Splicing Procedures

NOTE:
Refer to applicable wiring diagrams for circuit information.

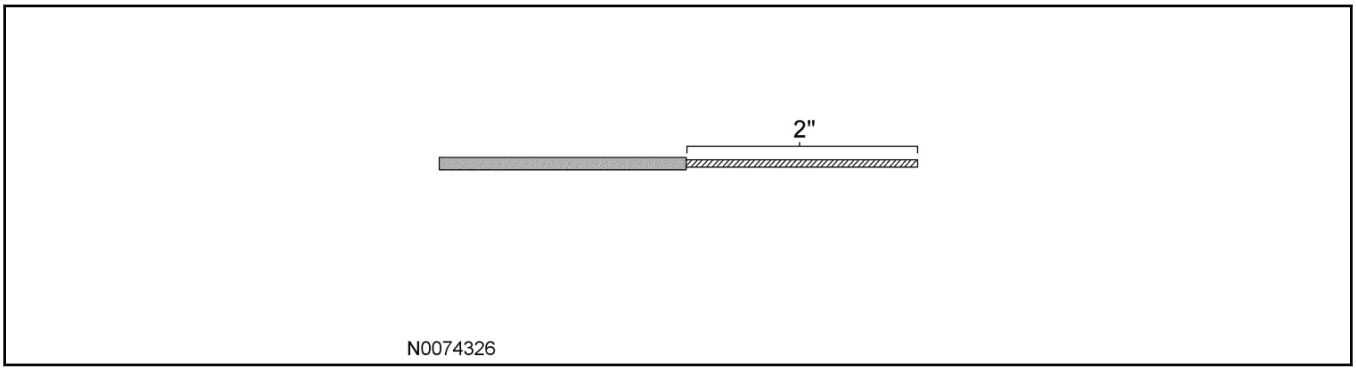
NOTE:
This procedure contains multiple splicing techniques.

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

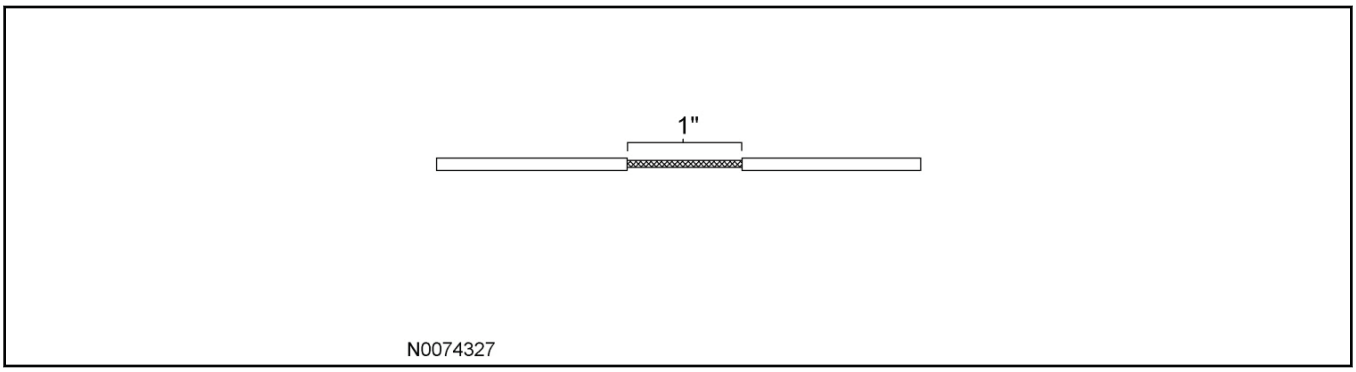
2-Wire Solder "Center Splice" With No Wire Cutting

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

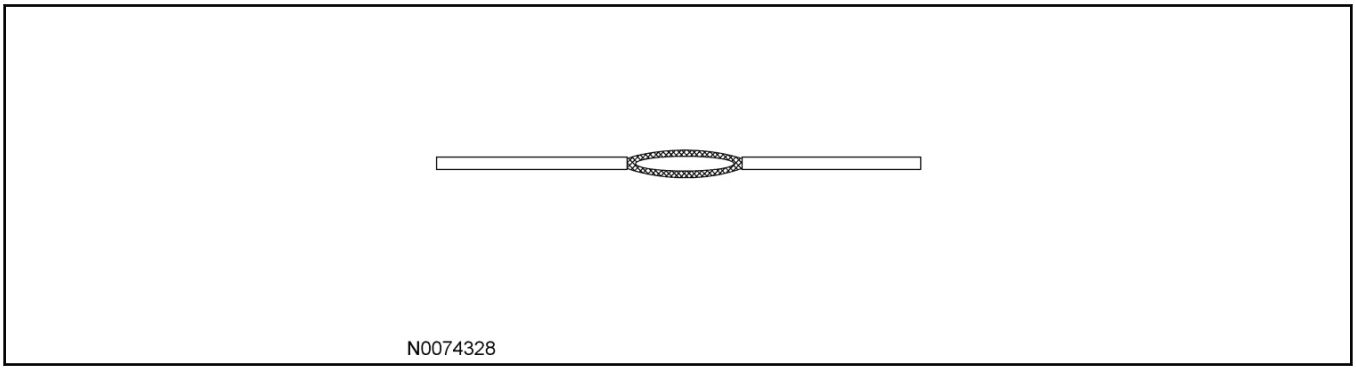
1. Strip approximately two inches of insulation from the wire to be installed in the vehicle.



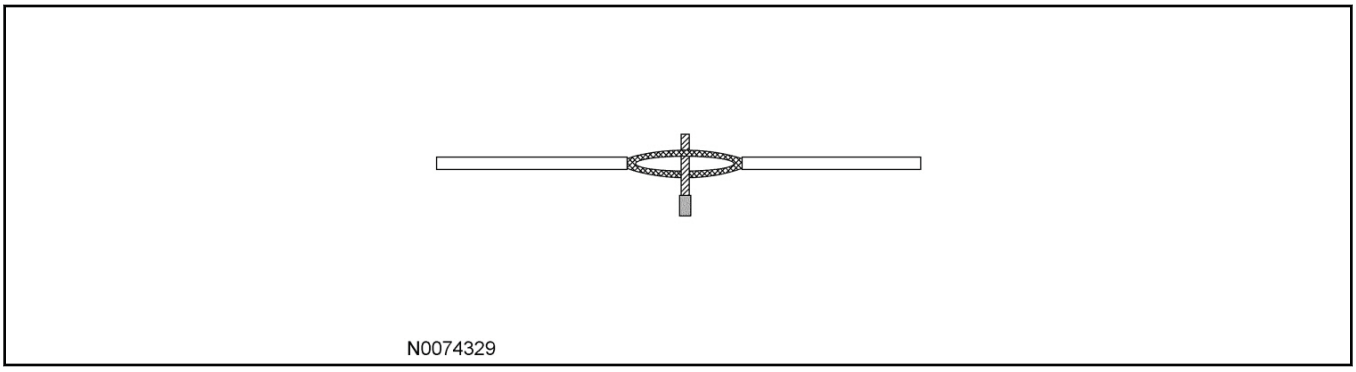
2. On the vehicle wire to be spliced into, strip one inch of insulation from the wire.



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



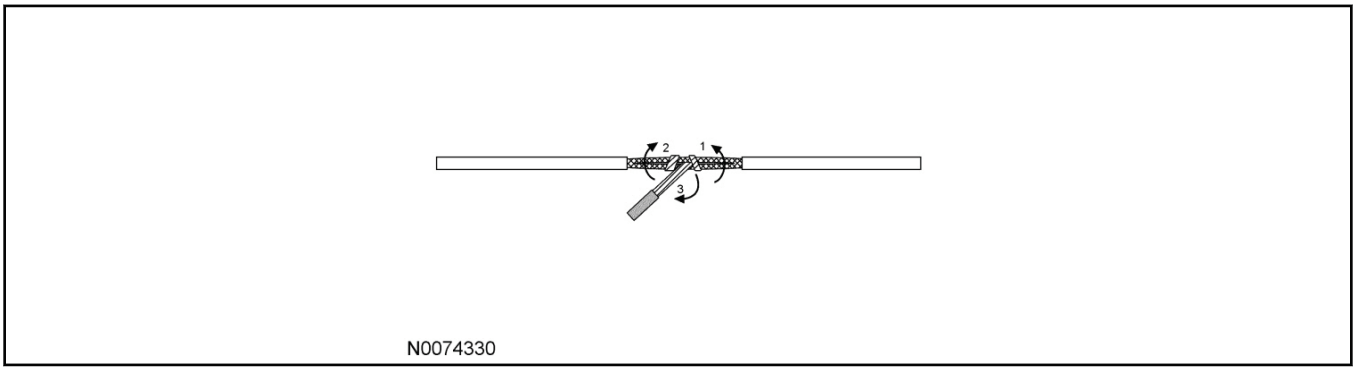
4. Insert the new wire between the parted strands. If more than one wire is being spliced, wrap them in opposite directions.



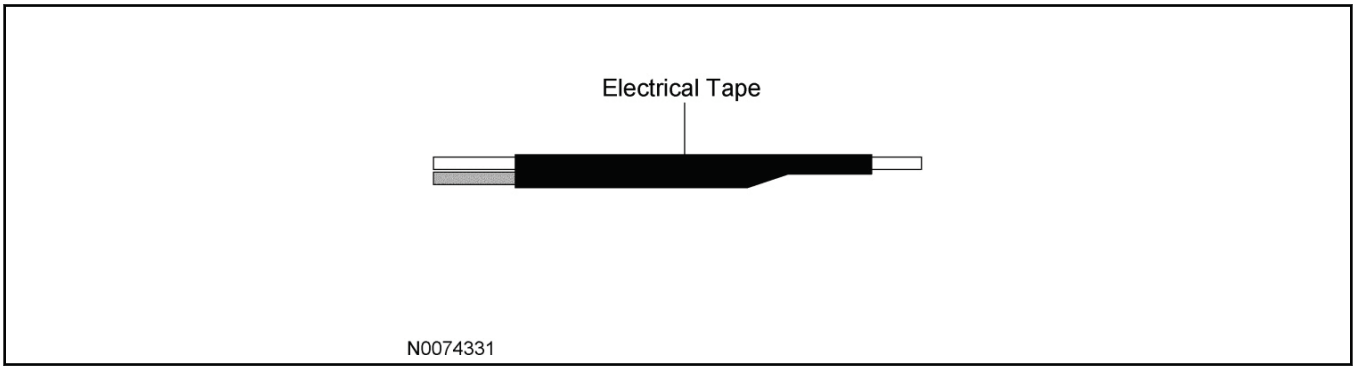
NOTE:
Use Rosin Core Mildly-Activated (RMA) Solder. Do not use Acid Core Solder.

NOTE:
Wait for solder to cool before moving wires.

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



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



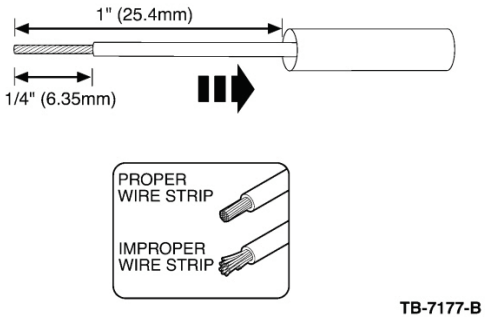
2-Wire Solder Splice/Ratcheting Crimp Tool Splice Procedure

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

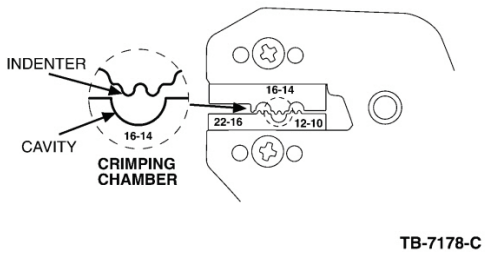
NOTE:
For Splicing Procedure Use Wire Splice Tool Kit (164-R5903).

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

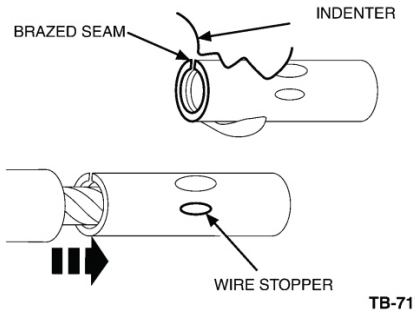
   Strip 1/4" (6.35 mm) of insulation from pigtail wire end once the wire lengths are sized so repairs can be staggered. Take care not to nick or cut wire strands. Pull wire straight from stripper. If wire is pulled at an angle, wire strands may be cut off. If more than one (1) strand is cut off during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



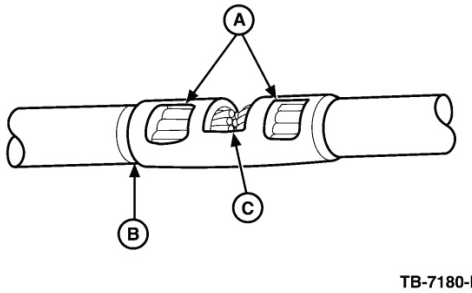
8. Identify the appropriate crimping chamber of the Rotunda 164-R5901 Pro-Crimper (or equivalent) by matching the wire size on the dies with the wire size stamped on the butt splice. Hold the crimping tool so the identified wire sizes are facing you. Squeeze tool handles together until the ratchet releases,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



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



10. Holding the wire in place, squeeze tool handles together until ratchet releases. Allow tool handles to open, then remove crimped butt splice.
    To crimp the other half of the splice, reposition the un-crimped wire barrel in the same crimping chamber, and repeat the crimping procedure. If splice cannot be turned for crimping the other half, turn the tool around.
    Check for acceptable crimp.
    - Crimp should be centered on each end of the butt splice. It is acceptable for crimp to be slightly off center, but not off the end of the butt splice (A).
    - Wire insulation does not enter butt splice. Wire is flush with or extends slightly beyond end of butt splice (B).
    - Wire is visible through inspection hole of splices (C).

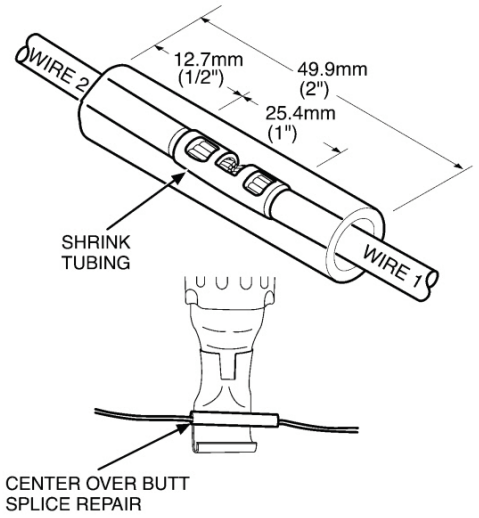


11. **NOTE:**
    Overlap heat shrink tubing on both wires.

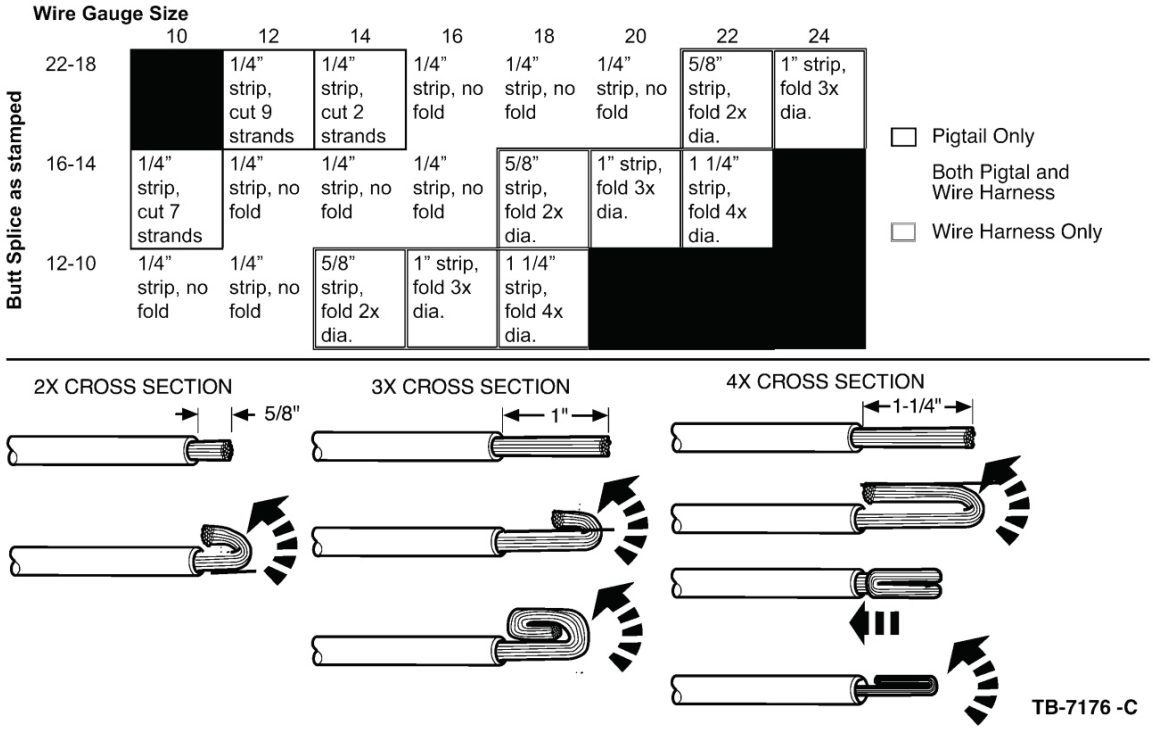
    NOTE:
    The hot melt forms an adhesive seal between the wire insulation and the heat shrink tubing, which prevents air and moisture from entering the solder point.

    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.

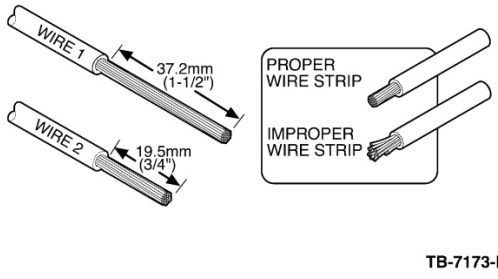


Wire Stripping Lengths and Application Techniques.



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.



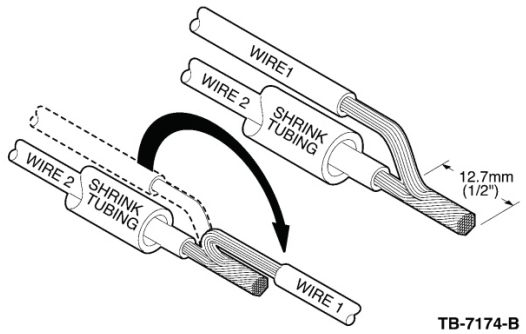
13. **NOTE:**
Use rosin core mildly activated (RMS) solder. do not use acid core solder for wire repair.

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.

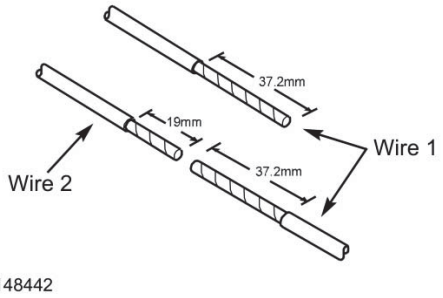
NOTE:
The hot melt forms an adhesive seal between the wire insulation and the heat shrink tubing, which prevents air and moisture from entering the solder point.

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.



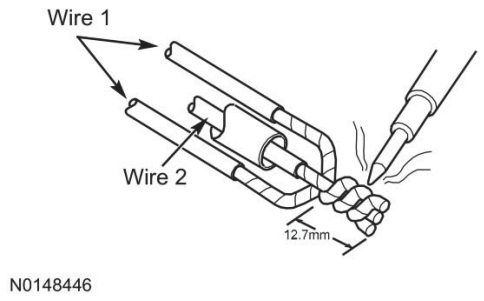
3-Wire Solder Splice Procedure

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.

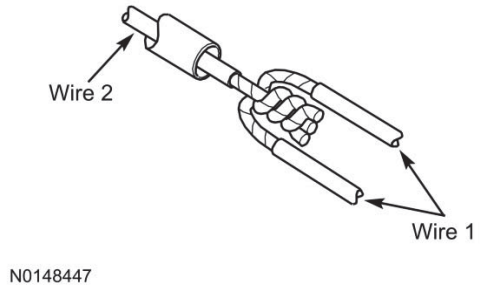


15. **NOTE:**
    Wait for solder to cool before moving wires.

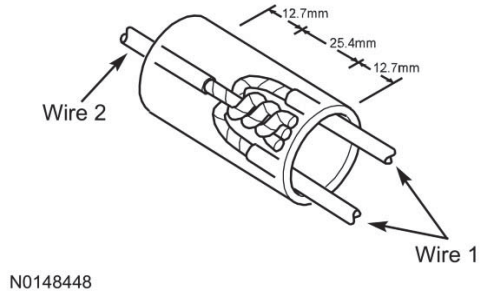
    Apply heat shrink tubing to Wire #2. Twist both ends of Wire #1 around Wire #2. Solder wires together.



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



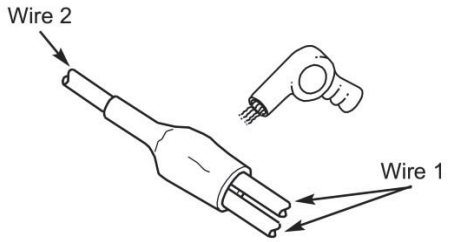
17. Evenly position heat shrink tubing over wire repair.



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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TRAILER TOW

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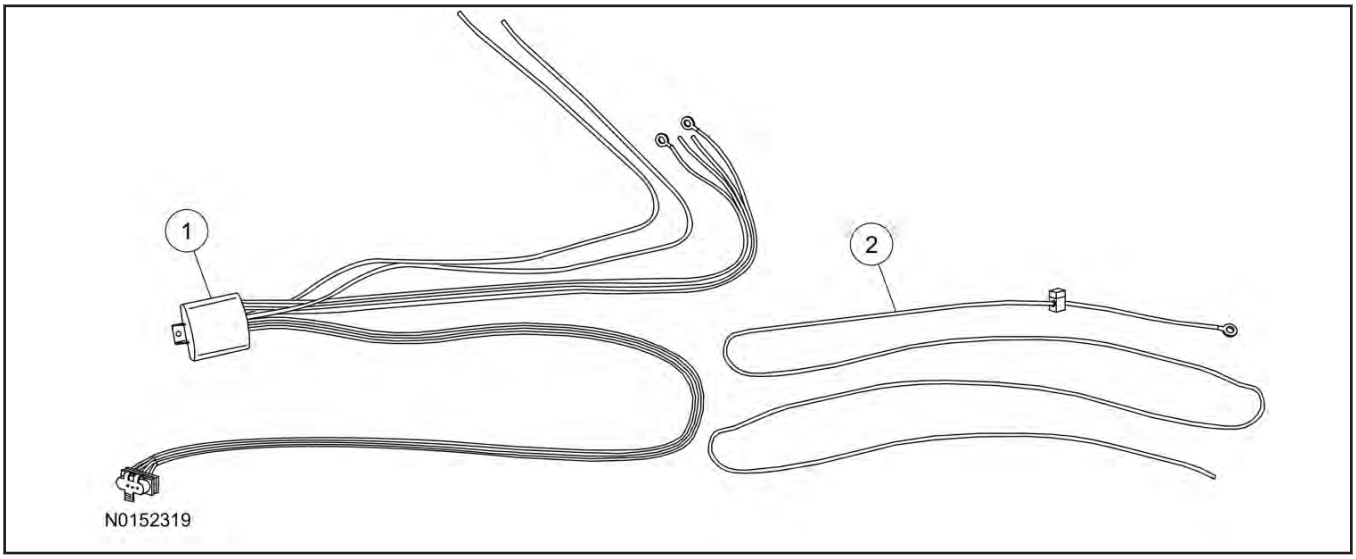


MKC

1. Verify correct kit number.

Review Trailer Tow Installation Kit Contents

2. Review Trailer Tow Installation Kit Contents

Trailer Tow Installation Kit

ITEM	QUANTITY	DESCRIPTION
1	1	Trailer Tow Converter Harness Assembly
2	1	Power Cable with In-Line Fuse
—	7	Foam Pad (Not Shown)
—	14	Tie Straps (Not Shown)
—	60"	Convoluted Tubing (Not Shown)
—	6	Hitch Wire Retainer Tie Straps (Not Shown)
—	1	Fuse - 15A (Not Shown)

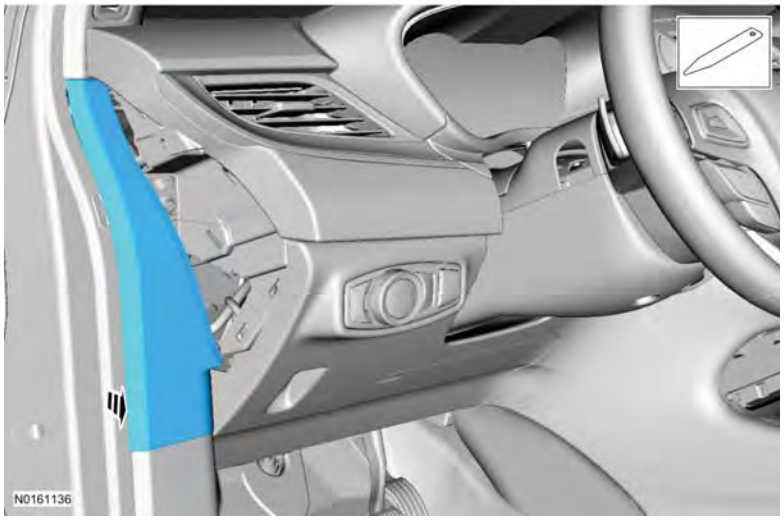
Vehicle Preparation

3. Remove the battery tray. For additional information, refer to Workshop Manual (WSM) Section 414-01.
4. Remove the LH lower B-pillar trim panel. For additional information, refer to WSM Section 501-05.
5. Position aside the LH side front door weather strip.

INSTALLATION (Continued)

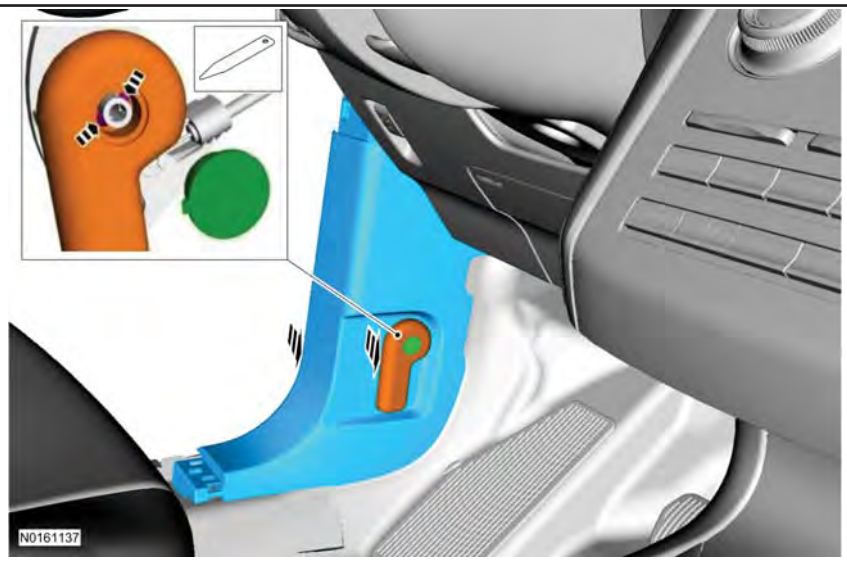
6. Remove the Instrument Panel (IP) LH finish panel.

7. Remove the IP LH trim panel.



8. Remove the hood release lever and the LH lower cowl trim panel.
   - To Install tighten to 2.6 Nm

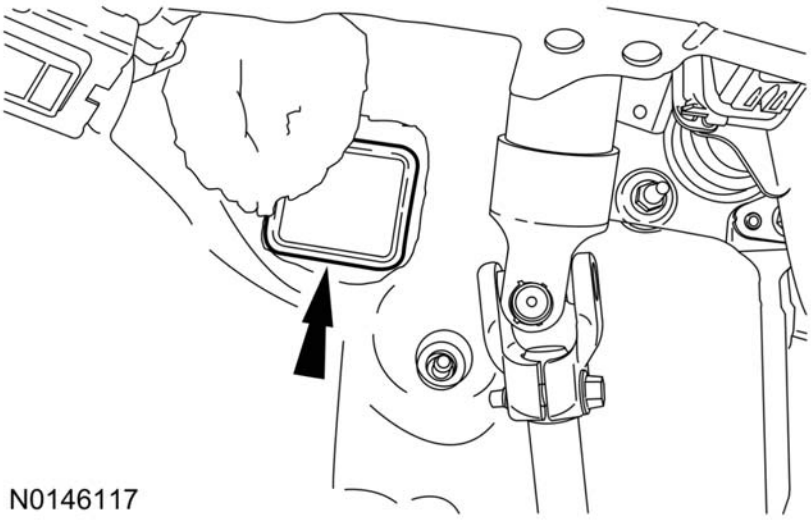
INSTALLATION (Continued)



9. Remove the RH and LH loadspace trim panels. For additional information, refer to WSM Section 501-05.
10. Remove the LH C-pillar trim panel. For additional information, refer to WSM Section 501-05.

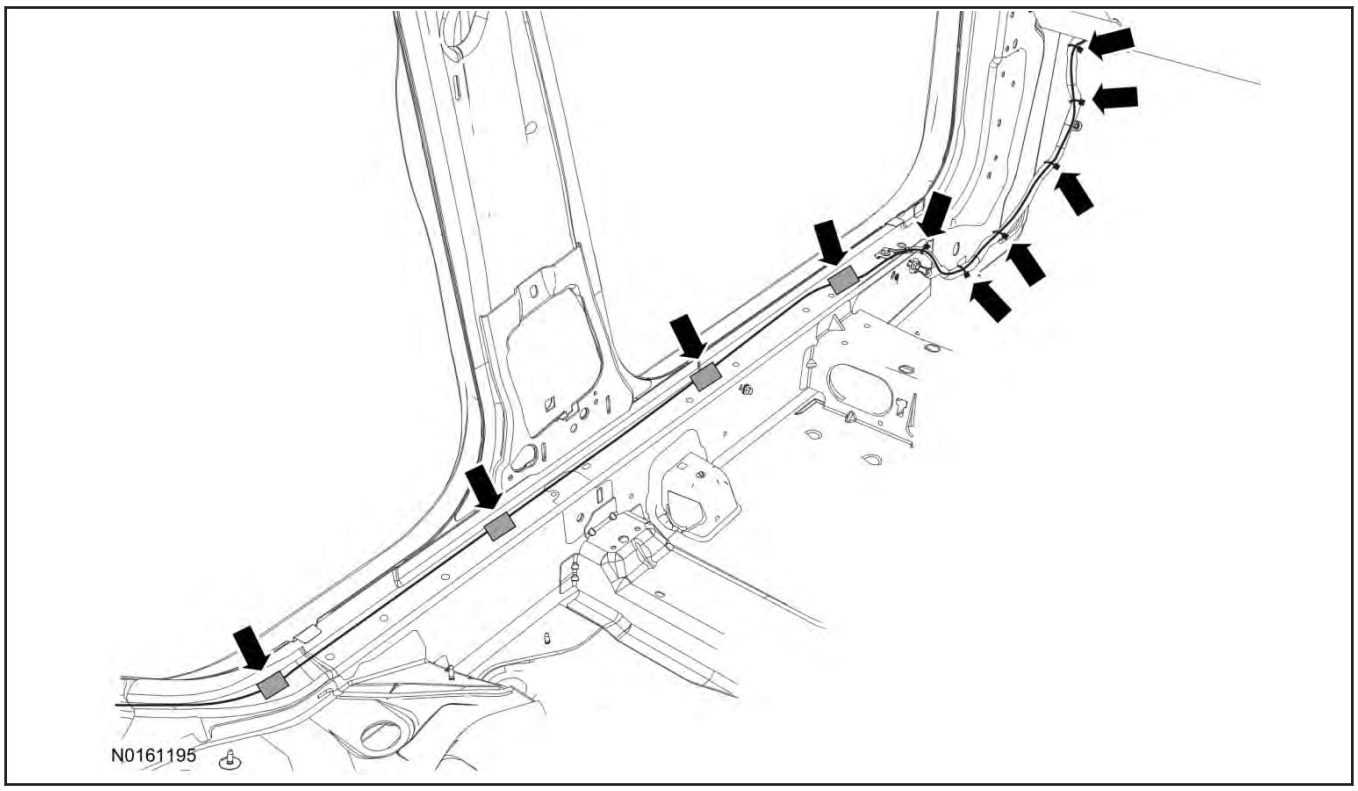
Route Power Wire

11. Position aside the carpet and locate the bulkhead plug located to the left of the steering column.

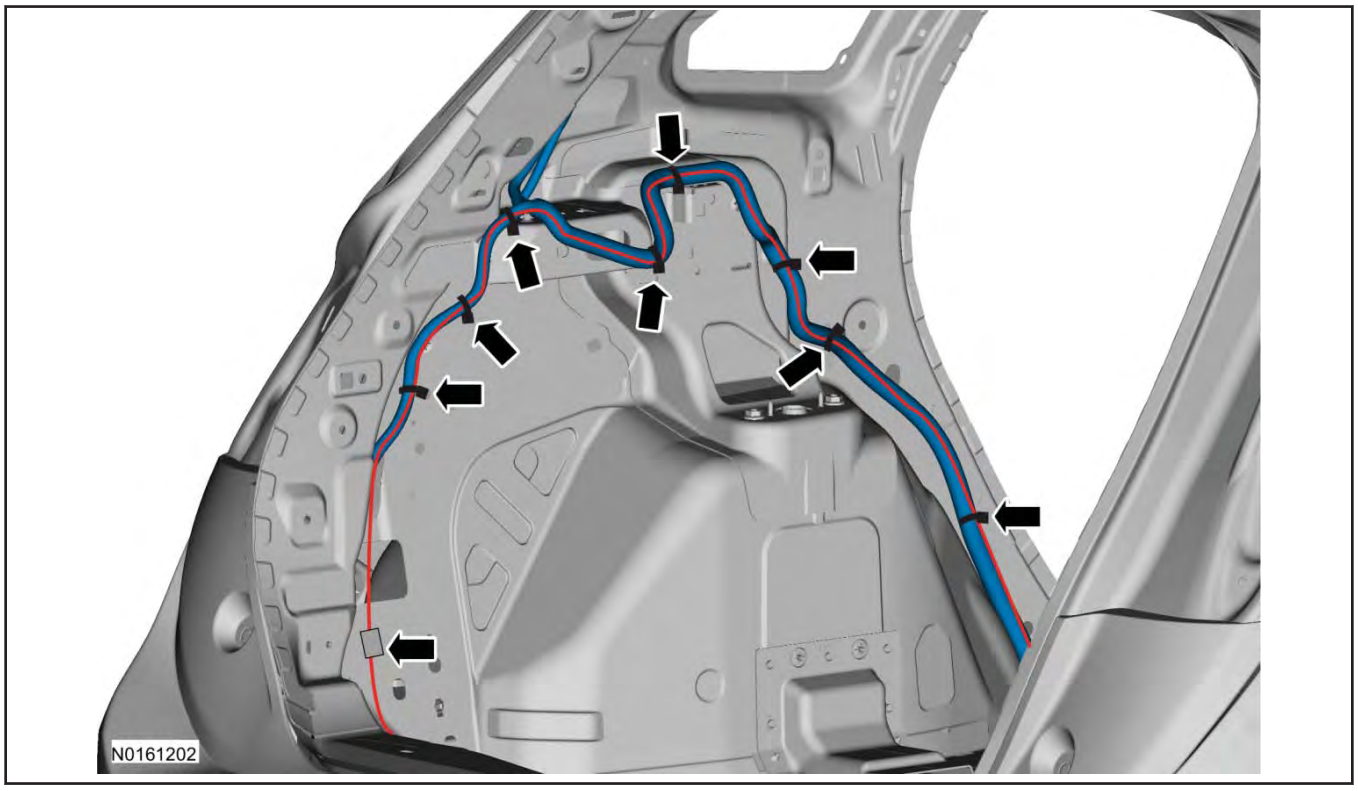


12. Cut the bulkhead plug and route the Red power wire from the engine compartment, through the plug and to the LH side of the vehicle and to the cargo area.
    - The Red power wire will be routed along the RH side of the battery tray (once installed).
    - Use supplied tie straps and foam pads to secure power cable to the interior vehicle harness and floor pan.
    - Seal the bulkhead plug at the cut slit, with a suitable silicone sealer.

INSTALLATION (Continued)



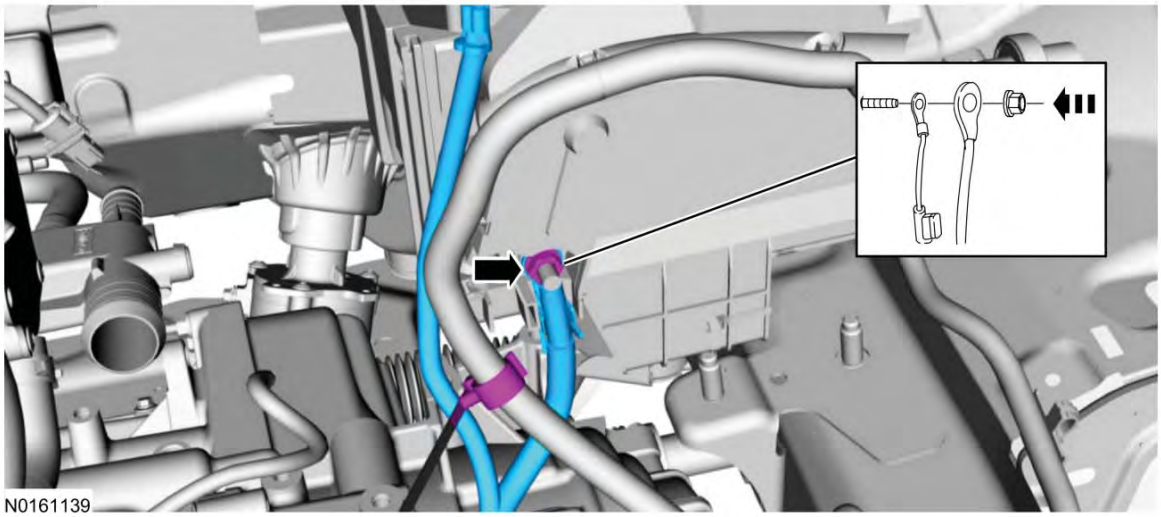
13. Secure the Red power wire to the rear quarter panel vehicle harness.



14. Install the battery tray. For additional information, refer to WSM Section 414-01.
    - Do not connect the battery cable to ground at this time.

INSTALLATION (Continued)

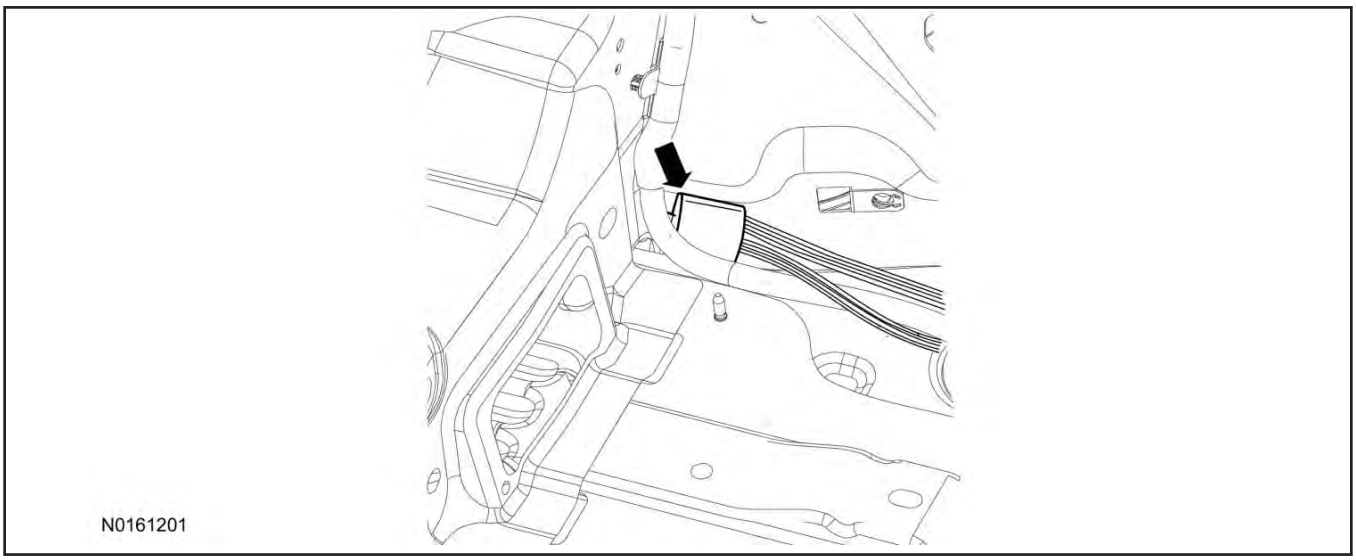
15. Connect the Red power wire to the RH battery power terminal.
    1 Remove the nut from the buss bar located below the battery and remove the cable.
    2 Install the power wire onto the buss bar stud.
    3 Install the battery cable and nut.
    4 Tighten to 6 Nm.



16. Connect the battery cable to ground. For additional information, refer to WSM Section 414-01.

Install the Trailer Tow Converter Harness Assembly

17. Remove the protective cover on the 2 sided tape and install the trailer tow converter module onto the LH rear quarter panel.

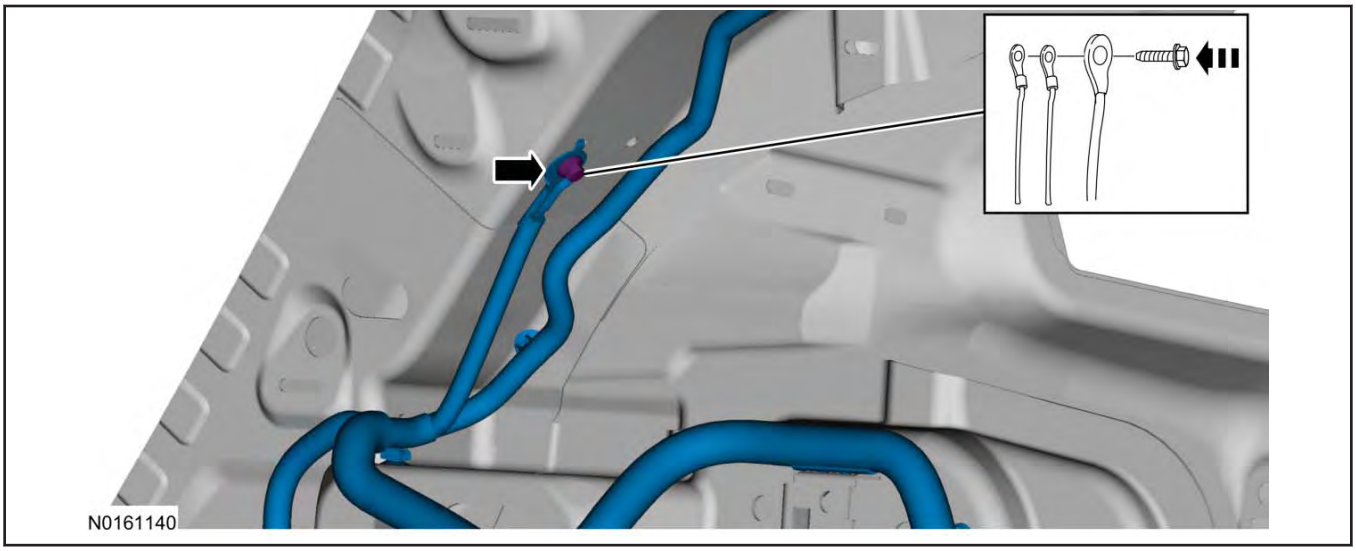


INSTALLATION (Continued)

Identify Circuit Wires For Connections

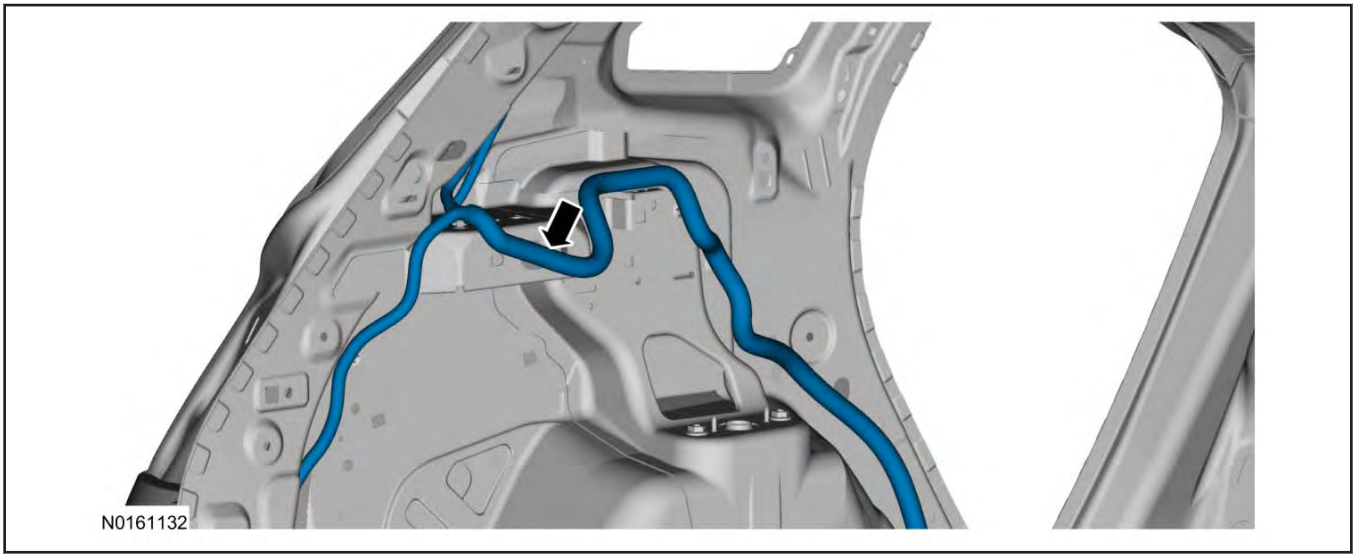
NOTE:
Refer to "Proper Wire Splicing Techniques" prior to proceeding.

18. Connect the Black "Ground" wire and the Blue "Stop" wire from the control module to one of the ground screws located on the LH quarter panel.



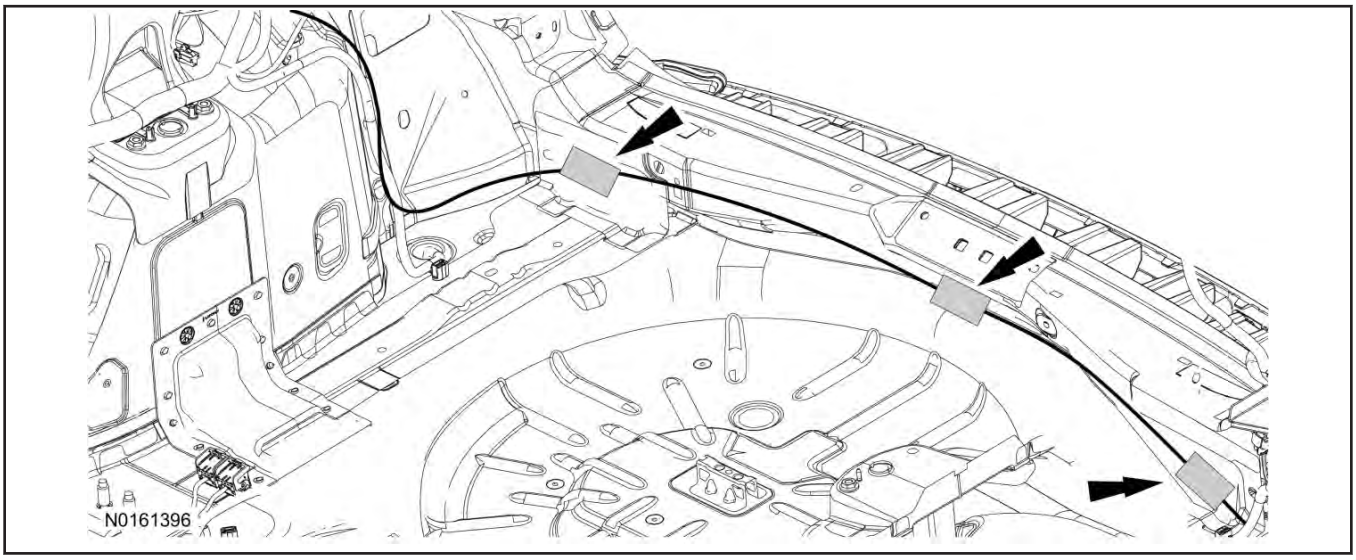
19. **NOTE:**
    LH shown, RH similar.

    Locate the LH and RH rear wire harness, where the control module harness connections will be made.



INSTALLATION (Continued)

20. Route the green wire from the control module along the rear floor pan and up to the passenger side rear wire harness.
    - Install tape pads at 3 locations equally spaced to secure the wire to the vehicle floor pan.

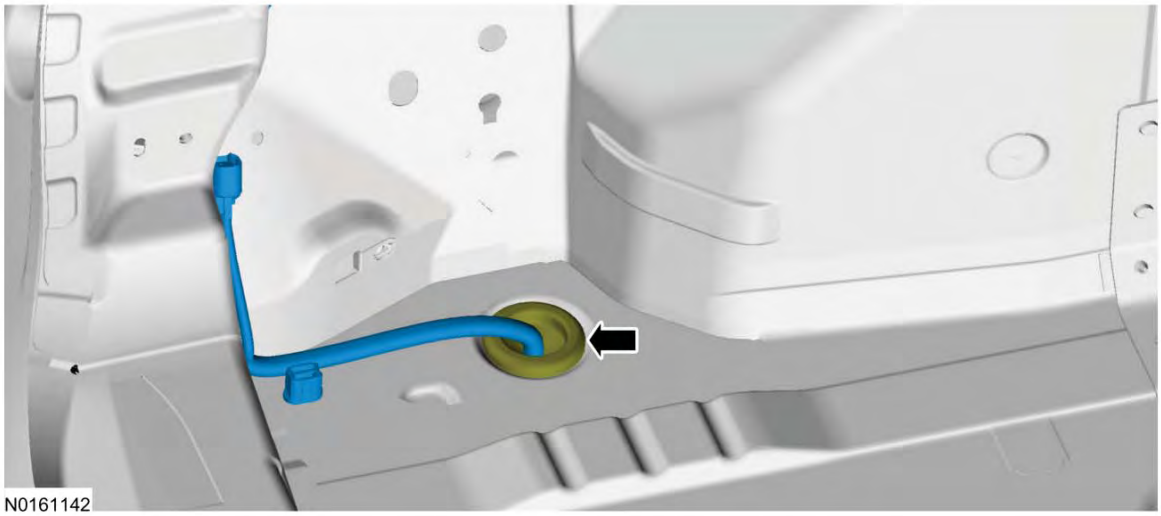


21. Cut and peel back the wire harness insulation at the LH and RH rear wire harness.
22. Identify the Violet/Orange RH turn/stop circuit wire (CLS19A), within the RH rear wire harness.
    - A DVOM connected to the correct wire will show 0V, then show pulsing 12V when the Multifunction Switch in the RIGHT TURN position.
      A logic probe will show ground on the correct wire, then show pulsing power when the Multifunction Switch in the RIGHT TURN position.
23. Connect the Green RH turn signal wire from the control module harness to the Violet/Orange RH turn/stop circuit wire (CLS19A), within the RH rear wire harness.
24. Identify the Blue/Gray tail lamp circuit wire (CLS05A), within the LH rear wire harness.
    - A DVOM connected to the correct wire will show 0V with the Headlight Switch in the OFF position and 12V with the Headlight Switch in the parking lights ON position.
      A logic probe connected to the correct wire will show ground with the Headlight Switch in the OFF position and power with the Headlight Switch in the parking lights ON position.
25. Connect the Brown tail lamp wire from the control module harness to the Blue/Gray tail lamp circuit wire (CLS05A), within the LH rear wire harness.
26. Identify the Gray/Brown LH turn/stop circuit wire (CLS18A), within the LH rear wire harness.
    - A DVOM connected to the correct wire will show 0V, then show pulsing 12V when the Multifunction Switch in the LEFT TURN position.
      A logic probe will show ground on the correct wire, then show pulsing power when the Multifunction Switch in the LEFT TURN position.
27. Connect the Yellow LH turn signal wire from the control module harness to the Gray/Brown LH turn/stop circuit wire (CLS18A), within the LH rear wire harness.
28. Splice the Red (Battery) wire from the control module harness to the Red power cable.

INSTALLATION (Continued)

Trailer Harness Routing

29. Remove the floor pan plug located in LH side of the rear cargo area.

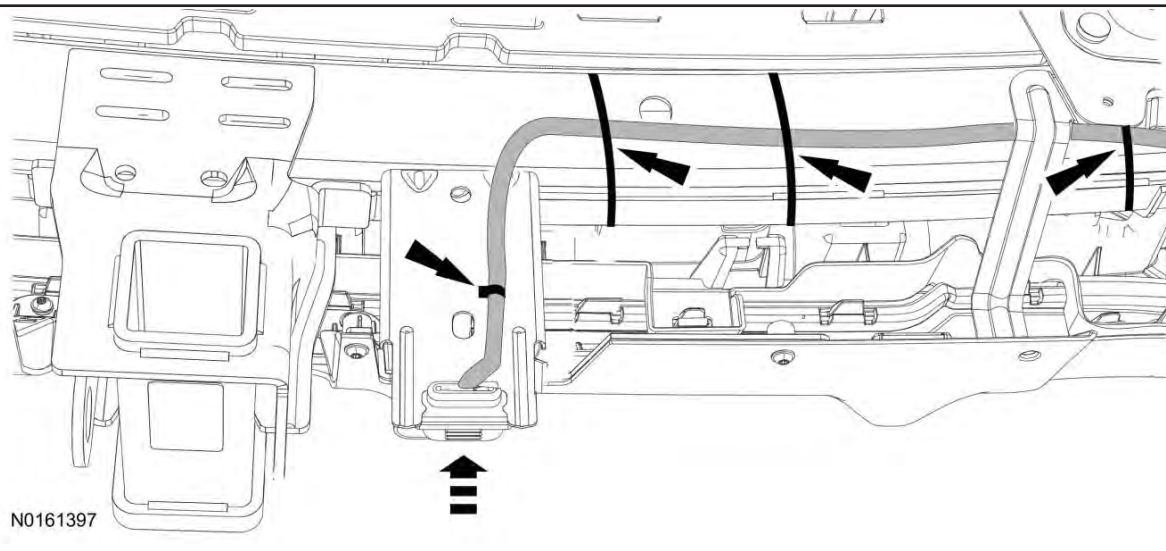


30. Working from the outer edge towards the center, cut a slit into the floor pan plug.
31. Feed the 4-pin connector and harness from the control module through the hole in the floorpan.
32. Install the rear floorpan plug, while installing, feed the 4-pin connector's ribbon harness into the cut portion of the plug.
33. Seal the rear floorpan plug at the cut slit, with a suitable silicone sealer.

Secure Wires

NOTICE:
Secure harness away from sharp edges, moveable parts or high heat sources.

34. Install the supplied convoluted tubing to the exterior portion of the 4-pin ribbon harness.
35. Install the 4-pin connector to the front of the trailer hitch. Secure the 4-pin ribbon harness to the hitch and vehicle harness.



INSTALLATION (Continued)

36. Bundle all excess wires together and use the supplied tie straps to secure.
37. Install the in-line fuse into the Red power cable fuse socket.
38. **NOTE:**
    If your vehicle is equipped with Reverse Park Aid, Blind Spot Information System, Cross Traffic Alert or other detection system a false alert maybe generated when towing a trailer.

    NOTE:
    The Class 1 4-pin trailer tow harness does not support electric trailer brakes.

    Verify proper operation of the vehicle lighting systems and 4-pin trailer tow connector.

    - Black/Green - RH Turn Signal/Brake
    - Black/Yellow - LH Turn Signal/Brake
    - Black/Brown - Tail Lamps
    - Black/White - Ground

Reassemble Vehicle

39. Reverse the removal procedure to reassemble the vehicle.

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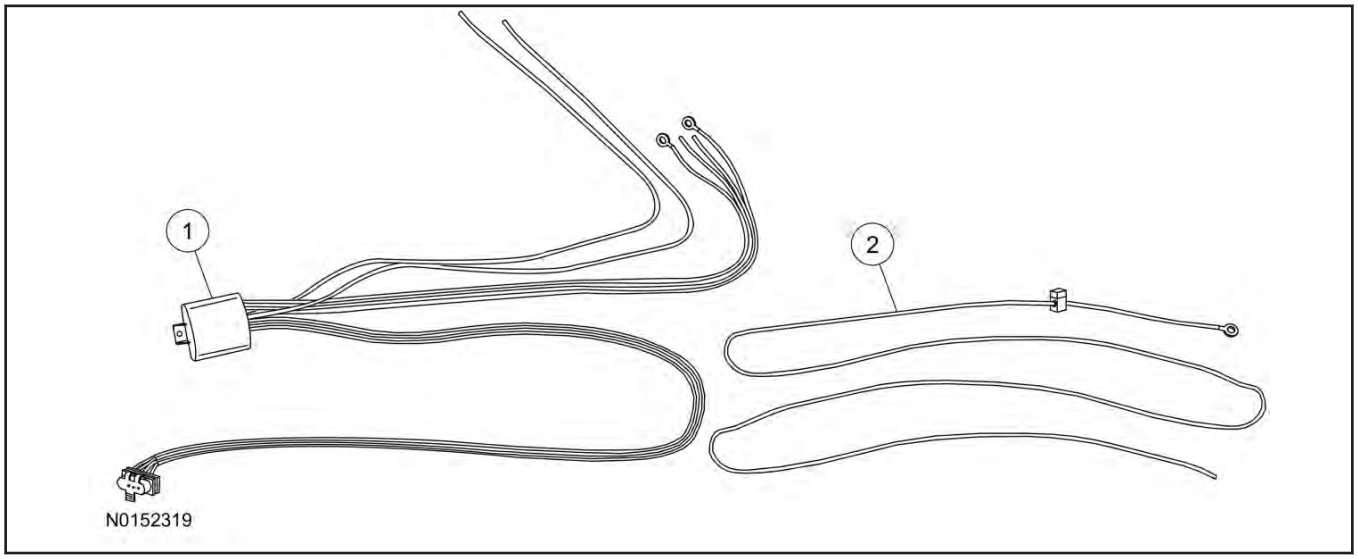
Trailer Tow



Transit Connect

1. Verify correct kit number.

Review Trailer Tow Installation Kit Contents

2. Review Trailer Tow Installation Kit Contents

Trailer Tow Installation Kit

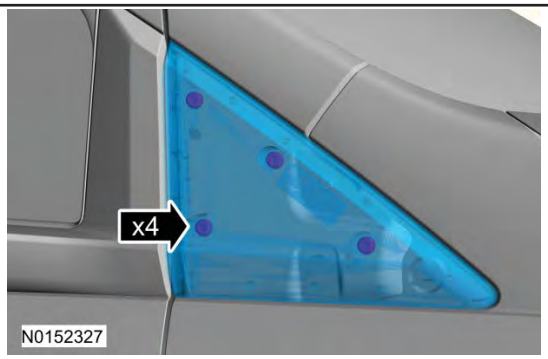
ITEM	QUANTITY	DESCRIPTION
1	1	Trailer Tow Converter Harness Assembly
2	1	Power Cable With In-Line Fuse
—	7	Foam Pad (Not Shown)
—	12	Tie Straps (Not Shown)
—	60"	Convoluted Tubing (Not Shown)
—	6	Hitch Wire Retainer Tie Straps (Not Shown)
—	1	Fuse - 15A (Not Shown)

Vehicle Preparation

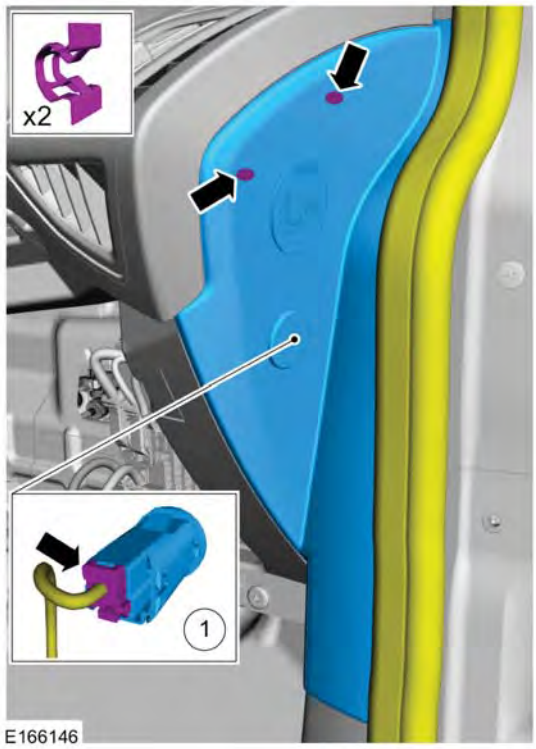
3. Disconnect the battery cable to ground. For additional information, refer to Workshop Manual (WSM) Section 414-01.
4. Remove the engine air cleaner assembly. For additional information, refer to WSM Section 303-12.

INSTALLATION (Continued)

5. Detach the push pins and remove the RH sail panel.

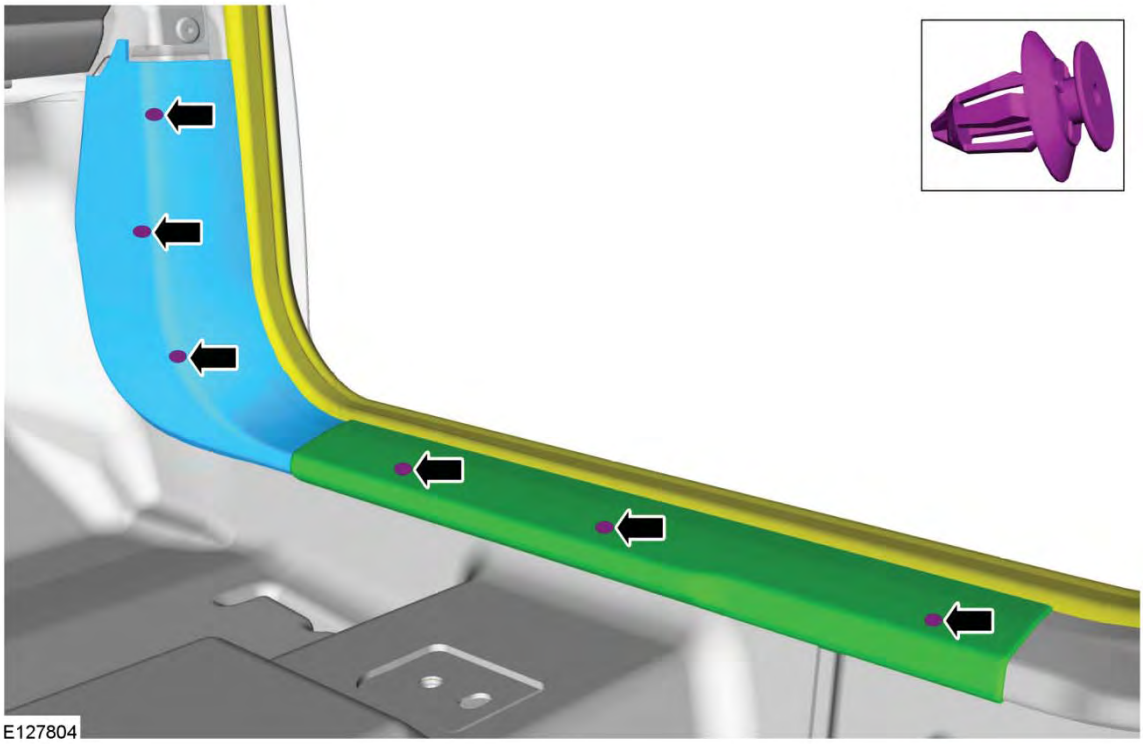


6. Remove the RH Instrument Panel (IP) side trim panel.
   - If equipped disconnect the electrical connector.



INSTALLATION (Continued)

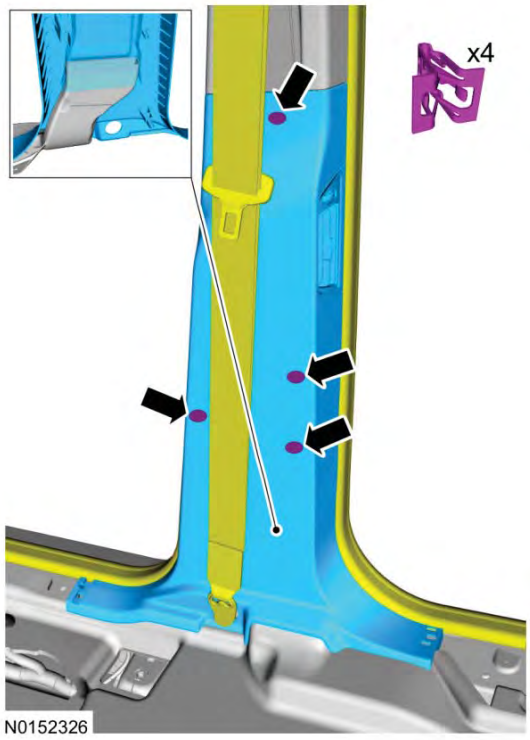
7. Remove the RH lower A-pillar and scuff plate trim panels.



8. If equipped, remove the RH and LH 3rd row seats. For additional information, refer to WSM Section 501-10C.
9. Remove the RH and LH loadspace trim panels. For additional information, refer to WSM Section 501-05.
10. Remove the RH rear door scuff plate trim panel. For additional information, refer to WSM Section 501-05.

INSTALLATION (Continued)

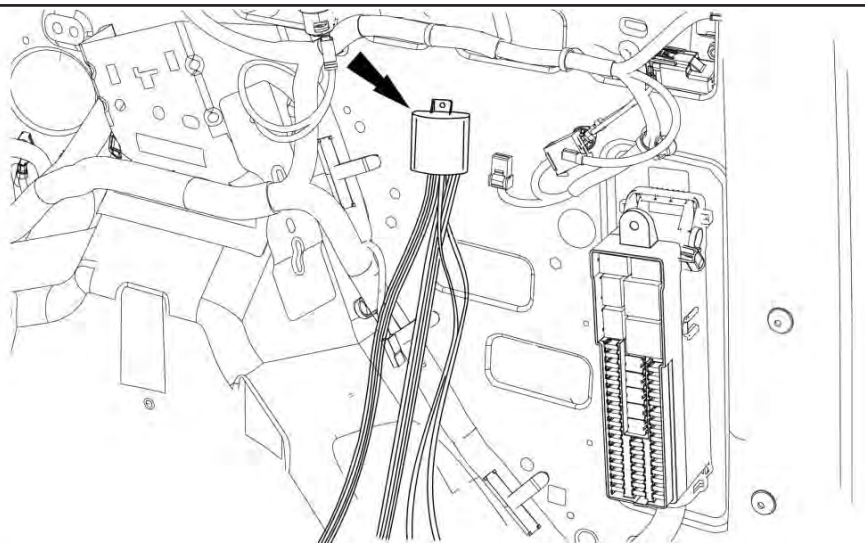
11. Detach the RH side B-pillar trim panel from the B-pillar.
    - It is not required to remove the B-pillar from the vehicle.



12. Remove the liftgate scuff plate trim panel.

Install the Trailer Tow Converter Harness Assembly

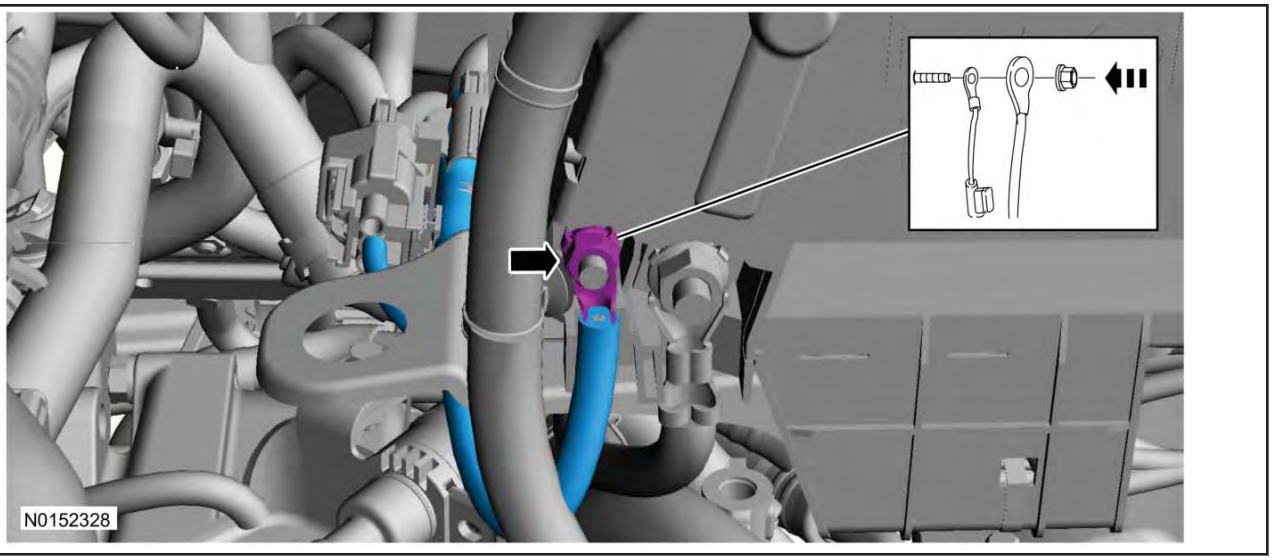
13. Remove the protective cover on the 2 sided tape and install the trailer tow converter module onto the RH rear quarter panel.



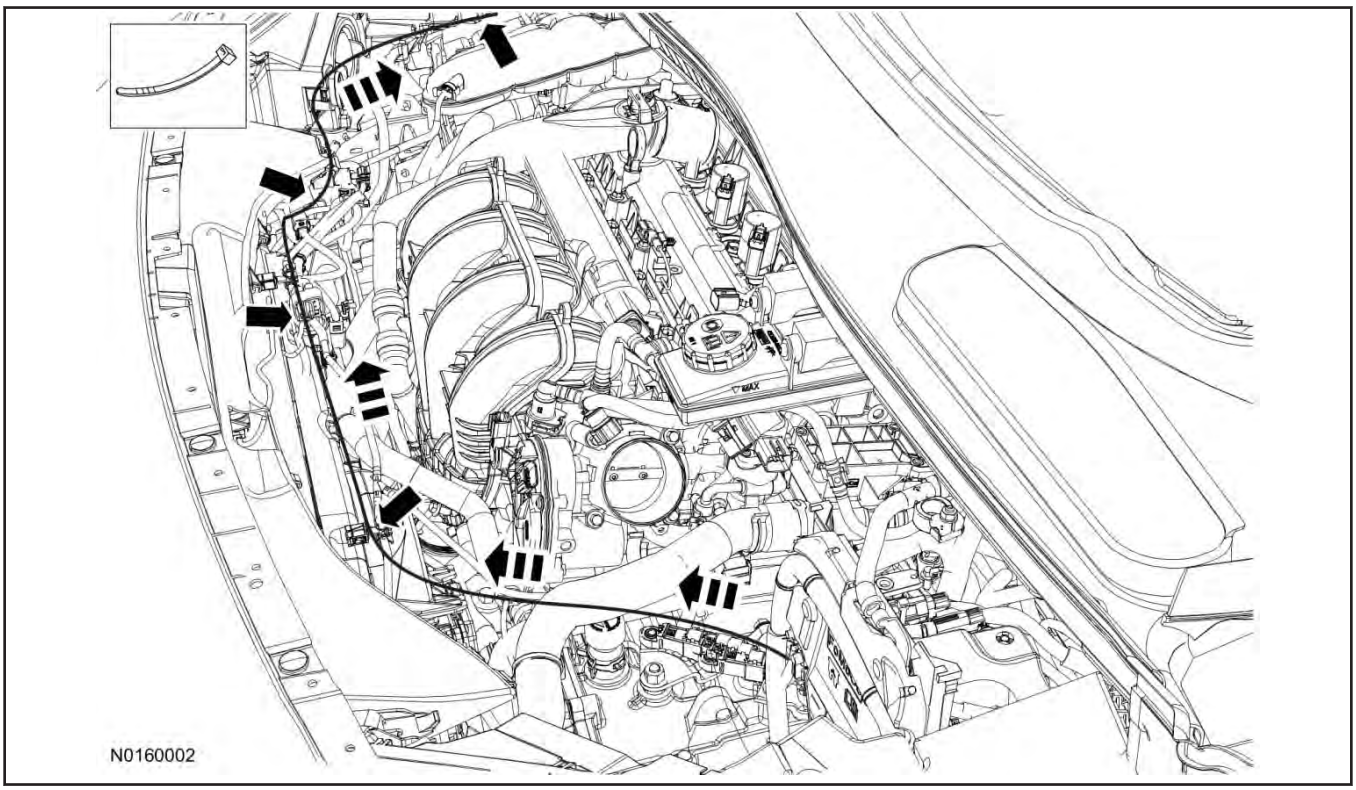
INSTALLATION (Continued)

Route Power Wire

14. Connect the Red power wire to the battery power terminal.
    1 Remove the nut from the buss bar located below the battery and remove the cable.
    2 Install the power wire onto the buss bar stud.
    3 Install the battery cable and nut.
    4 Tighten to 12 Nm.

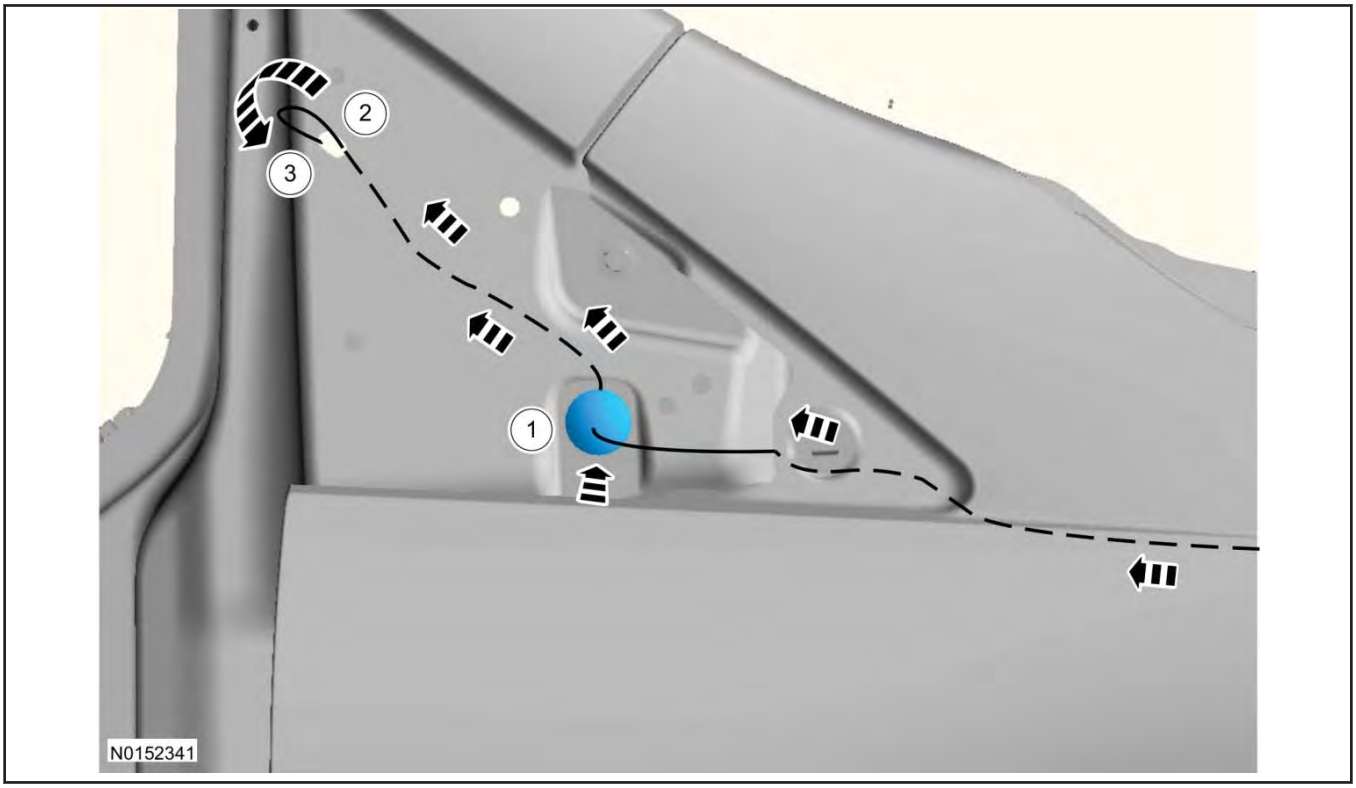


15. Connect the battery cable to ground. For additional information, refer to WSM Section 414-01.
16. Route the Red power wire to the front of the engine compartment and continue routing to the RH fender.
    - Secure with tie straps at the marked locations.

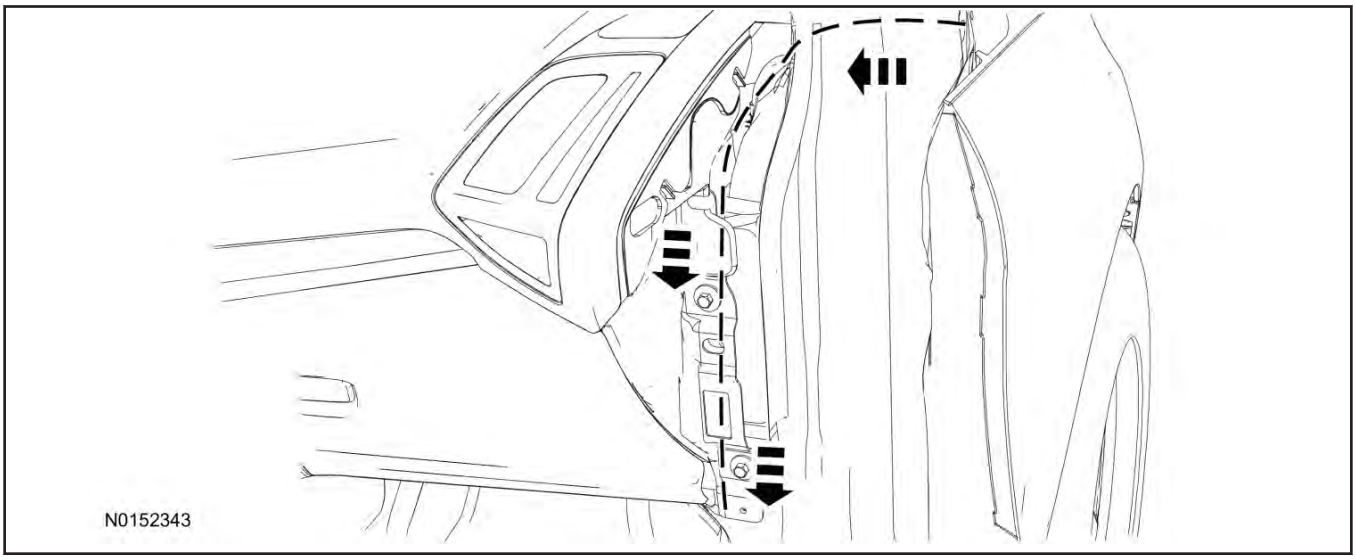


INSTALLATION (Continued)

17. Continue routing the Red power wire from the passenger side of the vehicle through the RH fender and into the vehicle.
    1 Remove the rubber plug, pierce the plug and feed the red power wire through it. Reinstall the plug and seal it as required.
    2 Feed the power wire upward and out of the top fender hole.
    3 Loop the wire back in and through the fender hole that leads into the vehicle interior.

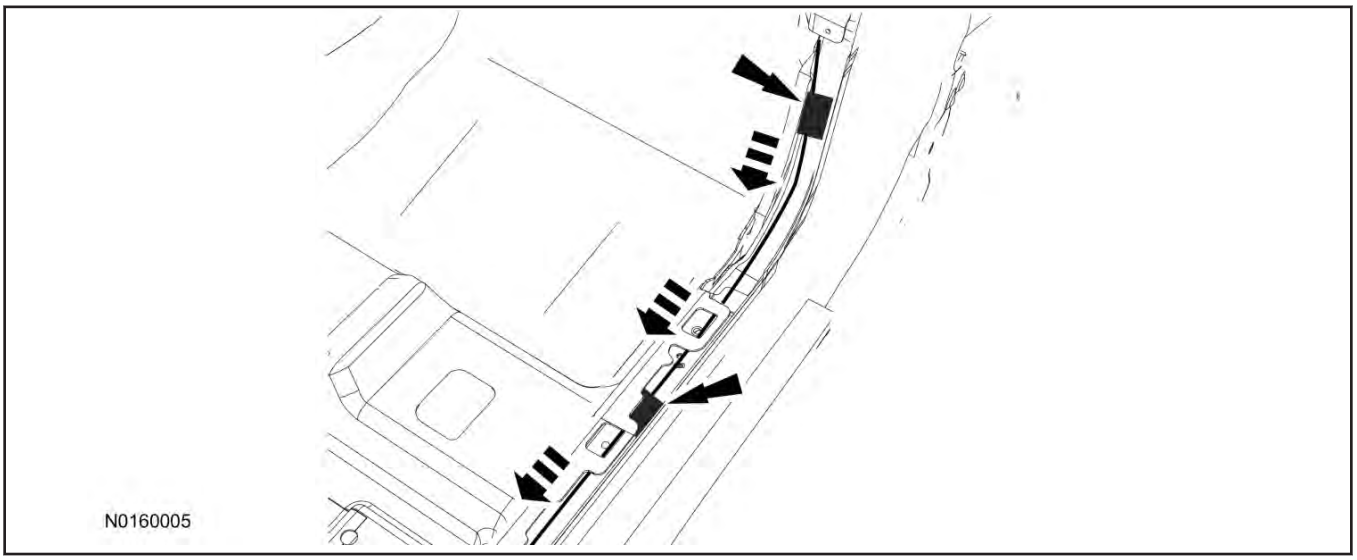


18. Route the Red power wire downward and out of the bottom of the IP frame to the floor.

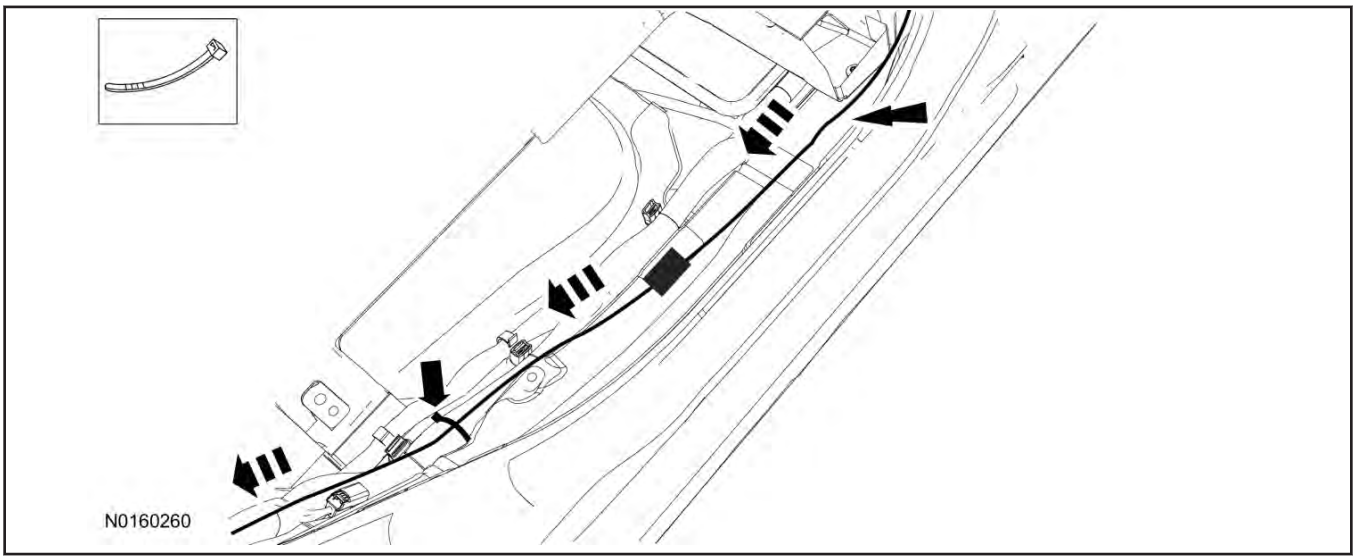


INSTALLATION (Continued)

19. Route the Red power wire rearward, through the B-pillar trim panel.
    - Install two tape pads to secure the wire to the vehicle.

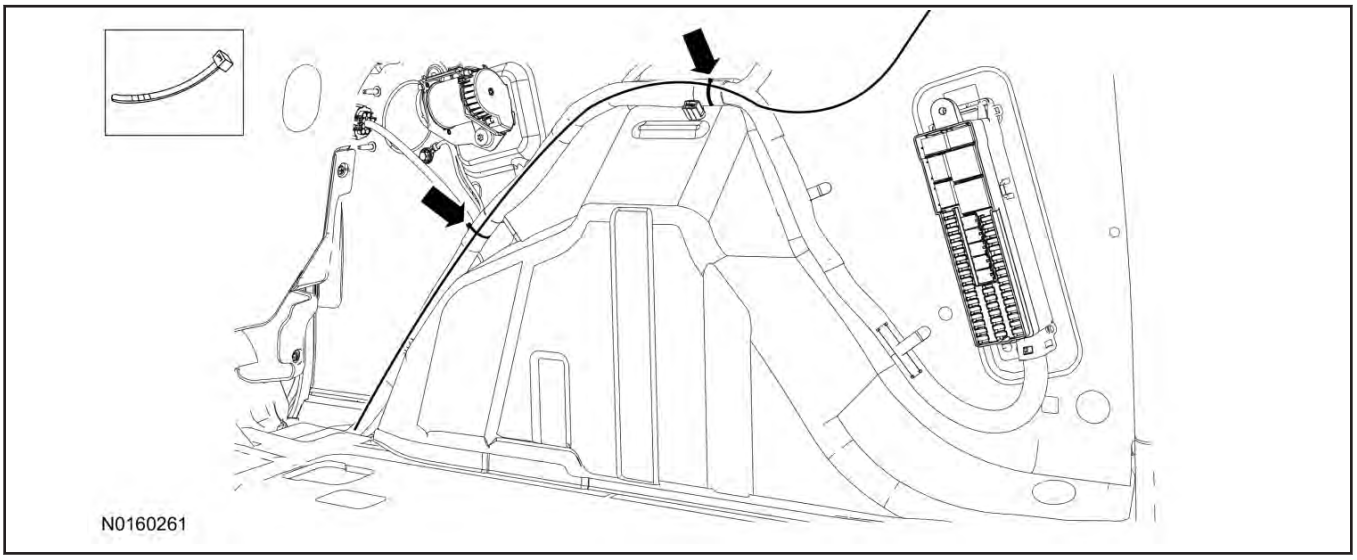


20. Route the Red power wire rearward into the cargo area.
    1 Install a tape pad to secure the wire to the vehicle.
    2 Secure the wire to vehicle harness with tie straps.

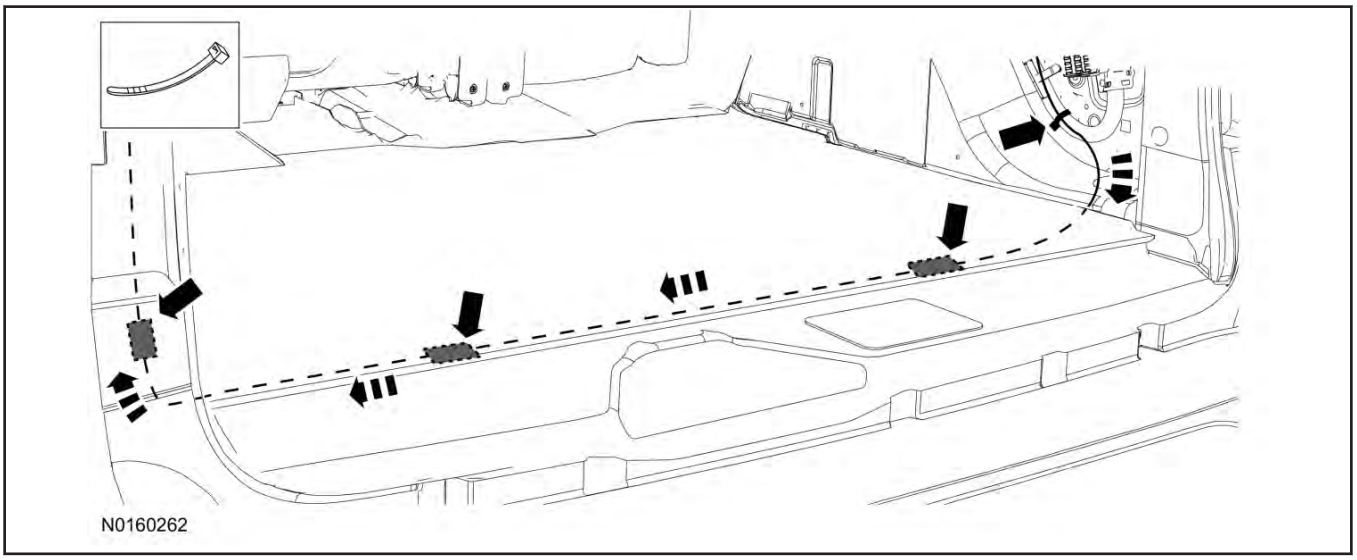


INSTALLATION (Continued)

21. Secure the Red power wire to the rear quarter panel vehicle harness.



22. Route the yellow wire from the control module under the rear floor carpet and up to the drivers side tail lamp.
    - Secure the wire to the RH vehicle harness.
    - Install tape pads to secure the wire to the vehicle.

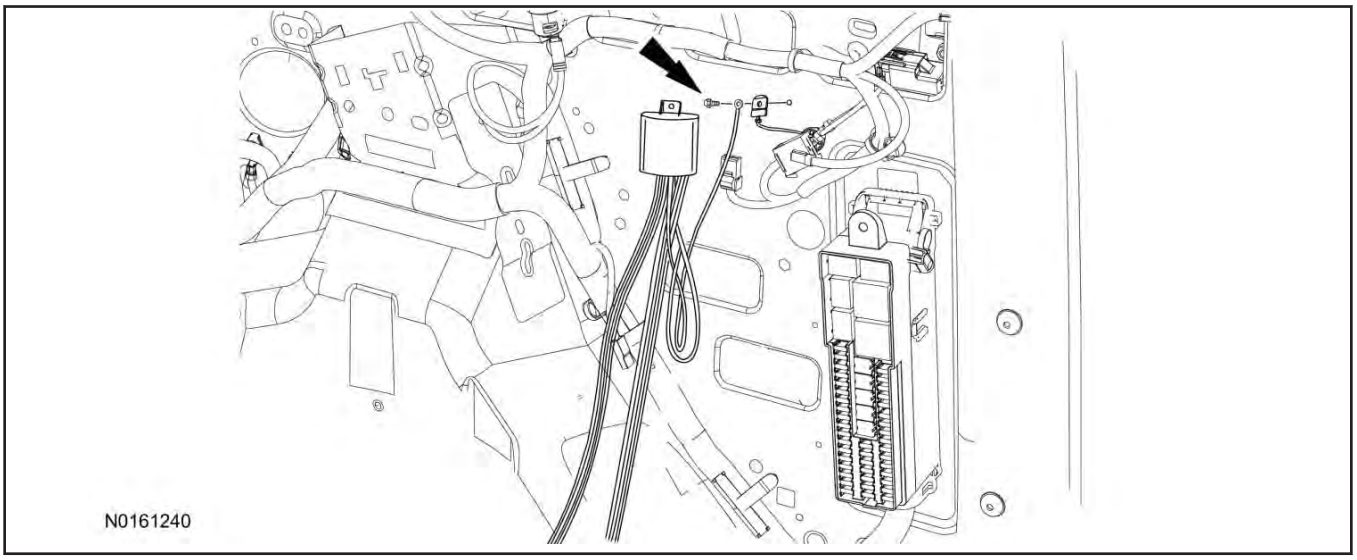


INSTALLATION (Continued)

Identify Circuit Wires For Connections

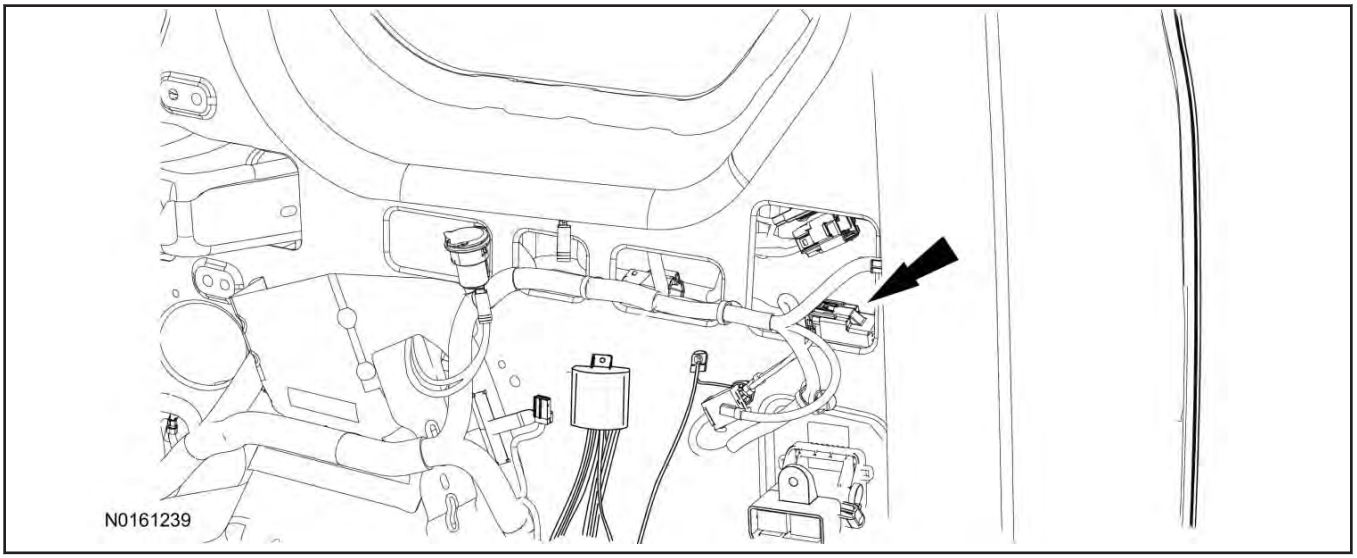
NOTE:
Refer to "Proper Wire Splicing Techniques" prior to proceeding.

23. Connect the Black "Ground" wire from the control module to the ground bolt located on the RH quarter panel.



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

Locate the RH and LH tail lamp connectors, where the control module harness connections will be made.



25. **NOTE:**
    Two Violet/Green wires are present at the RH tail lamp connector, at Pins 3 and 6. The Brown wire from the control module harness will be spliced onto the Violet/Green wire at Pin 3 of the RH tail lamp connector.

    Identify the Violet/Green park lamp circuit wire (CLS09BB), near the RH tail lamp connector.

    - A DVOM connected to the correct wire will show 0V with the Headlight Switch in the OFF position and 12V with the Headlight Switch in the parking lights ON position.
      A logic probe connected to the correct wire will show ground with the Headlight Switch in the OFF position and power with the Headlight Switch in the parking lights ON position.

26. Connect the Brown park lamp wire from the control module harness to the Violet/Green park lamp circuit wire (CLS09BB), near the RH tail lamp connector.
    Ensure the Brown park lamp wire from the control module harness is spliced onto the Violet/Green wire at Pin 3 of the RH tail lamp connector.

27. Identify the Green/Orange RH turn/stop circuit wire (CLS27BC), near the RH tail lamp connector.

    - A DVOM connected to the correct wire will show 0V, then show pulsing 12V when the Multifunction Switch in the RIGHT TURN position.
      A logic probe will show ground on the correct wire, then show pulsing power when the Multifunction Switch in the RIGHT TURN position.

28. Connect the Green RH turn signal wire from the control module harness to the Green/Orange RH turn/stop circuit wire (CLS27BC), near the RH tail lamp connector.

29. Identify the Violet/Brown stop circuit wire (CLS44AA), near the RH tail lamp connector.

    - A DVOM connected to the correct wire will show 0V, then show 12V while the brake pedal is depressed.
      A logic probe will show ground on the correct wire, then show power while the brake pedal is depressed.

30. Remove the eyelet from the control module harness Blue stop signal wire.
    Connect the Blue stop signal wire from the control module harness to the wire to the Violet/Brown stop circuit wire (CLS44AA), near the RH tail lamp connector.

31. Identify the Gray/Orange LH turn circuit wire (CLS23BC), near the LH tail lamp connector.

    - A DVOM connected to the correct wire will show 0V, then show pulsing 12V when the Multifunction Switch in the LEFT TURN position.
      A logic probe will show ground on the correct wire, then show pulsing power when the Multifunction Switch in the LEFT TURN position.

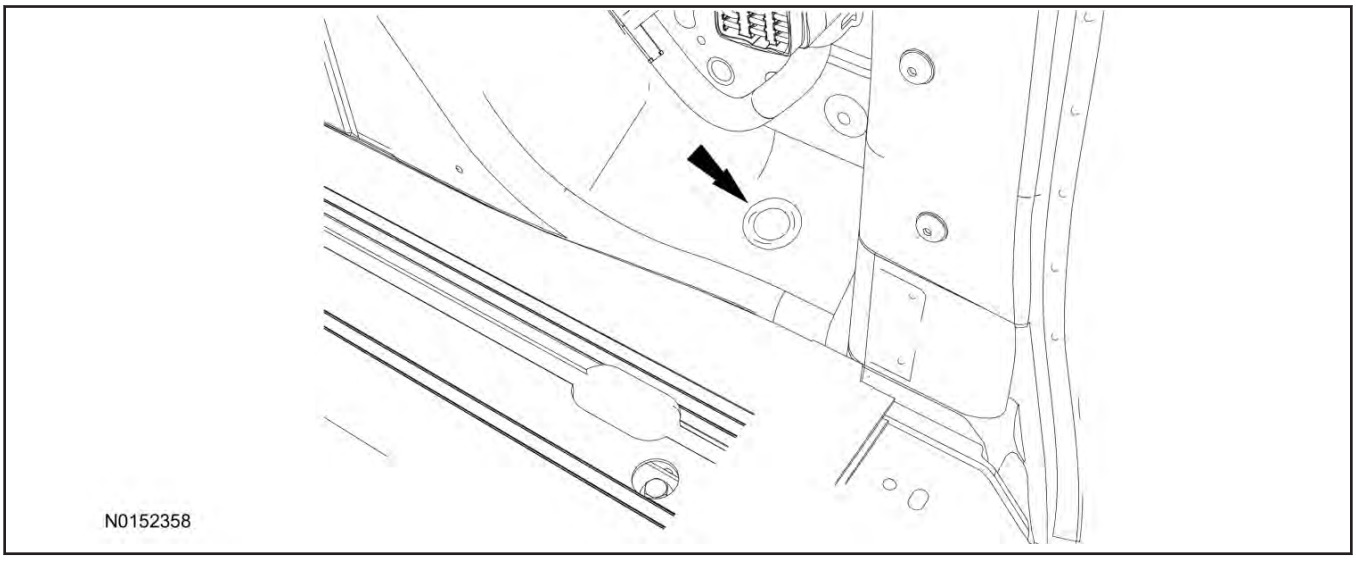
32. Connect the Yellow LH turn signal wire from the control module harness to the Gray/Orange left turn/stop circuit wire (CLS23BC), near the LH tail lamp connector.

33. Splice the Red (Battery) wire from the control module harness to the Red power cable.

INSTALLATION (Continued)

Trailer Harness Routing

34. Remove the floorpan plug located in RH side of the rear cargo area.

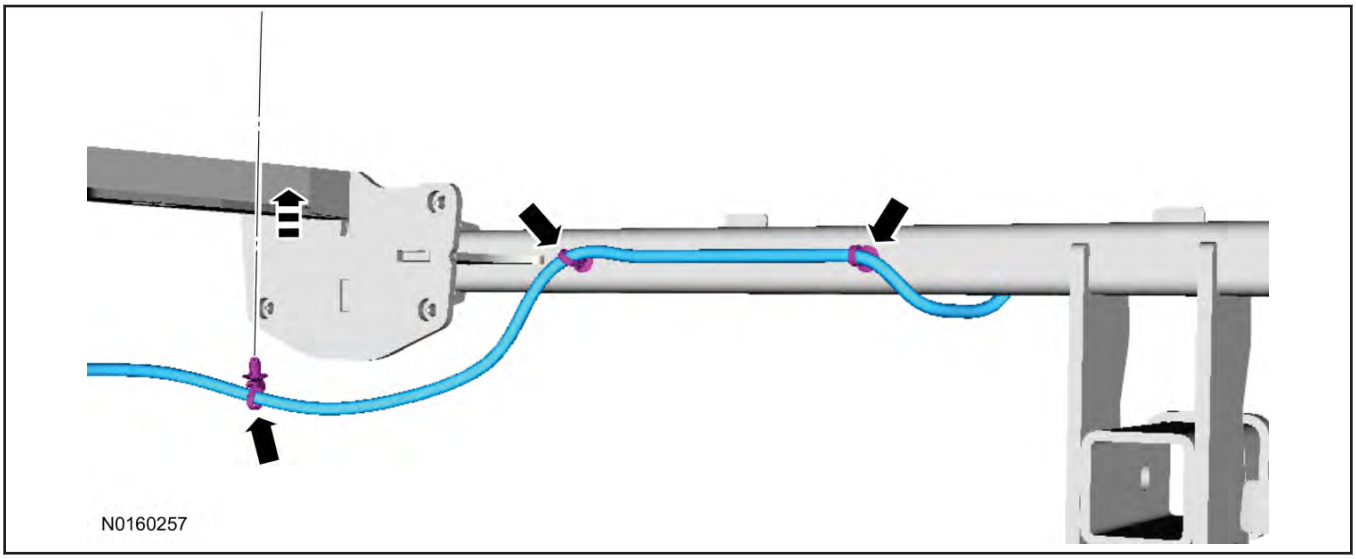


35. Working from the outer edge towards the center, cut a slit into the floorpan plug.
36. Feed the 4-pin connector and harness from the control module through the hole in the floorpan.
37. Install the rear floorpan plug, while installing, feed the 4-pin connector's ribbon harness into the cut portion of the plug.
38. Seal the rear floorpan plug at the cut slit, with a suitable silicone sealer.

Secure Wires

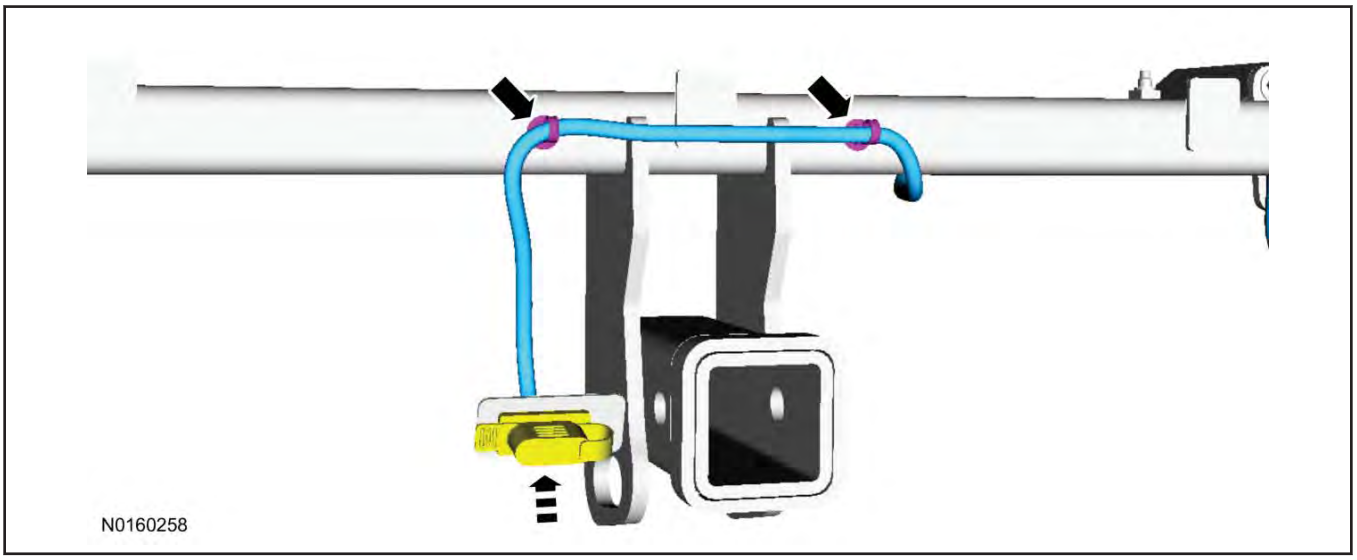
NOTICE:
Secure harness away from sharp edges, moveable parts or high heat sources.

39. Install the supplied convoluted tubing to the exterior portion of the 4-pin ribbon harness.
40. Using the supplied hitch wire retainer tie straps, Secure the 4-pin ribbon harness to the underside of the vehicle and to the rear of the trailer hitch.



INSTALLATION (Continued)

41. Using the supplied hitch wire retainer tie straps, secure the 4-pin ribbon harness to the front of the trailer hitch.
    - Install the 4-pin connector to the hitch after the wire harness is routed and secured.



42. Bundle all excess wires together and use the supplied tie straps to secure.
43. Install the in-line fuse into the Red power cable fuse socket.
44. **NOTE:**
    If your vehicle is equipped with Reverse Park Aid, Blind Spot Information System, Cross Traffic Alert or other detection system a false alert maybe generated when towing a trailer.

    NOTE:
    The Class 1 4-pin trailer tow harness does not support electric trailer brakes.

    Verify proper operation of the vehicle lighting systems and 4-pin trailer tow connector.
    - Black/Green - RH Turn Signal/Brake
    - Black/Yellow - LH Turn Signal/Brake
    - Black/Brown - Tail Lamps
    - Black/White - Ground

Reassemble Vehicle

45. Reverse the removal procedure to reassemble the vehicle.

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TRAILER TOW

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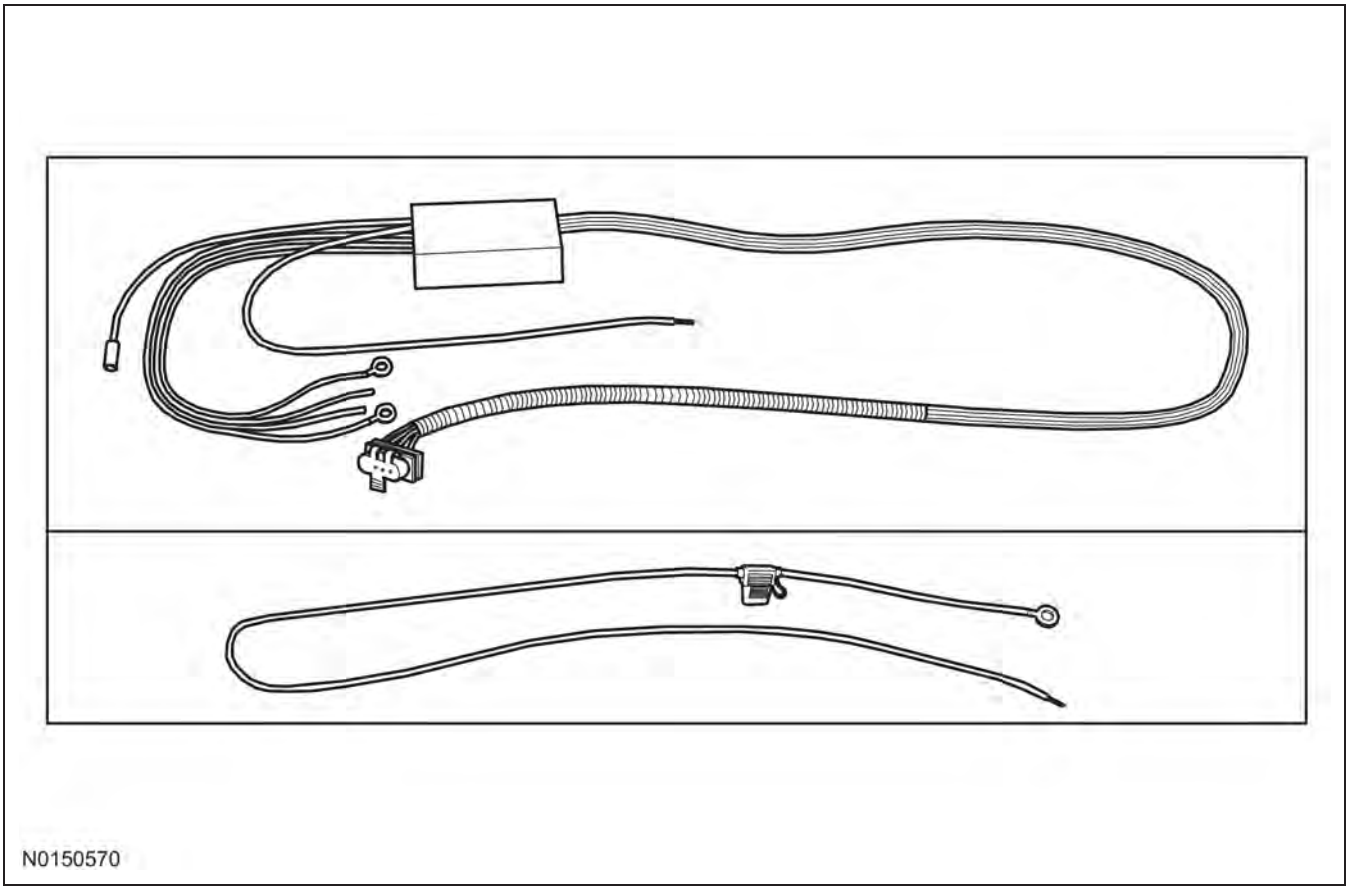
INSTALLATION

Trailer Tow — Escape



Escape

NOTE: This accessory kit is designed to be used as a Class 1 trailer tow wiring solution.

NOTE: It is recommended that the technician read through these instructions thoroughly prior to installing this accessory.

1. Verify correct kit number.

Review Trailer Tow Installation Kit Contents

2. Review Trailer Tow Installation Kit Contents.

Trailer Tow Installation Kit

QUANTITY	DESCRIPTION
1	TRAILER TOW CONVERTER HARNESS ASSEMBLY
1	POWER CABLE WITH IN-LINE FUSE
12	Tie Straps

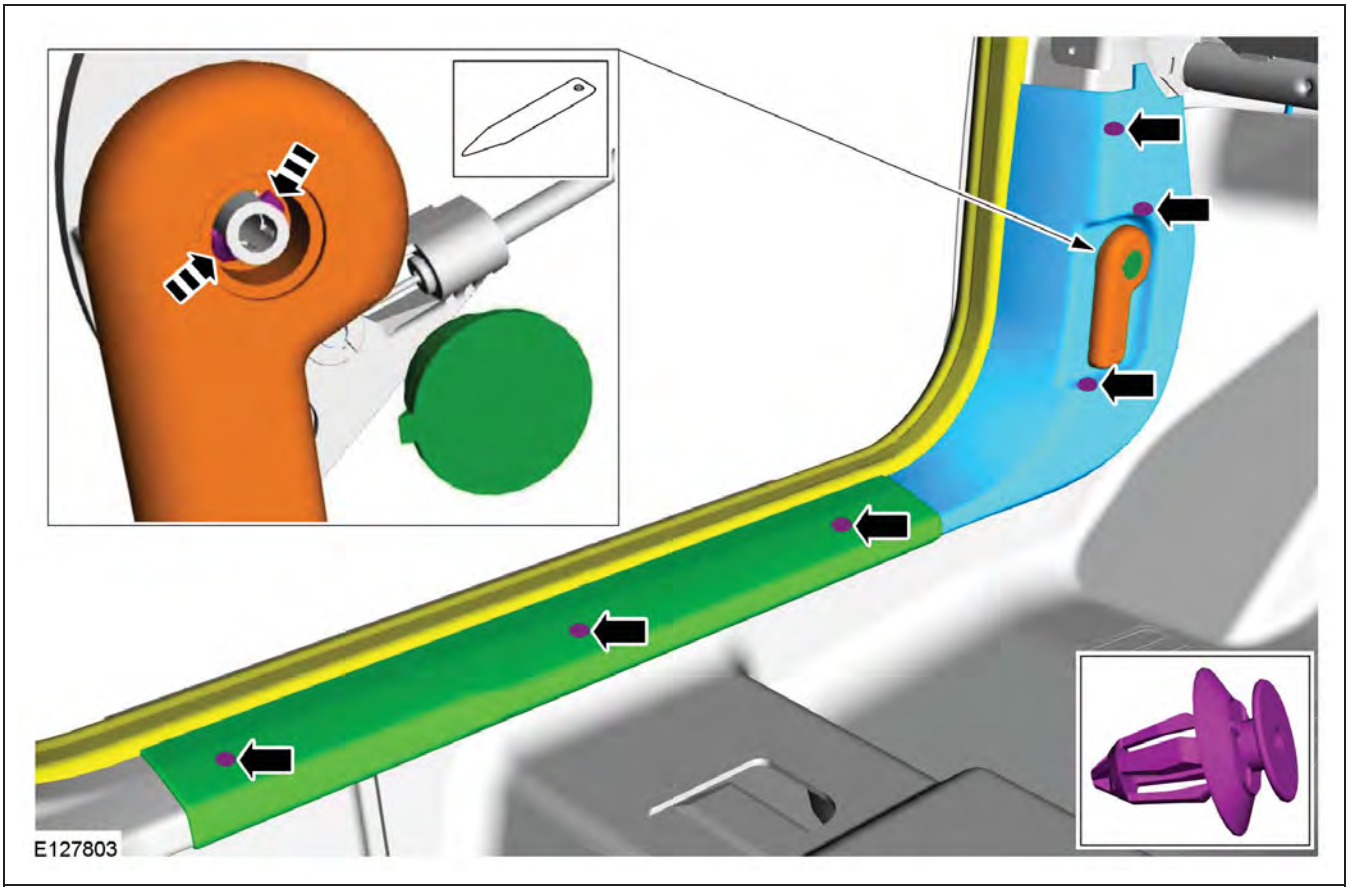
INSTALLATION (Continued)

Vehicle Preparation

3. Disconnect the battery cable to ground. For additional information, refer to WSM, Section 414-01.

4. Remove the engine air cleaner. For additional information, refer to WSM, Section 303-12.

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



6. Remove the RH and LH quarter trim panels. For additional information, refer to WSM, Section 501-05.

Trailer Tow Converter Harness Assembly Preparation

7. Remove the grommet/plug located in the rear floor pan just forward of the Driver side D-pillar.

8. Working from the outer edge towards the center, cut a slit into the grommet/plug.

9. Position the Trailer Tow Converter Harness Assembly into the vehicle forward of the rear LH D-pillar. **Do not attach the Trailer Tow Converter at this time.**

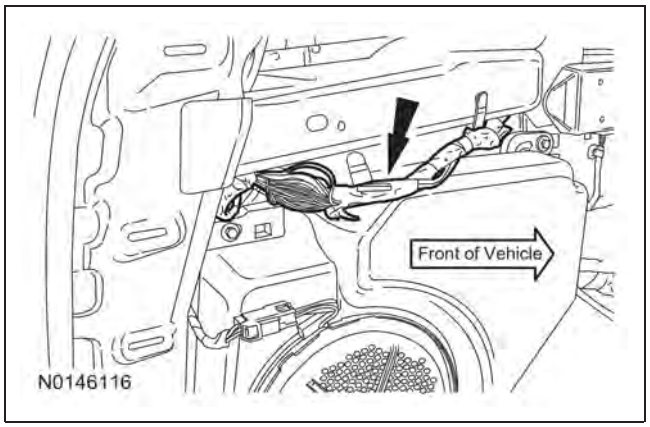
INSTALLATION (Continued)

Identify Circuit Wires For Connections

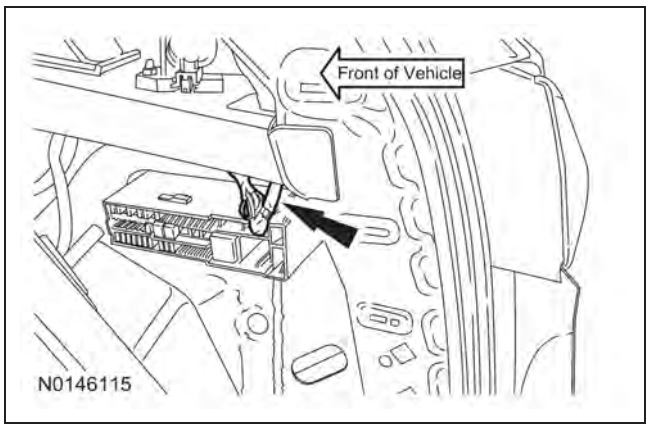
NOTE: Review the proper wire splicing techniques prior to proceeding.

NOTE: Reconnect the battery as needed to identify the appropriate wire(s).

10. Locate the LH interior vehicle harness.

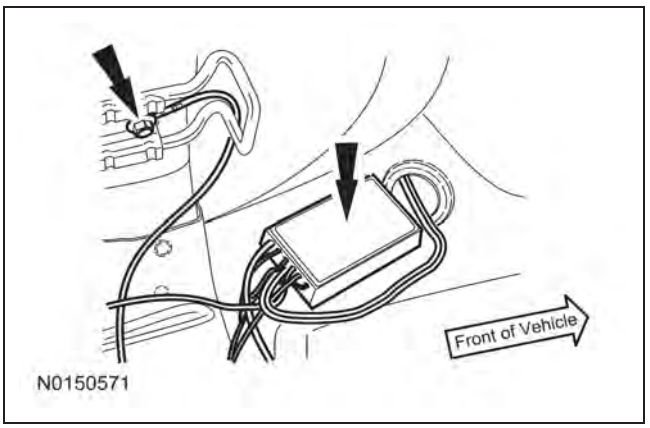


11. Locate RH interior vehicle harness.



12. Locate the Blue (Stop) wire on the converter module and cut the eyelet off.

13. Connect the Black (Ground) wire eyelet from the converter module to the bolt located on the LH D-pillar's cargo tie down. Feed the 4 pin connector through the hole in the floorpan.



14. Install the rear floorpan grommet/plug, while installing, feed the 4 pin connector's ribbon harness into the cut portion of the plug.

15. Seal the rear floorpan grommet/plug.

16. **NOTE:** A DVOM connected to the correct wire will show 0V when the Brake Pedal is not depressed and 12V when the Brake Pedal is depressed.

    A logic probe connected to the correct wire will show ground when the Brake Pedal is not depressed and powerwhen the Brake Pedal is depressed.

    Identify the Violet/Green (Stop) wire at the Lamp Assembly, Left Rear.

17. Connect the Blue (Stop) wire from the converter module to the Violet/Green (Stop) located at the Lamp Assembly, Left Rear.

18. **NOTE:** A DVOM connected to the correct wire will show 0V with the Headlight Switch in the OFF position and 12V with the Headlight Switch in the parking lights ON position.

    A logic probe connected to the correct wire will show ground with the Headlight Switch in the OFF position and power with the Headlight Switch in the parking lights ON position.

    Identify the Violet/Green (Parking Lights Circuit) wire at the Lamp Assembly, Left Rear.

19. Connect the Brown (Tail Lamp) wire from the converter module harness to the Violet/Green (Parking Lights Circuit) wire at the Lamp Assembly, Left Rear.

INSTALLATION (Continued)

20. **NOTE:** A DVOM connected to the correct wire will show 0V, then show pulsing 12V with the Multifunction Switch in the LEFT TURN position.

    A logic probe will show ground on the correct wire, then show pulsing power with the Multifunction Switch in the LEFT TURN position.

    Identify the Gray/Orange (Left Turn Circuit) wire at the Lamp Assembly, Left Rear.

21. Connect the Yellow (Left Turn) wire from the converter module harness to the Gray/Orange (Left Turn Circuit) wire at the Lamp Assembly, Left Rear.

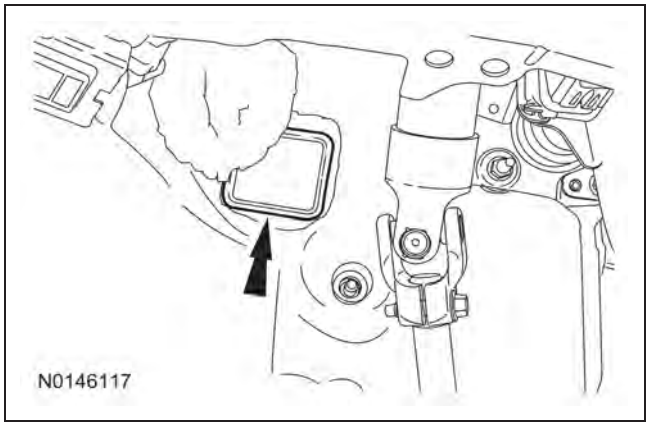
22. **NOTE:** A DVOM connected to the correct wire will show 0V, then show pulsing 12V when the Multifunction Switch in the RIGHT TURN position.

    A logic probe will show ground on the correct wire, then show pulsing power when the Multifunction Switch in the RIGHT TURN position.

    Identify the Green/Orange (Right Turn Circuit) wire at the Lamp Assembly, Right Rear.

23. Route the Green (Right Turn) wire from the converter module harness under the liftgate scuff plate and connect to the Green/Orange (Right Turn Circuit) wire at the Lamp Assembly, Right Rear.

24. Position aside the carpet and locate the grommet located in the bulkhead just left of the steering column.



25. Use a fish wire to puncture the grommet located in the bulkhead and feed the fish wire through to the front area of the engine compartment.

26. From the engine compartment, attach the kit supplied power cable to the fish wire (do not attach the eyelet). Route the power cable through the bulkhead into the passenger compartment, along the LH door sills (under the carpet) back to the converter module.

27. Seal the bulkhead grommet and position back the carpet cut out.

28. From the cargo area in the vehicle, connect the kit supplied red power cable to the red battery wire located on the converter module.

29. **NOTE:** Remove the in-line fuse before connecting the power cable to the Fuse Junction Panel.

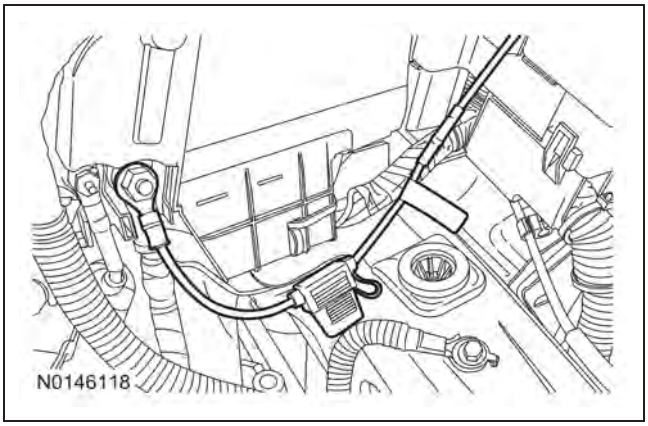
    Connect the Red power cable to the Fuse Junction Panel battery terminal.

    1 Remove the nut from the large stud on the Fuse Junction Panel located on the front of the battery tray.

    2 Install the eyelet onto the Fuse Junction Panel.

    3 Tighten to 5.0 Nm (44 lbs.in.).

    4 Replace the in-line fuse.

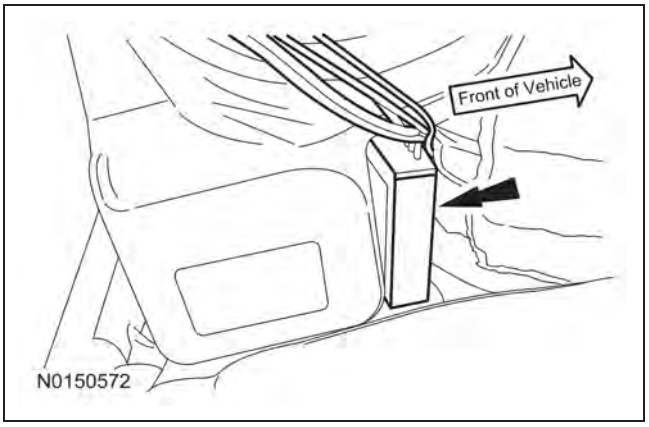


30. Remove the adhesive backing from the underside of the converter module.

31. Vehicles not equipped with premium sound, attach the converter module to the floorpan just forward of the LH D-pillar.

INSTALLATION (Continued)

32. Vehicles equipped with premium sound, attach the converter module to the front of the subwoofer.

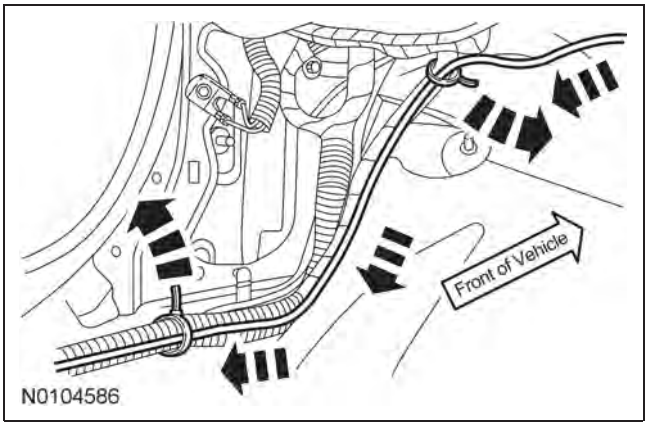


33. Accessing from under the vehicle, attach the 4 pin connector/harness to the trailer hitch.

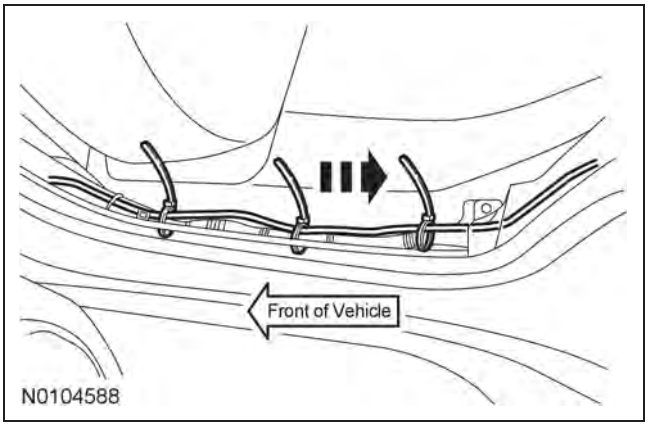
Secure Wires

NOTE: Position the floor carpet aside as needed.

34. Use supplied tie straps to secure power cable to the interior vehicle harness in the front lower cowl area.



35. Use supplied tie straps to secure power cable and converter module wires to the interior vehicle harness.



36. Secure the 4 pin connector/harness to the vehicles hitch and/or underside of the vehicle. **Secure harness away from sharp edges, moveable parts or high heat sources.**

Install Trim

37. Install the LH side lower cowl trim panel and scuff plate. Position the LH weather strip back.

38. Install the RH and LH quarter trim panels. For additional information, refer to WSM, Section 501-05.

39. Install the engine air cleaner. For additional information, refer to WSM, Section 303-12.

40. Connect the battery cable to ground. For additional information, refer to WSM, Section 414-01.

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TRAILER TOW

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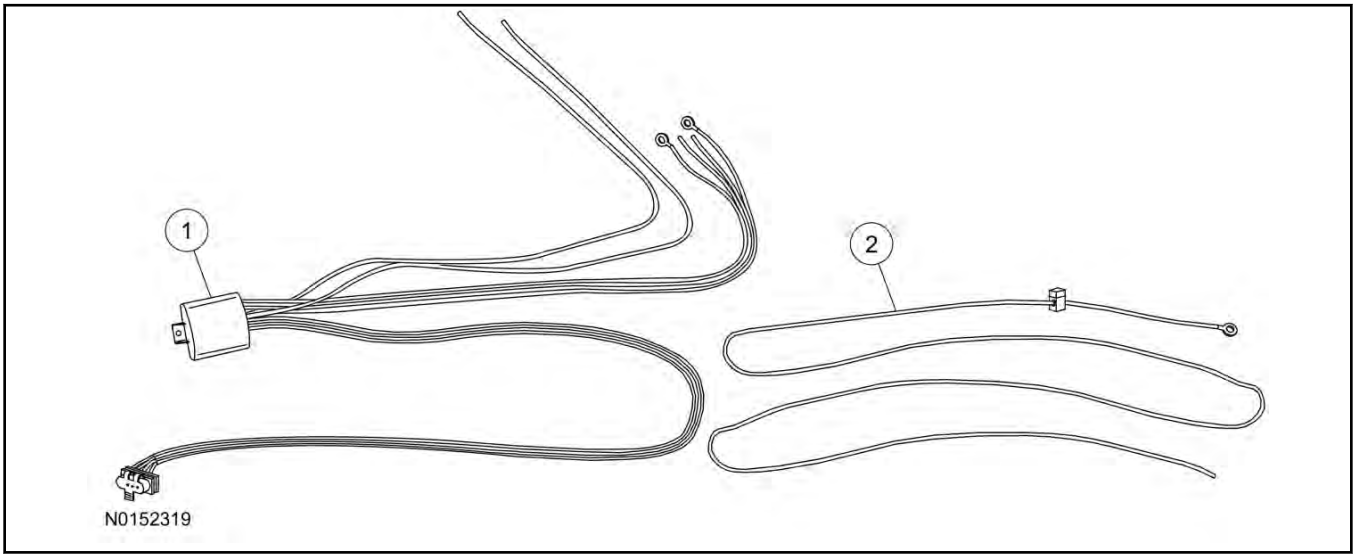
INSTALLATION

Trailer Tow — Edge



Edge

1. Verify correct kit number

Review Trailer Tow Installation Kit Contents

2. Review Trailer Tow Installation Kit Contents

Trailer Tow Installation Kit

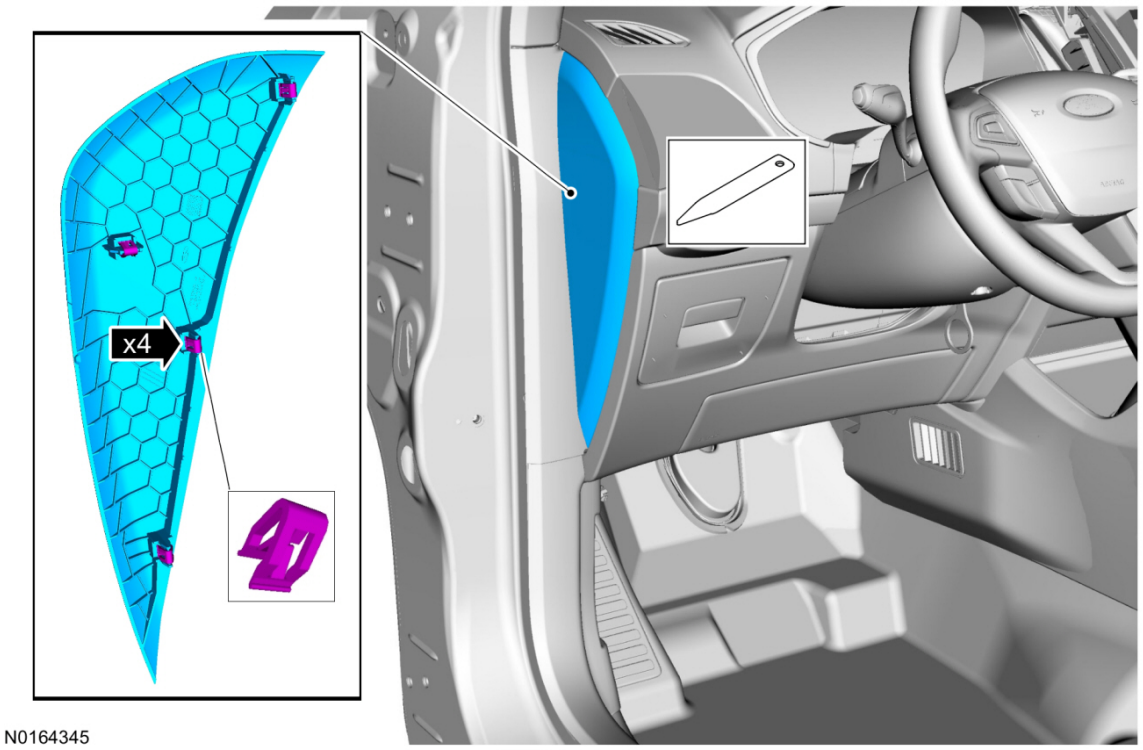
ITEM	QUANTITY	DESCRIPTION
1	1	Trailer Tow Converter Harness Assembly
2	1	Power Cable with In-Line Fuse
—	7	Foam Pad (Not Shown)
—	12	Tie Straps (Not Shown)
—	60"	Convoluted Tubing (Not Shown)
—	6	Hitch Wire Retainer Tie Straps (Not Shown)
—	1	Fuse - 15A (Not Shown)

Vehicle Preparation

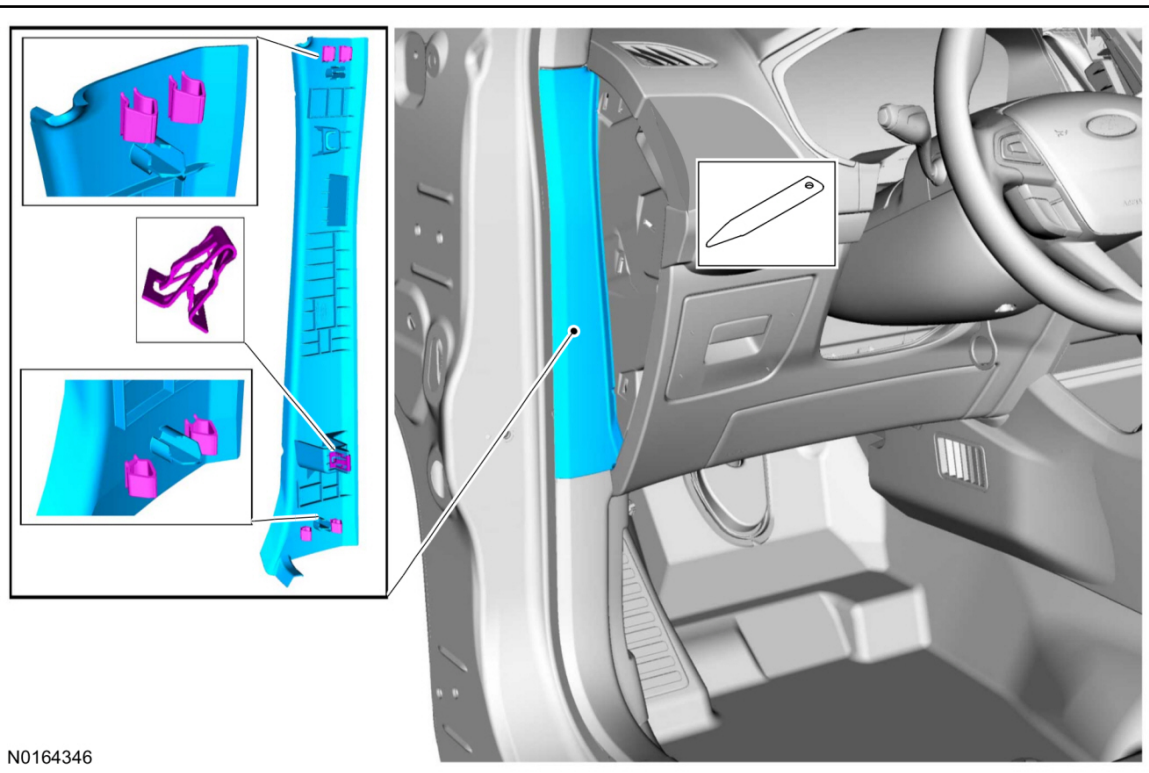
3. Disconnect the battery ground cable. For additional information, refer to Workshop Manual (WSM) Section 414-01.

INSTALLATION (Continued)

4. Remove the LH IP side trim panel.

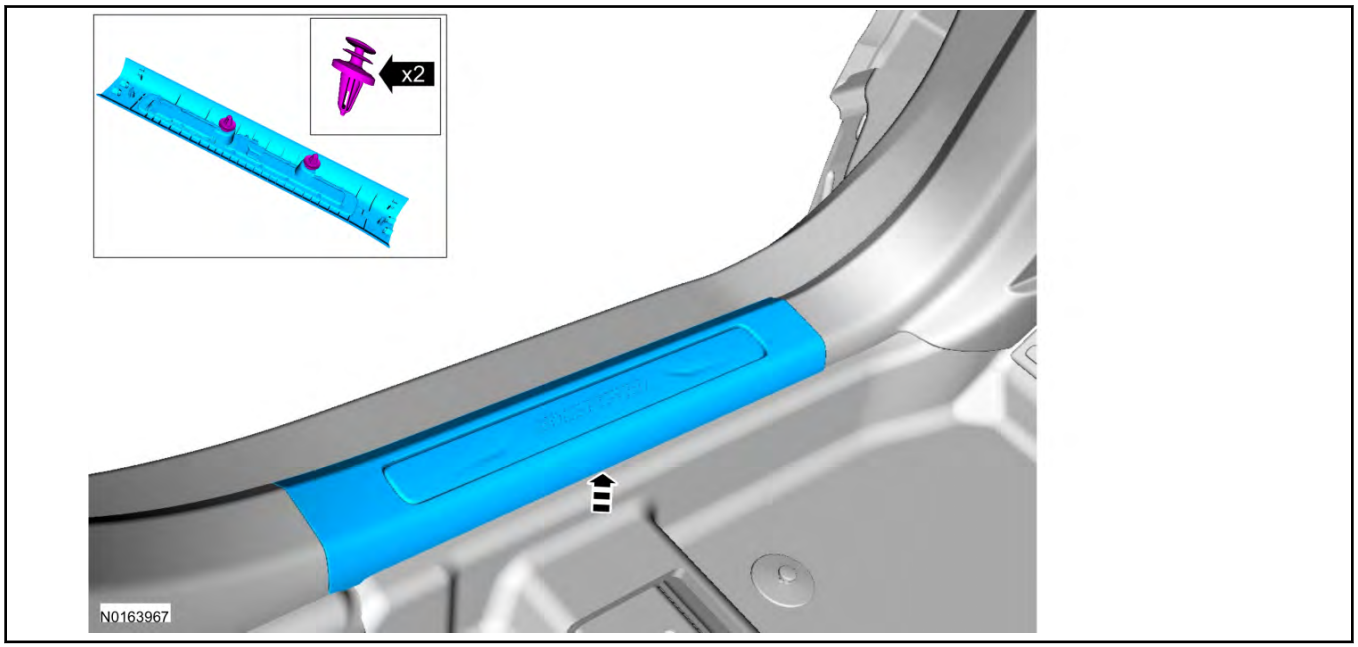


5. Remove LH cowl panel upper trim.

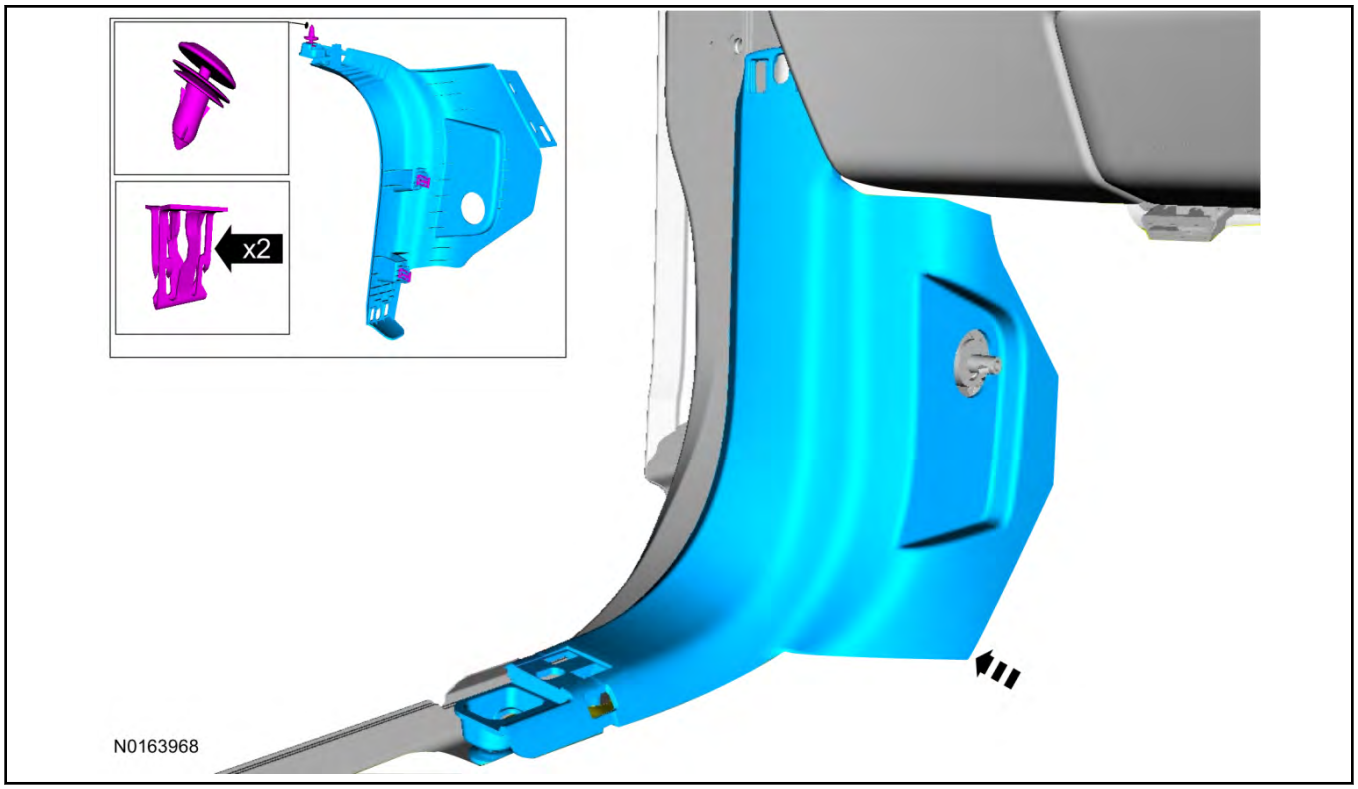


INSTALLATION (Continued)

6. Remove LH Instrument Panel (IP) storage bin.
7. Remove LH sill plate.



8. Remove the hood release lever, refer to WSM Section 501-14.
9. Remove the LH lower cowl trim panel.

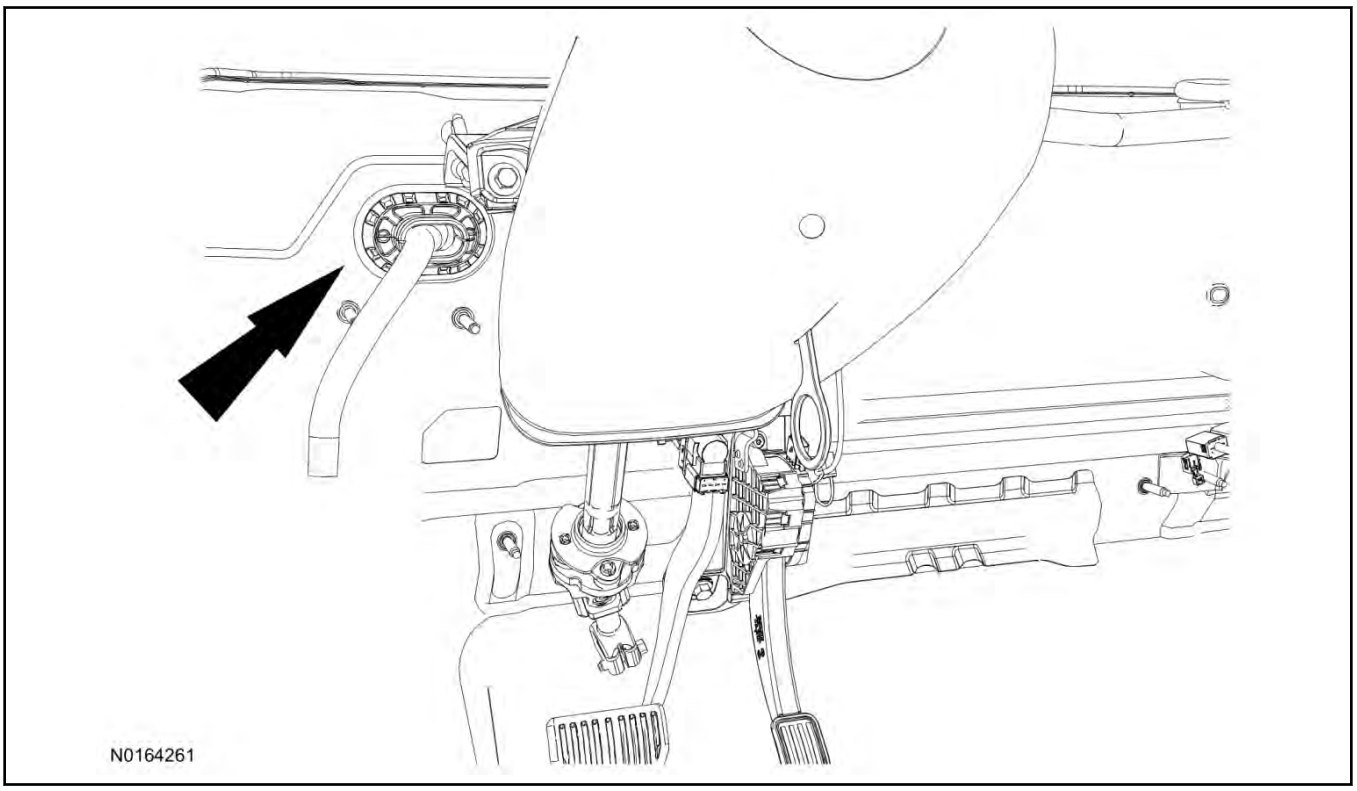


10. Remove the RH and LH loadspace trim panels. For additional information, refer to WSM Section 501-05.

INSTALLATION (Continued)

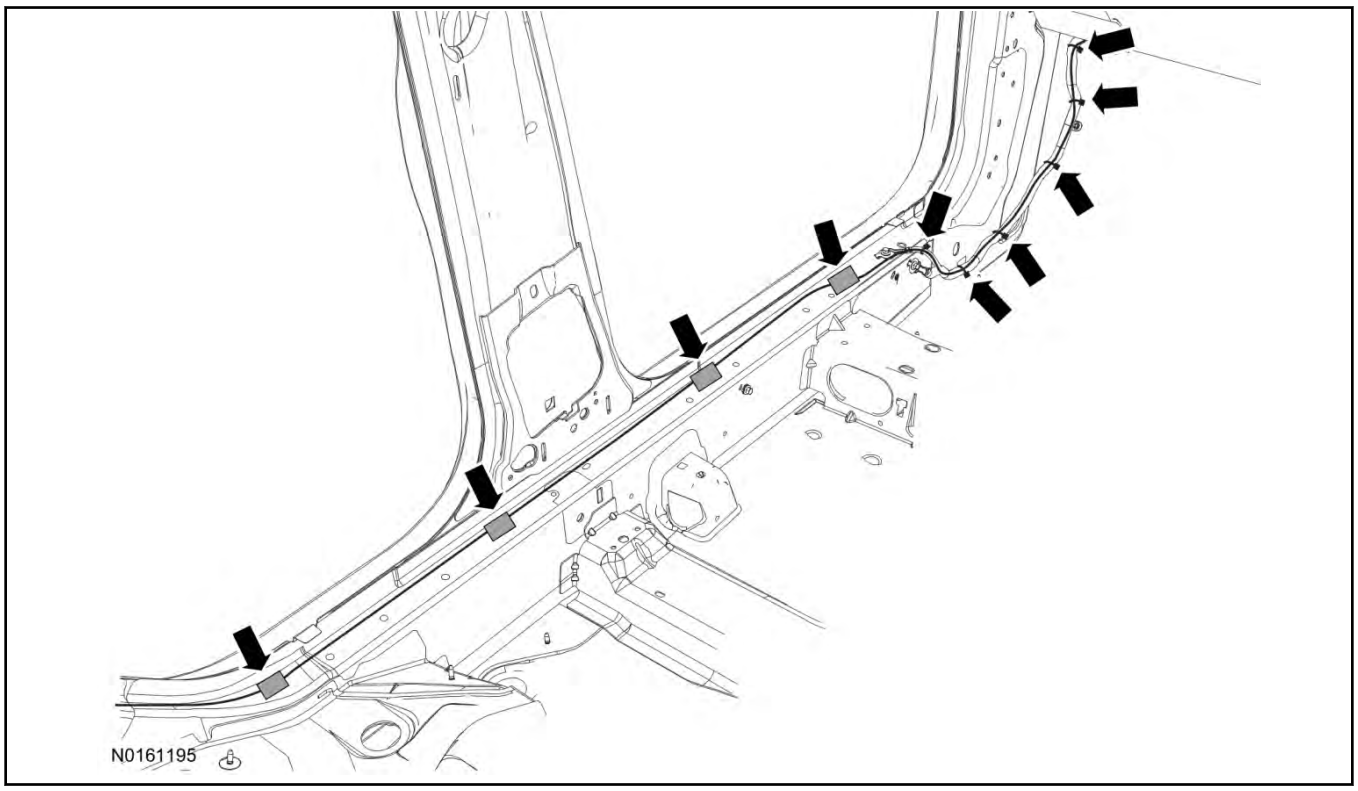
Route Power Wire

11. Position aside the carpet and locate the bulkhead plug located to the left of the steering column.

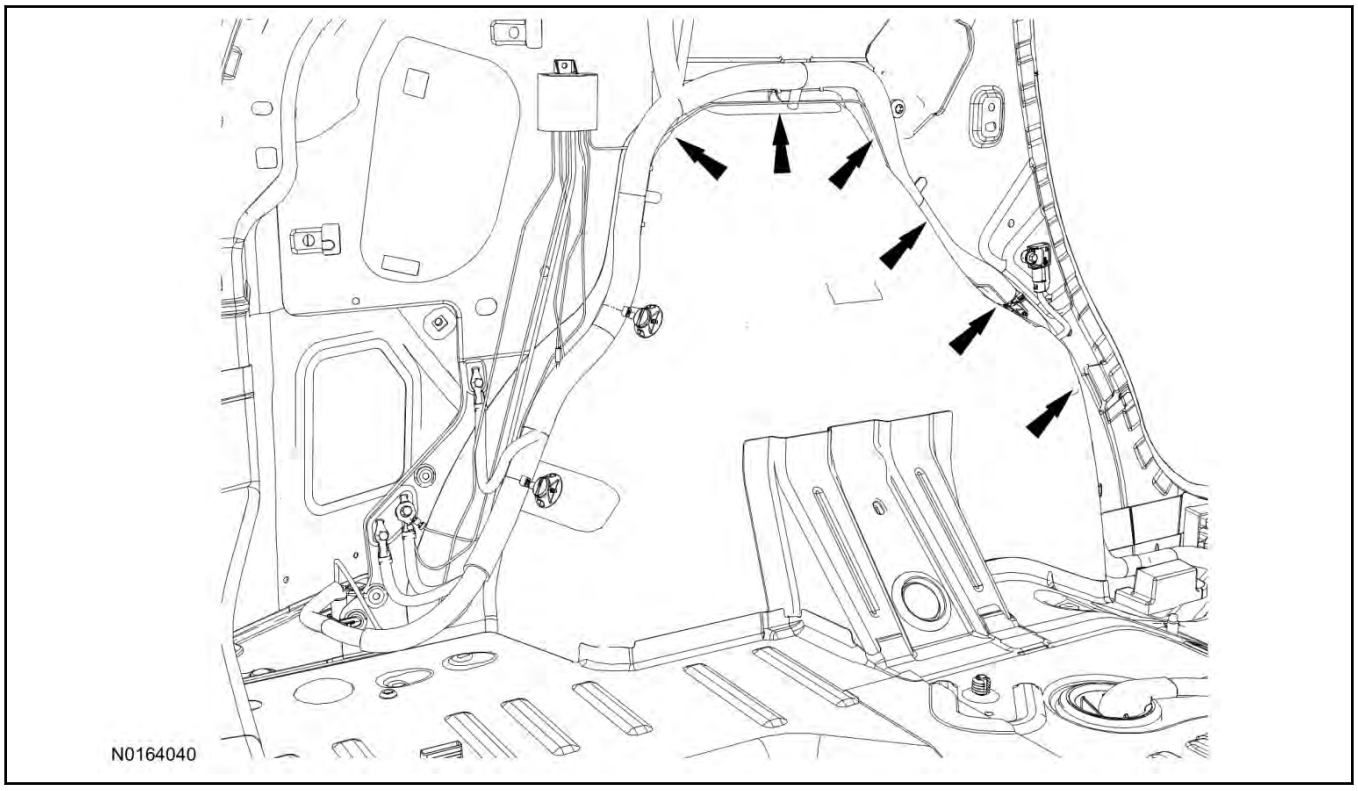


12. Cut the bulkhead plug and use a push rod to feed the Red power cable from the engine compartment, through the plug and route down the LH side of the vehicle to the cargo area.
    - The Red power cable will be routed along the LH side of the battery tray.
    - Using a push rod feed the Red power cable behind the lower B pillar.
    - Use supplied tie straps and foam pads to secure the Red power cable to the interior vehicle harness and floor pan.
    - Seal the bulkhead plug at the cut slit, with a suitable silicone sealer.

INSTALLATION (Continued)

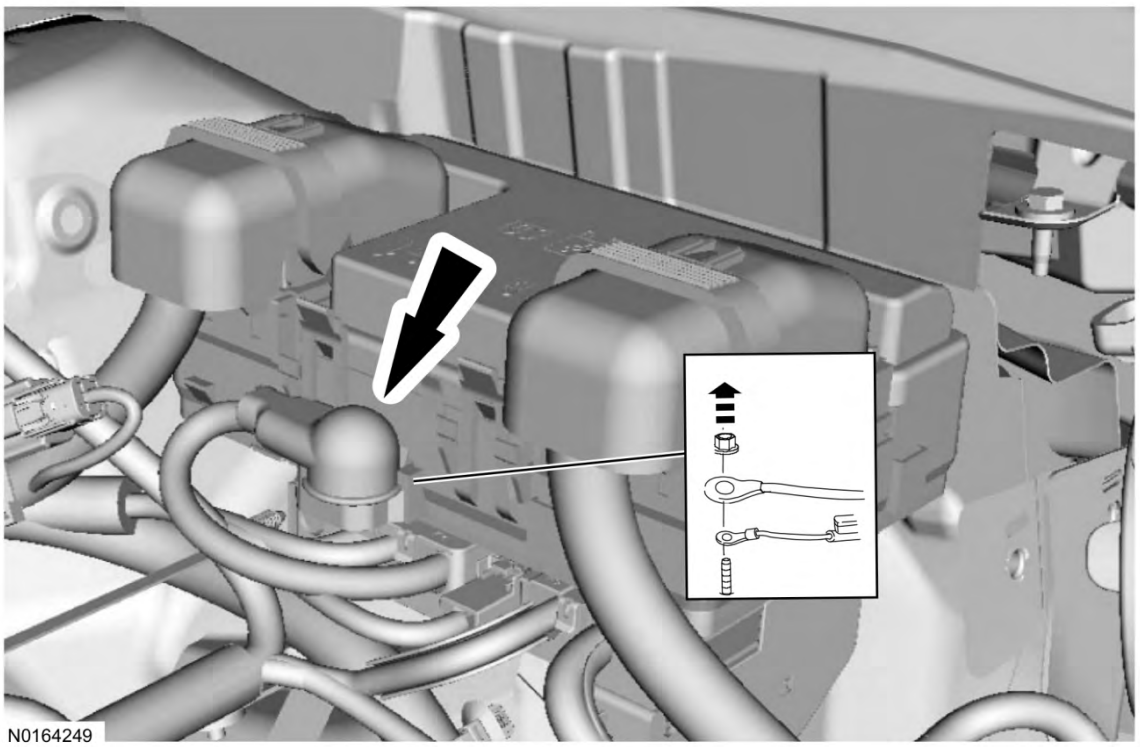


13. Secure the Red power cable to the rear quarter panel vehicle harness.



INSTALLATION (Continued)

14. Connect the Red power cable to the LH underhood fuse box battery power terminal.
    1 Remove the nut from the buss bar located below the battery and remove the cable.
    2 Install the power wire onto the buss bar stud.
    3 Install the battery cable and nut.
    4 Tighten to 6 Nm.

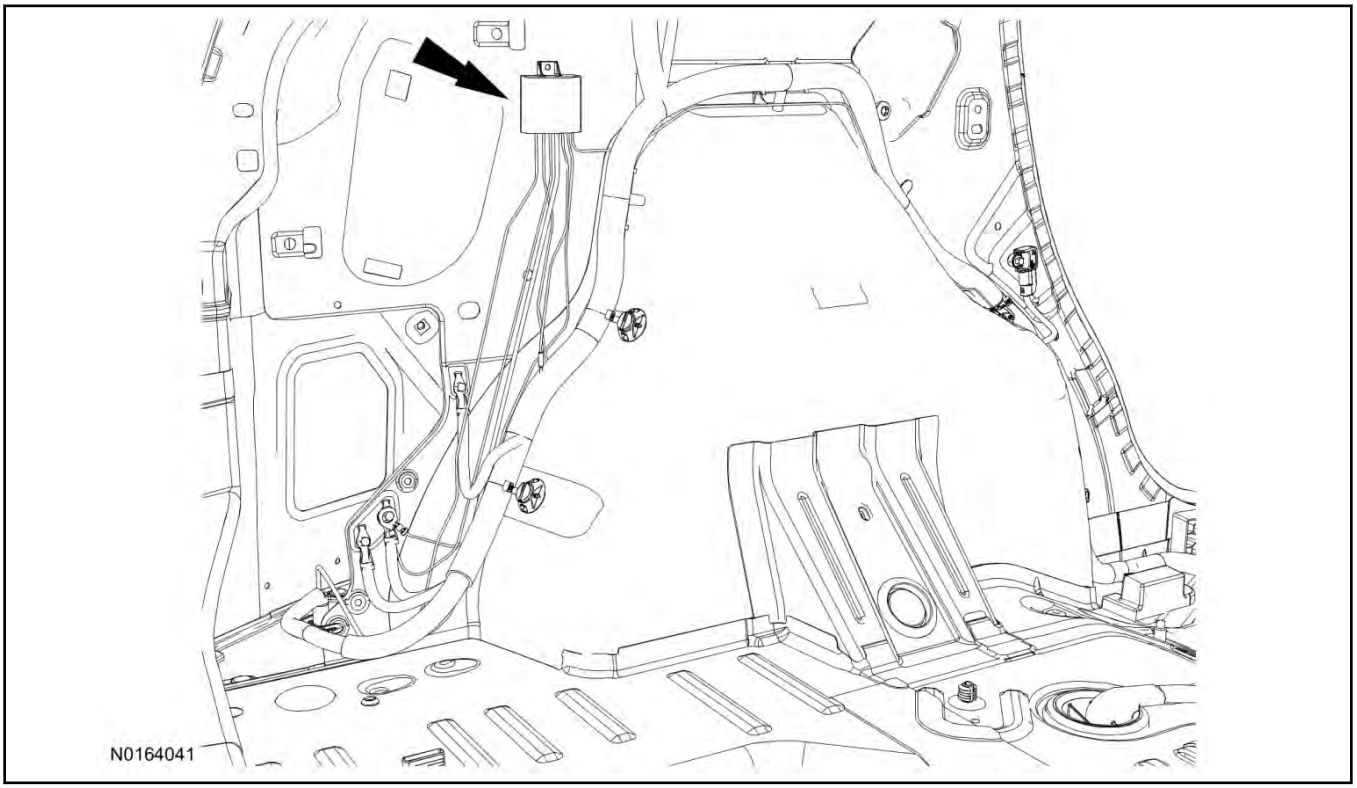


15. Connect the battery ground cable. For additional information, refer to WSM Section 414-01.
16. If equipped, remove Subwoofer. For additional Information refer to WSM Section 415-00.

INSTALLATION (Continued)

Install the Trailer Tow Converter Harness Assembly

17. Remove the protective cover on the 2 sided tape and install the trailer tow converter module onto the LH rear quarter panel.

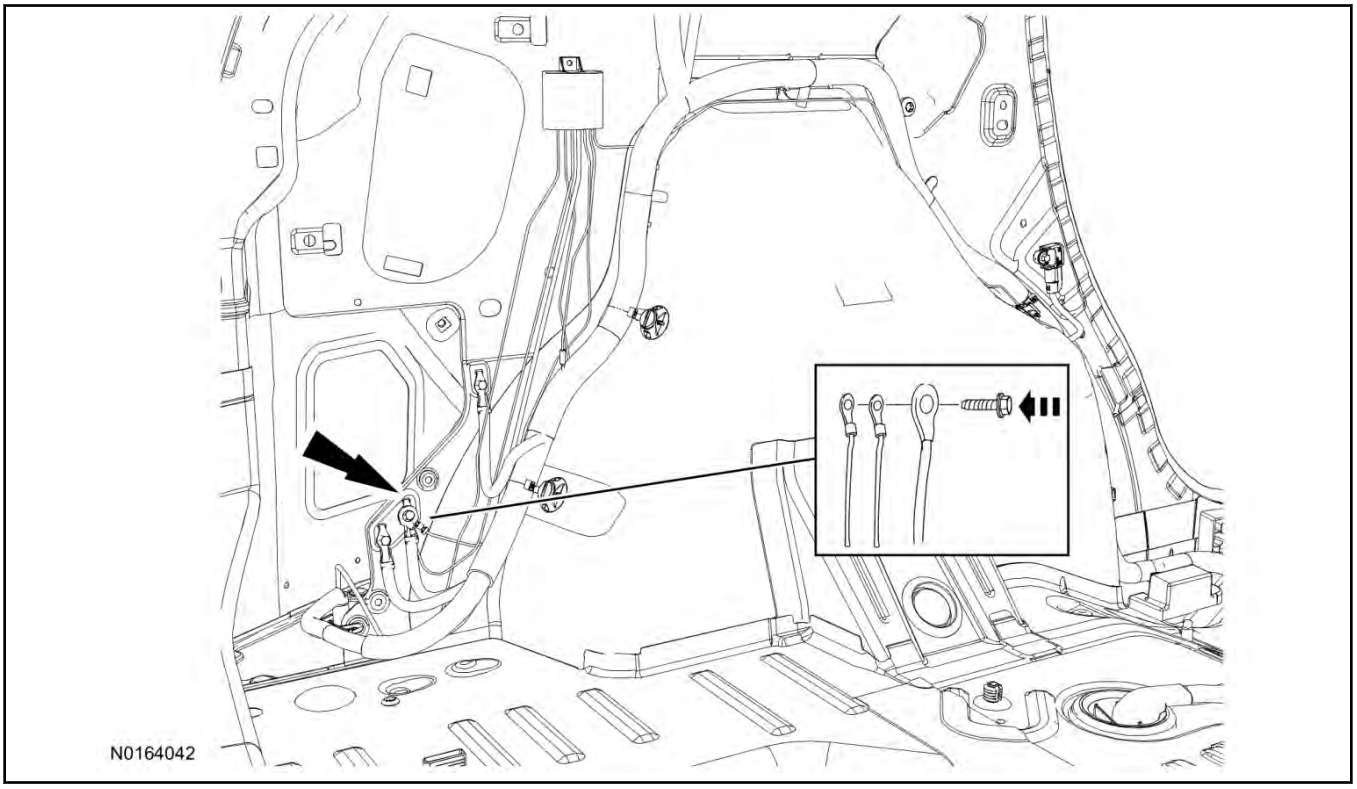


Identify Circuit Wires For Connections

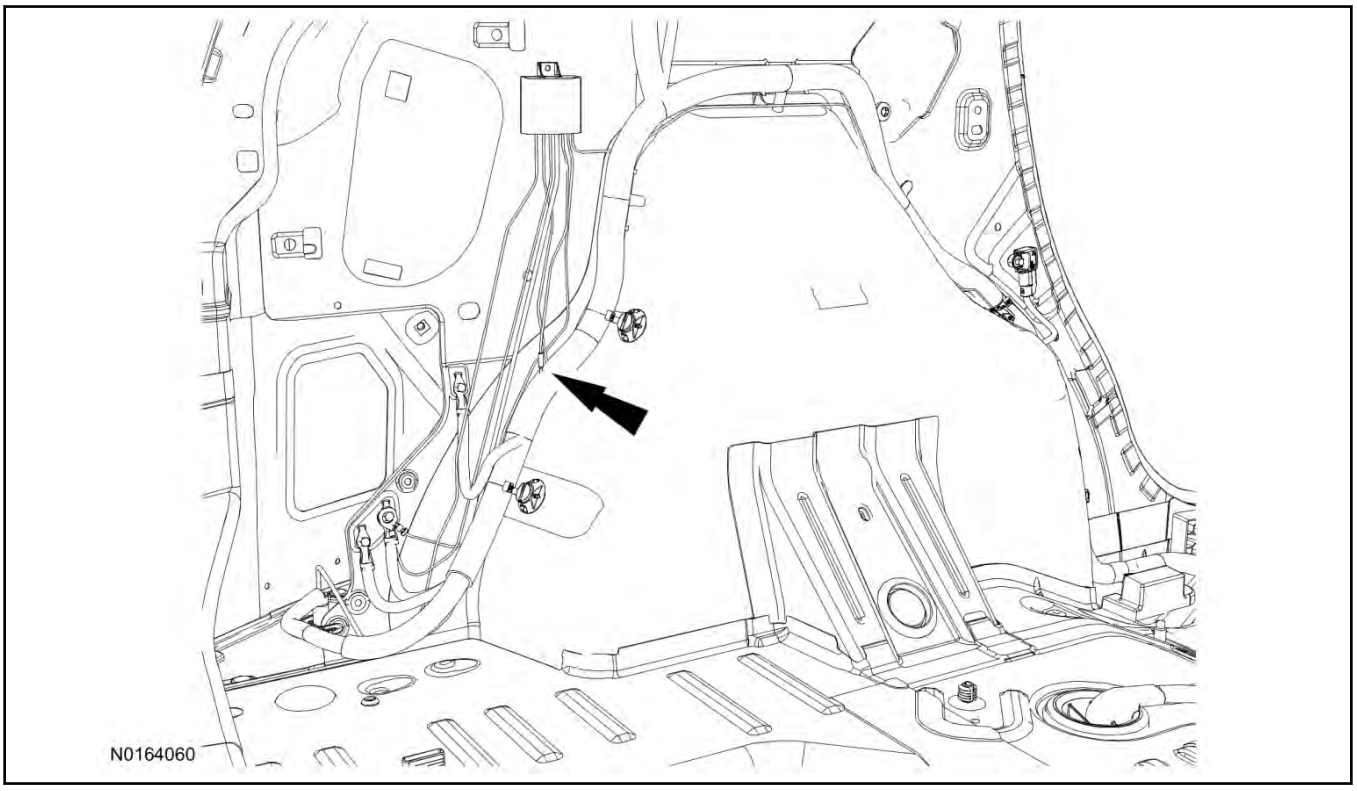
NOTE:
Refer to "Proper Wire Splicing Techniques" prior to proceeding.

18. Splice the Red wire from the control module to the Red power cable. Cut to length.
19. Connect the Black ground wire and the Blue stop wire from the control module to one of the ground screws located on the LH quarter panel.

INSTALLATION (Continued)

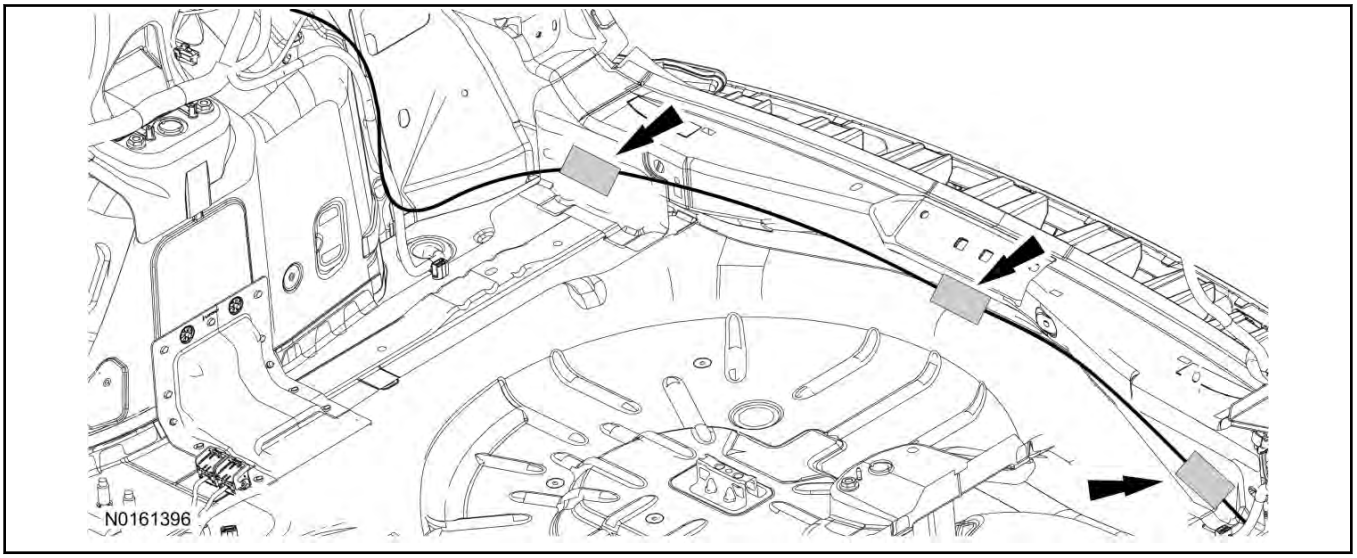


20. Locate the LH rear wire harness, where the control module harness connections will be made.

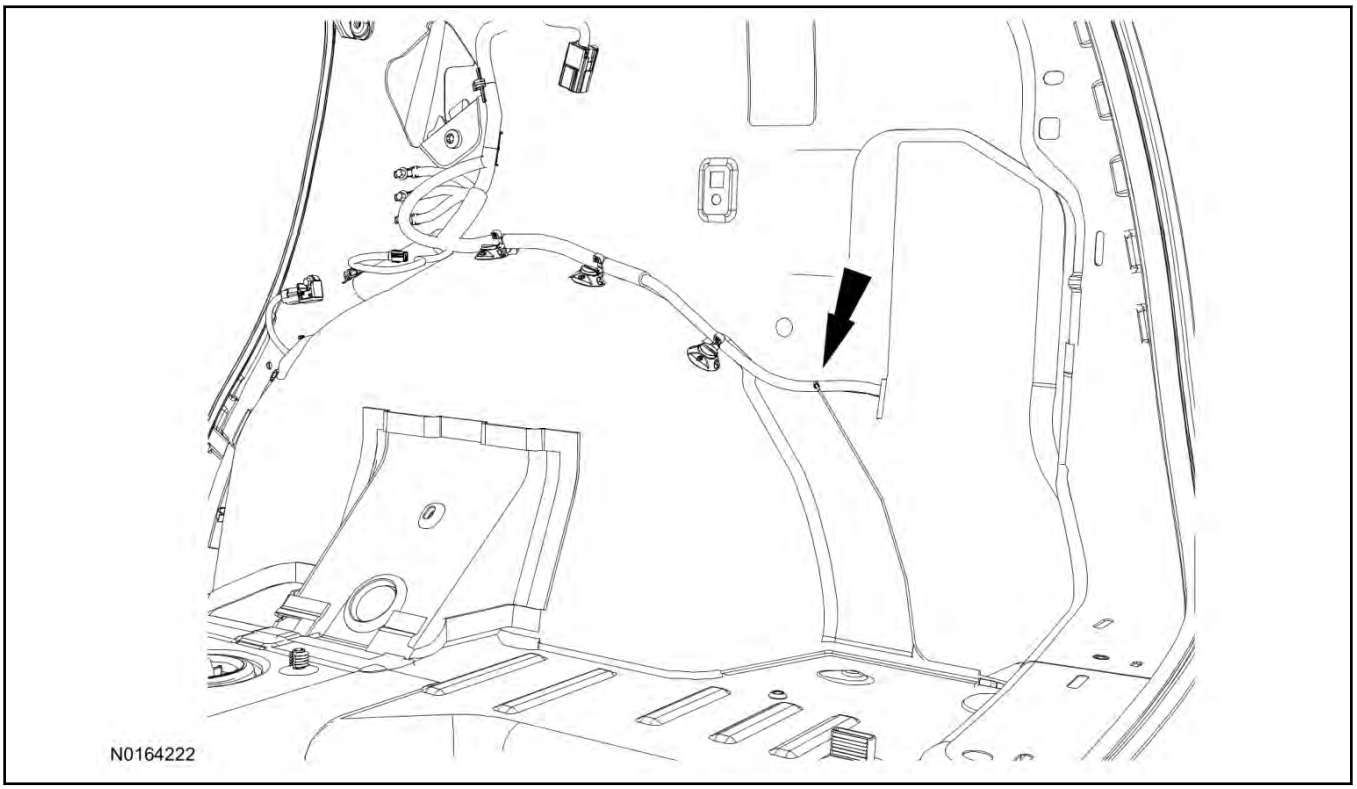


21. Route the Green wire from the control module along the rear floor pan and up to the passenger side rear wire harness.
    - Install tape pads at 3 locations equally spaced to secure the wire to the vehicle floor pan.

INSTALLATION (Continued)



22. Locate the RH rear wire harness, where the control module harness connections will be made.



23. Cut and peel back the wire harness insulation at the LH and RH rear wire harness.
24. Identify the Green/Orange RH turn/stop circuit wire (CLS27), within the RH rear wire harness.
    - A DVOM connected to the correct wire will show 0V, then show pulsing 12V when the multifunction switch in the right turn position.
      A logic probe will show ground on the correct wire, then show pulsing power when the multifunction switch in the right turn position.
25. Connect the Green RH turn signal wire from the control module harness to the Green/Orange RH turn/stop circuit wire (CLS27), within the RH rear wire harness.

INSTALLATION (Continued)

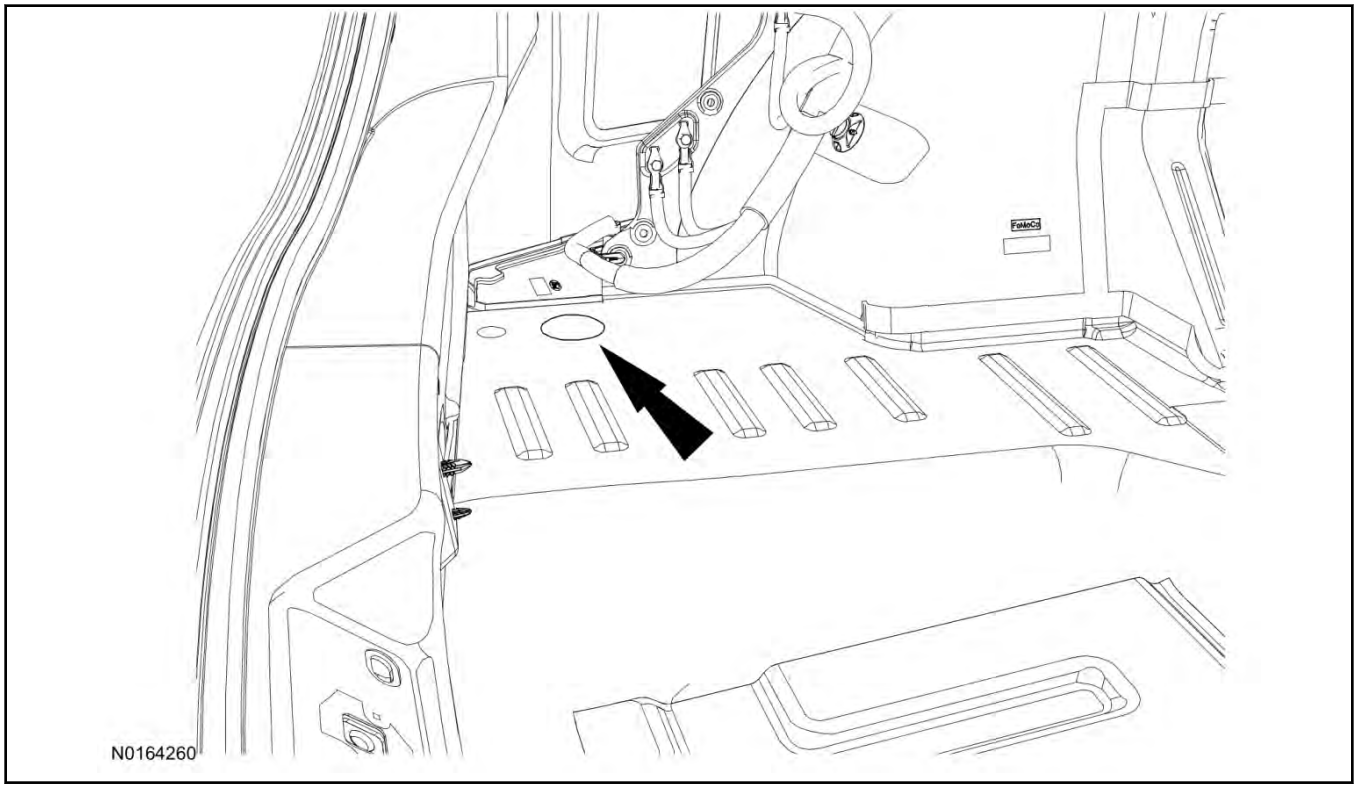
26. Identify the Violet/Green tail lamp circuit wire (CLS08), within the LH rear wire harness.
    - A DVOM connected to the correct wire will show 0V with the headlight switch in the OFF position and 12V with the headlight switch in the parking lights ON position.
      A logic probe connected to the correct wire will show ground with the headlight switch in the OFF position and power with the headlight switch in the parking lights ON position.

NOTE:
Cut module to vehicle harness wires to length

27. Connect the Brown tail lamp wire from the control module harness to the Violet/Green tail lamp circuit wire (CLS08), within the LH rear wire harness.
28. Identify the Gray/Orange LH turn/stop circuit wire (CLS23), within the LH rear wire harness.
    - A DVOM connected to the correct wire will show 0V, then show pulsing 12V when the multifunction switch in the left turn position.
      A logic probe will show ground on the correct wire, then show pulsing power when the multifunction switch in the LEFT TURN position.
29. Connect the Yellow LH turn signal wire from the control module harness to the Gray/Orange LH turn/stop circuit wire (CLS23), within the LH rear wire harness.

Trailer Harness Routing

30. Remove the floor pan plug located in LH side of the rear cargo area.
31. Working from the outer edge towards the center, cut a slit into the floor pan plug.



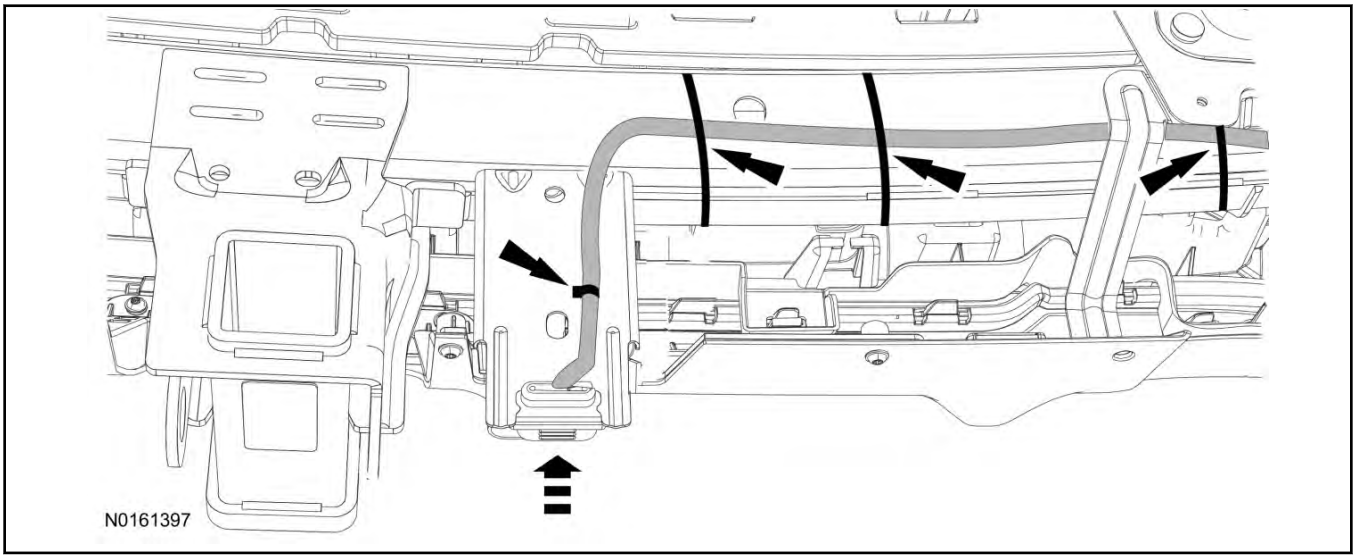
INSTALLATION (Continued)

32. Feed the 4-pin connector and harness from the control module through the hole in the floorpan.
33. Install the rear floorpan plug, while installing, feed the 4-pin connector's ribbon harness into the cut portion of the plug.
34. Seal the rear floorpan plug at the cut slit, with a suitable silicone sealer.

Secure Wires

NOTICE:
Secure harness away from sharp edges, moveable parts or high heat sources.

35. Install the supplied convoluted tubing to the exterior portion of the 4-pin ribbon harness.
36. Install the 4-pin connector to the front of the trailer hitch. Secure the 4-pin ribbon harness to the hitch and vehicle harness.



37. Bundle all excess ribbon harness wire together and use the supplied tie straps to secure.
38. Install the in-line fuse into the Red power cable fuse socket.
39. **NOTE:**
    If your vehicle is equipped with Reverse Park Aid, Blind Spot Information System, Cross Traffic Alert or other detection system a false alert maybe generated when towing a trailer.

    NOTE:
    The Class 1 4-pin trailer tow harness does not support electric trailer brakes.

    Verify proper operation of the vehicle lighting systems and 4-pin trailer tow connector.

    - Black/Green - RH Turn Signal/Brake
    - Black/Yellow - LH Turn Signal/Brake
    - Black/Brown - Tail Lamps
    - Black/White - Ground

Reassemble Vehicle

40. Reverse the removal procedure to reassemble the vehicle.

