



2020-2022 Superduty Halogen to LED Headlight Conversion

Tools Required:

Panel Popper OR Flat Blade Screwdriver
Wire Snips
Needle Nose Pliers
10mm Socket
13mm Socket with Flex Joint (1/4" drive suggested)
Snake / Wire Grabber / Bent metal clothes hanger

Optional Tools/Materials:

Electrical Tape
Dielectric Grease

Remove the Grille

1. Start by removing the CENTER UPPER plastic cover/trim piece using a panel popper or flat blade screw driver.
2. Remove the upper 10mm bolts
3. Remove the lower 10mm bolts hidden behind the plastic covers (1 per side)
4. Carefully pop/pull the grille out

Remove the ORIGINAL Halogen Headlights

1. Unbolt the top 10mm bolts
2. Unbolt the lower 13mm bolts (1 per side hidden behind a rubber flap)
3. Disconnect the four electrical connectors
4. Keep track of the connector that went to the Upper Headlight Bulb (it will have gray wire loom)

Install the Drivers / LH Side Harness

1. Find the end of the swap harness labeled "LH" or "DRIVERS".
2. Connect the black connector to the socket that went to the upper headlight bulb (GREY LOOM).
3. Connect the Brown connector to the Brown/Tan connector on the factory wiring.
4. Optionally seal the remaining two connectors with electrical tape. They will not be reused with the LEDs.
5. Connect the 16-pin connector to the LED light and install the light.
6. Run the driver/LH swap harness across to the passenger side headlight via the upper radiator/crossover mount area
This is the extended portion of the drivers/LH harness with a 3-prong plug. Secure with zip ties.
7. Run the swap harness across to the passenger side headlight. Secure it to the chassis with zip ties.

Install the Passengers / RH Side Harness

1. Find the end of the swap harness labeled "RH" or "PASSENGERS".
2. Connect the black connector to the socket that went to the upper headlight bulb (GREY LOOM).
3. Connect the Brown connector to the Brown/Tan connector on the factory wiring.
4. Optionally seal the remaining two connectors with electrical tape. They will not be reused with the LEDs.
5. Connect the 16-pin connector to the LED light and install the light.
6. Connect the 3-pin connector from the drivers / LH harness to the 3-pin socket on the passenger/RH side

Running Wires to the BCM

1. Start by lowering the splash shield/inner fender above the passenger side front wheel. This may require removal of bolts or panel grommets to access.
2. Look for the large grommet on the firewall. Just to the driver's side is a smaller, rectangular grommet. It may be hidden behind a piece of reflective heat-shield.
3. Remove the grommet.



4. With the grommet removed, feed a wire snake or pull wire through the opening. It will come out in the passenger foot well, above the carpet.



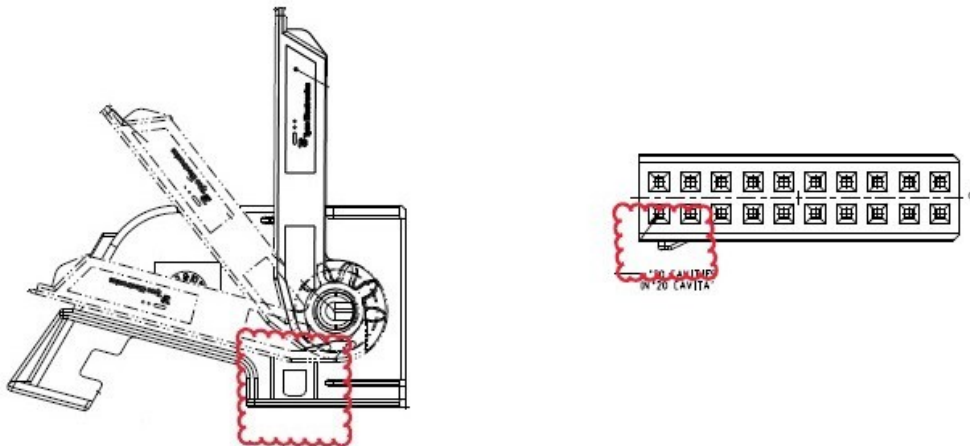
5. Run the BCM wire of the harness past the battery and towards the firewall, following the existing bundle of wires.
6. Disconnect the 5-pin connector on the harness. Use electrical tape to tape the harness wires to the wire snake. Use the tape to make smooth transition between the snake and the connector so it is not caught on anything.
7. Slowly pull the snake and wiring harness through the firewall. It helps to have two people for this part, one pulling from inside the cab and one feeding from under the fender.
8. Once the harness wire is neatly run to the firewall, secure it with zip ties. Cut a slot in the grommet and reinstall it in the firewall.
9. The 5-pin connectors can now be reconnected under the dash to make the actual BCM pin connections.
10. **PLEASE BE CAREFUL** when working with the BCM connection pins, they are extremely small and delicate



Working with the C2280F BCM Connector



1. To remove the connector from the BCM, depress the tab and slide the gray lever to the other side. This will lift the connector away from the BCM.

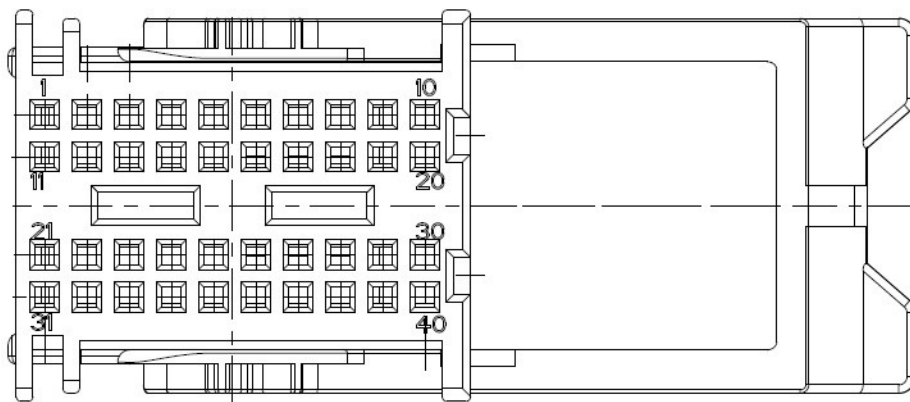


2. Locate the window on either side of the connector housing.
3. Sight the small tab on the terminal block through window.
4. Use a fingernail to pull the tab back on the connector housing. At the same time, use a small



pick or screwdriver on the opposite end to push the terminal blocks slightly out of the housing.

- Repeat for the other terminal block.
- With both terminal blocks released, completely slide them out of the housing.



- On the face of the C2280 connector, there are small numbers molded into the plastic. These correspond to the pin locations.
- Insert each wire from the harness into the correct pin location. Each terminal will only go into the terminal block one way, if the terminal doesn't just slide in rotate the terminal 90-degrees and reinsert it.
- Slide each terminal block into the housing until the tab clicks into the window.
- Reconnect the connector to the BCM and slide the lever to the other side to lock it in place.
- Connect the 5-pin male connector to the 5-pin female connector that was pulled through the firewall.

Wire Pin Outs

- At the BCM connector (C2280F), Terminate the wires from the new harness as follow:

BCM Pin	Wire Color
6	Blue
40	Black
15	Red
36	Brown or Green
17	Orange or White

- There are two videos showing how to do the above steps.

<https://www.youtube.com/watch?v=0OrcqhQl2W4>

<https://www.youtube.com/shorts/ZmEIWRbxXS4>

Note: the C2280F connector in your truck will be black and not Blue, but it will come apart exactly as shown.

Once installation is done, FORSCAN ECU Programming is the next step. If you are familiar with Forscan and are ready to make the changes please reference the specific parameters to change on the sheet included with your kit.

Test your headlights after programming, reinstall the front grille and trim pieces and enjoy driving at night again.