

Pyrotechnic Device Disposal

Disposal

Disposal of Deployable Devices and Pyrotechnic Devices That Are Undeployed-Inoperative

NOTE: All inoperative airbags, safety belt pretensioners and inflatable safety belt inflators have been placed on the Mandatory Return List. Treat all discolored or damaged airbags the same as any inoperative live airbag being returned.

1.  **WARNING:** Before beginning any service procedure in this manual, refer to health and safety warnings in section 100-00 General Information. Failure to follow this instruction may result in serious personal injury.

Refer to: Pyrotechnic Device Health and Safety Precautions (100-00 General Information) .

2. Depower the SRS
Refer to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
3. Remove the undeployed/inoperative device. Refer to the appropriate procedure in this section or in the safety belt system section.
4. **NOTE:** When installing a new airbag or inflatable safety belt inflator, a prepaid return postcard is provided with the replacement part. The serial number for the new part and the VIN must be recorded and sent to Ford Motor Company.

If installing a new airbag, or inflatable safety belt inflator, record the necessary information and return the inoperative airbag to Ford Motor Company.

Disposal of Deployable Devices and Pyrotechnic Devices That Are Deployed

5. Depower the SRS.
Refer to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint

System, General Procedures).

6. Remove the deployed device. Refer to the appropriate procedure in this section or in the safety belt system section.
7. **NOTE:** *If a dual stage driver or passenger airbag has deployed due to a crash event, the airbag requires manual deployment to make sure both stages and the active canister vent (if equipped) have deployed before scrapping the vehicle or disposing of the airbag.*

Determine if the vehicle is equipped with dual stage driver or passenger airbags.

Refer to: [Airbag and Seatbelt Pretensioner Supplemental Restraint System \(SRS\) - Raptor - System Operation and Component Description](#) (501-20B Supplemental Restraint System, Description and Operation).

8. REFER to: Disposal of Deployable Devices and Pyrotechnic Devices That Require Manual Deployment in this procedure.
9. Seal the deployed air bag module(s) in the packaging from the new air bag module(s) or a suitable polythene bag and dispose of the deployed device.
 - If required, dispose of in accordance with local contaminated waste regulations.
 - If there are no local contaminated waste regulations, dispose of the deployed device in the same manner as any other part to be scrapped.

Disposal of Deployable Devices and Pyrotechnic Devices That Require Manual Deployment

NOTE: *Safety and environmental concerns require consideration and treatment of restraints system deployable and pyrotechnic devices when disposing of vehicles, deployable devices or pyrotechnic devices. Deploying deployable and pyrotechnic devices before scrapping a vehicle or the device eliminates the potential for hazardous exposures or reactions during processing. If special handling procedures are followed, deployable and pyrotechnic devices can be deployed safely and recycled with the vehicle, shipped separately to a recycling facility or disposed of safely.*

10. To determine the deployable devices a vehicle is equipped with:
Refer to: [Airbag and Seatbelt Pretensioner Supplemental Restraint System \(SRS\) - Raptor - System Operation and Component Description](#) (501-20B Supplemental Restraint System, Description and Operation).
11. A vehicle equipped with any of the following deployable devices requires manual deployment of the devices before scrapping the vehicle or component. For additional information, refer to the appropriate portion of this procedure.

- Driver airbag
- Inflatable safety belt inflators
- Knee airbag
- Passenger airbag
- Seat side airbag
- Safety Canopy®
- Side air curtain

13. To determine the pyrotechnic devices a vehicle is equipped with:

Refer to: [Airbag and Seatbelt Pretensioner Supplemental Restraint System \(SRS\) - Raptor - System Operation and Component Description](#) (501-20B Supplemental Restraint System, Description and Operation).

14. A vehicle equipped with any of the following pyrotechnic devices requires manual deployment of the devices before scrapping the vehicle or component. For additional information, refer to the appropriate portion of this procedure.

- Inflatable safety belt inflators
- Safety belt buckle pretensioners
- Safety belt retractor pretensioners
- Safety belt anchor pretensioners
- Adaptive load-limiting retractors
- Deployable steering column

16. **NOTE:** *If a dual stage driver or passenger airbag has deployed due to a crash event, the airbag requires manual deployment to make sure both stages and the active canister vent (if equipped) have deployed before scrapping the vehicle or disposing of the airbag.*

To determine if a vehicle is equipped with dual stage driver or passenger airbags:

Refer to: [Airbag and Seatbelt Pretensioner Supplemental Restraint System \(SRS\) - Raptor - System Operation and Component Description](#) (501-20B Supplemental Restraint System, Description and Operation).

17. If a dual stage driver or passenger airbag has deployed due to a crash event, the airbag requires manual deployment to make sure both stages and the active canister vent have deployed before scrapping the vehicle or disposing of the airbag. Refer to Driver, Passenger, Knee and Seat Side Airbags - Remote Deployment in this procedure.

Driver, Passenger, Knee and Seat Side Airbags - Remote Deployment

NOTE: *For airbags with multiple loops, deploy all of the loops on the airbag.*

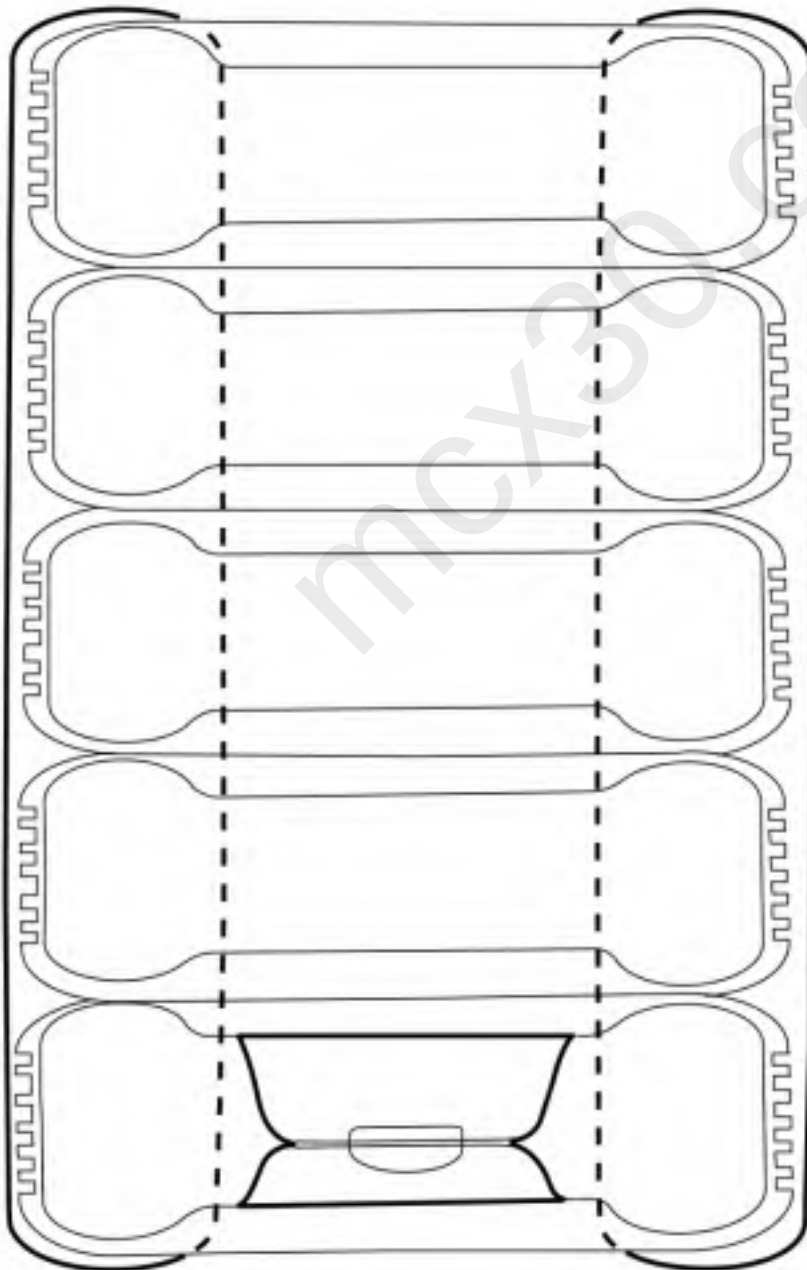
NOTE: Some driver and passenger front airbags have 2 deployment stages and an active canister vent. After a collision it is possible that Stage 1 has deployed and Stage 2 and the active canister vent have not. If a front airbag has deployed, it is mandatory the front airbag be remotely deployed using the appropriate airbag disposal procedure.

NOTE: A typical airbag disposal is shown that is similar for all vehicles.

- **NOTE:** The tires must be of sufficient size to accommodate the airbag.

Obtain a tire and wheel assembly and 4 additional tires (without wheels) of the same size.

- With the tire and wheel assembly on the bottom, stack the tires.
- Securely tie all of the tires together.



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19. Depower the SRS

Refer to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).

20. Remove the airbag. Refer to the appropriate procedure in this section.

21. If the airbag does not have a hard-wired pigtail:

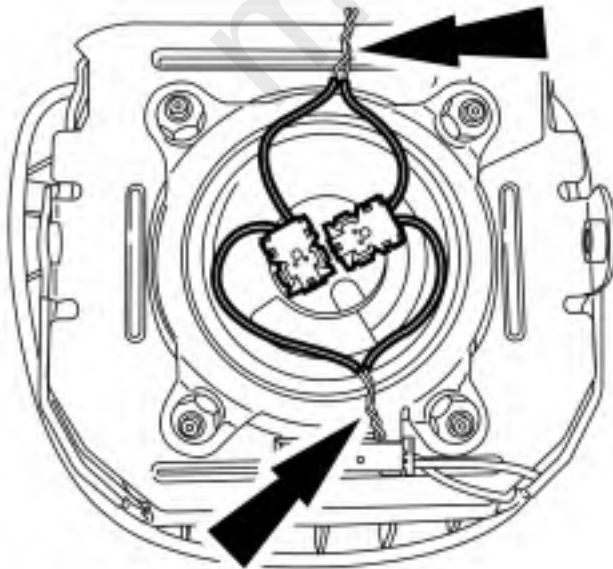
- For vehicles being scrapped, cut each of the airbag wires near the electrical connector that connects to the vehicle wire harness.
- For vehicles not being scrapped, acquire the appropriate wiring pigtail kit. REFER to the Wiring Diagrams manual.

22. Remove any sheathing (if present) and strip the insulation from the ends of the cut wires.

23. **NOTE:** Typical driver airbag with 2 loops shown, other airbags with multiple loops or multiple features (canister vent, active tether) similar.

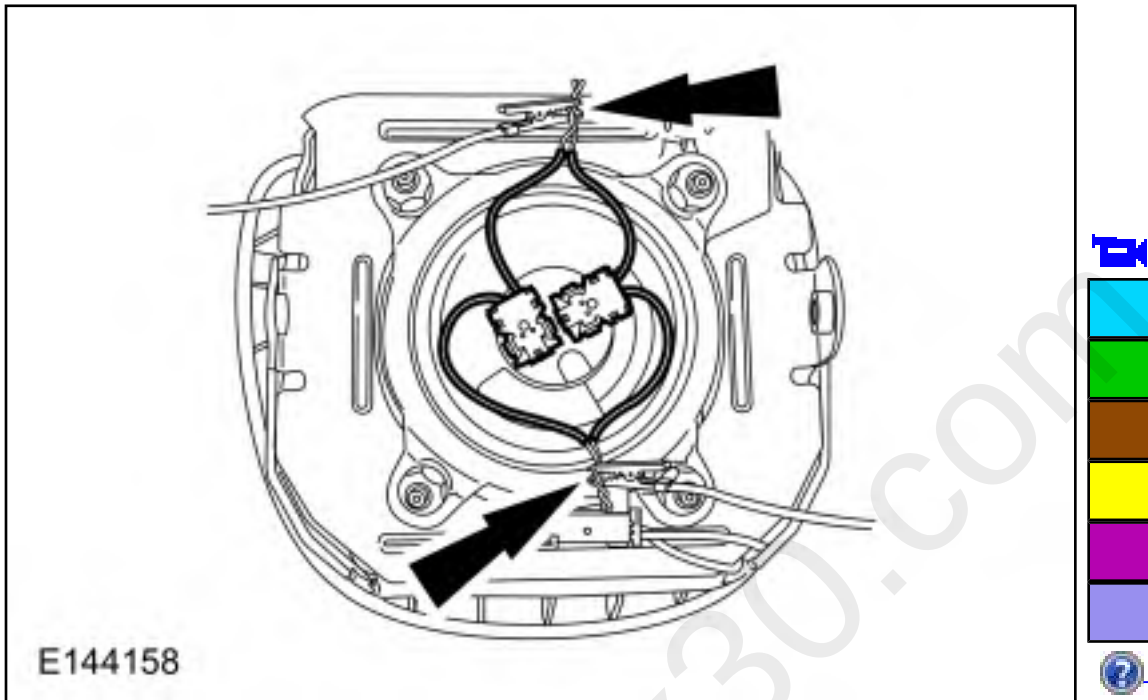
For airbags with multiple loops, twist together a wire from each loop then repeat for the remaining wires from each loop.

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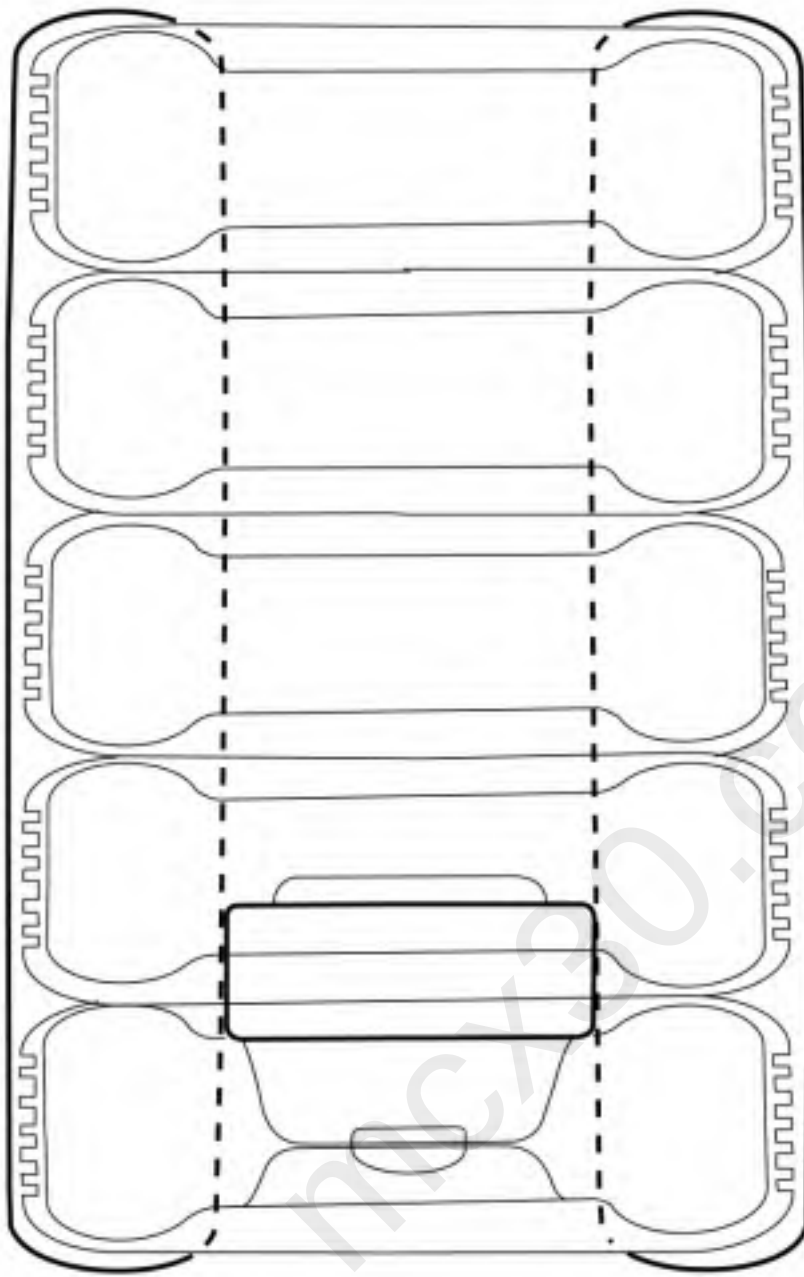
- Make a jumper harness to deploy the airbag module by obtaining 2 wires (20 gauge minimum) at least 9.14 m (30 ft).
- At one end of the jumper harness, connect the wires together.

25. Using the end of the jumper harness where the wires are not connected together, attach each wire of the jumper harness to each wire of the airbag or to the twisted-together wires if multiple loops. Use tape or other insulating material to make sure the leads do not make contact with each other.



26. **NOTE:** *Make sure the airbag connections are maintained.*

For driver airbags, with the stack of tires upright and the wheel on the bottom, carefully place the driver airbag, with the trim cover facing up, on the wheel.

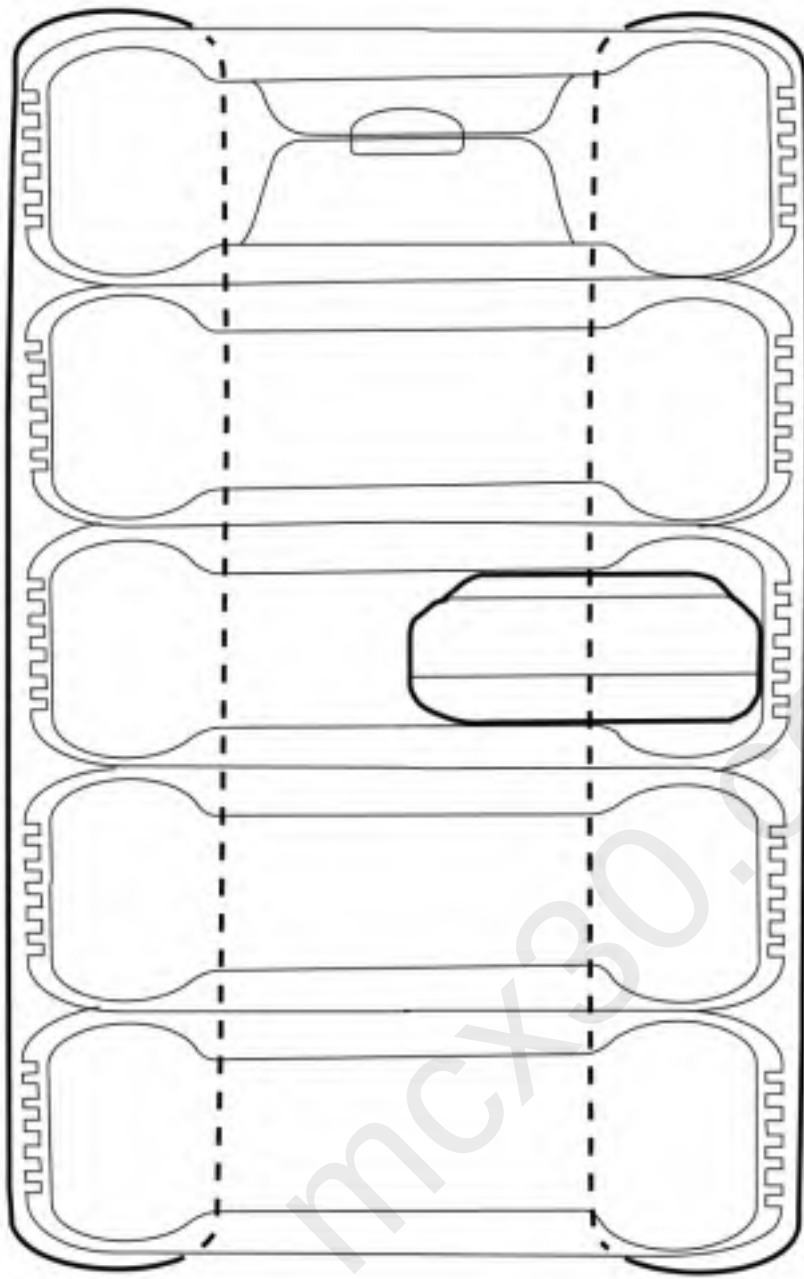


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27. **NOTE:** *Make sure the airbag connections are maintained.*

- For passenger, knee and seat side airbags, tip the stack of tires on its side.
- Place the airbag inside the center tire, making sure that there are 2 tires beneath the tire containing the airbag and 2 tires (including the tire and wheel assembly) above the tire containing the airbag.
- Place the tire stack upright, with the wheel on top.



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28. Remain at least 9.14 m (30 ft) away from the airbag.
29. From the end of the jumper harness that is not connected to the airbag, disconnect the 2 wires of the jumper harness from each other.
30. Deploy the airbag by touching the ends of the 2 wires of the jumper harness to the terminals of a 12-volt battery.

31. To allow for cooling, wait at least 10 minutes before approaching the deployed airbag.

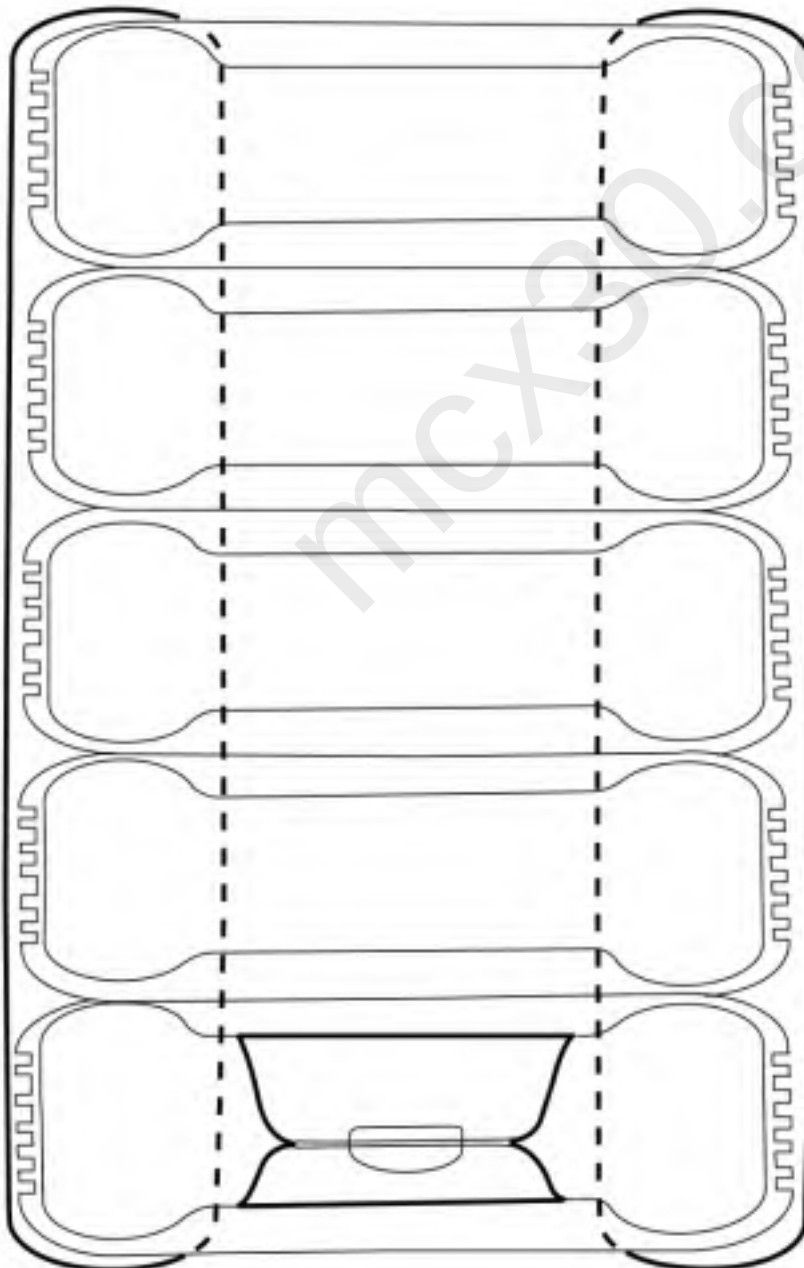
32. Dispose of the deployed airbag in the same manner as any other part to be scrapped.

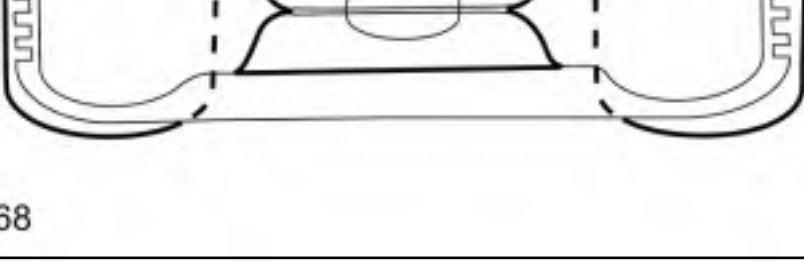
Safety Belt Anchor-Buckle-Retractor Pretensioners, Adaptive Load Limiting Retractors and Safety Belt Inflators - Remote Deployment

- **NOTE:** *The tires must be of sufficient size to accommodate the safety belt anchor, buckle, retractor or inflator.*

Obtain a tire and wheel assembly and 4 additional tires (without wheels) of the same size.

- With the tire and wheel assembly on the bottom, stack the tires.
- Securely tie all of the tires together.





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34. Depower the SRS.

Refer to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).

35. Remove the safety belt anchor, buckle, retractor or inflator. Refer to the appropriate procedure in the safety belt system section.

36. If the safety belt anchor, buckle, retractor or inflator does not have a hard-wired pigtail, cut each of the wires near the electrical connector that connects to the vehicle wire harness.

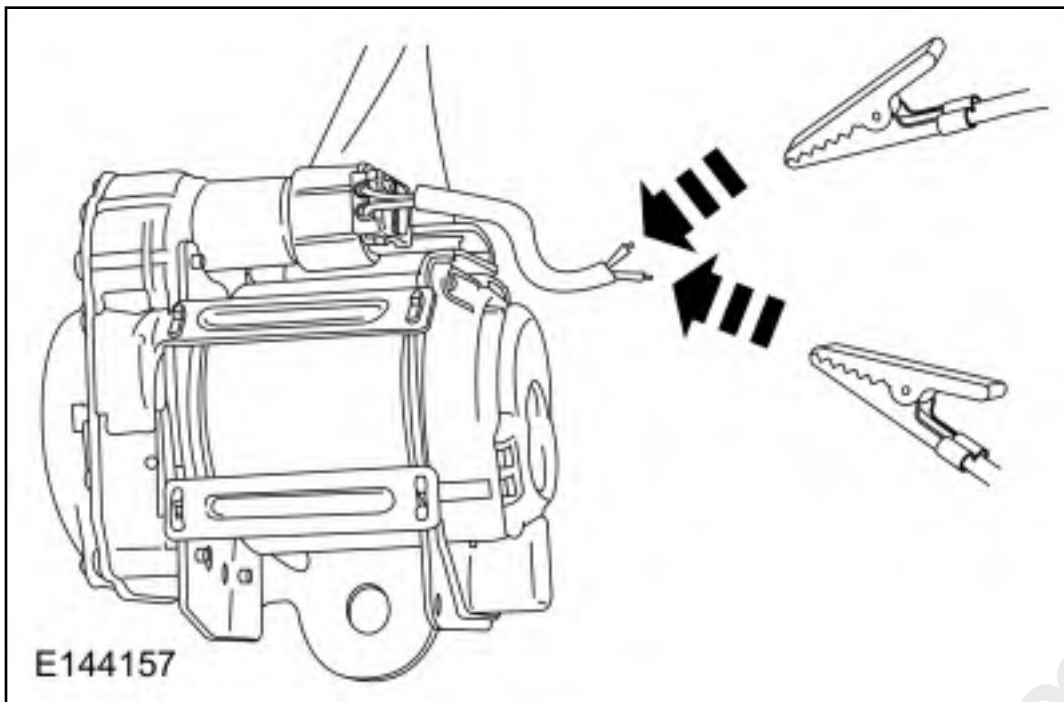
37. When deploying a safety belt buckle pretensioner, install a nut and bolt of sufficient length and the same diameter used to retain it to the seat.

38. Remove any sheathing (if present) and strip the insulation from the ends of the cut wires.

- Make a jumper harness to deploy the safety belt anchor, buckle, retractor or inflator by obtaining 2 wires (20 gauge minimum) at least 9.14 m (30 ft).
- At one end of the jumper harness, connect the wires together.

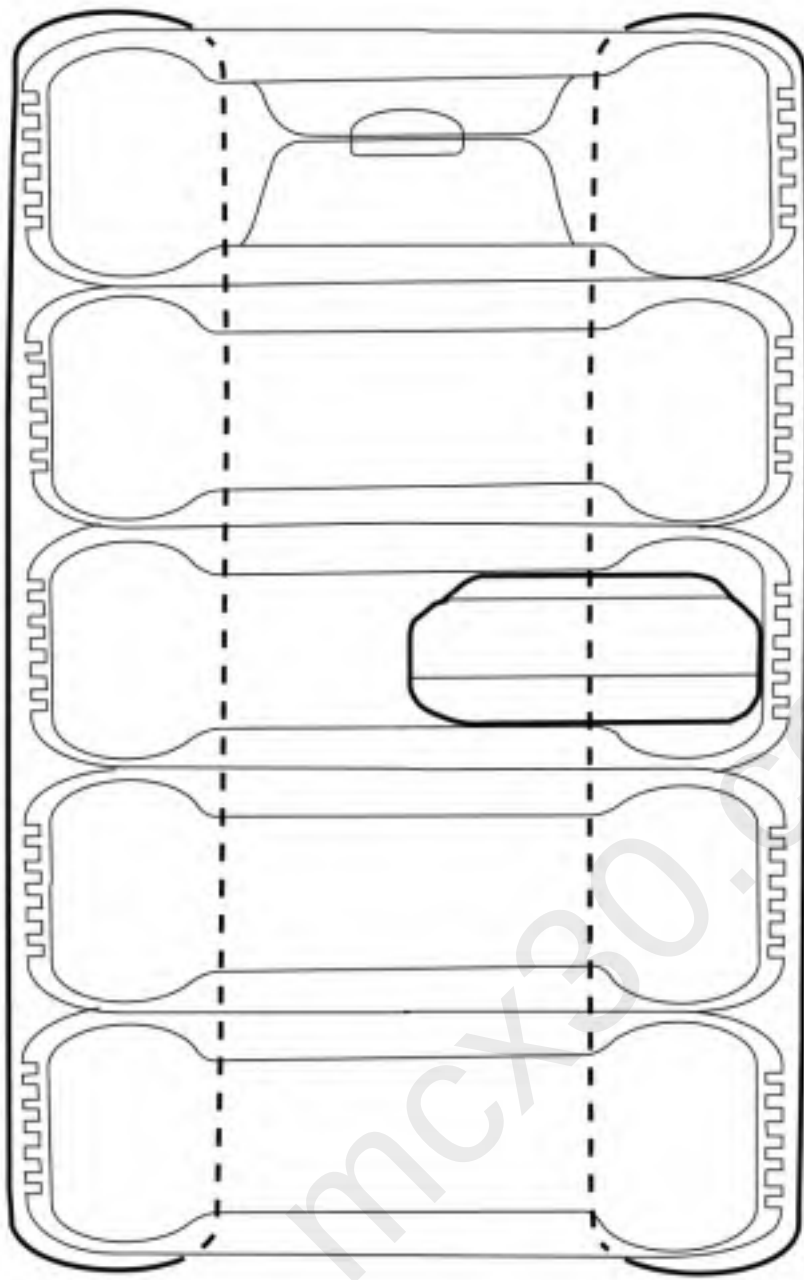
40. **NOTE:** *Typical safety belt retractor pretensioner shown, other safety belt anchor pretensioners, buckle pretensioners, load-limiting retractors and safety belt inflators similar.*

Using the end of the jumper harness where the wires are not connected together, attach each wire of the jumper harness to each wire of the safety belt anchor, buckle, retractor or inflator. Use tape or other insulating material to make sure the leads do not make contact with each other.



41. **NOTE:** *Make sure the airbag connections are maintained.*

- Tip the stack of tires on its side.
- Place the safety belt anchor, buckle, retractor or inflator inside the center tire, making sure that there are 2 tires beneath the tire containing the airbag and 2 tires (including the tire and wheel assembly) above the tire containing the airbag.
- Place the tire stack upright, with the wheel on top.



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42. Remain at least 9.14 m (30 ft) away from the safety belt anchor, buckle, retractor or inflator.
43. From the end of the jumper harness that is not connected to the safety belt anchor, buckle, retractor or inflator, disconnect the 2 wires of the jumper harness from each other.
44. Deploy the safety belt anchor, buckle, retractor or inflator by touching the ends of the 2 wires of the jumper harness to the terminals of a 12-volt battery.
45. To allow for cooling, wait at least 10 minutes before approaching the deployed safety belt

anchor, buckle, retractor or inflator.

46. Dispose of the deployed safety belt anchor, buckle, retractor or inflator in the same manner as any other part to be scrapped.

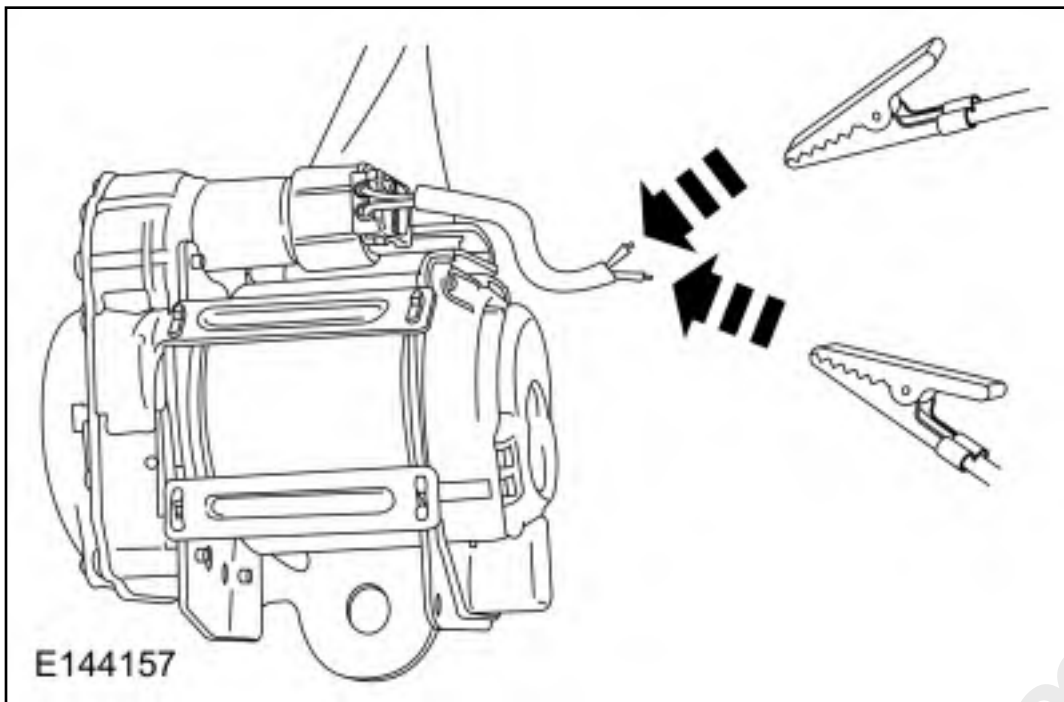
Safety Belt Anchor-Buckle-Retractor Pretensioners, and Adaptive Load Limiting Retractors - In-Vehicle Deployment

47. Depower the SRS

Refer to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).

48. Access the safety belt anchor, buckle or retractor electrical connectors. Refer to the appropriate procedure in the safety belt system section.
49. Cut each of the safety belt anchor, buckle or retractor wires, leaving at least 101.6 mm (4 in) to work with.
50. Remove any sheathing (if present) and strip the insulation from the ends of the cut wires.
 - Make a jumper harness to deploy the safety belt anchor, buckle or retractor by obtaining 2 wires (20 gauge minimum) at least 9.14 m (30 ft).
 - At one end of the jumper harness, connect the wires together.
52. **NOTE:** *Typical safety belt retractor pretensioner shown, other safety belt anchor pretensioners, buckle pretensioners and load-limiting retractors are similar.*

Using the end of the jumper harness where the wires are not connected together, attach each wire of the jumper harness to each wire of the safety belt anchor, buckle or retractor. Use tape or other insulating material to make sure the leads do not make contact with each other.



53. Remain at least 9.14 m (30 ft) away from the safety belt anchor, buckle or retractor.
54. Remain at least 9.14 m (30 ft) away from the safety belt anchor, buckle, retractor or inflator.
55. From the end of the jumper harness that is not connected to the safety belt anchor, buckle or retractor, disconnect the 2 wires of the jumper harness from each other.
56. Deploy the safety belt anchor, buckle or retractor by touching the ends of the 2 wires of the jumper harness to the terminals of a 12-volt battery.
57. To allow for cooling, wait at least 10 minutes before approaching the deployed safety belt anchor, buckle or retractor.
58. Dispose of the deployed safety belt anchor, buckle or retractor in the same manner as any other part to be scrapped.

Safety Canopy® and Side Air Curtains - In-Vehicle Deployment

NOTE: The Safety Canopy® deployment for a scrapped vehicle occurs in its installed position in the vehicle.

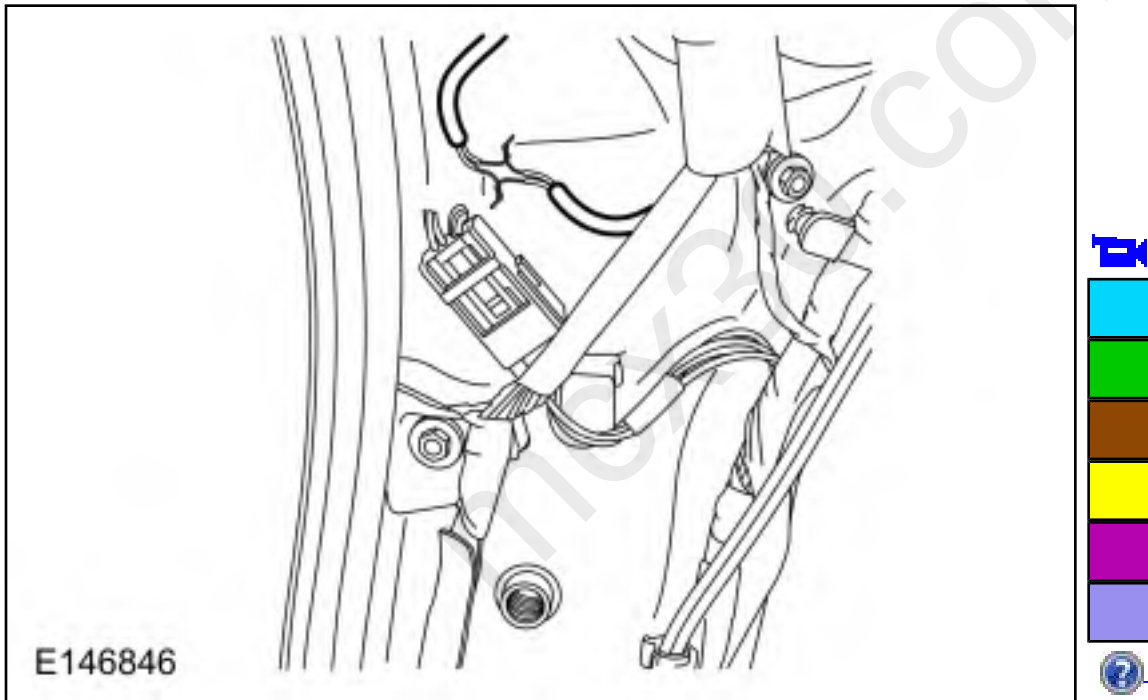
NOTE: A typical Safety Canopy® disposal is shown.

59. Depower the SRS
Refer to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint

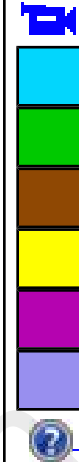
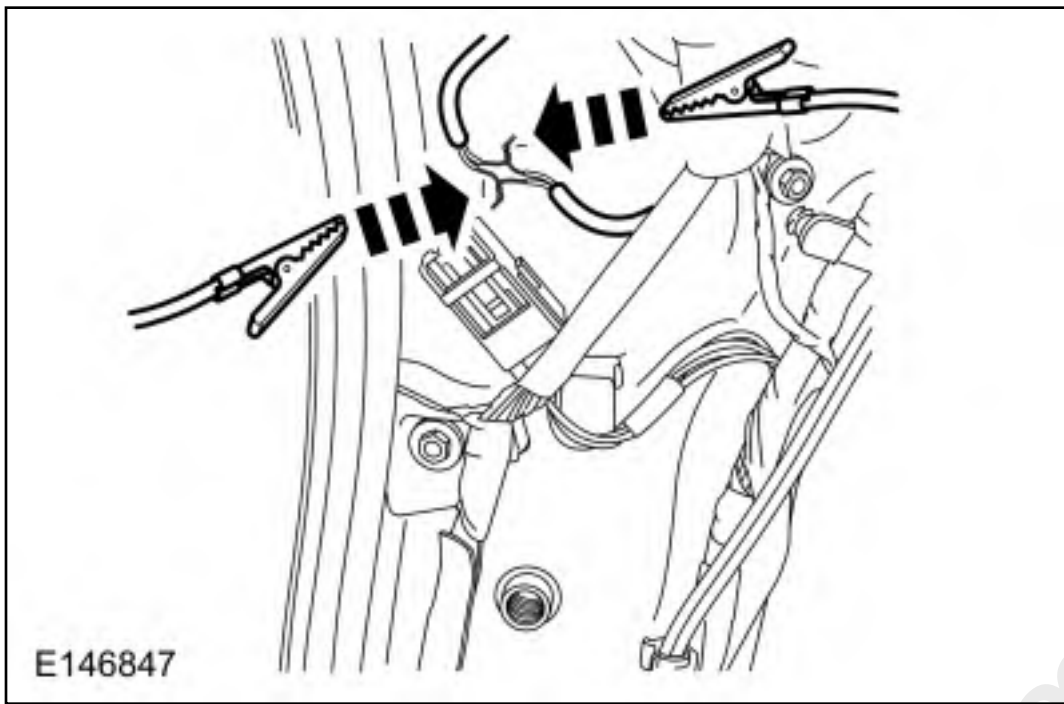
System, General Procedures).

60. Access the Safety Canopy® /side air curtain electrical connectors. For additional information, refer to the appropriate procedure in this section.
61. Cut each of the Safety Canopy® /side air curtain wires, leaving at least 101.6 mm (4 in) to work with.
62. Remove any sheathing (if present) and strip the insulation from the ends of the cut wires.
63. **NOTE:** *Typical Safety Canopy® /side air curtain with 2 loops shown, other Safety Canopy® /side air curtains with 2 loops are similar.*

For Safety Canopy® /side air curtains with multiple loops, twist together a wire from each loop then repeat for the remaining wires from each loop.



- Make a jumper harness to deploy the Safety Canopy®/side air curtains by obtaining 2 wires (20 gauge minimum) at least 9.14 m (30 ft).
 - At one end of the jumper harness, connect the wires together.
65. Using the end of the jumper harness where the wires are not connected together, attach each wire of the jumper harness to each wire of the Safety Canopy® /side air curtain or to the twisted-together wires if multiple loops. Use tape or other insulating material to make sure the leads do not make contact with each other.



66. From the end of the jumper harness that is not connected to the Safety Canopy® /side air curtain, disconnect the 2 wires of the jumper harness from each other.
67. Deploy the Safety Canopy® /side air curtain by touching the ends of the 2 wires of the jumper harness to the terminals of a 12-volt battery.
68. To allow for cooling, wait at least 10 minutes before approaching the deployed Safety Canopy® /side air curtain.
69. Dispose of the deployed Safety Canopy® /side air curtain in the same manner as any other part to be scrapped.

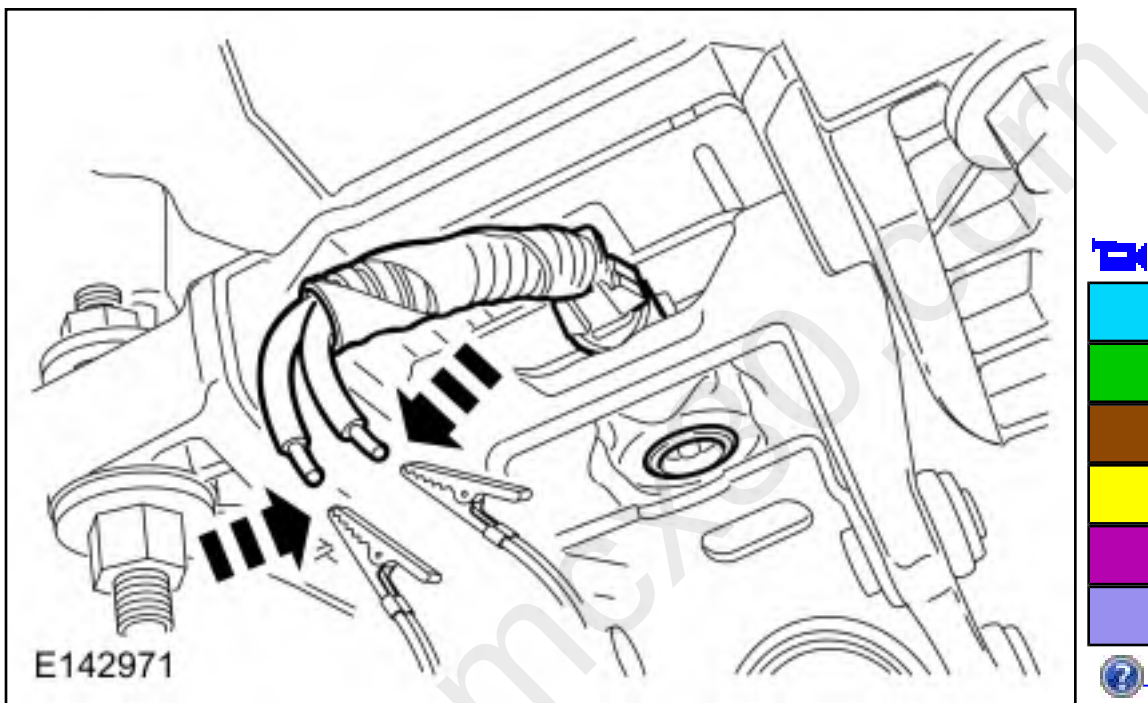
Deployable Steering Column - In-Vehicle Deployment

70. Depower the SRS
Refer to: [Supplemental Restraint System \(SRS\) Depowering](#) (501-20B Supplemental Restraint System, General Procedures).
71. **NOTE:** *It may be necessary to lower or remove the deployable steering column from the instrument panel to access the deployable steering column electrical connector.*

Access the deployable steering column electrical connector.
72. **NOTE:** *If the deployable steering column does not have a hard-wired pigtail, cut the wires and connector(s) from the vehicle wire harness and reconnect to the deployable steering column.*

Cut each of the deployable steering column wires, leaving at least 101.6 mm (4 in) to work with.

73. Remove any sheathing (if present) and strip the insulation from the ends of the cut wires.
- Make a jumper harness to deploy the deployable steering column by obtaining 2 wires (20 gauge minimum) at least 9.14 m (30 ft).
 - At one end of the jumper harness, connect the wires together.
75. Using the end of the jumper harness where the wires are not connected together, attach each wire of the jumper harness to each wire of the deployable steering column. Use tape or other insulating material to make sure the leads do not make contact with each other.



76. Remain at least 9.14 m (30 ft) away from the deployable steering column.
77. From the end of the jumper harness that is not connected to the deployable steering column, disconnect the 2 wires of the jumper harness from each other.
78. Deploy the deployable steering column by touching the ends of the 2 wires of the jumper harness to the terminals of a 12-volt battery.
79. To allow for cooling, wait at least 10 minutes before approaching the deployed steering column.
80. Dispose of the deployed steering column in the same manner as any other part to be scrapped.

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