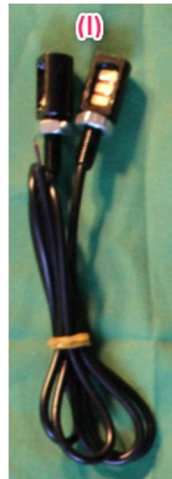
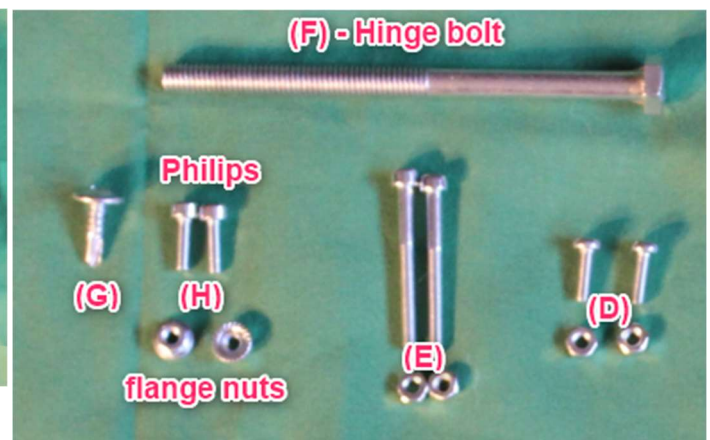
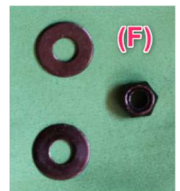


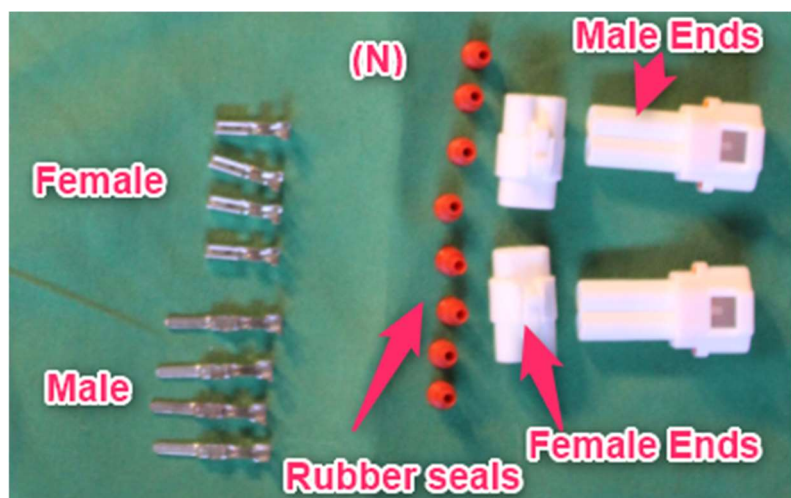
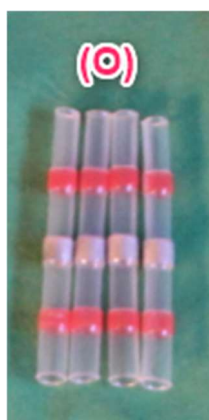
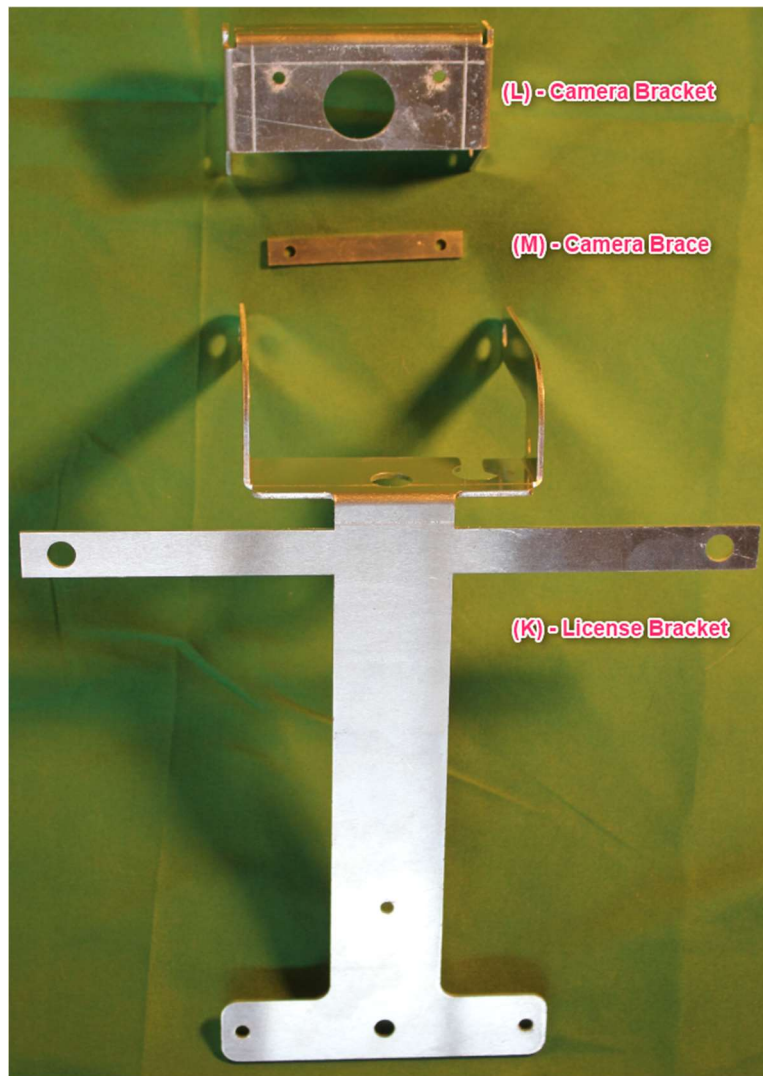
Tools needed:

- 1) 5/8" or 14mm wood bit
- 2) Philip's head bit
- 3) Electric driver
- 4) Trim removal tool
- 5) Allen wrench: 2.5mm
- 6) Socket: 10mm
- 7) 5.5mm wrench
- 8) Torx wrenches – T8, T25
- 9) Small crescent wrench
- 10) Scissors
- 11) Hot air gun
- 12) Wire stripper
- 13) 5/16" drill bit

Items included:

- A) Wire – for third brake light and license plate lights
- B) Split conduit – for cable management
- C) Camera extension cable
- D) M3x10mm bolts and nuts for camera bracket to license bracket – 1 set
- E) M3x30mm bolts and nuts for camera bracket and brace – 1 set
- F) M6x90mm, 2 washers, 1 locking nylon nut – 1
- G) 13mm self-tapping screw – 1
- H) M3x10 (Philips' head) and flange nuts for 3rd brake light LED – 1 set
- I) License plate lights – 2 bolt-type LEDs
- J) 3rd brake light LED – 1
- K) License bracket – 1
- L) Camera bracket – 1
- M) Camera brace – 1
- N) 3rd brake light, license lights connectors – 2 sets
- O) Solder & seal connectors – 4





Installation Instructions:

If you plan on not using any of the license plate lights, third brake light, or camera, you can skip those sections below...If you have an aftermarket tire carrier that swings out, you will need to route the wires accordingly. Instructions below are for OEM tire carriers. The brackets come in raw aluminum but may be painted the color of your choice. Make sure your vehicle is turned off while splicing into wires.

a. Jeep Wrangler JL: Remove the OEM camera and cable

- i. You will use the camera extension cable (C) BETWEEN the OEM camera cable and the connector in the back gate. This allows you to disconnect the camera easily at the spare tire inside RGB when you need to use the spare tire.
- ii. Remove the spare tire, lug studs, and camera housing assembly with the correct size Torx bit/driver. T8 & T25 will be used.
- iii. Remove the 3 screws holding in the camera and remove the camera and camera cable. Disconnect the camera cable from the camera.
- iv. Remove the 6 Torx bolts to access the OEM 3rd brake light wires. Remove the wire & cable cluster.
- v. Separate the 3rd brake light and camera cable from the wire cluster and remove the grommet from the outside of the tail gate. You will use the grommet later so be as gentle as possible and keep it handy.
- vi. If you plan on using the OEM 3rd brake light put it back together with the OEM wires.
- vii. Reinstall lug studs.

b. For Jeep Wrangler JK & JL:

Cutting into or splicing into OEM wires is done at your own risk. You can always use a professional installer to install RGB's camera relocation kit.

If you plan on using the OEM 3rd brake light, splice into the wiring on the vehicle side of the OEM brake wire connector. This allows for easy removal of the OEM 3rd brake light in the future.

If you do not want to use the supplied 3rd brake light, you can cut off the end of the license plate bracket (K) where the supplied 3rd brake light (J) goes.

If you plan on continuing to use the OEM license plate light, cut the license plate wires inside the vehicle. If you do not plan on using the OEM license plate light, you can (but don't have to) cut the wires closer to the OEM license plate light connector so you have more play in the wires when splicing into them.

If you do not plan on using the license plate bolt-type LEDs, you can simply use a bolt and nut (not included) to secure the license plate to the bracket. Check if your state laws require a license plate light.

If you don't have a backup camera (most JKs) you do not need to use the camera bracket (L) and brace (M). The camera bracket and brace allow up to a .9" deep aftermarket camera.

Installing RGB, building, and attaching the relocation kit

Do not over tighten the bolt-type LED license plate lights. You can easily break them.

- i. Cut a 4.5" (11cm) & 12" (30cm) piece of the split conduit.

- ii. Open the lid and drill a 5/16" hole in the triangle support "triangle". This will be used for cable management later.



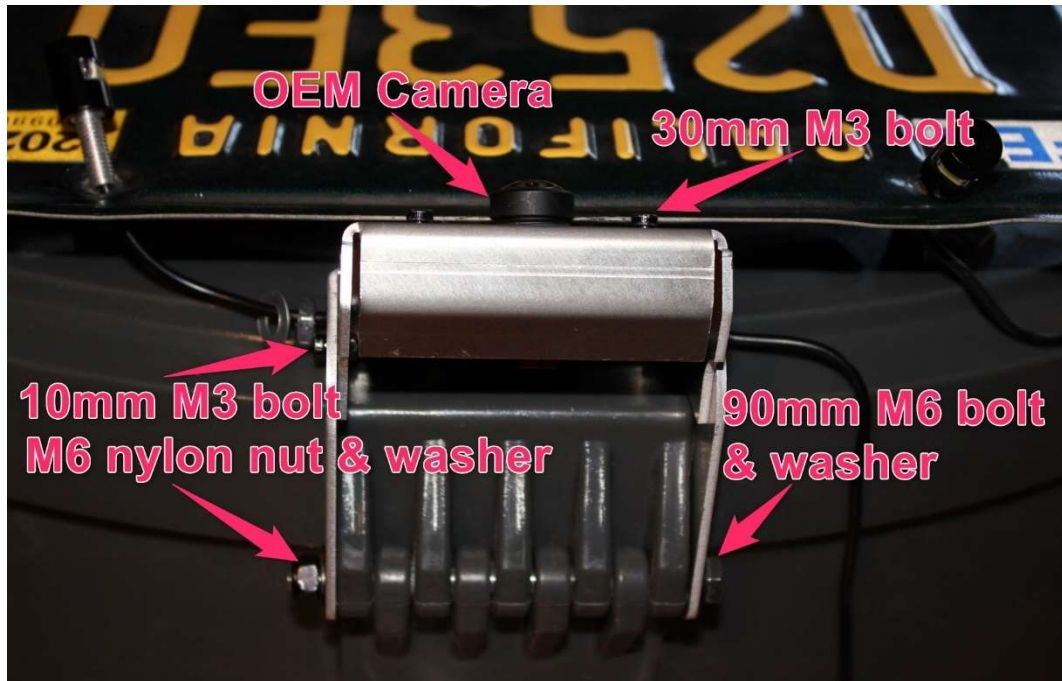
- iii. Using a 5/8" (or 14mm) wood bit, drill a hole just under the faux bolt under the hinge at the top.



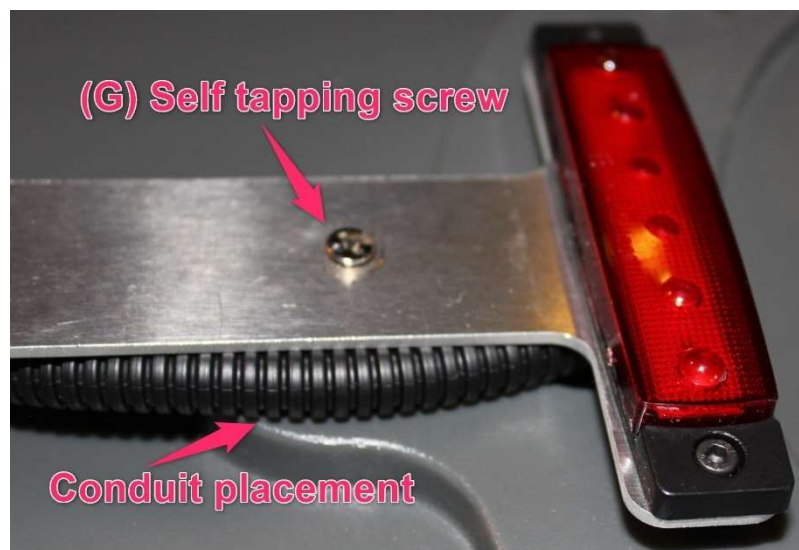
- iv. **If you have a back-up camera....** Attach the camera to the camera bracket (L) making sure it is correctly orientated with the 30mm bolts and nuts (E) and the camera brace (M). **OEM JL camera:** bolts go through the side holes and the middle hole points down and may stick (a little) through the hole in the license bracket (K). **Aftermarket camera:** review those installation instructions for camera orientation and use. The camera brace (M) should slightly bend towards the front of the camera bracket (L) after tightening.
- v. Using the two holes on the sides, attach the camera bracket (L) using the 10mm bolts and nuts (D) to the license bracket (K). The camera bracket should bend out towards the license bracket.
- vi. Feed the OEM camera cable through the 12" piece of split conduit.
- vii. Feed the split conduit and the white end of the OEM camera cable through the hole drilled earlier in the lid.
- viii. Feed the split conduit about an inch (3cm) and the correct end of the cable through the camera cable cutout in the top of the license bracket and connect to the camera.



- ix. Remove the wax paper and center cutout and apply the sponge backing to the back of the 3rd brake light.
- x. Feed the supplied 3rd brake light (J) wires through the hole and feed through the 4.5" split conduit over the wires.
- xi. Use the 90mm bolt (F) supplied with the washers and nylon nut to attach the main license bracket to the RGB hinge.



- xii. Take the supplied license plate LED (H) nuts off the bolt-type LEDs and feed the wires through your license plate holes (the two top holes) and through the license plate bracket (K). Flip the license plate up so you can get to the hole in the lid.
- xiii. Feed the license plate LED wires through the LED nuts but do not thread them on yet.
- xiv. Feed the license plate and 3rd brake light wires through the split conduit and the hole drilled earlier in the lid of RGB.
- xv. After all wiring is nicely fed through the lid and the license plate bracket is pushed onto the lid, use the self-tapping screw (G) to secure the bracket to the lower faux bolt head in the lid.



- xvi. Flip the license plate down and screw on each nut to each bolt-type LED. Tighten slightly more than hand tight. Adjust the LEDs so they shine on the license plate.

- xvii. Open the lid and put one side of the connectors (N) together for the supplied 3rd brake light and combine the license plate bolt-type LEDs into another connector (N).
In order to keep track of which connector is for the brake light and which is for the license lights, use the female part of one of the connectors for the 3rd brake light and the male part of the other connector for the license lights.

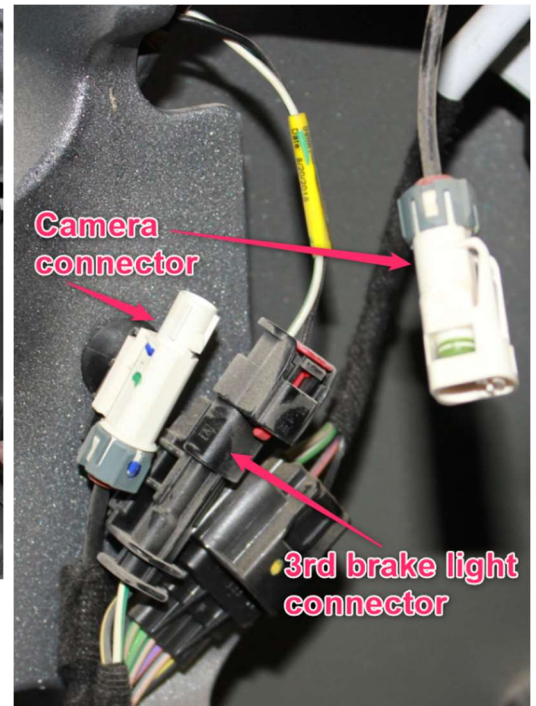
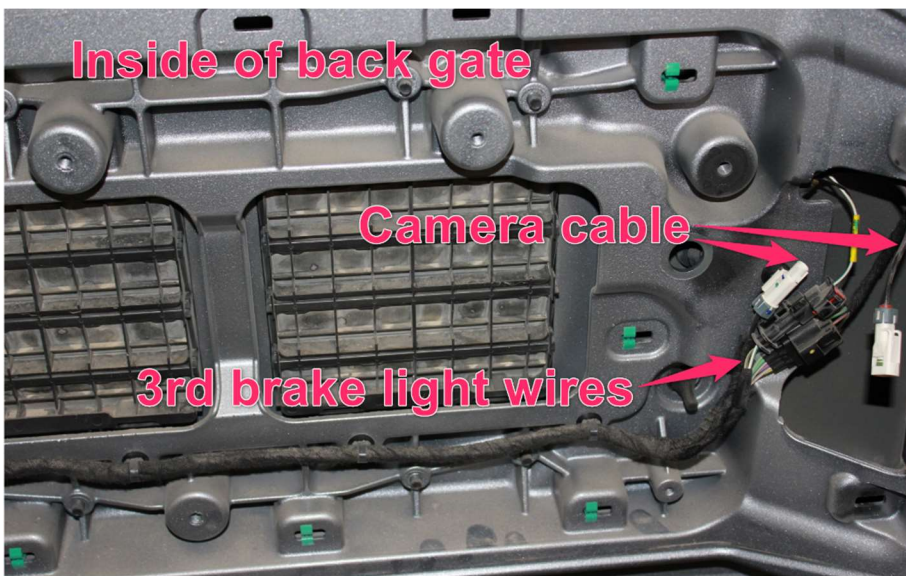
Removing trim panels

- xviii. Remove the seatbelt trim cover and two plastic trim panels (under the seatbelt cover on the driver's side, rear corner where the roll bar ends and where the seatbelt rolls up into) in order to find the license plate



light wires. Those wires are fed down through a grommet and into a large rectangular plug (JL) or smaller connector (JK) which you will need to cut near the connector block and feed back up through the grommet OR cut the wires near the roll bar (not very much slack to work with but doable and easier). You will have to make a small hole in the grommet to feed the wires through if you cut near the connector.

- xix. Loosen the weather strip on the bottom and plastic covers/trim around the driver's side and bottom edges of the tail gate area. You will be routing wires there.
- xx. On the inside of the tail gate, take off the tail gate protector and wire & cable concealer.

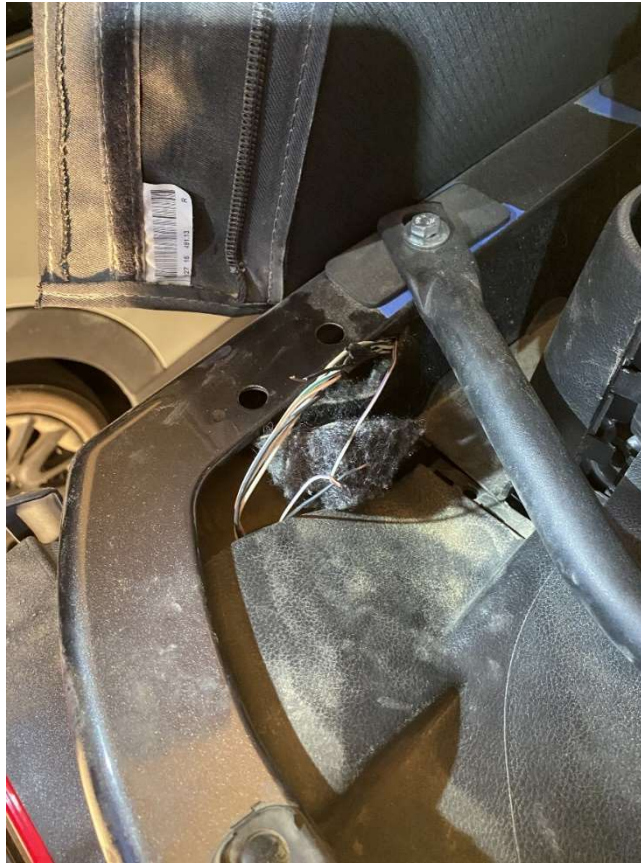


c. <=JKs:

- i. Take off your license plate so you can get to the license plate light. Use a trim removal tool to remove the plastic cover (behind the license plate) to gain access to the wires (so you can gently pull on the wires to figure out which wires are correct).



- ii. Find the cluster of wires in the driver's side, rear corner. It's under the carpet/padding and plastic trim covers you took off earlier.
- iii. There will be one "purple stripe/white" wire and the correct black wire (there are several but you need the one specific to the license plate light). Once you find these two wires, you will splice in the electric wires (A) supplied in this kit using a solder and seal connector (O).



- iv. Gently pull on the two wires (purple/white and black you found near the license plate light) until you find the correct wires near the roll bar.
- v. Cut the two license plate light wires and splice in the red and black wires (A) (do not cut the supplied wires yet but you may need to strip the ends more) provided in the kit: Black to black and red to purple/white. If you are keeping the OEM license light active, make sure the two purple/white wires are twisted together on one side and the two black wires are twisted together on one side also.
- vi. Use the solder & seal connectors (O) to connect the cut wires to the black and red wires. Using a hot air gun, melt the connectors and make sure the solder is melded also.
- vii. Route the newly spliced wires down from the corner near the end of the roll bar, under the weather stripping, and to the right side of the tail gate (hinge side).
- viii. Fish the black/red wires through the wire sock (by making a hole on either side of the sock) or use the split conduit (B) in order to get the wires to the grommet hole in the tail gate.
- ix. Continue fishing the extended license plate light wires through the tail gate and through the grommet and into RGB. You will need to slice the grommet to be able to do this.
- x. Make sure the license plate light wires are long enough (plus some extra so the cable and conduit can be nicely tucked/secured into the corner (where the support triangle is)) to reach the male connector that is near the lid of inside RGB. You will use the Velcro to secure the wires to the support triangle (you drilled a 5/16" hole earlier). Cut the excess wire and save for later.
- xi. Use the female part of the connector to make the other side of the license plate light connector.
- xii. Use the split conduit to do some cable management from the grommet to the inside of RGB and secure the conduit to the support triangle with Velcro.

d. **JLs:**

- i. Take off your driver-side brake light so you can get to the license plate light wires (so you can gently pull on the wires to figure out which wires are correct).



- ii. You can splice into the wires here and fish the wires up and through the grommet (you will need to cut a small hold in the grommet to do this) or splice into the wires inside the vehicle.
- iii. If you plan on splicing into the wires inside the vehicle, find the cluster of wires in the driver's side, rear corner. It's under the carpet/padding and plastic trim covers you took off earlier.
- iv. There will be one "blue-ish stripe/white" wire and the correct black wire (there are several but you need the one specific to the license plate light). Once you find these two wires, you will splice in the electric wires (A) supplied in this kit using a solder and seal connector (O).
- v. Gently pull on the two wires (blue/white and black you found near the brake light) until you find the correct wires near the roll bar.
- vi. Cut the two license plate light wires and splice in the red and black wires (A) (do not cut the supplied wires yet but you may need to strip the ends more) provided in the kit: Black to black and red to blue/white. If you are keeping the OEM license light active, make sure the two blue/white wires are twisted together on one side and the two black wires are twisted together on one side also.
- vii. Use the solder & seal connectors (O) to connect the cut wires to the black and red wires. Using the hot air gun, melt the solder & seal connectors and make sure the solder is melded also.
- viii. Route the newly spliced wires down from the corner near the end of the roll bar, under the weather stripping, and to the right side of the tail gate (hinge side).

- ix. Fish the black/red wires through the wire sock (by making a hole on either side of the sock) or use the split conduit (B) in order to get the wires to the grommet hole in the tail gate.



- x. Continue fishing the extended license plate light wires through the tail gate and through the grommet and into RGB. You will need to slice the grommet to be able to do this.
- xi. Make sure the license plate light wires are long enough (plus some extra) to reach the male connector that is near the lid of inside RGB. Cut the excess wire and save for later.
- xii. Use the female part of the connector to make the other side of the license plate light connector.
- xiii. Use the split conduit to do some cable management from the grommet to the inside of RGB and inside RGB.
- xiv. Connect the license plate light connectors.

e. For JKs & JJs: - 3rd Brake Light Wiring

- i. Find the OEM 3rd brake light connector. You can find it on the inside of the tailgate, near the handle. The connector has a green stripe white wire (hot) and yellow stripe gray wire on one side and a green stripe white wire and black wire on the other.
- ii. Splice into the green/white and yellow/gray side by cutting the wires at least 4 inches further away from the connector.
- iii. Use the solder & seal connectors (O) to connect the cut wires to the supplied black and red wires. Green stripe/white wire to the red wire and yellow stripe/gray wire to the black wire. Using a hot air gun, melt the solder & seal connectors and make sure the solder is melded also.
- iv. Feed the red/black wire through the tail gate's grommet (you will have to cut into it to allow this wire through).
- v. Cut the wire so there is enough wire to safely reach (plus some extra) the female connector for the supplied 3rd brake light.

- vi. Use the male part of the connector to make the other side of the 3rd brake light connector.
- vii. Put these wires into the split cable conduit.
- viii. Connect the 3rd brake light connectors.

f. For JLs: Connecting the backup camera

- i. Use the supplied camera extension cable (C) to connect to the OEM camera cable (white connector) that is already connect to the OEM camera in the camera bracket (L).
- ii. Feed the camera extension cable through RGB, the rim, the grommet, and the tail gate.
- iii. Wrap up the excess and use the Velcro supplied in RGB to secure the excess.
- iv. Connect the extension cable (C) to the OEM connector in the door.

g. For all vehicles: Clean up

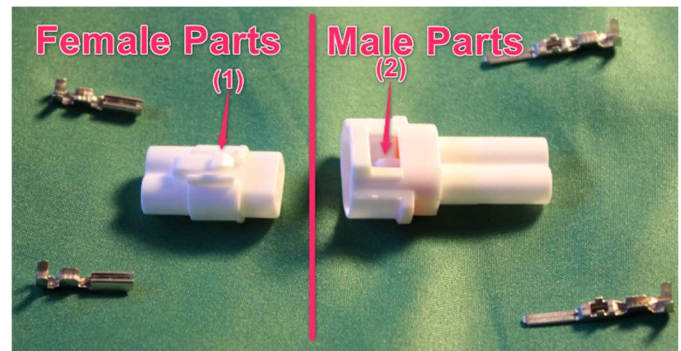
- i. Use the split conduit for cable management.
- ii. Put everything back in place: plastic trim, tail gate protector, etc.

If you have any installation questions, we are here to help. Please either email OrderQuestions@OffRoadInMind.com or call 949-767-4455.

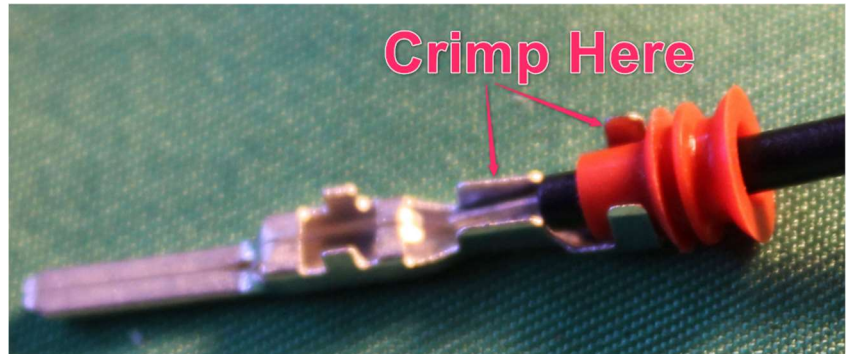
How to build the wire connectors (3rd brake light, License plate lights)

- 1) Layout the male and female pieces as shown in the photo to the right.

Female pieces (both metal and plastic) are shorter than the male ones.

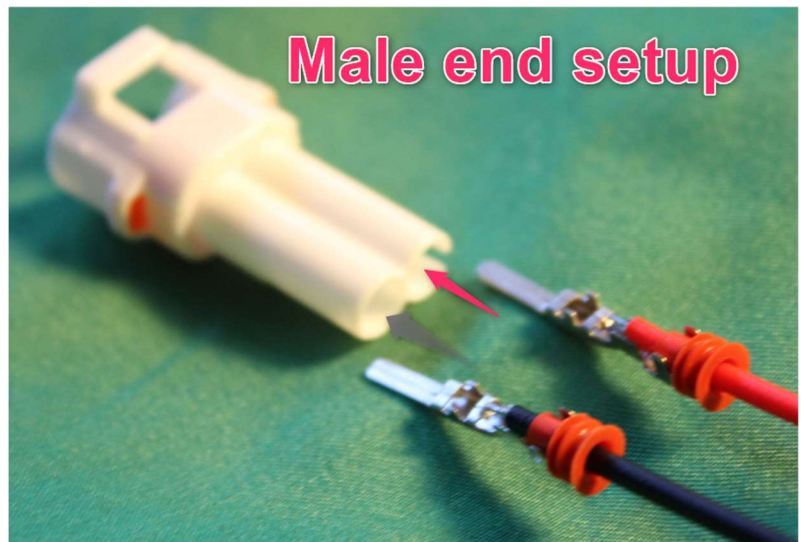


- 2) Feed all wires through the rubber seals as shown.
- 3) Feed the wire & seal through the metal part of the connector as shown.
Make sure the wire fits in the area you will crimp and make sure the wire sheath butts up against the crimp tabs.
Make sure the rubber seal butts up against the crimp tabs as shown.
- 4) Crimp the two sets of crimp tabs.
- 5) Do the same for all wires.



- 6) After crimping all wires push them through the **round end** of the plastic connectors as far as they can go.
- 7) Do the same for the other set of wires but remember to reverse the wires. In other words, if the black wire is on the left for the male side, the black wire needs to be on the right for the female side. That way, when the connectors are inserted, the black wire on the male side matches up with the black wire on the female side. And the red wires match up also.

See the photo below for how the connectors and wires should look.



Installation Finished Photos

The photo below shows RGB + Relocation Kit installed with OEM 3rd brake light and license plate light still working and a Jeep logo license plate where the original license plate goes. Since this is a JK, the camera is an aftermarket (cube shaped) camera.



JL OEM camera with supplied license lights and 3rd brake light.

