

CUSTOM LED 2002-2009 ROAD STAR WARRIOR & 2008-2010 RAIDER INTEGRATED TAIL LIGHT RETROFIT KIT INSTALLATION INSTRUCTIONS

NOTE: YOU MAY DOWNLOAD FULL SIZED INSTRUCTIONS AT [HTTP://WWW.CUSTOMLED.COM](http://www.customled.com) ON THE RESPECTIVE PRODUCT PAGE.

GETTING READY



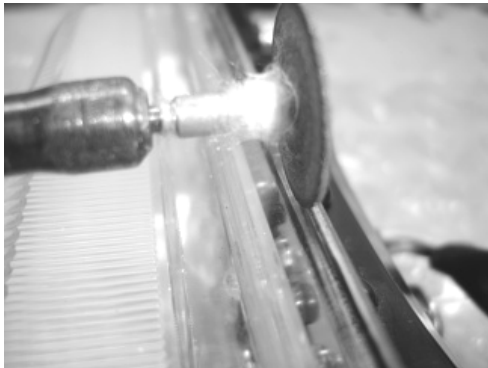
ITEMS YOU WILL NEED

- 1) DREMOL WITH SMALL CUTTING WHEEL AND SANDING DRUM OR EQUIVALENT
- 2) PLIERS
- 3) WIRE SNIPS
- 4) FLAT HEAD SCREWDRIVER
- 5) PHILLIPS HEAD SCREWDRIVER
- 6) EYE PROTECTION
- 7) STOCK LED TAIL LIGHT REMOVED FROM BIKE.
- 8) GLUE GUN
- 9) CRAZY GLUE (OR EQUIVALENT)
- 10) LATEX GLOVES



BEFORE PROCEEDING
PLEASE READ THESE
INSTRUCTIONS
THOROUGHLY. IF YOU
FEEL YOU ARE UNABLE OR
UNWILLING TO PERFORM
THIS INSTALLATION
PLEASE CONTACT A
QUALIFIED TECHNICIAN.
IMPROPER INSTALLATION
WILL VOID WARRANTY.

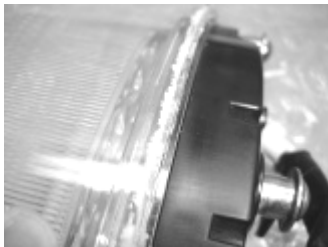
GETTING STARTED



IT IS HIGHLY RECOMMENDED THAT YOU USE LATEX GLOVES DURING THIS ENTIRE PROCESS. THIS WILL SAVE YOU LOTS OF CLEANING EFFORT LATER.

1) POSITION YOUR CUTTING WHEEL AT THE GLUE SEAM BETWEEN THE CLEAR LENS AND THE BLACK PLASTIC HOUSING.

2) PROCEED TO CUT INTO THE CLEAR LENS APPROXIMATELY HALF OF THE THICKNESS, ALL THE WAY AROUND THE PERIMETER OF THE LENS – BE SURE NOT TO CUT ALL THE WAY THROUGH TOO MUCH BECAUSE IT WILL NOT GLUE BACK TOGETHER PROPERLY. SEE "TIPS FOR CUTTING YOUR LENS" BEFORE BEGINNING.



TIPS FOR CUTTING YOUR LENS

- A) KEEP THE CUTTING WHEEL MOVING AND APPLY LIGHT PRESSURE. SITTING IN ONE SPOT WILL JUST MELT THE PLASTIC.
- B) TRY TO STAY TIGHT AGAINST THE INSIDE EDGE WHERE THE CLEAR LENS AND THE BLACK BACKING MEET (CUTTING THE CLEAR PART).

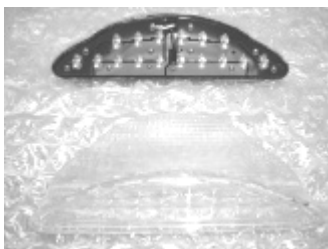
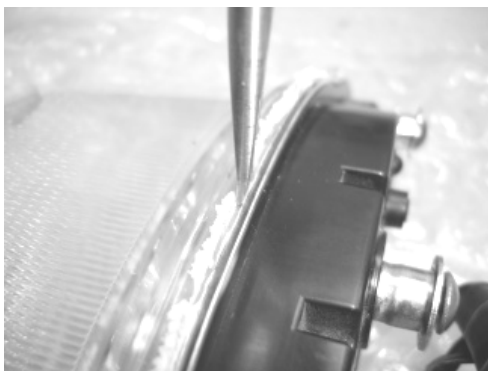
WHEN YOU MAKE YOUR WAY AROUND THE ENTIRE PERIMETER, CLEAN ALL THE BURRED PLASTIC FROM AROUND THE EDGES AND FROM INSIDE THE GROOVE YOU'VE MADE.

OPENING THE LENS

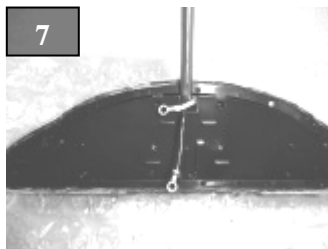
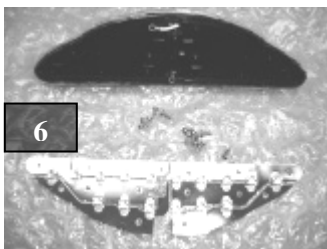
3) PLACE THE TIP OF A FLAT HEAD SCREWDRIVER IN THE GROOVE YOU HAVE CREATED.

4) GENTLY TWIST THE SCREWDRIVER TO CRACK THE GLUE ALONG THE GROOVE.

NOTE: AS SOON AS YOU HEAR THE SOUND OF THE GLUE GIVING (A CRACK), MOVE THE SCREWDRIVER SLIGHTLY AND ADVANCE THE CRACK. SLOW AND STEADY IS THE NAME OF THE GAME HERE. IF YOU FIND A HARD SPOT, WEAKEN IT WITH THE CUTTING WHEEL AS NECESSARY.



THE HARD PART IS OVER! YOU CAN RELAX NOW!



5) REMOVE THE SCREWS HOLDING THE STOCK LED BOARDS TO THE HOUSING (YOU WILL BE REUSING SOME OF THE SCREWS SO PUT THEM TO THE SIDE).

6) REMOVE THE STOCK LED ASSEMBLY FROM THE LENS HOUSING. YOU WILL NO LONGER NEED THE STOCK LED BOARD, DISPOSE OF IT AS YOU WISH.

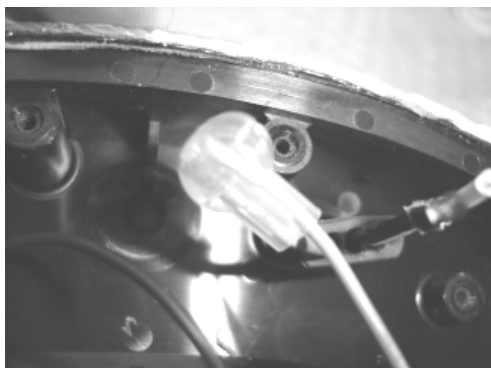
7) GENTLY PRY OFF THE PLASTIC COVER TO EXPOSE THE DRIVER BOARD UNDERNEATH.

8) REMOVE THE SCREWS SUPPORTING THE DRIVER BOARD AND SNIP OFF THE THREE WIRES (BLUE, BLACK, YELLOW) AS SHOWN AS CLOSE TO THE CIRCUIT BOARD AS POSSIBLE! YOU WILL NEED TO CONNECT TO THESE WIRES LATER.



9) POP OUT THE LITTLE BLACK PLUG AS SHOWN IN THE PICTURE. YOU CAN POKE IT OUT FROM THE INSIDE OF THE HOUSING. THIS HOLE WILL BE USED TO ROUTE THE GRAY, GREEN AND BROWN WIRES FROM INSIDE THE HOUSING. QUICKLY CHECK TO MAKE SURE ALL THREE WIRES WILL FIT THROUGH THIS OPENING. IF NOT, NOW IS A GOOD TIME TO ENLARGE THE OPENING TO FIT THE THREE WIRES. YOU CAN USE A DRILL TO SLIGHTLY ENLARGE THE OPENING. DO NOT MAKE THE HOLE TOO BIG.

WIRING UP YOUR CUSTOM LED BOARD



PLACE YOUR CUSTOM LED INTEGRATED TAIL BOARD NEXT TO THE HOUSING AND MATCH THE WIRE COLORS AS FOLLOWS: *TRY TO HANDLE THE CIRCUIT BOARD AS LITTLE AS POSSIBLE AS FINGERPRINTS AND DIRT WILL HINDER THE PERFORMANCE.*

- BLACK ON HARNESS TO 4" BLACK ON CUSTOM LED BOARD
- BLUE ON HARNESS TO 4" BLUE ON CUSTOM LED BOARD
- YELLOW ON HARNESS TO 4" YELLOW ON CUSTOM LED BOARD

USE THE THREE (3 OF 5) SUPPLIED ORANGE SPLICE CONNECTORS. PUSH THE TWO WIRES TO BE SPLICED TOGETHER INTO THE OPEN END. BE SURE TO PUSH THE WIRES ALL THE WAY IN (UNTIL YOU CAN SEE THEY HAVE REACHED THE OTHER SIDE).

NOTE: YOU WILL NEED TO SEPARATE THE THREE WIRES FIRST BY CUTTING THE PLASTIC COLLAR THAT BINDS THEM TOGETHER (NOT THE GROMMET!). FOR THE WIRES TO FIT PROPERLY INTO THE CONNECTORS, YOU MUST ALSO REMOVE THE REMNANTS OF THE COLLAR FROM THE WIRES.

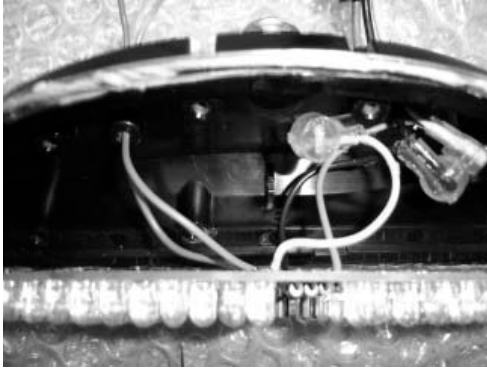
NOTE: THE SPLICE IS MORE RELIABLE IF THE WIRE IS NOT STRIPPED. BE SURE TO SNIP OFF THE BARE ENDS OF THE WIRES TO BE SPLICED, TO ENSURE THAT THERE IS INSULATION, AND CONDUCTOR BENEATH, WHERE THE SPLICE WILL OCCUR. THE SUPPLIED SPLICE CONNECTORS AUTOMATICALLY DISPLACE THE INSULATION AS NECESSARY.

ONCE YOU DOUBLE CHECK YOUR COLOR MATCHING AND ARE ABSOLUTELY SURE THAT THE WIRES ARE FULLY INSERTED INTO THE SPLICE CONNECTORS DO THE FOLLOWING:

10) SQUEEZE THE SPLICE CONNECTORS FIRMLY WITH PLIERS. VISUALLY INSPECT YOUR CONNECTIONS TO SEE THAT THEY HAVE BEEN SPLICED PROPERLY INSIDE.



11) RUN THE GRAY, GREEN AND BROWN WIRES THROUGH THE HOLE YOU OPENED UP IN STEP 9. (GRAY WIRE NOT SHOWN. YOU MAY NEED TO ENLARGE THE HOLE IF YOU HAVE NOT DONE SO IN STEP 9. BE CAREFUL NOT DO OVERSTRESS OR DAMAGE THE CIRCUIT BOARD AND WIRES DURING THE OPERATION).



12) POSITION YOUR CUSTOM LED BOARDS IN PLACE AS SHOWN AND FASTEN THE BOARD USING THE SCREWS REMOVED FROM THE STOCK BOARD.

NOTE: IT IS EXTREMELY IMPORTANT TO MAKE SURE THAT YOU DO NOT PINCH ANY OF THE WIRES UNDERNEATH THE CIRCUIT BOARD. MAKE SURE THE WIRES ARE FREE AND NOT PRESSED UP TIGHT AGAINST ANY OF THE SHARP SOLDER POINTS AS THIS WILL CERTAINLY CAUSE PROBLEMS IMMEDIATELY OR IN THE FUTURE. DO NOT OVER-TIGHTEN THE SCREWS.

13) AT THIS POINT WE HIGHLY RECOMMEND SEALING THE HOLE YOU CREATED IN STEP 9 FROM THE *OUTSIDE* OF THE HOUSING USING A HOT-GLUE GUN. IF YOU DO NOT HAVE A HOT GLUE GUN AT THIS POINT, YOU MAY AT A LATER TIME OR WITH ANOTHER SEALANT. BE SURE ALL THE WIRES ARE THROUGH AND ARE NICELY PLACED.

PREPARING YOUR LENS

14) BECAUSE OF THE CHARACTERISTICS OF THE STOCK LEDS, AND THE WAY THE STOCK LEDS ARE SITUATED, A CULMINATION LENS WAS INCORPORATED INSIDE THE STOCK LENS. FOR BEST RESULTS WITH YOUR CUSTOM LED TAIL, IT IS HIGHLY RECOMMENDED THAT YOU REMOVE THIS CULMINATION LENS.

THERE ARE TWO WAYS REMOVE THIS LENS

A) DRILL A SMALL HOLE IN THE MIDDLE OF THE LENS, INSERT A HOOK SHAPED OBJECT AND PULL THE LENS OUT. *BE SURE NOT TO DAMAGE THE OUTER LENS.*

- OR -

B) SMASH THE LENS CAREFULLY WITH A METAL OBJECT SUCH AS A WIRE STRIPPER. *BE SURE NOT TO DAMAGE THE OUTER LENS.*

ONCE STRUCK WITH ENOUGH FORCE, THE CULMINATION LENS WILL CRACK, AND CAN BE PRIED OUT OF THE STOCK LENS PIECE BY PIECE. **NOTE: THE LENS FRAGMENTS ARE EXTREMELY SHARP! USE CAUTION AND EYE PROTECTION.**



15) IN ORDER TO ENSURE PROPER FITMENT OF THE LENS OVER THE LED BOARD, YOU MAY NEED TO GRIND DOWN THE FRAGMENTS OF THE CULMINATION LENS THAT CANNOT OTHERWISE BE REMOVED.

THIS CAN BE ACHIEVED WITH A DREMOL WITH A SMALL SANDING DRUM ATTACHED AS SHOWN.

YOU CAN PERIODICALLY CHECK TO SEE IF YOU HAVE ACHIEVED PROPER FITMENT AS YOU WORK.

RE-SEALING YOUR LENS

CONGRATULATIONS! YOU'RE ONE STEP AWAY FROM FULFILLING YOUR WILDEST DREAMS - OK, MAYBE NOT, BUT YOU'RE ALMOST DONE WITH YOUR CUSTOM LED 2002-2009 ROAD STAR WARRIOR & 2008-2010 RAIDER INTEGRATED TAIL RETROFIT KIT!

IT IS SUGGESTED AT THIS POINT THAT YOU PLUG IN THE CUSTOM LED TAIL LIGHT TO VERIFY THAT THE WIRING IS DONE CORRECTLY BEFORE RESEALING THE LENS. THE RUNNING LIGHT AND BRAKE LIGHT SHOULD WORK PROPERLY.

NOTE: IF YOU FEEL YOU MAY HAVE CONTAMINATED THE SURFACES, CLEAN THE INSIDE OF THE LENS AND ALL THE LEDS AND CIRCUIT BOARD THOROUGHLY BEFORE GLUING IT SHUT. RUBBING ALCOHOL IS EXCELLENT FOR THIS PURPOSE. THOROUGHLY TOWEL DRY WITH A LINT FREE CLOTH, DO NOT ALLOW THE ALCOHOL TO AIR DRY SLOWLY. FINGER PRINTS AND GREASE WILL BECOME OPAQUE WITH CERTAIN GLUE VAPORS WHICH WILL HINDER THE PERFORMANCE OF YOUR TAIL LIGHT AND MAY VOID YOUR WARRANTY ENTIRELY!

16) RE-SEAL YOUR LENS GLUE OF YOUR CHOICE. WE HIGHLY RECOMMEND HOT GLUE AS IT DOES NOT CONTAIN VAPORS THAT PERMINANTLY DISCOLOR THE LEDS OR THE LENS. THE PROPER WAY TO USE HOT GLUE IS TO MOUNT THE LENS ON THE BUCKET AND RUN A BEAD OF HOT GLUE IN THE CUT RIDGE YOU MADE WITH THE DREMOL. MAKE SURE YOU WORK SLOWLY AND ALLOW THE GLUE TO PENETRATE INTO THE RIDGE.

WIRING THE BLINKERS

17) AFTER ALLOWING THE GLUE ON THE LENS TO SET, MOUNT THE TAIL UNIT BACK ON THE MOTORCYCLE.

18) LOCATE THE BLINKER WIRES ON THE MOTORCYCLE. IF YOU HAVE NOT REMOVED THE STOCK BLINKERS YET, YOU CAN SIMPLY FOLLOW THE WIRES. OTHERWISE THEY ARE BROWN AND GREEN.

YOU HAVE TWO (2) OPTIONS FOR WIRING YOUR CUSTOM LED BLINKER WIRES.

- A) MAINTAIN THE STOCK PLUG IN TYPE CONNECTION BY CUTTING THE WIRES OFF OF THE STOCK BLINKERS AND USING THE SUPPLIED ORANGE SPLICE CONNECTORS TO SPLICE ON THE FACTORY PLUG TO THE CUSTOM LED WIRES (RECOMMENDED).
-OR-
B) USE THE NON-DESTRUCTIVE RED TAP CONNECTORS TO SPLICE INTO THE WIRING ON THE MOTORCYCLE.

WHICHEVER ROUTE YOU DECIDE TO GO, YOU WILL NEED TO CONNECT THE 16" BROWN AND GREEN WIRES FROM THE CUSTOM LED TAIL AS FOLLOWS:

- BROWN BLINKER WIRE ON BIKE TO 16" BROWN WIRE FROM CUSTOM LED TAIL.
- GREEN BLINKER WIRE ON BIKE TO 16" GREEN WIRE FROM CUSTOM LED TAIL.

NOTES:

- A) THE WIRE COLORS ON THE MOTORCYCLE MAY NOT BE SOLID (THERE MAY BE A STRIPE, BUT THE WIRE IS PREDOMINANTLY THE DESCRIBED COLOR)
B) IF YOU DECIDE TO REUSE THE STOCK CONNECTOR BY CUTTING THE WIRES OFF OF THE STOCK BLINKERS, YOU WILL HAVE AN EXTRA WIRE ON EACH SIDE, WHICH IS NOT TO BE CONNECTED TO ANYTHING – THIS IS AN UNNECESSARY GROUND WIRE. WE SUGGEST YOU TAPE IT OFF NEATLY.

STROBE MODE CONTROL WIRE

YOUR CUSTOM LED TAIL LIGHT IS EQUIPPED WITH A STROBE MODE FEATURE. THIS FEATURE IS ENGAGED BY GROUNDING THE GRAY 16" WIRE (TO ANY COMMON GROUND POINT: BATTERY (-) OR FRAME). THIS WIRE SHOULD BE CONNECTED TO A TOGGLE SWITCH TO CONTROL STROBE MODE OPERATION. FOR NORMAL TAIL LIGHT OPERATION, THIS WIRE SHOULD NOT BE CONNECTED.

NOTE: STROBE MODE OVERRIDES ALL OTHER FUNCTIONS OF THE TAIL LIGHT AND IS NOT INTENDED FOR STREET USE!

19) NEATLY ZIP TIE OR TAPE THE WIRES TOGETHER FOR A TROUBLE FREE INSTALL!

TROUBLESHOOTING

YOU MAY FIND THAT YOUR BLINKERS BLINK FASTER NOW THAT YOU HAVE REMOVED THE STOCK TURN SIGNALS IN THE REAR OF THE BIKE. THIS IS THE DESIGNED RESPONSE OF THE FLASHER RELAY – AND IT IS OK TO LEAVE IT THIS WAY. IF YOU WISH TO SLOW YOUR BLINK RATE, YOU MUST REPLACE YOUR FLASHER RELAY OR ADD LOAD TO THE SYSTEM. THE CUSTOM LED ELECTRONIC LED FLASHER RELAY OR LOAD EQUALIZERS ARE THE PERFECT SOLUTION FOR THIS! SEE [HTTP://WWW.CUSTOMLED.COM](http://www.customled.com) FOR MORE INFORMATION.

IF YOU HAVE REPLACED THE FRONT TURNS SIGNALS WITH LEDS ALSO, YOU MAY FIND THAT YOUR BLINKERS DON'T BLINK AT ALL - YOU MUST REPLACE YOUR FLASHER RELAY OR ADD LOAD TO THE SYSTEM TO FIX THIS PROBLEM. AGAIN, THE CUSTOM LED ELECTRONIC LED FLASHER RELAY OR LOAD EQUALIZERS ARE PERFECT FOR THIS. VISIT [HTTP://WWW.CUSTOMLED.COM](http://www.customled.com).

IF YOU FIND THAT BOTH TURN SIGNAL SIDES COME ON AT THE SAME TIME, YOU NEED TO ADD SOME LOAD TO THE SYSTEM VIA OUR STAGE I LOAD EQUALIZERS.

IF YOUR TAIL LIGHT IS NOT FUNCTIONING PROPERLY, CHECK YOUR CONNECTIONS CAREFULLY! THE CUSTOM LED INTEGRATED TAIL LIGHTS ARE TESTED "GOING INTO THE BOX." YOU CAN SAVE YOURSELF A LOT OF AGGRAVATION BY SIMPLY DOUBLE AND TRIPLE CHECKING YOUR WIRING. IN THE EVENT THAT YOU MAY HAVE A FAULTY UNIT, PLEASE CONTACT YOUR VENDOR FOR ASSISTANCE OR E-MAIL SUPPORT@CUSTOMLED.COM.

DISCLAIMER

BY SELLING YOU THIS PRODUCT, WE MAKE NO GUARANTEE THAT THE USE OF THIS PRODUCT CAN OR WILL HELP REDUCE THE CHANCE OF ACCIDENTS IN ANY WAY, NOR ARE WE LIABLE IN ANY WAY. IT IS YOUR RESPONSIBILITY TO VERIFY PROPER FUNCTIONALITY OF THIS PRODUCT EVERY TIME YOU START YOUR MOTORCYCLE.

FURTHERMORE, IT IS YOUR RESPONSIBILITY TO FOLLOW THE LAWS OF YOUR LOCAL JURISDICTIONS AS FAR AS D.O.T. REQUIREMENTS FOR MARKER LIGHT AND BLINKER LIGHT SHAPE, COLOR AND INTENSITY.

THIS PRODUCT IS FOR OFF-ROAD USE ONLY.