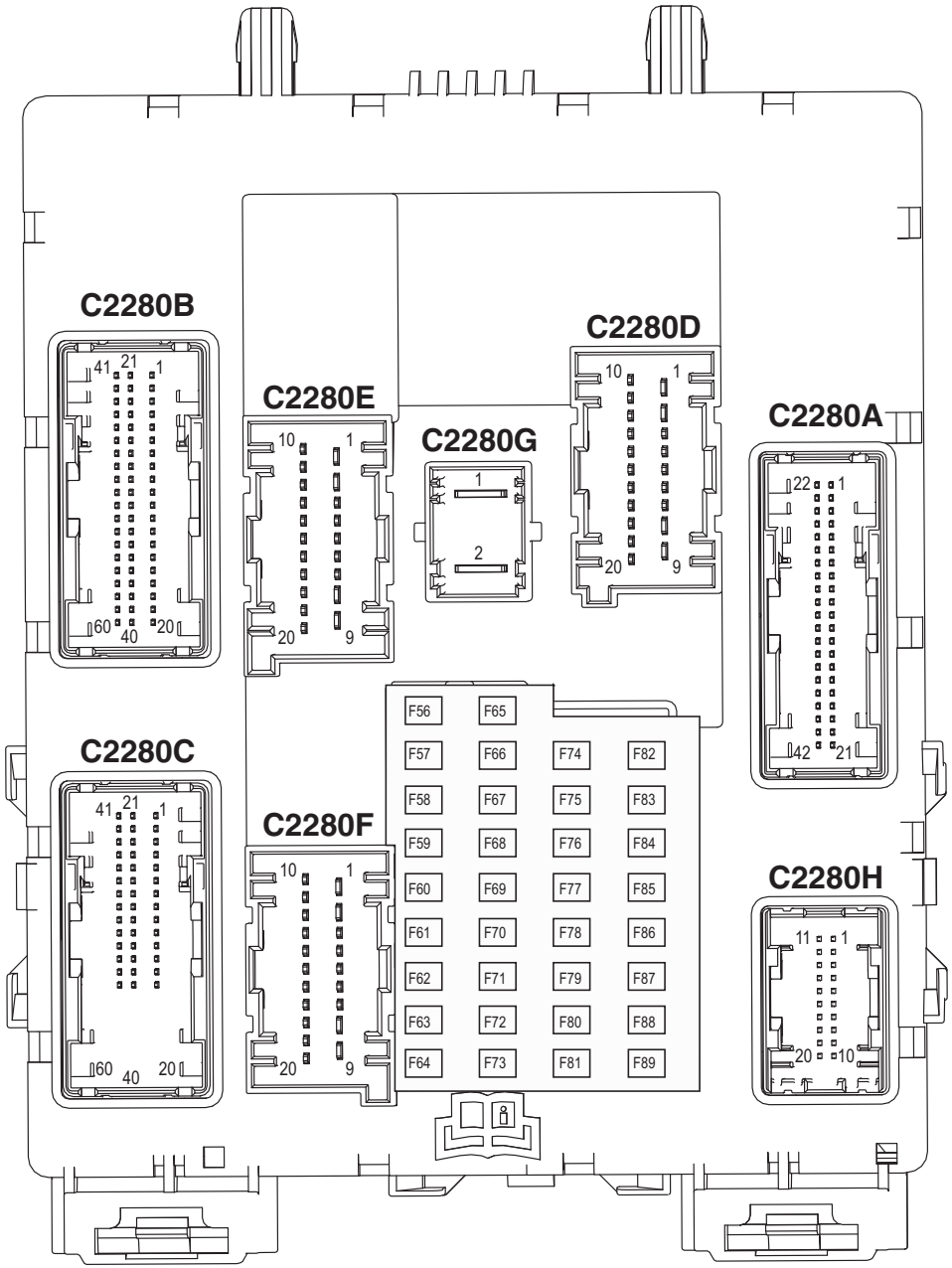
2015 Escape - Key Start

INTERRUPT RELAY



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

BCM Connector Locations



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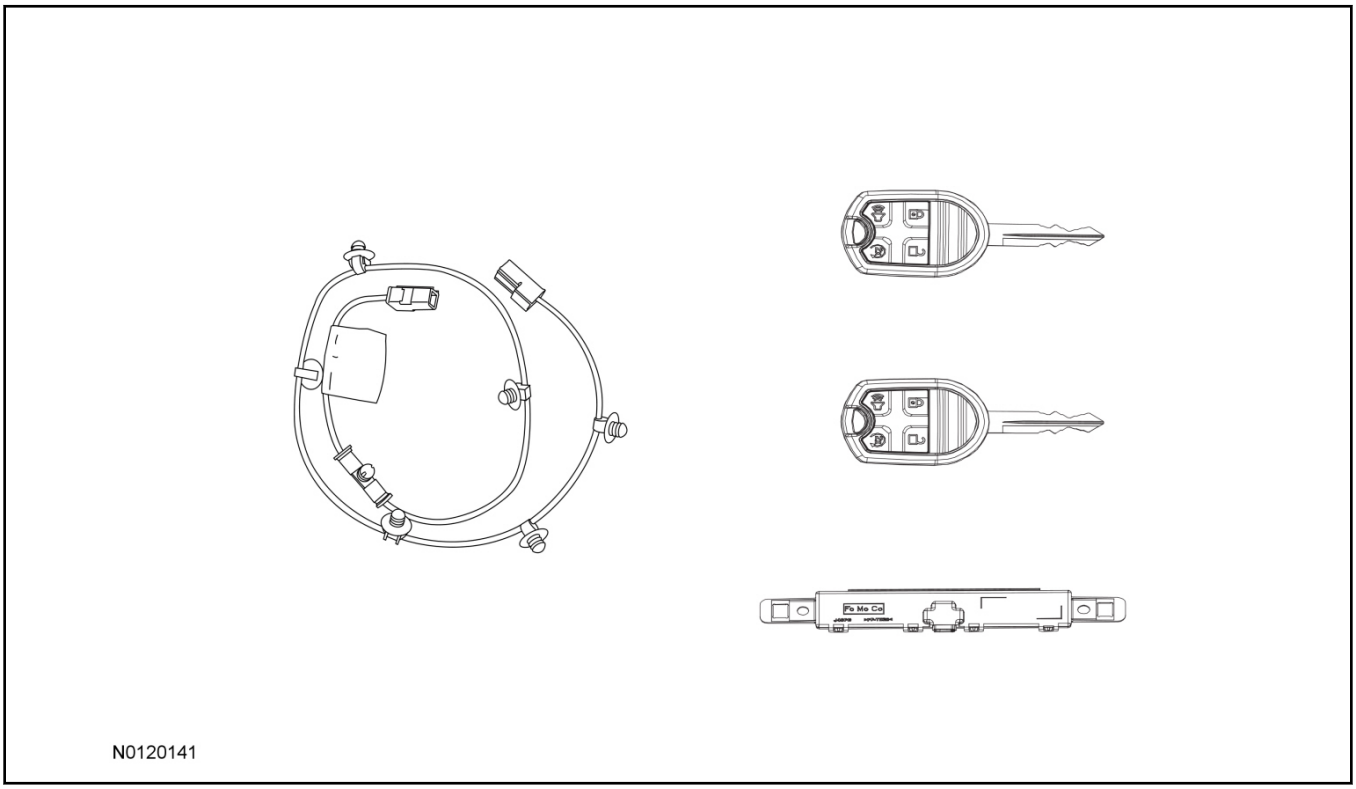
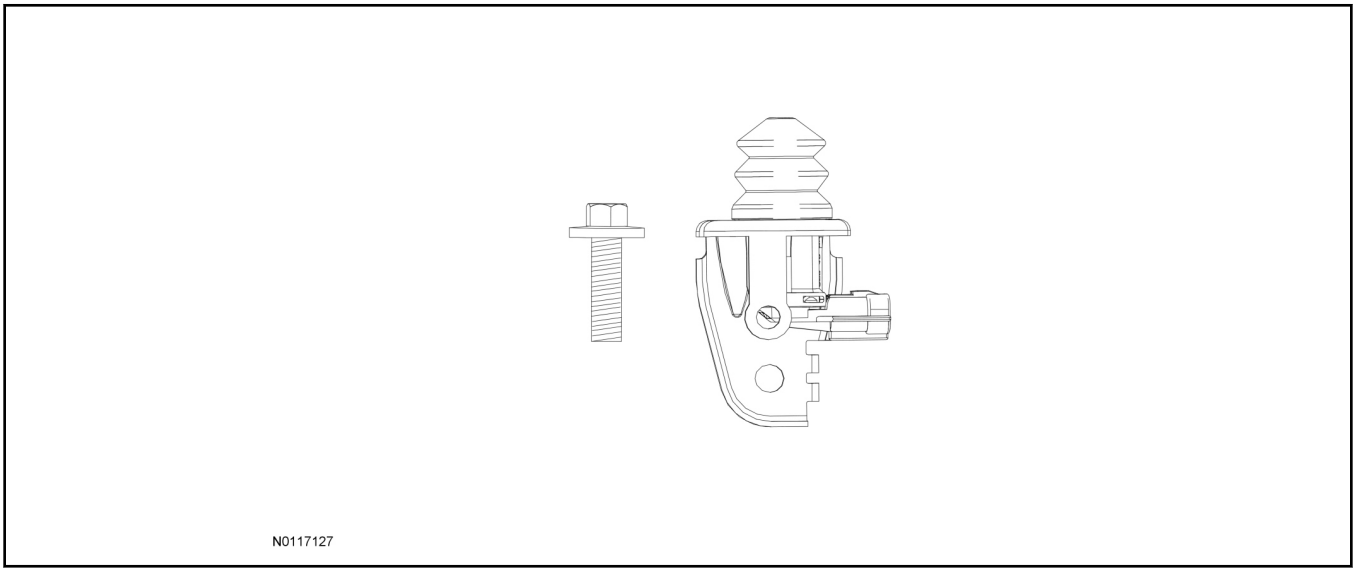
INSTALLATION

Remote Start — F-Super Duty

Remote Start System RMST Components



Hood switch Kit Components - Sold separately if needed



F-Super Duty

NOTE:

The OE Remote Start kit is only applicable on vehicles that have power locks.

1. Verify correct kit number.

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INSTALLATION (Continued)

Review Remote Start Installation Kit Contents

2. Review the RMST kit contents.

Remote Start System OE Kit (RMST)

QUANTITY	DESCRIPTION
2	**Key (4 Button)**
1	Antenna Jumper Wire
1	Antenna Module

Review Hood Switch Kit Contents

3. Review the Hood Switch kit contents.

Hood Switch OE Kit

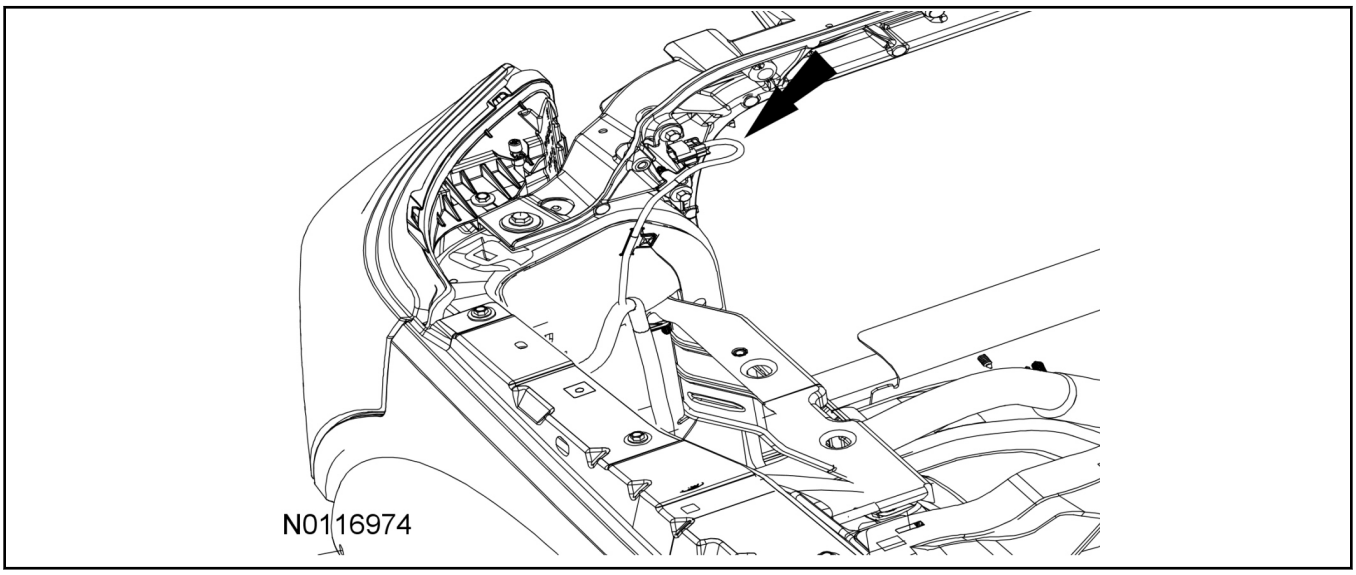
QUANTITY	DESCRIPTION
1	**Bolt**
1	Hood Switch Assembly

Vehicle preparation

4. Verify that a OE hood switch is installed.
   - If the vehicle is not equipped with a OE hood switch see hood switch installation in this procedure.

Hood Switch Installation

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



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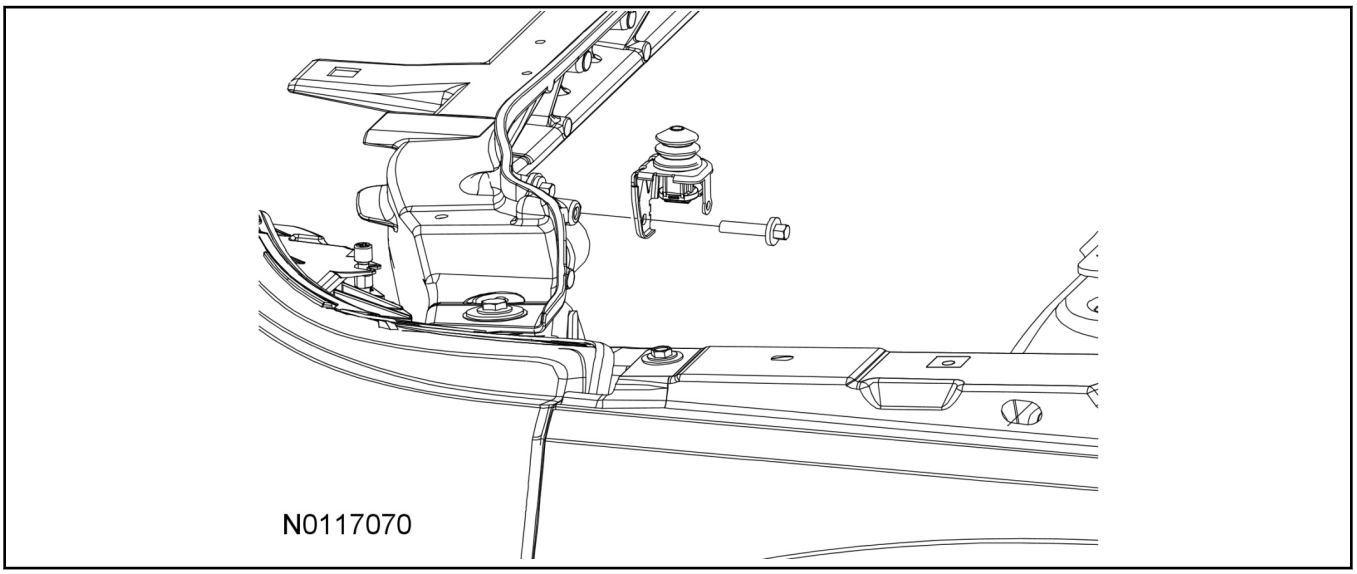
INSTALLATION (Continued)

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



7. Connect the electrical connector to the hood switch.
8. Install the hood switch wire harness push pin retainer to the hood switch bracket.

Spare Key Programming

NOTE:
The hood switch is required for remote start activation.

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.

9. Cut the provided 4-button keys, that are going to be programmed to match the existing keys.
10. 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).
11. Turn the first key to the OFF position and remove the key from the ignition.

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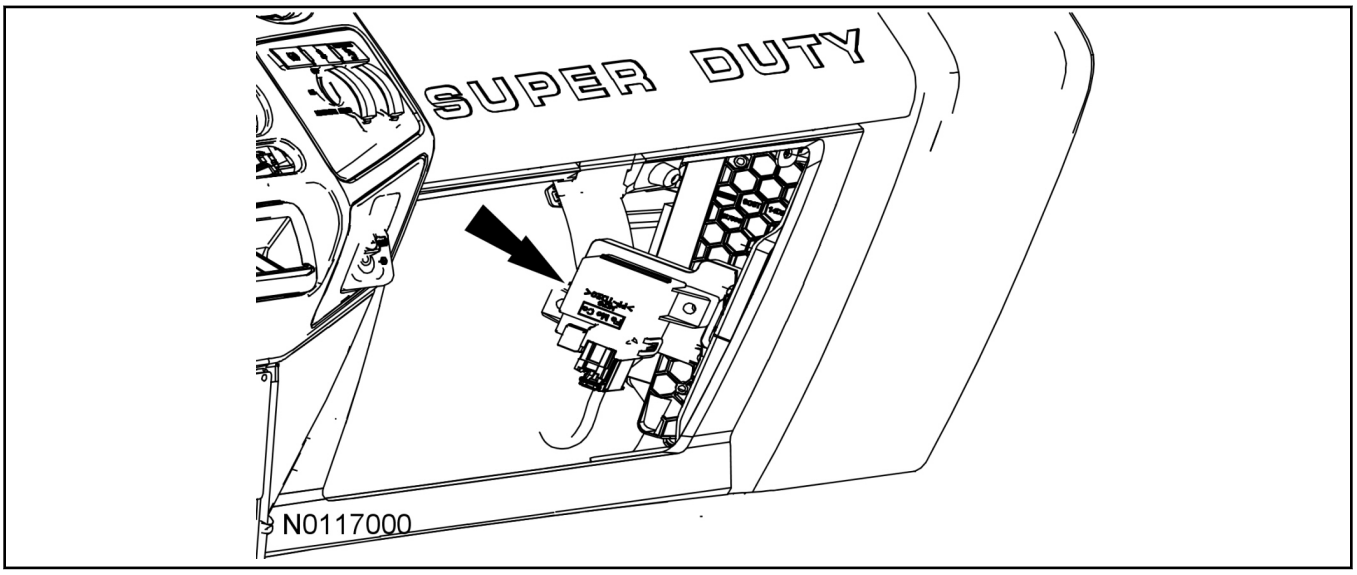
INSTALLATION (Continued)

12. 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).
13. Turn the second key to the OFF position and remove the key from the ignition.
14. 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).
15. **NOTE:**
    The doors lock and then unlock to confirm that each Integrated Key Transmitter (IKT) is programmed.

    If it is desired to program additional key(s) (up to a total of 4 keys can be programmed), repeat Steps 1 - 5 for each additional key.

Installation

16. Open the glove compartment and empty the contents.
17. Push in the 2 side tabs and fully lower the glove compartment.
18. Locate the TPM module.



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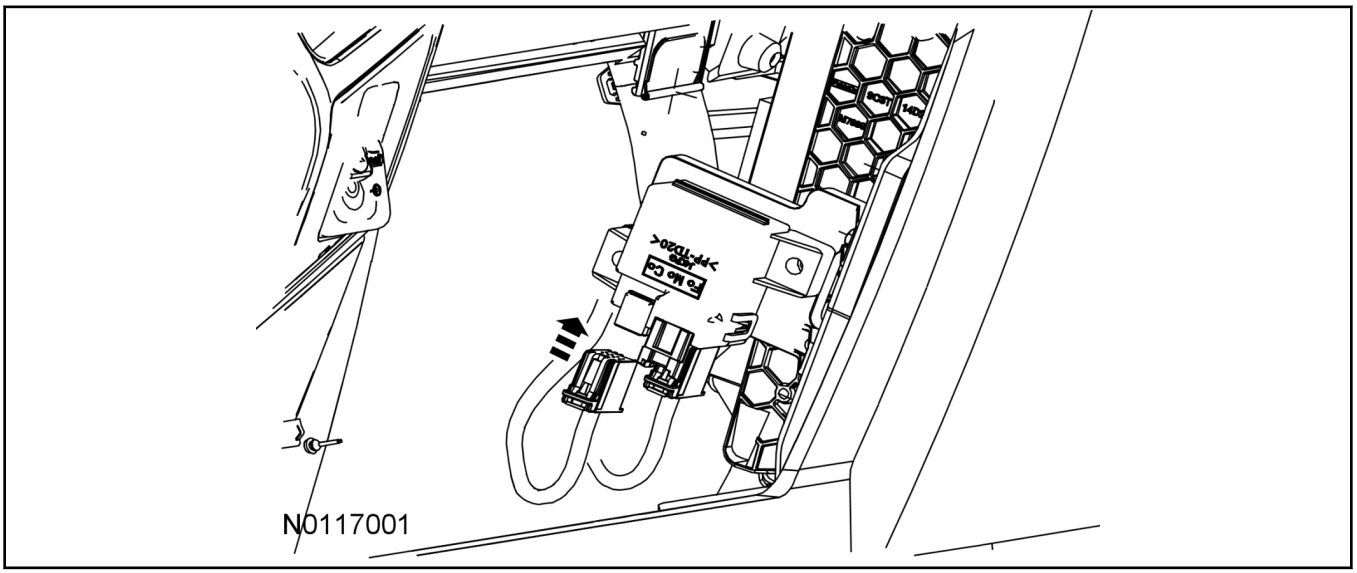
INSTALLATION (Continued)

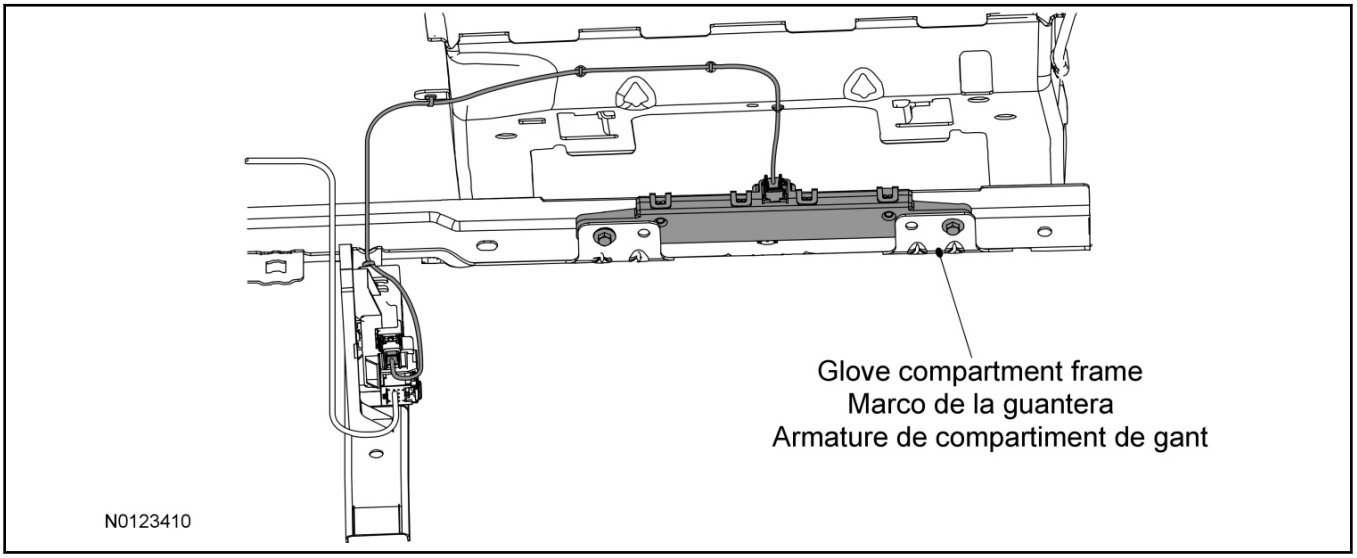
19. Connect the antenna jumper wire to the TPM module.



20. **NOTE:**
    View is from inside the instrument panel glove box area.

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

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



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

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INSTALLATION (Continued)

23. ***NOTICE:***
    While closing the glove compartment make sure that the antenna and antenna module do not come in contact with the glove compartment door.

    Close the glove compartment.

Remote Start Activation

24. Verify that the IDS is updated to the most current version.
25. Connect IDS.
    - Follow the prompts to select new vehicle session.
    - Enter VIN.
26. 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.
27. For vehicles equipped with standard message center, verify that the remote start option now appears.
    - Using the select button on the LH side of the steering wheel, cycle though the options and verify that the remote start option appears.
    - Select ok and verify that the remote start system is enabled.
28. For vehicles equipped with advanced message center, verify that the remote start option now appears.
    - Using the select and arrow buttons on the LH side of the steering wheel, select settings.
    - Select vehicle.
    - Select remote start.
    - Select system.
    - Verify that the remote start system is enabled.

Functional Test

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

29. Make sure the transmission is in "park" and the ignition is in the "OFF" position, remove all keys from the vehicle.
30. Close the hood.
31. Close all of the vehicle doors.

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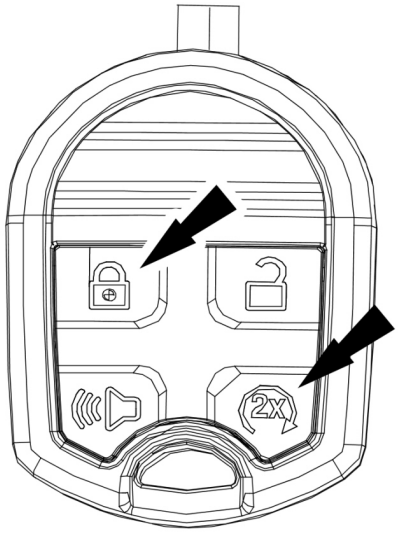
INSTALLATION (Continued)

32. **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.



33. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
34. Enter the vehicle and confirm that the vehicle shuts down when attempting to shift out of park.
35. Open the hood.
36. **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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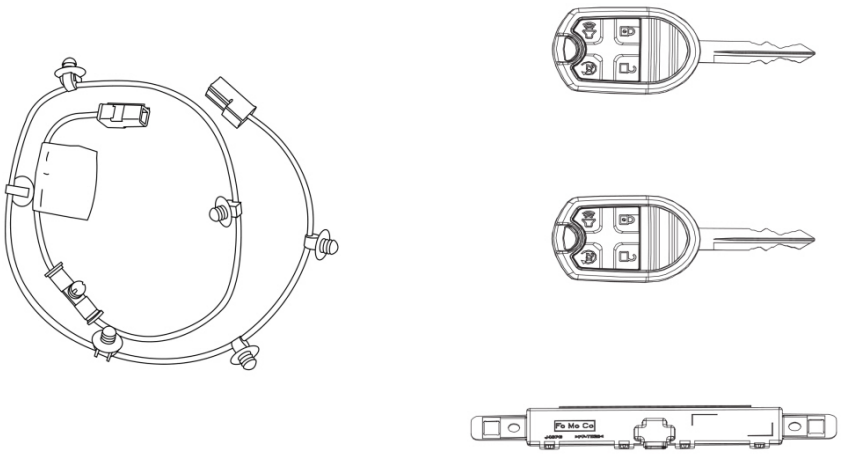
INSTALLATION

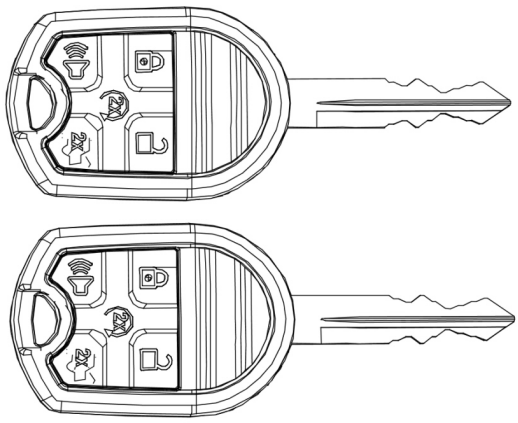
Remote Start

Vehicles Not Equipped with Power Liftgate - (4-Button) Remote Start System (RMST) Components



N0120141

Vehicles Equipped with Power Liftgate - (5-Button) RMST Components



N0149595

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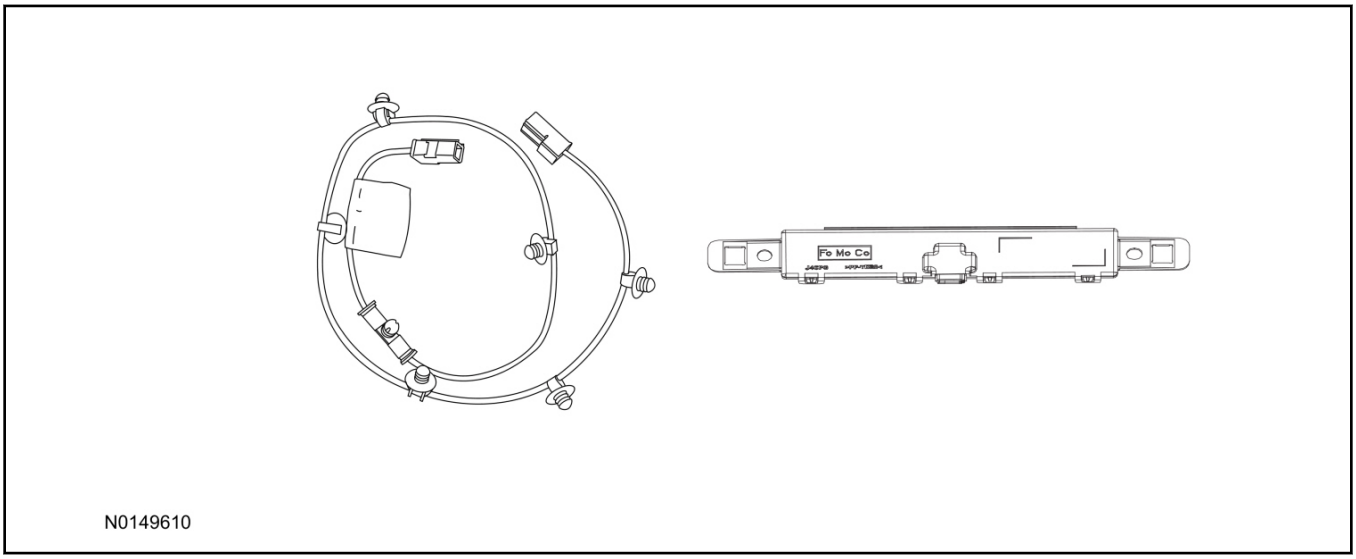
INSTALLATION (Continued)

Vehicles Equipped with Power Liftgate - Antenna Kit (15603 - Sold separately)



Flex - Key Start

NOTE:
If installing the 5-button kit, the antenna kit - 15603 will also need to be installed.

NOTE:
The OE RMST kit is only applicable on vehicles that have power locks.

1. Verify correct kit number.

Vehicles Not Equipped with Power Liftgate - RMST Installation Kit Contents

2. Review the RMST kit contents.

RMST Kit

QUANTITY	DESCRIPTION
2	Key (4 Button)
1	Antenna Jumper Wire
1	Antenna Module

Vehicles Equipped with Power Liftgate - RMST Installation Kit Contents

3. Review the RMST kit contents.

RMST Kit

QUANTITY	DESCRIPTION
2	Key (5 Button)

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INSTALLATION (Continued)

Antenna Kit Contents (Sold separately if needed)

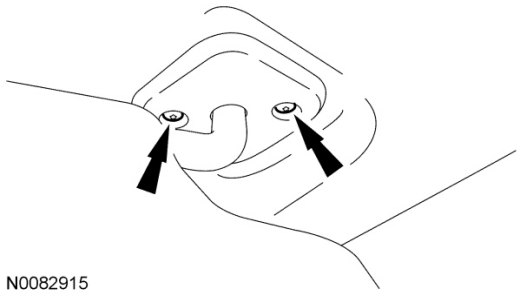
4. Review the Antenna Kit contents.

Antenna Kit

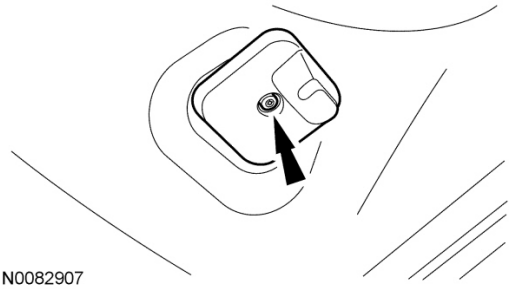
QUANTITY	DESCRIPTION
1	Antenna Jumper Wire
1	Antenna Module

Vehicle Preparation

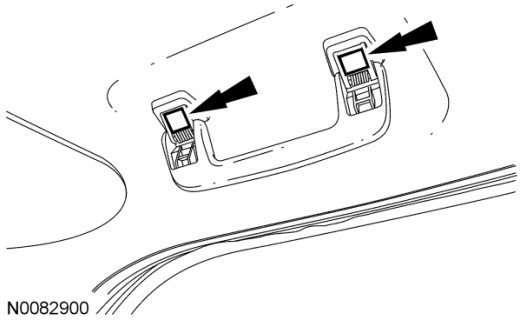
5. Remove the RH A-Pillar and RH B-pillar trim panels. For additional information, refer to WSM, Section 501-05.
6. If equipped, remove the DVD entertainment system. For additional information, refer to WSM, Section 415-00.
7. Remove the RH sun visor retainer screws and lower the RH sun visor.



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



9. Open the RH front assist handle screw covers.



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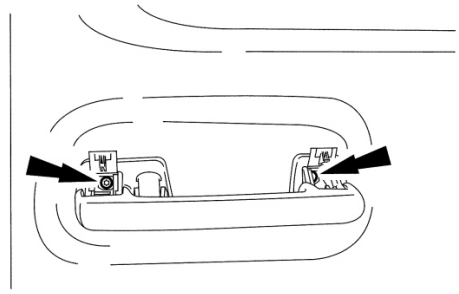
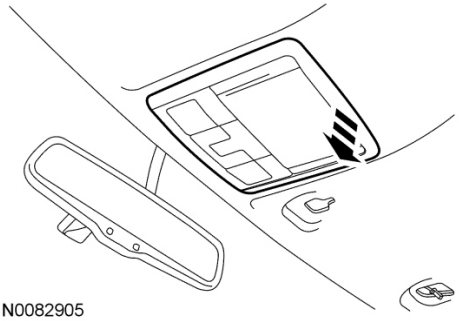
INSTALLATION (Continued)

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



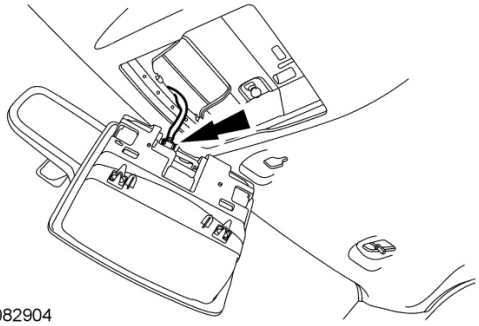
N0082924

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



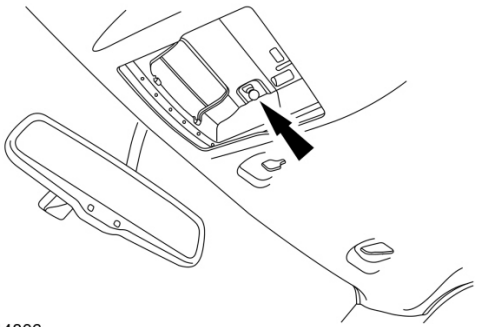
N0082905

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



N0082904

13. Remove the headliner push pin retainer.



N0144806

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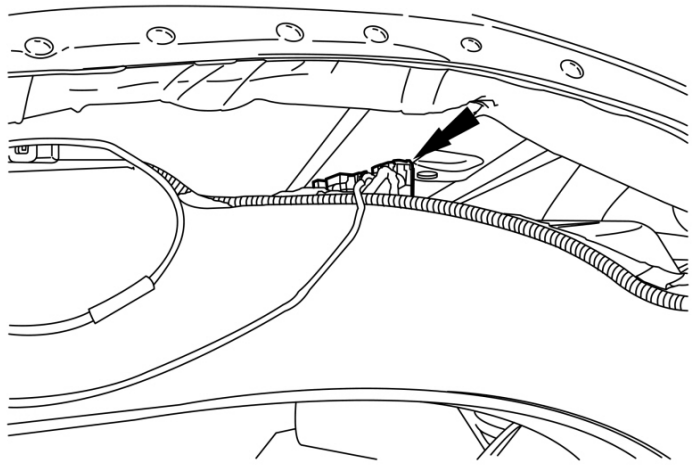
INSTALLATION (Continued)

14. ***NOTICE:***

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

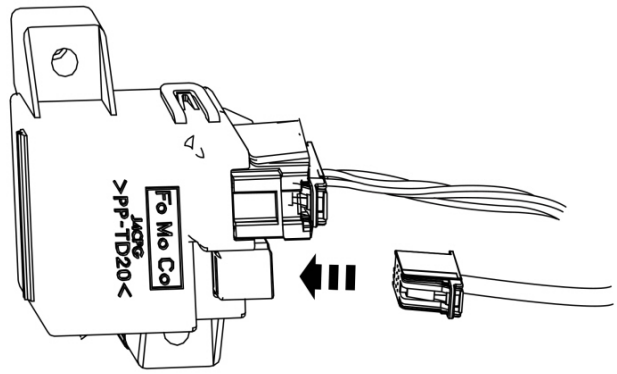
    Position the RH front portion of the headliner downward slightly to access the Tire Pressure Monitor (TPM) module.



N0144240

Antenna Module Installation

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



N0124234

16. Connect the antenna jumper wire connector to the antenna module.
    - The push pins on the antenna jumper wire are not used for this application.
17. **NOTE:**
    View is top of headliner.

    Secure the antenna module to the headliner using a suitable adhesive.
    - Alternatively 2-sided tape may be used to secure the antenna module to the headliner.

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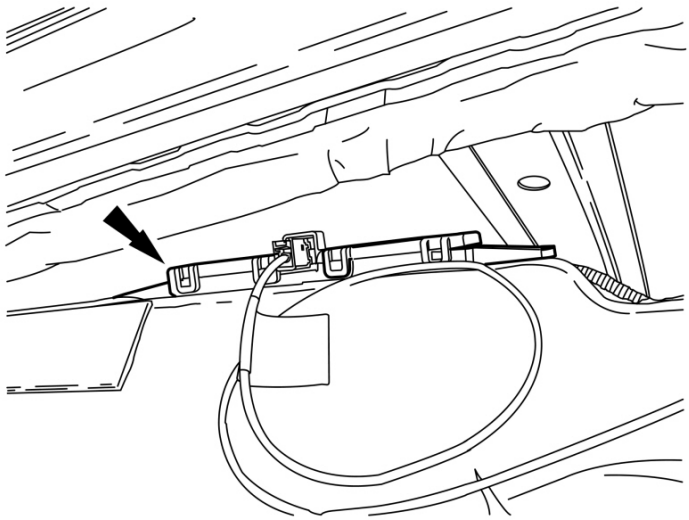
INSTALLATION (Continued)


N0144241

Install Trim

18. Install the headliner push pin retainer.
19. Connect the overhead console electrical connector(s) and install the overhead console.
20. Install the RH front assist handle and screws.
    - If equipped, connect the assist handle lamp electrical connector.
21. Close the assist handle screw covers.
22. Install the sun visor clips and the sun visor clip retainer screws.
23. Position the RH sun visor and install the retainer screws.
24. Install the RH A-Pillar and RH B-pillar trim panels. For additional information, refer to WSM, Section 501-05.
25. If equipped, install the DVD entertainment system. For additional information, refer to WSM, Section 415-00.

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)

26. Cut the keys that are going to be programmed to match the existing keys.
27. 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).
28. Turn the first key to the OFF position and remove the key from the ignition.
29. 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).
30. Turn the second key to the OFF position and remove the key from the ignition.
31. **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).
32. 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

33. Verify that the IDS is updated to the most current version.
34. Connect IDS.
    - Follow the prompts to select new vehicle session.
    - Enter VIN.
35. 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.
36. 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)

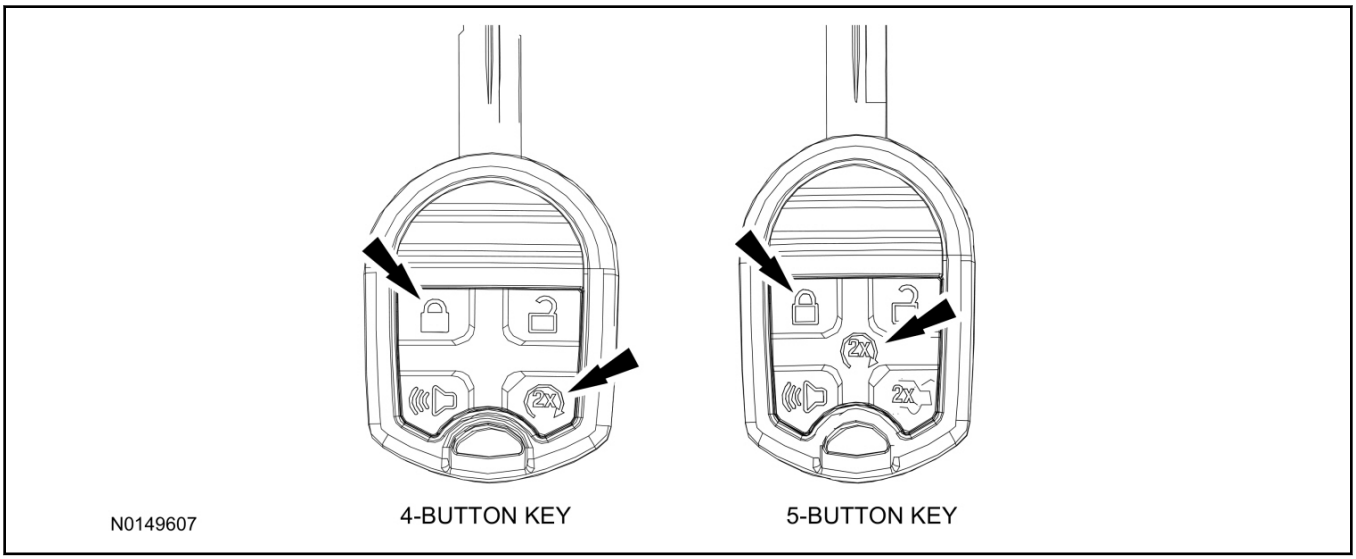
37. For vehicles equipped with advanced message center, verify that the remote start option now appears.
    - Using the Select and Arrow buttons on the steering wheel, select Settings.
    - Select Vehicle Settings.
    - Select Vehicle.
    - Select Remote Start System.
    - Verify that the remote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

Functional Test

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

38. Make sure the shift level is in park and the ignition is in the off position. Remove all keys from the vehicle.
39. Close the hood.
40. Close all of the vehicle doors.
41. **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.



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INSTALLATION (Continued)

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

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

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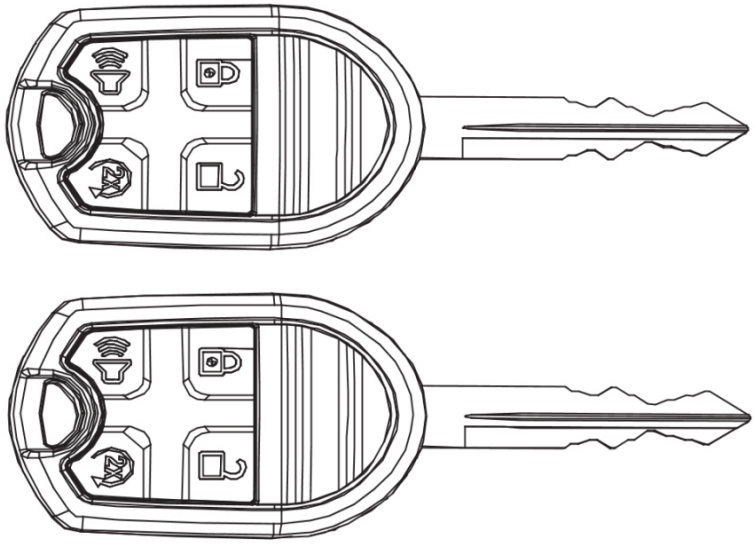
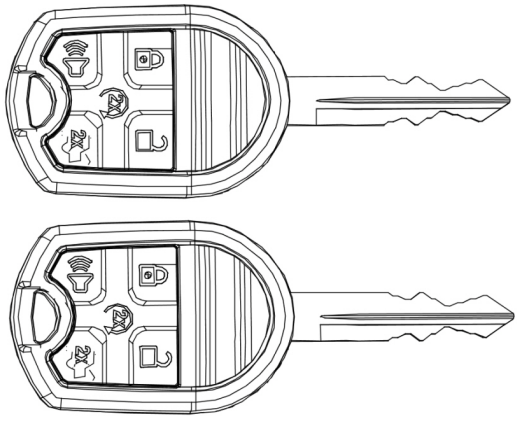
Remote Start - Expedition

Vehicles Not Equipped with Power Liftgate - (4-Button) Remote Start System (RMST) Components



N0149596

Vehicles Equipped with Power Liftgate - (5-Button) RMST Components



N0149595

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INSTALLATION (Continued)

Expedition - Key Start

NOTE:

The OE RMST kit is only applicable on vehicles that have power locks and remote keyless entry.

1. Verify correct kit number.

Vehicles Not Equipped with Power Liftgate - RMST Installation Kit Contents

2. Review the RMST kit contents.

RMST Kit

QUANTITY	DESCRIPTION
2	Key (4 Button)

Vehicles Equipped with Power Liftgate - RMST Installation Kit Contents

3. Review the RMST kit contents.

RMST Kit

QUANTITY	DESCRIPTION
2	Key (5 Button)

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.

4. Cut the keys that are going to be programmed to match the existing keys.
5. 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).
6. Turn the first key to the OFF position and remove the key from the ignition.
7. 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).
8. Turn the second key to the OFF position and remove the key from the ignition.

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INSTALLATION (Continued)

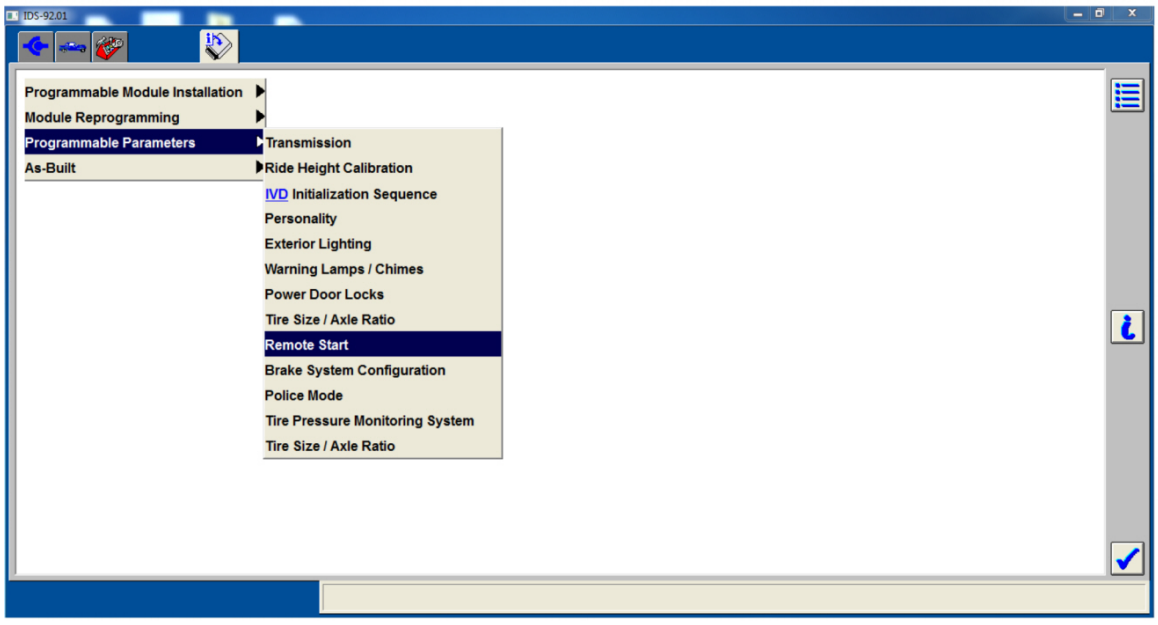
9. Within 10 seconds of turning the second key to the OFF position, insert the new, unprogrammed PATS key into the ignition and turn the key from the OFF position to the RUN position (maintain the key in the RUN position for approximately 3 seconds).

   NOTE:
   The doors lock and then unlock to confirm that each Integrated Key Transmitter (IKT) is programmed.

10. 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.

RMST Activation - Key Start Only

11. Verify that the IDS is updated to the most current version.
12. Connect IDS.
    - Follow the prompts to select new vehicle session.
    - Verify VIN.
13. Activate the remote start using the IDS.
    - Select the Tool Box icon.
    - Select Programmable Parameters.
    - Select Remote Start.



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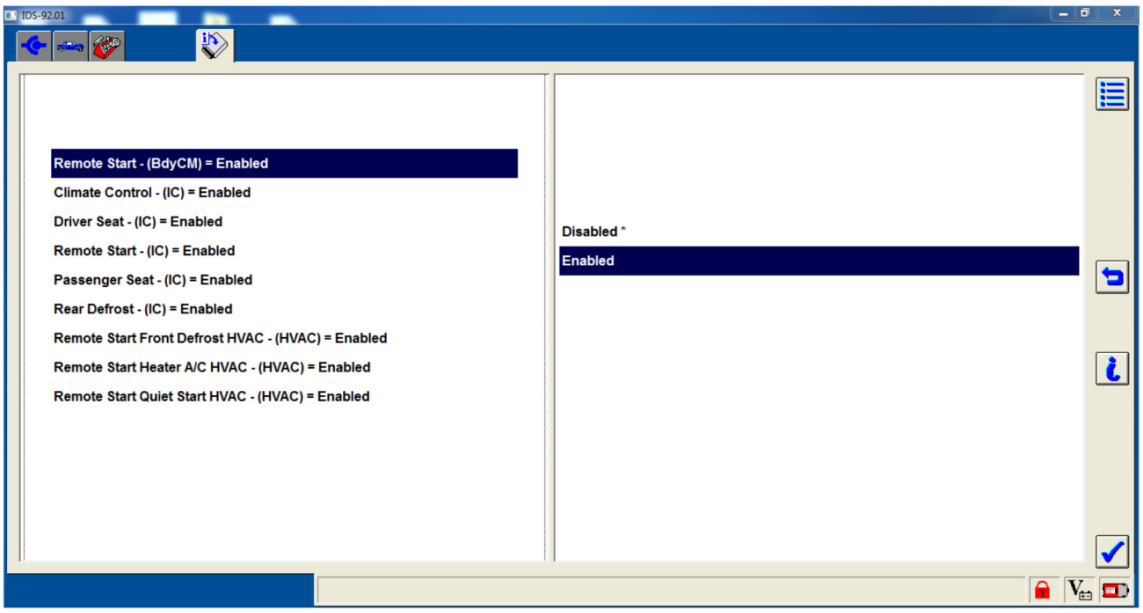
INSTALLATION (Continued)

14. Verify that the instructions on the IDS screen have been completed and continue until you reach the screen below.

    - From this screen, you must select the feature and then select the "Enabled" text (to the right) for these items:
        - Remote Start - (BdyCM)
        - Climate Control - (IC)
        - Driver Seat - (IC)
        - Remote Start (IC)
        - Passenger Seat - (IC)
        - Rear Defrost - (IC)
        - Remote Start Front Defrost - (HVAC)
        - Remote Start Heater A/C HVAC - (HVAC)
        - Remote Start Quiet Start HVAC - (HVAC)
    - Once all appropriate items have been enabled, select the Tick button to direct IDS to enable the remote start option on the vehicle.



N0163477

15. **NOTE:**
    For Expedition vehicles that have the single display instrument cluster the remote start menus will not be available.

    For vehicles equipped with standard message center, verify that the remote start option now appears.

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INSTALLATION (Continued)

- 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.

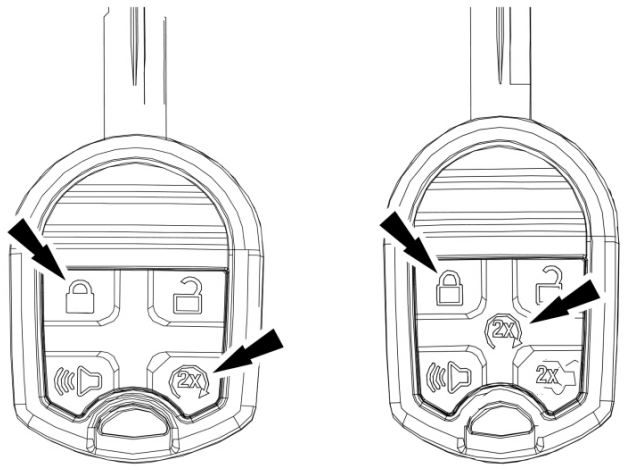
16. For vehicles equipped with advanced message center, verify that the remote start option now appears.
    - Using the Select and Arrow buttons on the steering wheel, select Settings.
    - Select Vehicle Settings.
    - Select Vehicle.
    - Select Remote Start System.
    - Verify that the remote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

Functional Test

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

17. Make sure the shift level is in park and the ignition is in the off position. Remove all keys from the vehicle.
18. Close the hood.
19. Close all of the vehicle doors.
20. **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.



N0149607 4-BUTTON KEY 5-BUTTON KEY

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INSTALLATION (Continued)

21. Confirm the remote start works with the vehicle in park and with the hood and doors closed.
22. Enter the vehicle and confirm that the vehicle shuts down when attempting to shift out of park.
23. Open the hood.
24. **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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