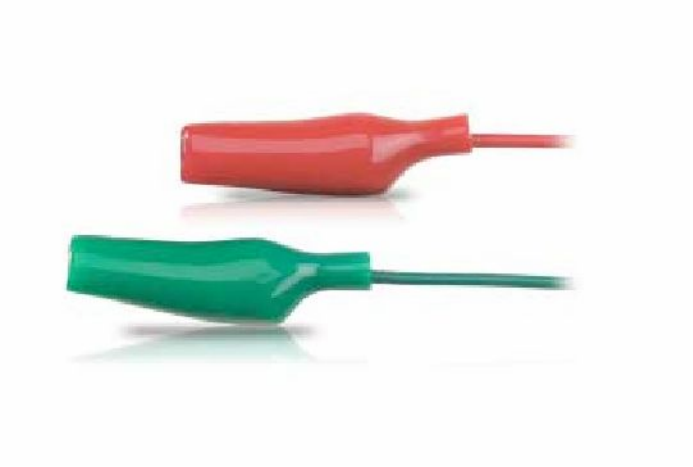
W124 Cabriolet Convertible Top Manual Rear Bow Latch Release Procedure

This procedure is intended to be used in cases when the top is up, but there has been a failure of either the top controller or the sensing microswitches that prevents the top from being lowered. The ability to lower the top under these conditions can be critical as most of the microswitches, hydraulic cylinders, and actuating solenoids can only be accessed for service and/or diagnosis with the rear top bow and hard tonneau cover open. And as far as I know, there is no mechanical way to unlatch the rear bow latch, so I developed this for this circumstance.

This procedure assumes that the hydraulic pump is functional and that there is sufficient fluid in the system. If there is doubt, the pump/fluid should be attended to first as the lack of hydraulic pressure will prevent the rear bow from unlatching even using this procedure.

To perform this procedure you will need five small insulated jumper leads like those sold be Radio Shack:



Get the smallest ones they carry as you will have to push the clip ends into the connector on the wiring harness (you may even have to crimp them a bit with pliers to get them in).

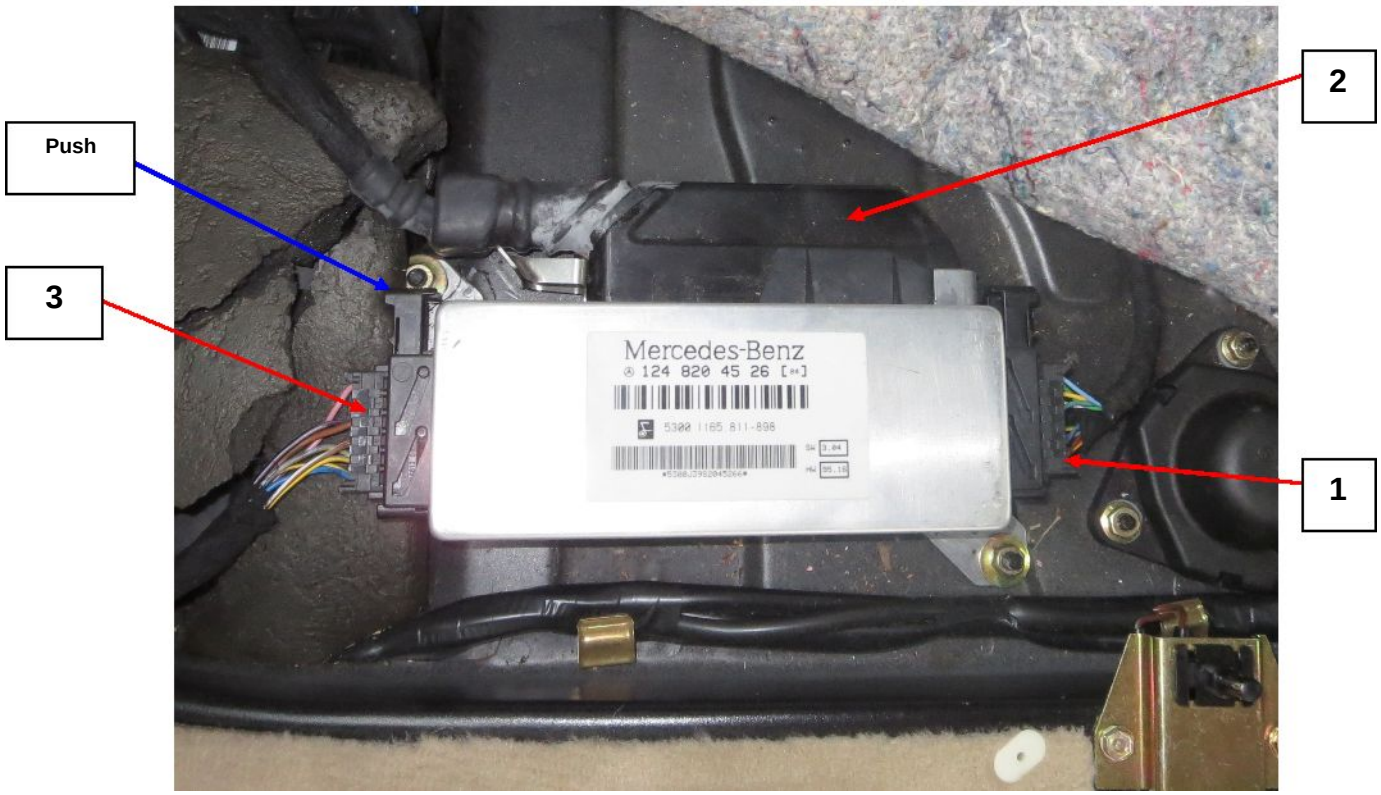
Step By Step

Step 1: Remove the rear seat bottom by pressing on the two red releases along the front bottom edge of the seat. Pull up at the front and lift out of the car.

Step 2: Pull back the insulating blanket in the right rear seat area to expose the top controller (the anti-theft alarm and the vacuum lock controller are in the same area).

Top Controller

The top controller is connected to the top wiring harness via three connectors which I have arbitrarily labeled as 1, 2 and 3, shown below:

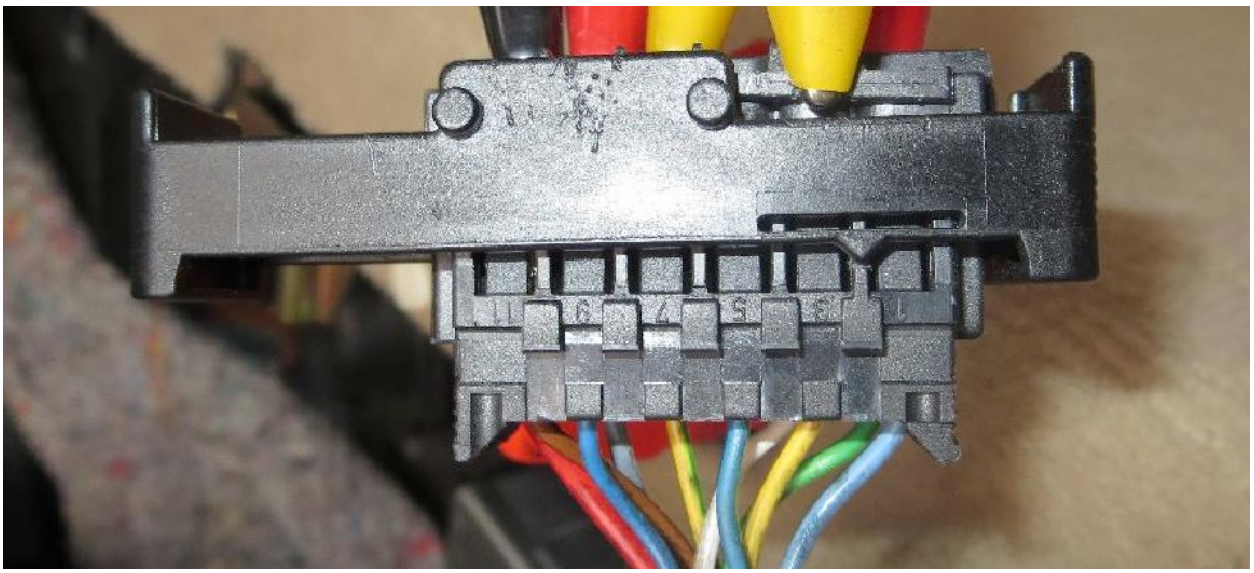


Step 3: Make sure the ignition if turned off (remove key). Unlock the two windshield header latches and push the top up slightly as you would for the normal top lowering procedure. Note that the ignition will remain off the entire procedure.

Step 4: Push the release clips for connectors 1 and 3 horizontally toward the front of the car. Pull the connectors away from the controller. Leave connector 2 in place. Just to be sure you can identify the connectors, connector 1 is the one with the red/yellow wire in position 12. The red/yellow wire connects to the battery through one of the fuses on the right strut tower.

Connector Pin Numbering:

The top controller connector pins are numbered along the side of each connector. MB uses a even/odd scheme (e.g., 1, 3, 5, 7, 9, 11 on one side, and 2, 4, 6, 8, 10, 12 on the other). The following picture show the connectors as the pin number embossed on the side. When I refer to pin numbers, this is how you identify them.



Now that the connectors are disconnected from the controller, we are going to perform two tasks in order. First, we are going to connect together the solenoid and relay leads that will be required to force the latches to open (I will call this connected group the "solenoid bundle"). Then, we will momentarily apply +12 volts to them which will cause the pump to run, the solenoid valves to route fluid to the correct cylinders, and the bow to unlatch. It will happen fast and when you remove power, the top will fall back down, so have a friend ready to prevent if from falling and possibly re-latching. Place a block of wood under the bow to prevent latching afterward.

Connector 3:

Examine connector 3. The MB schematic shows a grey/red wire to pin 1 of this connector. This wire appears to drive a master hydraulic pressure solenoid, but the wire is absent on my 1995 cabriolet. If this wire is present, I believe it will have to also be connected to the solenoid bundle, however it I can't show that here since I don't have one. Try the method without connecting to this wire first; if it does not work, you will have to add that too. If the grey/red wire on pin 1 is not present, you can ignore connector 3.

Step 5: This is where you will use the alligator clips. You will need to connect pins 2, 3, 8, and 10 (pin 10 is the pump relay control lead) of connector 1 together to form the solenoid bundle. Push one end of each of four jumper leads into the above pins and connect the free ends of all four leads together a shown in the pictures that follow. Only one side of the alligator clip jaw will actually go into the connector – the other end will clip onto the side of the connector. As mentioned, you may have to compress (with pliers) one of the clip jaws slightly to get it into the connector pins.

Step 6: Pin 12 of connector 1 brings +12 vdc from the battery via the fuse on the right strut tower. We are going to use it to supply power to the solenoids. Take one more jumper lead and push an end into pin 12 of connector 1. Be careful with the other end and do not let it touch either the car chassis or the leads that form the solenoid bundle. If you accidentally ground this lead, you will blow the fuse on the strut tower.

Step 7: Here's where it opens. You should now have something that looks like what is shown in Figure 3. Make sure all the clips are still in their respective pins. With your friend ready to catch the top, momentarily touch the power lead from pin 12 to the leads of the solenoid bundle. You will here the pump run and the rear bow and latch should pop open. DO NOT keep these connected for more the 5 seconds or the pump might be damaged.

Step 8: If step 7 was successful, you can now open the rear hard tonneau by connecting the lead to pins 3, 9, and 10 as shown in Figure 5. Make sure the rear bow is held out of the way of the opening for the tonneau and again, touch +12 vdc to the connection for 3, 9, and 10. The hard tonneau should unlatch and spring open. Have something ready to hold the tonneau open as it will also close once power is removed. Again, not more than 5 seconds of pump operation under these conditions.

Congratulations – you now have access to all the top hydraulics and switches for continued troubleshooting and diagnosis.

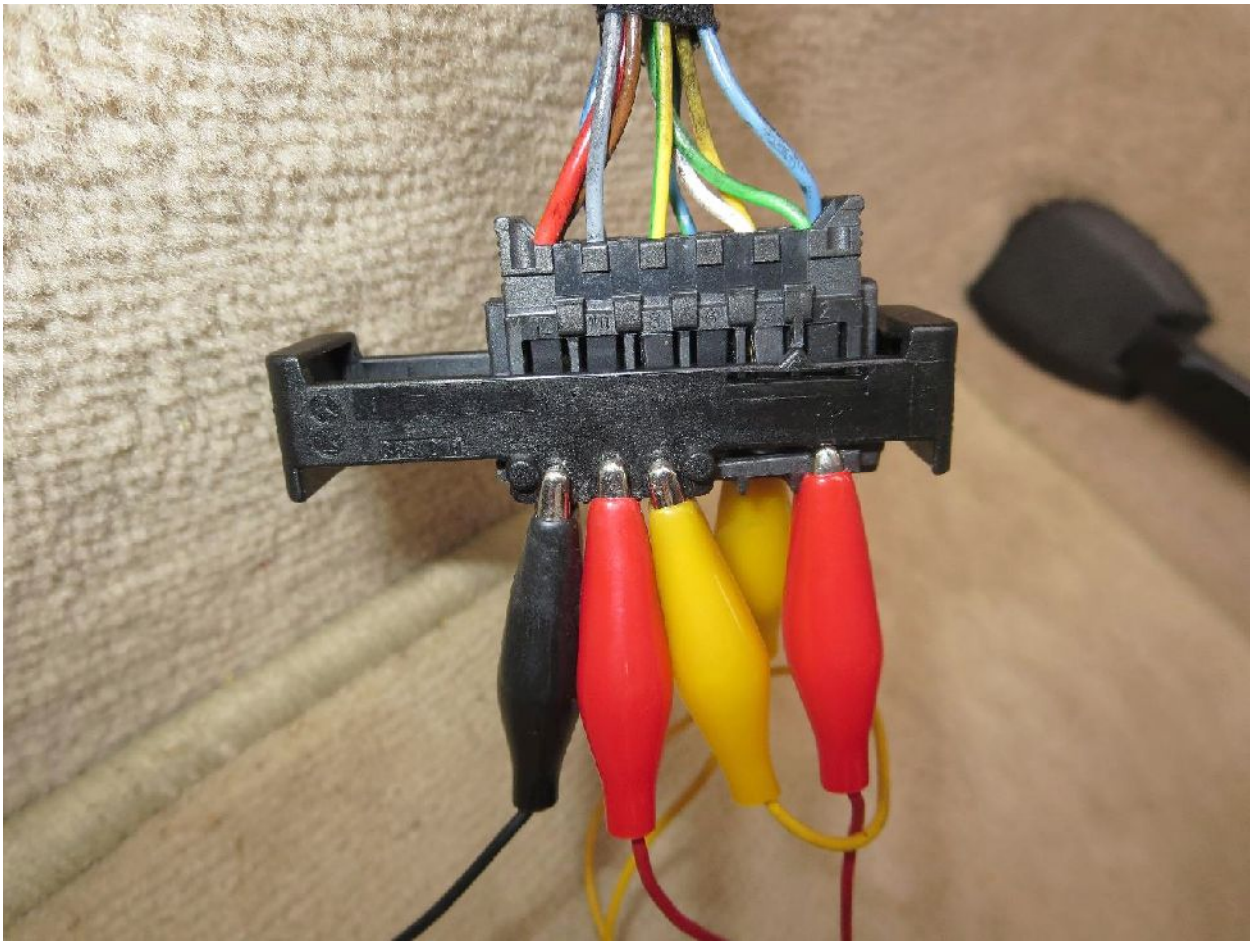


Figure 1: Clips on even numbered pins

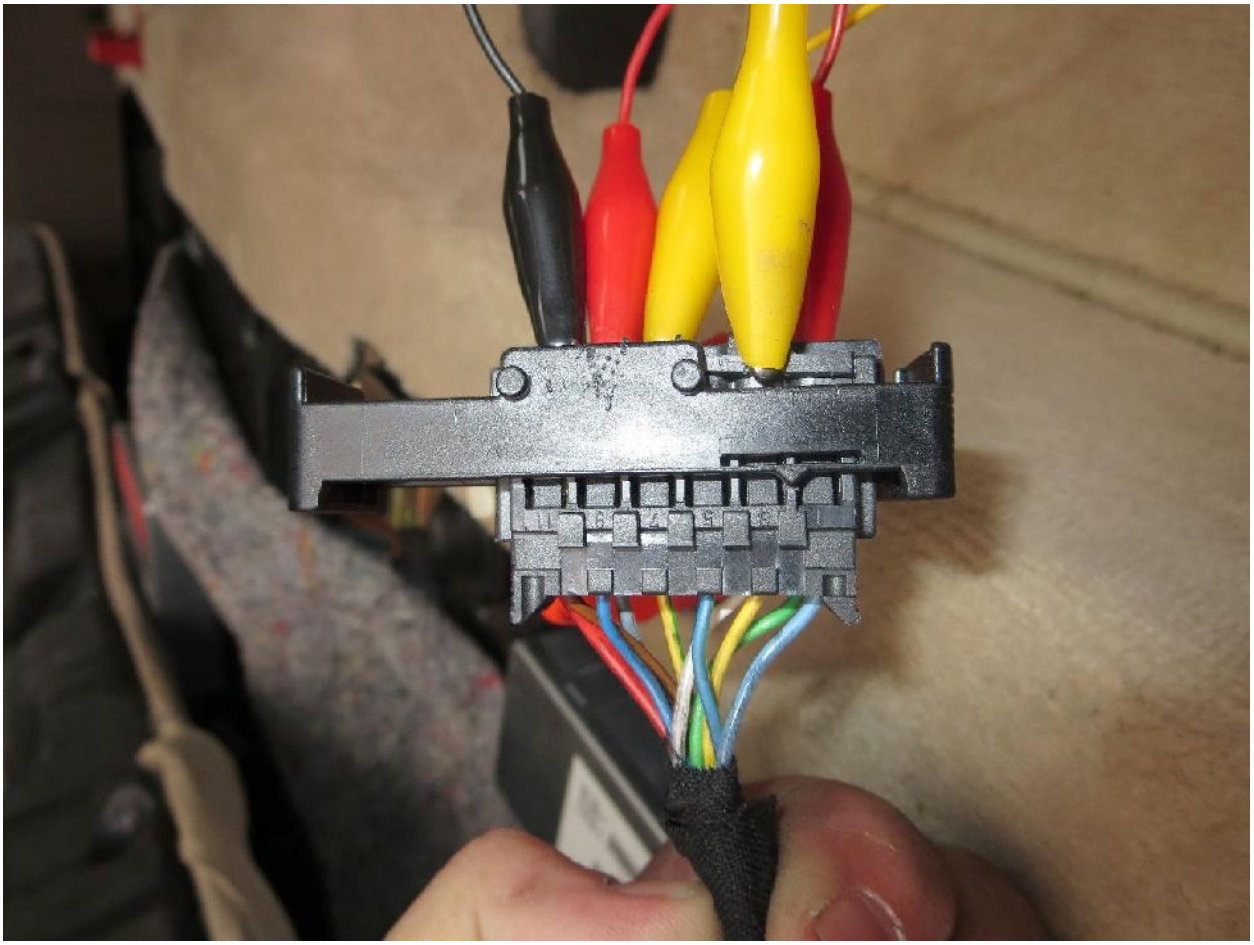


Figure 2: Clips on odd numbered pins

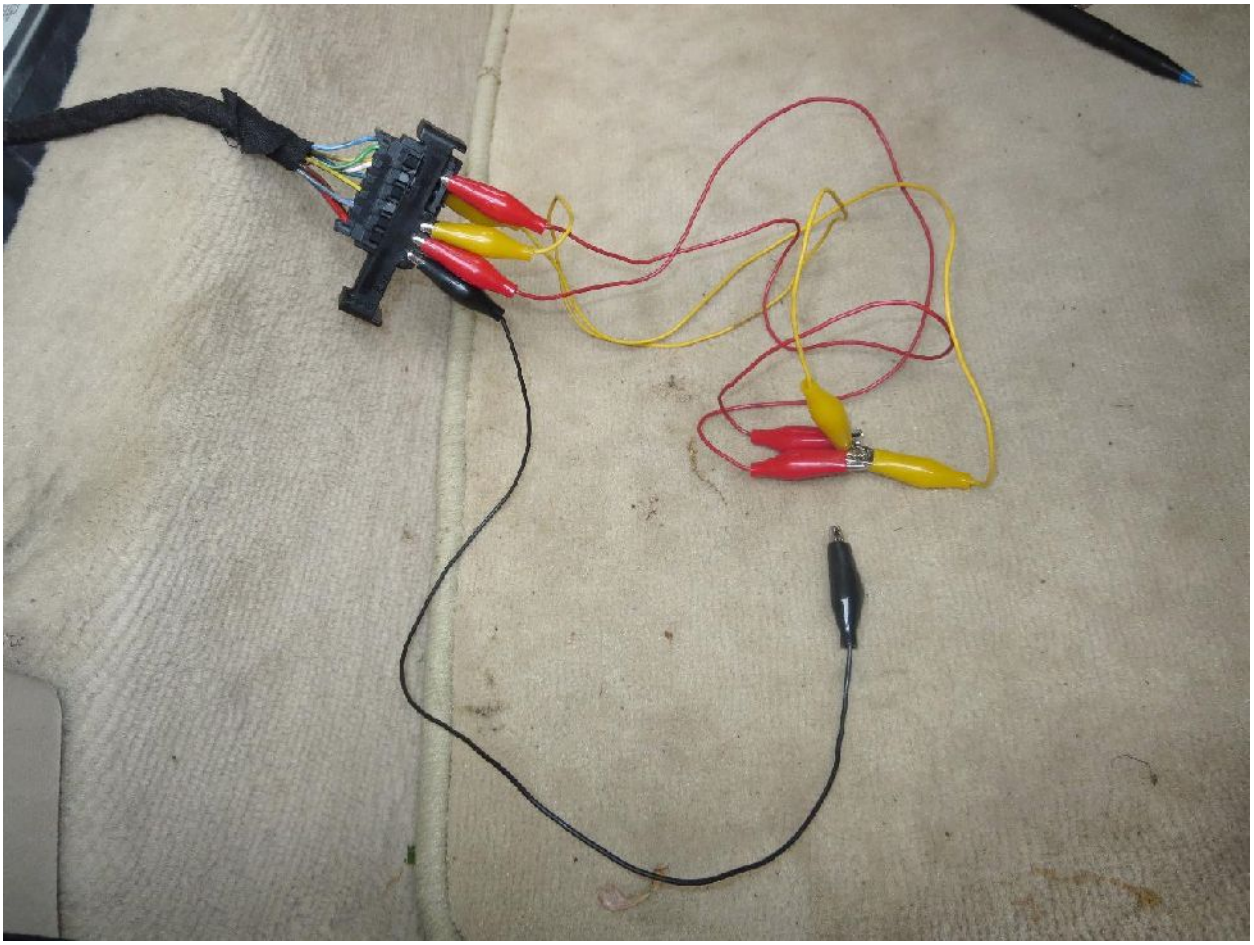


Figure 3: The completed setup – ready to touch +12 vdc (the black lead here) to the solenoid block (red/yellow leads)

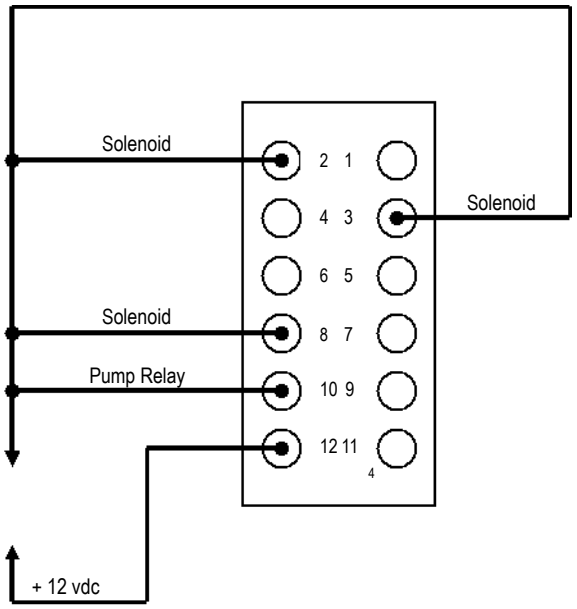


Figure 4: Connection Diagram to Unlock Rear Bow Latch and Raise Rear Bow
Connector 1 – End View

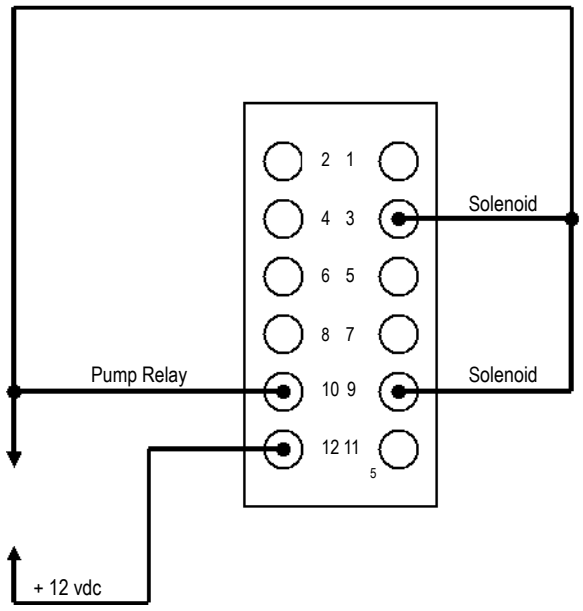


Figure 5: Connection Diagram to Unlock and Raise Hard Tonneau Cover
Connector 1 – End View
Note: The rear bow must be unlatched and manually held clear of the tonneau