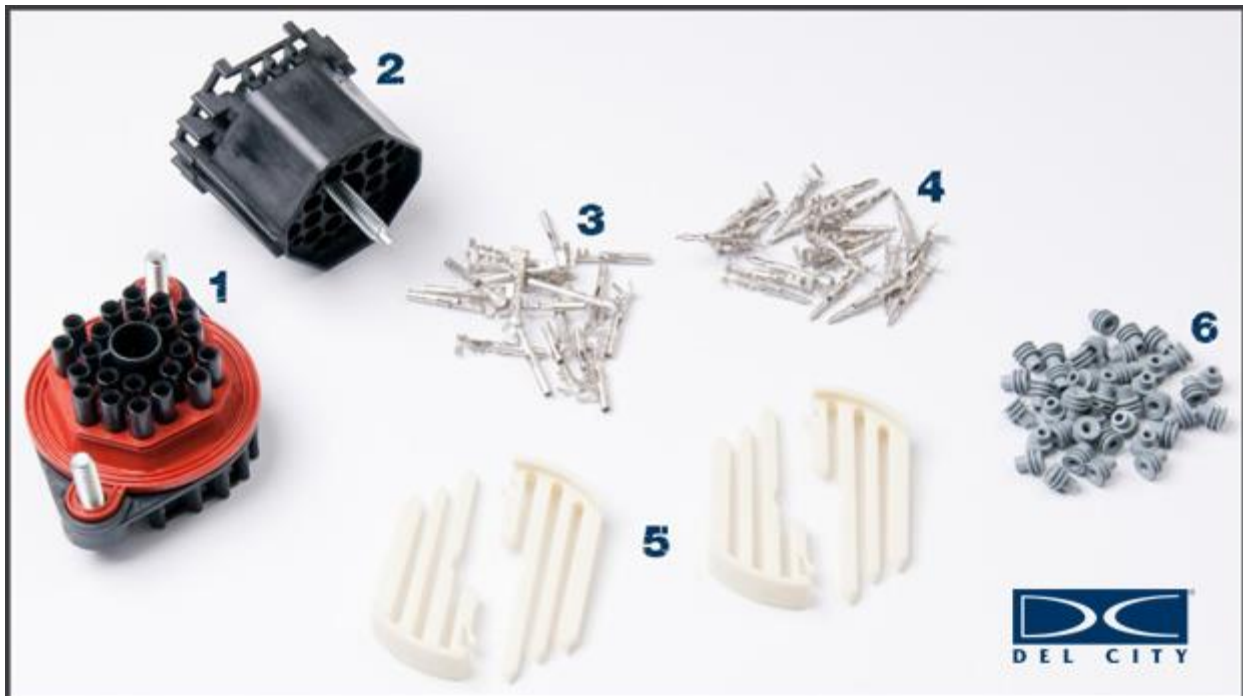


How To Install Weather Pack Bulkhead Wire Connectors

Weather Pack wire connectors are the premium line of environmentally sealed connectors from Delphi/Packard. The bulkhead series creates a secure and weather-proof connection for up to 22 wires and 20 amps. These wire connectors are designed with harsh environments in mind and can endure extreme temperatures, moisture, chemicals, and other fluids. Due to the fully-sealed and weather-resistant design of the weather pack wire connectors, they are commonly used in tough application settings including construction, off-road, and farm equipment.

The below how-to will walk you through each step of preparing, installing, and completing your electrical connection with the bulkhead Weather Pack wire connectors.



- | | |
|-----------------------------------------------|---------------------------------------------------------|
| 1. Female Connector Housing (PN. 75054) | 4. Male Terminals (PN. 75030, 75034, 75038) |
| 2. Male Connector Housing (PN. 75056) | 5. TPA Comb Locks (PN. 75058) |
| 3. Female Terminals (PN. 75032, 75036, 75040) | 6. Cavity Seals (PN. 75000, 75002, 75004, 75006, 75008) |

Additional Weather Pack Items and Tools

Cavity Plug – silicone seal designed to fill any unused housing cavities (PN. 75042)

Crimping Tool – many crimp tools can be used depending on style and tool type preference

Standard 990170 & 990174

Delphi Crimpers 906485 & 906495

Ratchet 990168 & 990030

Removal Tool – aids in the assembly and simple removal of Weather Pack terminals (PN. 906475)

Cavity Identification

Both the female and male connector housings contain identifying letters for each cavity location. These identifying letters assist in lining up and matching wires on each connector housing during the wiring installation process. By using the letters on one of the housings, you can ensure the connecting wire is in the same cavity location on the other housing.

The identification letters on the female housing are counter-clockwise and those on the male housing are clockwise. This is so when they are lined up and connected, the A cavity will be connected to the A cavity and so on.

FEMALE HOUSING



MALE HOUSING



Mounting Instructions

One of the major benefits of the bulkhead Weather Pack wire connectors is that they are designed to provide a weather-proof, through-panel connection. The center cavity portion of the female housing requires a 2 inch (2") hole on the panel for mounting. Each of the bolts on either side of the housing requires a 1/4 inch (1/4") hole. You will then need two (2) 1/4" x 20 nuts and washers to complete the mounting installation.



Installation Process

Step 1: Cavity Seal Installation

Place a cavity seal over the wire ends that you will be inserting into the connectors and push the seals back on the wire. Strip 1/4 inch (1/4") of insulation from the wire and push the cavity seal back down so the end of the seal meets the end of the insulation.



Step 2: Terminal Installation

Place the terminal onto the wire and cavity seal so the tall tangs on the back end of the terminal are surrounding the end of the cavity seal. The smaller tangs on the middle of the terminal should surround the exposed wire.



Step 3: Terminal Crimp

Once the terminal has been properly placed on the wire and cavity seal, it must be crimped to lock the terminal to the wire providing a secure connection and proper positioning. Begin by crimping the smaller tangs that are located around the exposed wire. Place the middle of the terminal and the tangs into the associating jaw location on the crimp tool depending on your wire/terminal size.



Next, you will crimp the taller tangs that cradle the cavity seal. Place the end of the terminal and cavity seal into the appropriate jaw setting on your crimper that associates with your wire/terminal size.

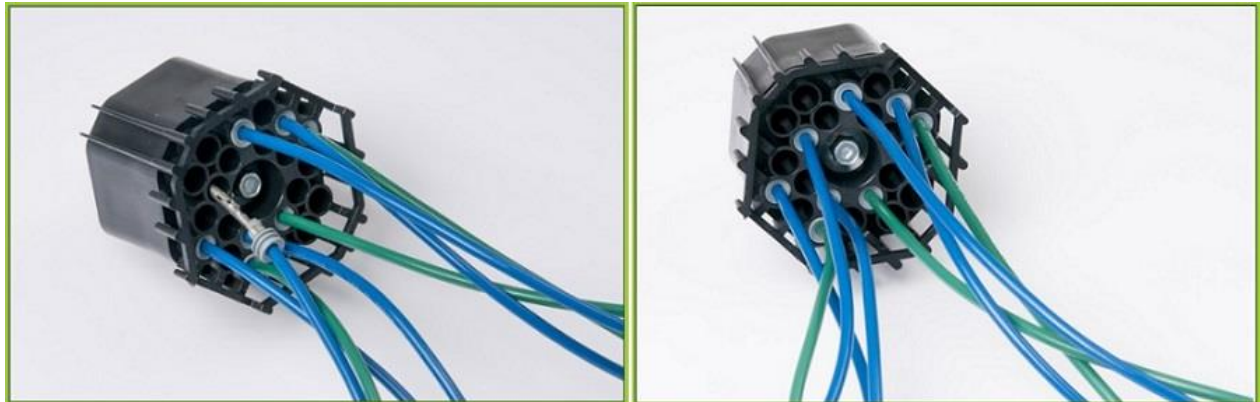
TIP: If you find the taller tangs are not fitting into the crimper tool exactly as you would like, slightly tighten the tangs around the seal for easier insertion into the crimp tool.



NOTE: Make sure your crimps roll the terminal tangs over and down into the cavity seal and copper wire as this is considered a proper crimp. You do not want your tangs to be lying flat or folded over the wire strands.

Step 4: Inserting the Wire, Seal, & Terminal Setups

Once you have all of your wires crimped with the cavity seals and terminals, you can begin inserting them into the appropriate female and male housings. The bulkhead wire connectors can hold up to 22 total wire setups.

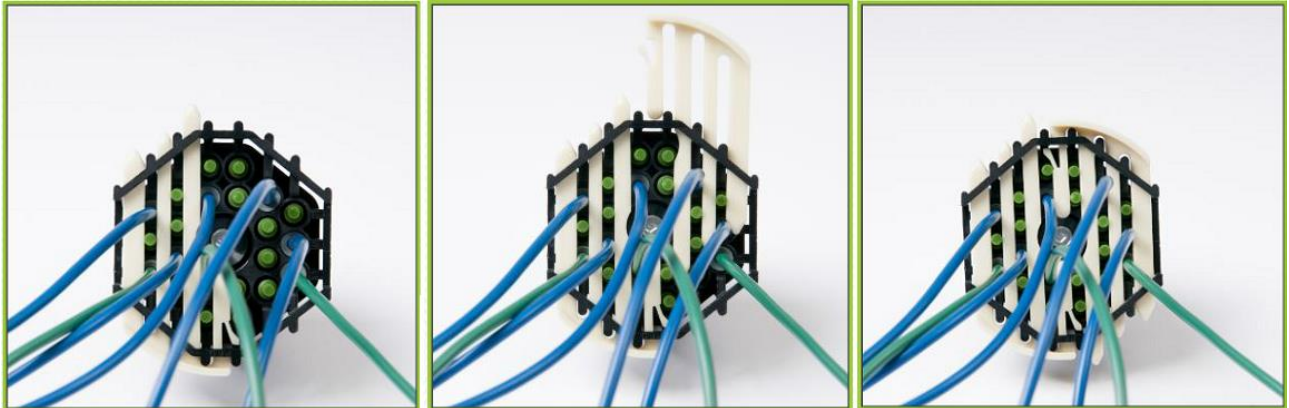


Any unused and empty connector cavities can be filled with cavity plugs. The plugs add another layer of protection to seal the remaining open cavities of the wire connectors against dust, moisture, fluids, and chemicals.



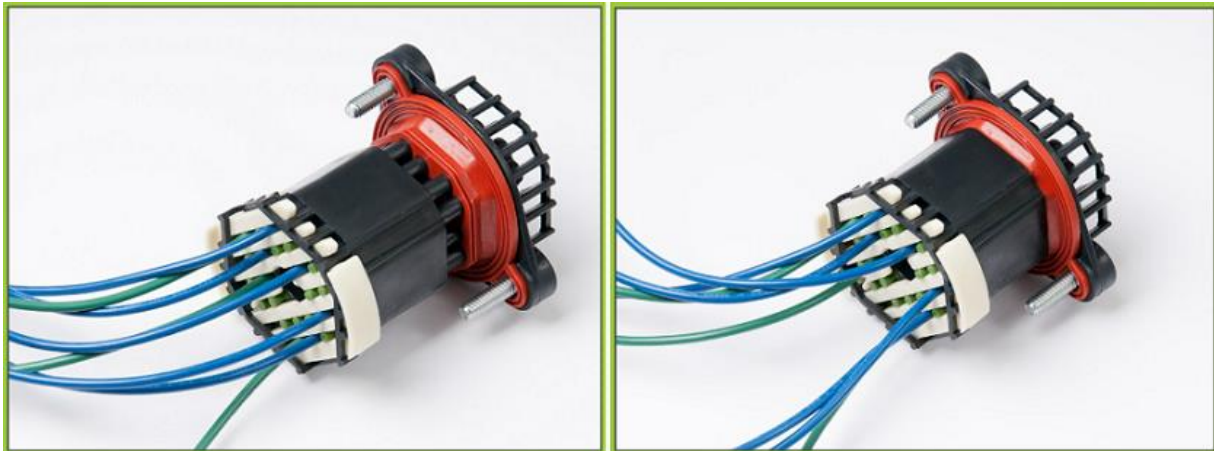
Step 5: Inserting TPA Comb Locks

After all wires and cavity plugs have been inserted into the connector housings, you can slide in two of our TPA comb locks per housing to help protect and maintain placement. TPA comb locks keep all wires in line and prevent potential pull out. The TPAs also ensure any cavity plugs will not fall out due to environment conditions such as vibration.



Step 6: Completing the Connection

Once all plugs, terminals, wires, seals, and TPA comb locks have been properly inserted and placed on both the male and female housings, it is time to complete the connection. The female connector housing is designed to be inserted and mounted within a panel, while the male housing is designed to then meet and lock with the female housing on the other side of the panel to complete the connection.



Use the mounting instructions from the beginning of this guide to assist in properly setting up and inserting the connector housings into the application mount.

Once the female and male housings are connected together, the male housing can be secured to the female housing by tightening the $\frac{1}{4}$ inch ($\frac{1}{4}$ ") hex bolt found in the center of the male connector.



Additional wire connectors and electrical systems including standard Weather Pack, Metri Pack 280, Packard 56 and more are also available. For any questions, contact our technical specialist at 1.800.658.4757