



ZROADZ

DYNAMIC LED MOUNTING SOLUTIONS



PROFESSIONAL INSTALL RECOMMENDED

REAR MODULAR / MULTI LED ROOF MOUNTS

PART#: Z350040 / Z350050

REAR ROOF LED LIGHT MOUNTS

PARTS ARE PATENT PENDING. ALL RIGHTS RESERVED - COPYRIGHT ©2016 - ZROADZ LED, INC.

PARTS INCLUDED

- (1) - Driver Side Roof Mount Upright
- (1) - Passenger Side Roof Mount Upright
- (1) - Cross Member Tube
- (8) - Main Light Bracket Assemblies
- (10) - Bracket Couplers
- (2) - End Caps
- (1) - Hardware Pack
- (2) - Mod Rack Weather Proofing Gaskets
- (2) - Paper Drill Templates



* Simulated Rendering, Not actual parts.

LED LIGHTS INCLUDED

- Z350040** - No LED Lights Included
- Z350050** - No LED Lights Included

HARDWARE INCLUDED

- | | |
|--|--|
| <p>BAG #1 (10) - 1/4-28 x 1.5 TPI Alloy Steel Full Thread Socket Cap</p> <p>BAG #2 (60) - 10/32 x .500 Button Head Allen Cap Stainless Steel Screws</p> <p>BAG #3 (4) - 1/2 x 20 Hex Nut
(4) - 1/2 Zinc Plated Split Lock Washer</p> <p>BAG #4 (2) - 5/16 DIA. Wire Clip Mount
(2) - 10/32 x .625 Button Head Allen Cap Stainless Steel Screws
(2) - #10 Stainless Steel Nylock Nuts</p> | <p>BAG #5 (2) - #10-32 x .625 Stainless Steel Socket Cap
(2) - End Caps</p> <p>BAG #6 (4) - Weather Proof Rubber Wire Boot
(3) - Weather Proof Rubber Boot Plug
(6) - EPDM 1/2" Sealing Washer</p> |
|--|--|

TOOLS REQUIRED

- Tapered 1/2" drill bit or car reamer
- Drill
- Air Hose & Nozzle
- Alcohol Cleaning Solution
- Cleaning Rag
- Socket Set & Ratchet Tool
- Ratchet Extensions
- Various Wrenches
- Dikes or Snips
- Torx Bits & Allen Set
- Heat Gun

- MATERIALS NEEDED**
- Clear RTV Silicone
 - 1/2" x 1/4" DIA Shrink Tube

INSTALLATION GUIDE

START HERE

PLEASE READ AND UNDERSTAND ALL INSTRUCTIONS BEFORE INSTALLATION. Auto makers offer varied models to each vehicle and occasionally manufacture more than one body style of the same model.

* APPLICATION MODELS VARY. WE RECOMMEND TO VERIFY FITMENT BEFORE BEGINNING INSTALLATION PROCESS.
* IMAGES FEATURED IN THE INSTRUCTION DOCUMENTS MAY NOT ALWAYS EXACTLY MATCH YOUR MODEL OR PART.

BEFORE YOU BEGIN

Before you begin the installation you must first confirm the bar length you purchased and your vehicle roof channel width from the far right edge and far left edge is within the minimum specification for installation.

- Part #: Z350040 = Minimum Channel Distance should be no less than 43"
- Part #: Z350050 = Minimum Channel Distance should be no less than 54"

It is also important to note that the minimum roof channel width at its narrowest point must be greater than 3/4". If your vehicle does not meet these minimum requirements this product will not install properly and should be returned to your ZROADZ authorized distributor.

LED LIGHT BRACKET INSTALLATION



FIG 1

STEP 1

1) It is now time to begin assembly of the Upright Mounts.

STEP 2

2) Start with screwing the Steel Socket Caps (From Bag #1) into the Bracket Couplers as seen in Figure #3. There should be 10 units. DO NOT BOTTOM OUT as you will need it adjustable.



FIG 2



FIG 3



MODULAR RACK ASSEMBLY - CONTINUED

PARTS ARE PATENT PENDING. ALL RIGHTS RESERVED - COPYRIGHT ©2016 - ZROADZ LED, INC.

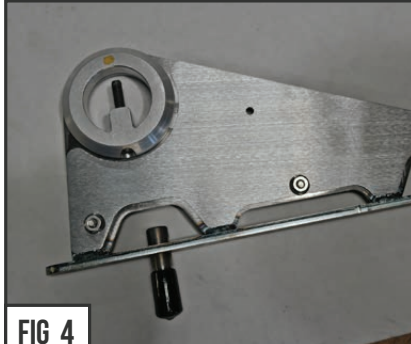


FIG 4



FIG 5



FIG 6

STEP 3

3) Now fix a Bracket Coupler to the inside of the Upright Mounts using the Button Head Allen Cap Screws (From Bag #2). Make certain the Coupler is clocked as seen in Figures #4 & #6.

Repeat for the opposite side Upright Mount.

SEE FIGURES 4 - 6

STEP 4

4) At this time, go ahead and assemble at least 2 - 4 (or more) of the Bracket Assemblies. Some will be clocked straight with the Coupler Set Screw pointed to 12:00 o'clock, (Fig. #9) while some should be offset with the Set Screw pointed to 3:00 o'clock (Fig. #7).

SEE FIGURES 7 - 10



FIG 7



FIG 8



FIG 9

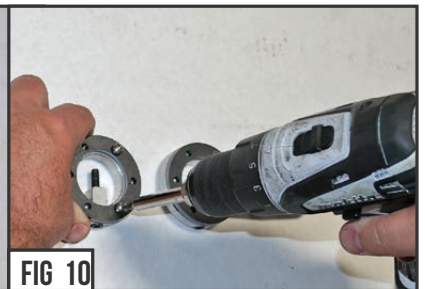


FIG 10

STEP 5

5) Before you determine your light configuration you must determine the size and quantity of lights you plan to install. First measure the roof from the inside edge of the roof channel on the Driver Side, to the inside edge of the roof channel on the Passenger Side. This will give you your maximum allowable cross member mounting area to determine your light configurations.

Part #: Z350040 = Minimum Channel Distance should be no less than 43"
Part #: Z350050 = Minimum Channel Distance should be no less than 54"

OPTIONAL STEP

Your kit was shipped with a universal length cross member tube. On some vehicles the bar length may be longer than required for your vehicle and if you desire, cut the tube to fit your vehicle. The way to determine the measurement is to find the distance from the outside edge of the roof channel, to the opposite outside edge of the roof channel. Add 1" and that is the measurement you need to cut the bar. Cold cutting is recommended but using a band saw or hand saw with metal cutting blade will also suffice. The supplied end cap will hide the cut edge once you complete the installation.

SEE FIGURE 11



FIG 11

STEP 6

6) It is now time to mock up and determine your LED Light layout and configuration. Put the parts in place starting with the Cross Member Tube and Upright Mounts. Add and position LED Lights into your layout mock as you desire. Fit and match the Bracket Assemblies so that the layout resembles your preferred plan.

NOTE: Customize and build according to your needs and preference. There are literally dozens and dozens of configurable combinations to organize and stack LED Light Bar placement, facing forwards, backwards, left & right. Leave at least 1.5" Tube on each end

SEE FIGURES 11 - 13

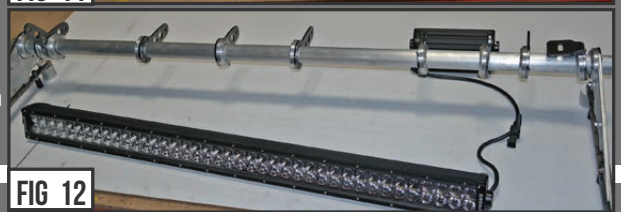


FIG 12



FIG 13

MODULAR RACK ASSEMBLY - CONTINUED



MODULAR RACK ASSEMBLY - CONTINUED

PARTS ARE PATENT PENDING. ALL RIGHTS RESERVED - COPYRIGHT ©2016 - ZROADZ LED, INC.

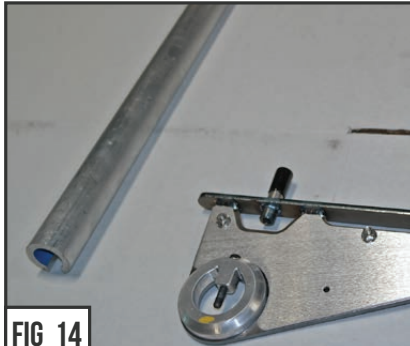


FIG 14



FIG 15

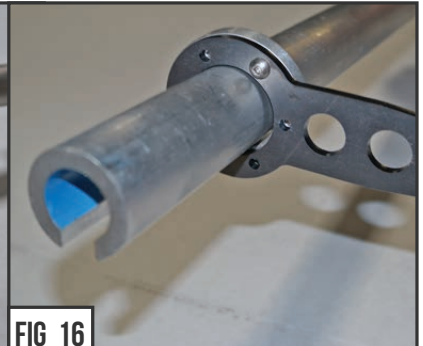


FIG 16

STEP 7

SEE FIGURES 15 - 19

7) With Your LED Light positioning determined and finalized, go ahead and slip the appropriate Bracket Assemblies onto the Cross Member Tube.

Make sure each bracket/coupler assembly is installed on the bar with the bracket and exposed button head Allen cap screws towards the outside of the LED light assembly as shown in Fig. 17, 19.

STEP 8

SEE FIGURES 15 - 19

8) Fit and match the Bracket Assemblies so that the layout resembles your preferred plan.

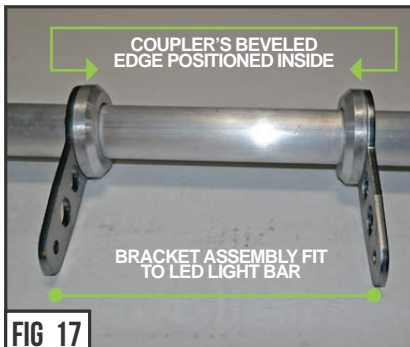


FIG 17

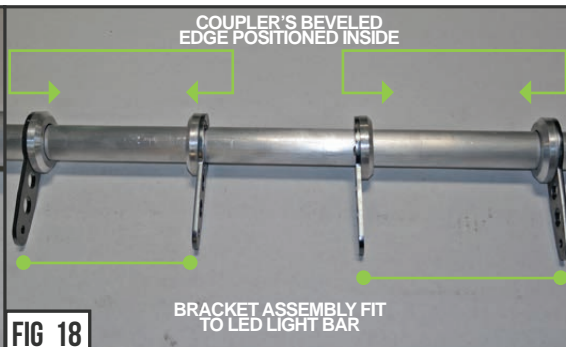


FIG 18

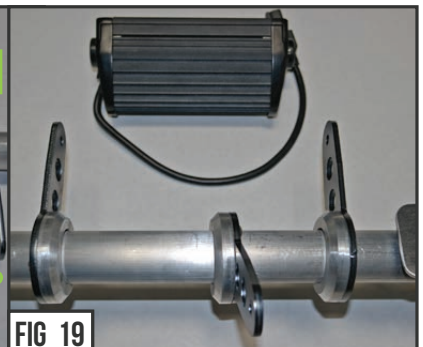


FIG 19

STEP 9

SEE FIGURES 19 & 20

9) Some Bracket Assemblies may be pointed forwards, backwards, and also clocked up if your original layout called out for this configuration.



FIG 20

STEP 10

SEE FIGURES 21 - 23

10) Go ahead and mount the LED Lights into their designated position and secure to the Bracket Assemblies.

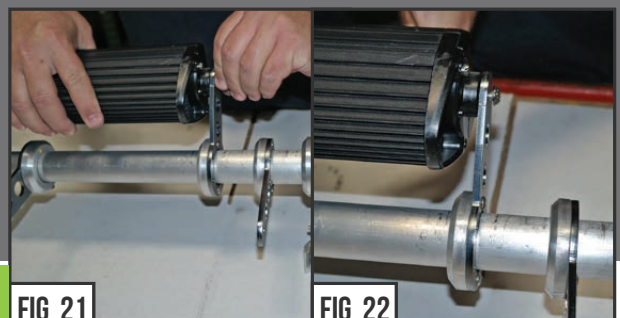


FIG 21

FIG 22



MODULAR RACK ASSEMBLY - CONTINUED

PARTS ARE PATENT PENDING. ALL RIGHTS RESERVED - COPYRIGHT ©2016 - ZROADZ LED, INC.



FIG 23



FIG 24



FIG 25

STEP 11

SEE FIGURE 24

11) With your LED Light positioning determined and finalized, go ahead and measure the LEDs placement side to side for approximate centering and equal symmetry.

STEP 12

SEE FIGURES 25 - 28

12) Once your satisfied with your LED placement, lock the Bracket Couplers into place by tightening the (Steel Thread Allen Cap) set screw on the underside of the Couplers.

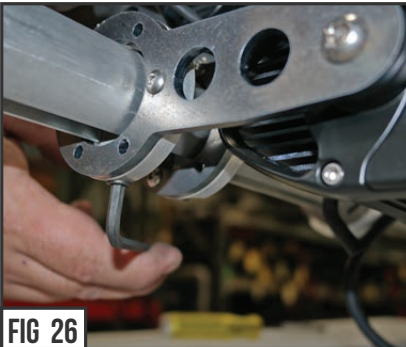


FIG 26



FIG 27

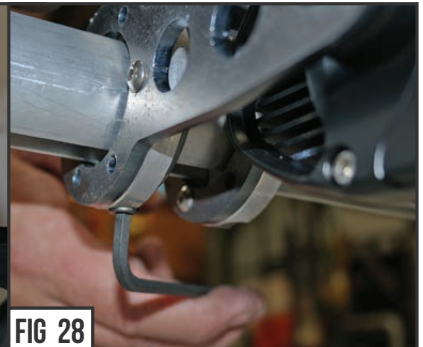


FIG 28

STEP 13

SEE FIGURES 29 - 34

13) It is now time to plumb and wire the LED Light Wiring inside the hollow cavern of the Cross Member Tube's under belly. Start by slipping the one of the 1/2" Rubber Sealing Washers (From Bag #6) onto each of the LED Light Wires.



FIG 29

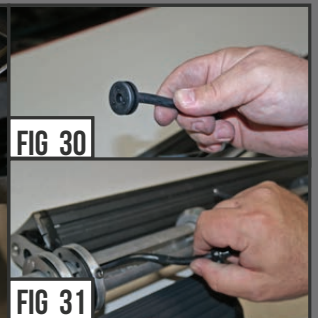


FIG 30

FIG 31

STEP 14

SEE FIGURES 29 - 34

14) To help push the rubber washer also the LED Light Wire into place, we recommend using some 50 / 50 water / dish soap lubricating solution to easily plumb the wires. With the 1/2" Rubber Sealing Washers slipped over the wires, carefully tuck it to the side of the Bracket Coupler's Set Screw. Press and insert the 1/2" Rubber Sealing Washers into the Cross Member Tube's Under Belly.



FIG 32



FIG 33

FIG 34

MODULAR RACK ASSEMBLY - CONTINUED



MODULAR RACK ASSEMBLY - CONTINUED

PARTS ARE PATENT PENDING. ALL RIGHTS RESERVED - COPYRIGHT ©2016 - ZROADZ LED, INC.



FIG 35



FIG 36



FIG 37

STEP 15

SEE FIGURES 35 - 37

15) The purpose of the 1/2" Rubber Sealing Washers around the LED Light wires is to hold and secure the wires inside the hollow cavern of the Cross Member Tube's under belly.

STEP 16

SEE FIGURE 36

16) Note that Modular Roof Mounts configured with an assortment of LED Lights will have multiple wires plumbed through the Cross Member Tube. For this reason, you may have to plumb some wires to the drivers side and some to the passenger side.

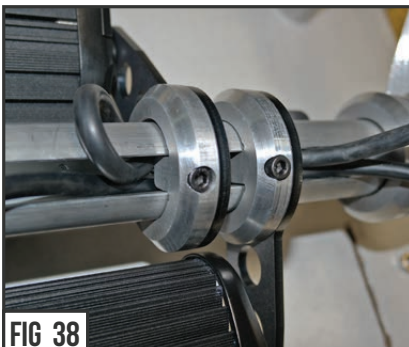


FIG 38



FIG 39

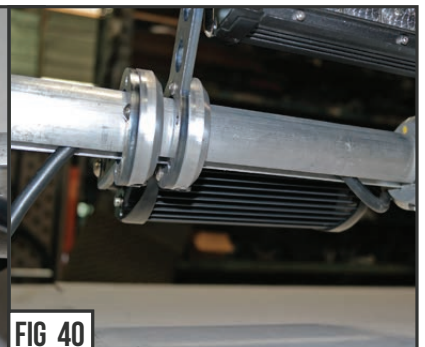


FIG 40

STEP 17

SEE FIGURES 38 - 40

17) If there is more than one wire, slip one wire to one side of the Set Screw and than slip the other wire to the other side of the set screw.

INSPECT YOUR WORK

The Bracket Assemblies should be locked into place, the LED Lights should be mounted, and the LED Light wires should be cleanly plumbed into the Cross Member Tube's under belly.



FIG 41

STEP 18

IMPORTANT

18) At this point, you will need to disassemble the Upright Mounts from the Assembled Modular Rack so you can accurately install the Upright Mounts onto Vehicle Roof. DO NOT attempt to install Upright Mounts with Assembled Modular Rack onto Vehicle Roof.

MODULAR RACK ASSEMBLY - COMPLETE



MODULAR RACK INSTALL - START

PARTS ARE PATENT PENDING. ALL RIGHTS RESERVED - COPYRIGHT ©2016 - ZROADZ LED, INC.



FIG 42

STEP 19

19) It is now time to begin the process of preparing the vehicle for install. This can be a delicate and pain staking process so make certain that you have the appropriate tools and know how.



FIG 43

STEP 20

SEE FIGURES 42 - 43

20) Drop OEM headliner down to allow access to the inside of vehicle roof panel moulding, per industry "R&R" method.



FIG 44

STEPS 21 & 22

SEE FIGURES 42 - 45

21) Carefully push to the side and clear any of the now exposed vehicle components such as side / curtain air bags, wiring looms, interior plastics, ect.

22) From above, remove or push to the side roof seam moulding (if your vehicle comes equipped).



FIG 45

STEP 23

SEE FIGURES 46 & 47

23) Using the provided templates, put them into place inside the vehicle's roof channel to help determine where the drill holes will locate.

IMPORTANT

Prior to marking the vehicle for drilling you must first check for clearance on the inside of the vehicle roof for the bracket mounting threaded down tubes. You can achieve this by inspecting the inside of the vehicle roof channel once the headliner is removed. Make sure that the location of the main upright brackets will not interfere with any substructure, accessory mounting tabs, airbag mounting tabs, wire harness mounts, or similar. Find an acceptable placement of the brackets, mock up with provided template and proceed to mark the roof channel for drilling.



FIG 46



FIG 47

MODULAR RACK INSTALL - CONTINUED



MODULAR RACK INSTALL - CONTINUED

PARTS ARE PATENT PENDING. ALL RIGHTS RESERVED - COPYRIGHT ©2016 - ZROADZ LED, INC.



FIG 48



FIG 49

STEP 24

SEE FIGURE 48

24) Test fit Bracket Mounts positioning according to the template placement.

IMPORTANT NOTE

For Ford trucks it is not necessary to remove the moulding or seam sealer. Drill hole through body seam sealer. Use RTV silicone to fill any uneven surfaces around drill hole prior to installing the bracket to the vehicle.

Clear the channel of any obstructions including any channel moulding mounting posts where the bracket will install. If the channel has body seam sealer that does not span the width of the channel it must be removed for the distance that the bracket will come in contact with the roof channel. Replace any seam sealer with RTV silicone (STEP #29) and apply in a manner that yields a flat surface for the gasket to contact the roof.

DRILLING VEHICLE ROOF



FIG 50

STEP 25

SEE FIGURES 49 & 50

25) Make sure the template is centered in the width of the channel, use masking tape or similar to hold the template in place prior to center punching the roof for drilling. Center punch the locator marks through the template.

PRO TIP

DO NOT ATTEMPT INSTALL UNLESS YOU HAVE A CAR REAMER OR TAPERED 1/2" METAL DRILL BIT!



FIG 51

STEP 26

SEE FIGURES 51 - 53

26) With the interior roof free and clear, drill a 1/4" hole in the roof channel gutter to pilot the mounting hole. Use a car reamer (as seen in Figure #7) or tapered 1/2" metal drill bit to open the hole to a final diameter of 1/2".

Drill the holes and check that both right and left uprights fit into the channel and are free and clear to seal along the base of the roof channel.

With the holes drilled through, clean off all drilling debris and flash INSIDE AND OUTSIDE OF THE DRILL HOLE LOCATIONS. This is a very important to create a flush sealing surface and you do not want to leave any chance of rust occurring. Perform this step for both sides of the roof.

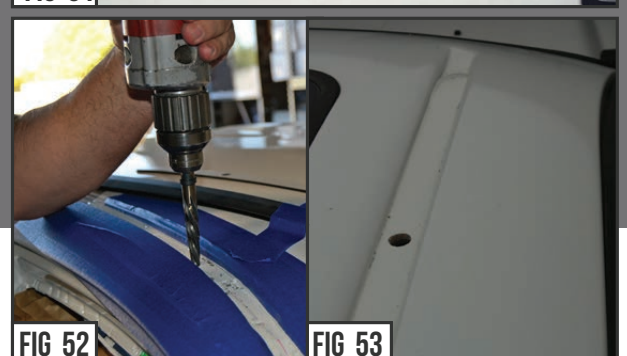


FIG 52

FIG 53

MODULAR RACK INSTALL - CONTINUED



MODULAR RACK INSTALL - CONTINUED

PARTS ARE PATENT PENDING. ALL RIGHTS RESERVED - COPYRIGHT ©2016 - ZROADZ LED, INC.



FIG 54



FIG 55

STEP 27

SEE FIGURES 54 - 56

27) Clean the base of the supplied Upright Mount with alcohol. Once dry remove the liner of the base gaskets and apply the gasket to the base of each bracket.

STEP 28

SEE FIGURE 57

28) Before you install the Upright Mount to the roof, check that the threads on the post are clean.



FIG 56

INSTALL ROOF MOUNT TO ROOF



FIG 57

STEP 29

SEE FIGURE 58

29) Use a thin layer of clear RTV Silicone around outside of each drilled hole to help with weather proofing and sealing.



FIG 58

STEP 30

SEE FIGURE 59

30) With the roof and channel area debris free and wiped down clean with alcohol cleaning solution, align the ZROADZ Modular Roof Upright Mounts to the roof and insert the through bolt threads down into the drilled hole.

Make sure the outside of the Upright Mount is coated black and says ZROADZ while the inside of upright presents the aluminum skin. Inspect your work to make sure you are happy with the position and then repeat for other side.



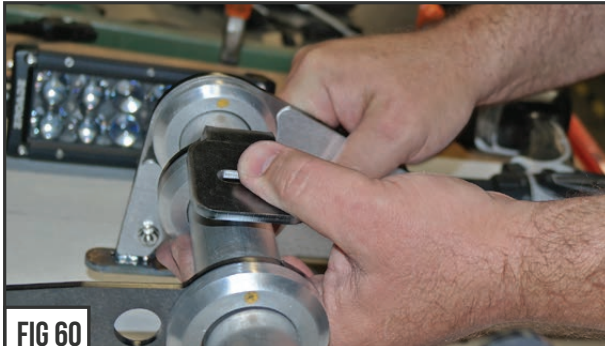
FIG 59

MODULAR RACK INSTALL - CONTINUED



MODULAR RACK INSTALL - CONTINUED

PARTS ARE PATENT PENDING. ALL RIGHTS RESERVED - COPYRIGHT ©2016 - ZROADZ LED, INC.



STEP 31

SEE FIGURE 64

31) Loosely install the Upright Mounts to the right and left sides of the Cross Member Tube. It will be heavy with all the LEDs installed so grab a friend to help install the completely assembly Cross Member Tube between the Upright Mounts.

Center the Cross Member Tube between the Upright Mounts and now finally lock it into place by tightening down the Outside Couplers at the Upright Mounts.

STEP 32

SEE FIGURES 61 & 62

32) With the two Upright Mounts placed into the drilled holes and the Cross Member Tube centered and seated, check that the threads on the post after coming through the roof are clean and free from debris.

Install the split lock washer and the (4) 1/2" hex nuts (From Bag #3) and tighten securely. Check to make sure the upright is secured and firmly attached to top side of roof.



INSTALL END CAPS

STEPS 33

SEE FIGURES 64 - 67

33) At this point you are ready to insert and secure the Modular Cross Member Tube End Caps. Using the provided hardware and parts (from Bag #5) put the End Caps into place and then insert the (2) - #10-32 x .625 Stainless Steel Socket Cap into the pre-determined hole and tighten down using an Allen Wrench or something of the sort. The Modular Rack should now be fully assembled, and firmly installed on the Vehicle's Roof.





MODULAR RACK INSTALL - CONTINUED

PARTS ARE PATENT PENDING. ALL RIGHTS RESERVED - COPYRIGHT ©2016 - ZROADZ LED, INC.



FIG 68



FIG 69



FIG 70

STEP 34

SEE FIGURES 68 - 70

34) Secure the wire to the Upright Mount with supplied wire clip and nut (From Bag #4). Leave slack in the wire from LED to the wire clip for some movement & available adjustment. Cut the LED light wires. Leave enough room for the insulation to be removed and the red and black wires to pass through the roof via the "Through Bolt Down Tube".

STEP 35

SEE FIGURE 70

35) Trim back a large amount of the insulation sheath off the LED Wires so that you can slip them through the rubber weather proofing boot.

To expose the wires, Wire Strippers will do the trick.



FIG 71



FIG 72

STEP 36

SEE FIGURES 71 & 72

36) Install 1/4" heat shrink insulation over wires as shown in Figure #25. Shrink insulation with heat gun or similar.

WIRING PLUMBING



FIG 73

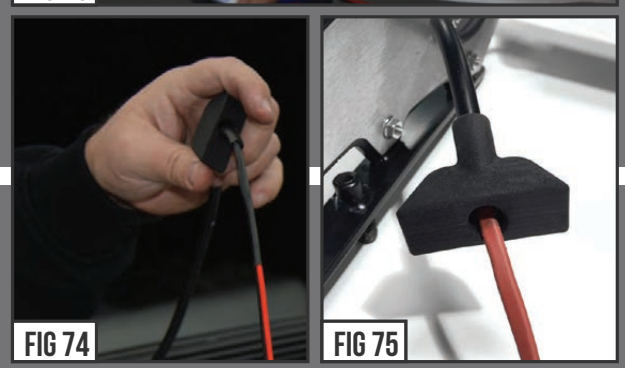


FIG 74



FIG 75

STEP 37

SEE FIGURES 74 - 76

37) Use a 50/50 mix of dish soap and water solution to install supplied boot over wire as shown on page #2 Fig. 6.

Pass the wire through the tube. Use a liberal amount of solution on the bracket around the area where the boot installs to aid in slipping the boot over the post.



FIG 76

MODULAR RACK INSTALL - CONTINUED



MODULAR RACK INSTALL - CONTINUED

PARTS ARE PATENT PENDING. ALL RIGHTS RESERVED - COPYRIGHT ©2016 - ZROADZ LED, INC.



STEPS 38

SEE FIGURE 77 - 80

38) Stuff the boot into the bracket opening and over the down tube upright. Repeat these steps for any other remaining exposed wires, and also use the (3 if needed) Wire Boot Plugs to finish off the blocking of the gaps and fully weather proofing the Upright Mounts.

STEP 39

39) With the rubber boots fully seated, you are now ready to finish wiring up the LED Light bar to a wiring harness.

After wiring is complete, re-install vehicle's interior in the reverse order it was removed according to industry "R&R" method.

FINAL INSTALLATION



STEP 40

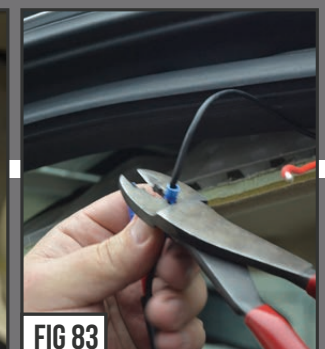
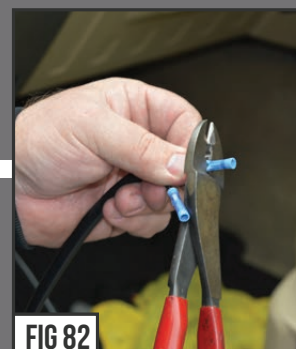
40) Wire LED Light with a ZROADZ optional wiring harness kit (part# Z390020S-A) or by utilizing a compatible custom wiring harness. ZROADZ recommends LED Lights be wired with ZROADZ harness kit (part# Z390020S-A).

STEPS 41

ADJUSTMENT TIPS

41) To adjust the angle of your Light Bar, rotate the LED(s) to adjust the angles till your desired light pattern is reached. There will be minimal adjustment due to curved light bar orientation. You may then tighten the hardware and secure everything into place. Be careful not to over tighten the mounting hardware.

It is best to adjust the angle with the vehicle on level ground with lights facing a wall, garage door or other solid barrier. We recommend checking from a distance of 25'. Your installation is now completed.



MODULAR RACK INSTALL - COMPLETE