



Protecting Your Adventure Lifestyle

Warrior Products, Inc.
16850 SW Upper Boones Ferry Rd
Ste. A
Durham, OR 97224
Phone (888) 220-6861
Fax (503) 692-0364
customerservice@warriorproducts.com

Jeep Wrangler (CJ / YJ / TJ) Steel LED Tail Lights

P/N 2965

Kit Contents:

<u>Item</u>	<u>Qty</u>	<u>Item</u>	<u>Qty</u>
Steel Light Housing pair (L & R)	1	3 LED License Plate Light	1
Red Rectangular Stop/Turn/Tail LED light (w/hardware)	2	#6 x 1/2" Sheet Metal Screw	2
White Rectangular Reverse LED light (w/hardware)	2	#8 x 1/2" Thread Cutting Screw (Black)	8
Red 1" Round Side Marker Light	4	Edge Trim	7 ft

Notes before you start:

Disclaimer: Warrior has developed this Tail Light kit keeping general motor vehicle requirements in mind; however, requirements can change from state-to-state. It is your responsibility to confirm that you are in compliance with local laws and regulations. Warrior Products is not responsible for any damages or costs incurred as a result of the installation of this Tail Light kit.

- There are many different ways to make wire connections. We have left it up to you to decide which method to use; therefore, these instructions will simply tell you which wires to connect. If you are uncomfortable with basic automotive wiring, you may want to find a friend to help, or contact a local shop to do the install.
- Your kit contains four different types of LED lights. LED lights are polarity sensitive and will only illuminate if connected correctly (i.e. ground (-) to ground (-), and positive (+) to positive (+). The three types of LED's in your kit and the wire colors are described below:
 - Red rectangular Stop/Turn/Tail LED light – Three wires coming out of the back;
 - **Ground (-)** = WHITE
 - **Bright Circuit (+) – Stop/Turn** = RED
 - **Dim Circuit (+) - Tail Light** = BLACK
 - White rectangular Reverse LED light – Two wires coming out of the back;
 - **Ground (-)** = WHITE
 - **Positive (+)** = BLACK
 - Red 1" round Side Marker light – Two wires coming out of the back;
 - **Ground (-)** = WHITE / RED STRIPE
 - **Positive (+)** = BROWN
 - 3 LED White License Plate Light – Two wires coming out the back;
 - **Ground (-)** = BLACK
 - **Positive (+)** = WHITE
- You will most likely experience a "fast blinker" or "hyper blinker" symptom as a result of installing LED Tail Lights. This symptom is a result of the lower power consumption of the LED bulb vs. the factory Incandescent bulb. To correct the "fast blinker" symptom, we recommend replacing your flasher module with one that has been designated as "compatible for LED use". You can find various options with a quick internet search, or you can visit your local auto parts store. Another option to solve this problem is to install the Warrior Product Load Resistor kit (WP Part# 2905). The Load Resistors in the kit produce heat during normal operation. It is important to follow the installation directions carefully, and **DO NOT** place the Resistors inside the Steel LED Tail Light housings, they must be located elsewhere on the vehicle. Ideally, they should be secured to a metal substrate with screws.

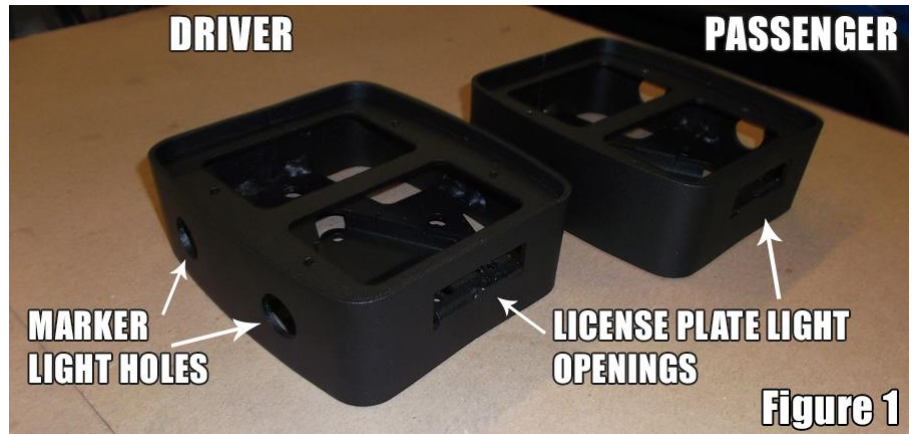
Installation Procedure:

- Begin by removing your existing Tail Lights, first remove the outer red lens by loosening the four (4) rear-facing Phillips head screws (one at each corner.) After taking the red lens off (you may have to gently pry the lens with a flat-edged tool), use a 5/16" socket or large Phillips head screw driver to remove the three #12 screws that attach each Tail Light housing to the

body of the jeep. Put the mounting screws aside in a safe place, you will re-use them to attach your new Warrior Steel Tail Light housings.

2. Unplug the Tail Light and set aside, you should be able to pull the wire harness through the slotted hole in the body sheet metal until you reach the plug (the plug will probably be wrapped in a protective foam.) Unplug the lights from the wiring connected to the vehicle and leave the plug hanging outside the vehicle through the hole in the sheet metal body. If you do not have enough slack in your wiring to access the plug from the outside of the vehicle, you may have to pull your rear fender liners loose to gain access to the inside corner of the body from underneath to disconnect the plug. Save the factory Tail Lights, you will use the harness to build your own harness for your new Warrior Steel LED Tail Lights. If you are starting with the removal of a different type of aftermarket light, and do not have harnesses and plugs to work with, you will have to determine the best way to make your connections. A simple "butt splice" may be the best solution.

3. Begin preparation of you Warrior Tail Light Housings by first identifying the Driver side and Passenger side lights. To do this lay both light housings down as shown in **Figure 1**. Place the housings so that the large rectangular cutouts are facing up, and the Triangular mounting feature is on the bottom side close to the table. Next, position the housings so that the rectangular License Plate Light Openings are facing the same direction (which will be pointed down on the vehicle.) The Side Marker Light Holes will face away from each other, so as to be visible from the side of the vehicle.



4. Continue preparing the light housings by determining which side (which housing) to attach your license plate light. For most applications this will be the driver side. Install the LED License Plate Light in the correct housing by inserting the light through the inside of the housing with the LED's pointed down through the opening, and the wires facing the open slot in the mounting tab as shown in **Figure 2**. Attach the License Plate Light using the two supplied #6 screws. First pass the screws through the mounting hole in the housing and thread them into the plastic casing of the light with a Phillips head screwdriver. Align the light to be parallel to the bottom surface of the housing, then tighten to snug with the screwdriver. See **Figure 3**.



FIGURE 2

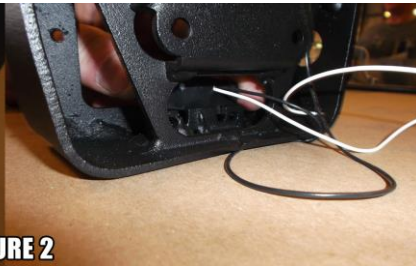


FIGURE 3

5. After attaching the License plate light, press the Red 1" Round Marker Lights into the 3/4" holes on the sides of the housings. Thread the wires of each light through a hole from the outside and press the lights into place as shown in **Figure 4**. There will be two of these lights per housing.

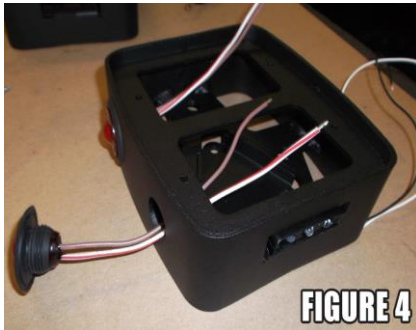


FIGURE 4

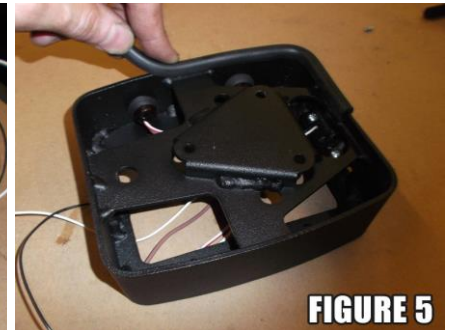


FIGURE 5

6. Next, install edge trim around the edge of the box that will be in contact with the body of the jeep. This is on the same side as the triangular mounting plate and the three mounting holes arranged in a triangle. See **Figure 5**. The side facing away from the body of the jeep is the side with two rectangular shaped openings.

7. The mounting holes to attach the Warrior Products Steel LED Tail Light housing must be accessed through the rectangular openings where the Red and White main rectangular lights will mount. Before mounting your remaining lights to the housing, position the housing in place on the vehicle. Make sure to thread the existing vehicle wire and plug through the large slot on the back side of the Warrior light housing so that you can plug the lights in later. See the wire loom at the bottom right of **Figure 6**.

8. Locate your original mounting screws and loosely start the three mounting screws for each housing to roughly hold them in place on the body. You should pull all your wire ends out through the LOWER of the two large rectangular light mount openings as shown in **Figure 6**. Make sure none of the wires are pinched between the tail light housing and the body of the vehicle.

9. The tail lights in the Jeep Wrangler ground through the mounting hardware and the threads in the body of the vehicle (keep this in mind during the next steps). Also, if your hardware is badly rusted out, threads are severely damaged, or you already have alternate hardware in place, you will have to find a suitable alternative mounting solution. If you mount the Warrior Products light housings by any means other than directly threading into the body, make sure that you sufficiently ground the lights by connecting them to a clean, un-painted portion of the metal body, or frame of the vehicle.

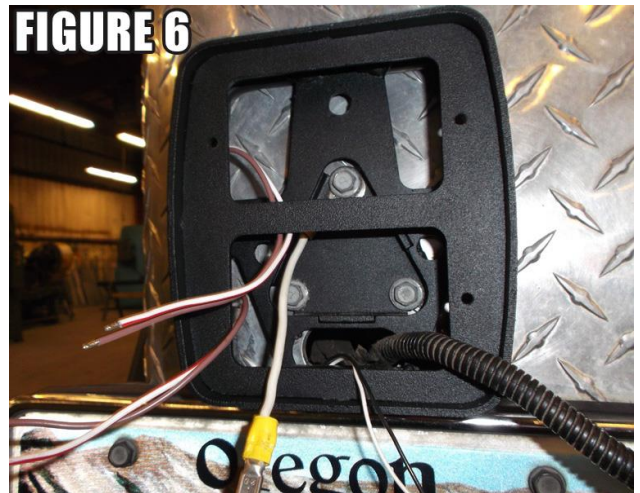
10. Now, keeping the grounding requirement in mind and making sure that all loose wire ends are threaded out through the bottom large rectangular opening, visually align the housing and tighten the top mounting screw and one of the bottom mounting screws. The third remaining screw will serve as your ground screw. After tightening the first two screws, remove the third grounding screw and set it aside. It is a good idea to clean the threads of the ground screw with a wire brush to help ensure a good ground connection. (Please note that in **Figure 6** above we have placed the ground wire on the top mounting screw. This is contrary to what is instructed, so please disregard the ground wire placement in the image.)

11. Next, you have to choose the orientation of the Red and White rectangular LED lights. You can place them however you wish, with either the Red on top, or the White on top. We have installed the Red lights on top in our installation. After you have decided which color to place on top, thread the wires of the top light in through the face of the housing, and then out through the bottom large rectangular opening with the rest of the wires as shown in **Figure 7**. Attach the light securely with the included black thread cutting screws. The supplied black screws will cut appropriate threads in the holes, however, if you have too much difficulty, you can chase the holes with a suitable sized drill bit making sure not to damage any existing lights or wires. Also, tighten the screws until they are snug, but do not overtighten as you may damage the plastic housing of the LED light.

NOTE: The lights are packaged with tamper resistant plastic screw head cover caps and silver colored sheet metal screws. The sheet metal screws are extra and are not needed for this installation. The cover caps, are intended to be a one-time use cap, however, they can be removed by carefully prying them out with a sharp tool such as a thumbtack or razor blade tip. Trying to remove the caps can be dangerous, as well as potentially scratch or crack the plastic LED light lens, or cap, or both. DO NOT INSTALL the screw head caps until you have completed the installation, tested functionality of the lights, and are happy with the placement of all components. You may also choose to leave the caps off entirely for easier serviceability.

12. Now that all the lights are attached to the box except the bottom rectangular one where you have wire access, you can begin to make all of the wire connections. During the process you will have to connect the bottom rectangular light wires before securing the light to the housing. As noted above, there are many different ways to make wire connections and we leave it up to you, or your installation shop to select the desired method. An additional note worth considering for the installation is that if you are comfortable enough with automotive wiring you can choose to connect some of the lights in series to also achieve the desired result, this can be a cleaner solution for wiring the side marker lights.

13. Cut the wire plug and harness off the OEM tail lights that you removed and follow the charts below to make your connections. You can plug the end of the harness back into the jeep wiring, and fish the plug back through the large slotted



hole in the light housing and jeep sheet metal, then into the rear corner of the vehicle. The OEM wire colors provided are a general guideline, it is always best to confirm with a multi-meter. We believe the TJ wire colors in the chart below to be fairly reliable, however the YJ wire color schemes seem to have changed a number of times over the years, and therefore we highly suggest the use of a multi-meter. You must use a multi-meter, or label your existing wires during removal for a CJ because we have not provided a chart. Remember that the ground wires will ultimately connect to the third mounting screw, and a ring terminal is suggested for this interface. We suggest you wire the circuits in the following order; (1) Running light, or "DIM" circuit, (2) Ground circuit to the third mounting bolt. (3) Turn and Brake, or "BRIGHT" circuit, and lastly, (4) Reverse light power. **(***NOTE: The License plate light is the only light with a BLACK ground wire, all other Ground wires are WHITE, or WHITE with a stripe.)**

WIRE CONNECTION CHARTS

TJ Wire Colors

WARRIOR Tail Light Circuit	LED Light Wires	TJ wires
(+ Running Lights – "DIM" circuit	Red rectangular S/T/T light = (+) BLACK	Black/Yellow (+)
	Red 1" round side marker light (x2 per housing) = (+) BROWN	
	3 LED White License plate light = (+) WHITE	
(-) Ground Circuit	Red rectangular S/T/T light = (-) WHITE	Attach to Ring terminal and secure with mounting screw for housing
	Red 1" round side marker light (x2 per housing) = (-) WHITE/RED stripe	
	3 LED White License plate light (one side only) = (-) BLACK	
	White rectangular Reverse Light = (-) WHITE	
(+) Turn/Brake – "BRIGHT" circuit	Red rectangular S/T/T light = (+) RED	Green/Red (+) = Driver Brown/Red (+) = Pass.
(+) Reverse power	White rectangular Reverse Light = (+) BLACK	Violet/Black (+)

YJ Wire Colors

WARRIOR Tail Light Circuit	LED Light Wires	YJ wires
(+ Running Lights – "DIM" circuit	Red rectangular S/T/T light = (+) BLACK	White (+)
	Red 1" round side marker light (x2 per housing) = (+) BROWN	
	3 LED White License plate light = (+) WHITE	
(-) Ground Circuit	Red rectangular S/T/T light = (-) WHITE	Attach to Ring terminal and secure with mounting screw for housing
	Red 1" round side marker light (x2 per housing) = (-) WHITE/RED stripe	
	3 LED White License plate light (one side only) = (-) BLACK	
	White rectangular Reverse Light = (-) WHITE	
(+) Turn/Brake – "BRIGHT" circuit	Red rectangular S/T/T light = (+) RED	Green/Black (+) = Driver Brown/Black (+) = Pass.
(+) Reverse power	White rectangular Reverse Light = (+) BLACK	White/Black (+)

General / Non-Specific Wire Connections

WARRIOR Tail Light Circuit	LED Light Wires
(+ Running Lights – "DIM" circuit	Red rectangular S/T/T light = (+) BLACK
	Red 1" round side marker light (x2 per housing) = (+) BROWN
	3 LED White License plate light = (+) WHITE
(-) Ground Circuit	Red rectangular S/T/T light = (-) WHITE
	Red 1" round side marker light (x2 per housing) = (-) WHITE/RED stripe
	3 LED White License plate light (one side only) = (-) BLACK
	White rectangular Reverse Light = (-) WHITE
(+) Turn/Brake – "BRIGHT" circuit	Red rectangular S/T/T light = (+) RED
(+) Reverse power	White rectangular Reverse Light = (+) BLACK

14. After you have connected all of your wires, check to verify that the lights are working correctly. Check the following scenarios; Left turn, Right turn, Brake with Left turn and then Right turn, Running lights with Left turn and then Right turn, Running lights and brakes with Left turn and then Right turn, then finally Reverse (Remember that you will probably have a “hyperblinker” if you have not already installed an LED compatible flasher, or Load Resister kit.) Also make sure to check that your license plate light illuminates when the Running lights are turned on. After you have confirmed that all lights function correctly, carefully place any remaining wire inside the housing, or back through the hole into the jeep body and then attach the last bottom rectangular lights with two screws each as seen in **Figure 8**. Again, make sure to make the screws snug, but do not overtighten which may break the plastic.
15. Place remaining edge trim on the outer edge of the housing and trim to fit. You can choose to add a very small amount of black RTV silicone to the inside of the channel to ensure that it stays in place.
16. Installation Complete.



THANK YOU FOR PURCHASING WARRIOR PRODUCTS

If you need further assistance installing your product, please contact us by email at techsupport@warriorproducts.com or call us at (888) 220-6861.