

## 2016-2017 KIA OPTIMA LED DRL AIR VENT KIT



### REQUIRED ITEMS:

- SMALL FLAT HEAD
- PHILLIPS SCREW DRIVER
- RACHET
- 10MM SOCKET
- ZIP TIES
- WASHERS
- DREMEL OR SOMETHING TO DO PRECISE TRIMMING
- DRILL
- 1/2 DRILL BIT



## STEP ONE:

OPEN HOOD. REMOVE 6 FASTENERS.  
THESE JUST POP RIGHT UP WITH A SMALL  
FLAT HEAD. REMOVE 2 X 10MM SCREWS  
HOLDING INTAKE RAM IN PLACE



## STEP TWO:

JACK CAR UP TO GAIN ACCESS TO BELLY PAN  
AND WHEEL LINERS. REMOVE 3 FASTENERS



## STEP THREE:

REMOVE SCREW HOLDING BUMPER ON.  
RIGHT ABOVE TO THE 3 FASTENERS  
YOU JUST REMOVED.

**STEP FOUR:**

WITH THE CAR JACKED UP, REMOVE THE BELLY PAN. THERE ARE A TOTAL OF 5 SCREWS HOLDING THE BELLY PAN TO THE BUMPER.

**STEP FIVE:**

NOW EVERYTHING THAT IS HOLDING THE BUMPER TO THE CAR IS OFF, IT IS TIME TO POP THE BUMPER OFF THE RETAINING CLIPS. GENTLY POP THE BUMPER OFF BY PULLING IT OUTWARDS.

IT TAKES A BIT OF FORCE, BUT BE CAREFUL! IT WILL POP OFF JUST BELOW THE HEADLIGHT WHERE IT IS CLIPPED IN. THE TRICK IS DOING A LITTLE ON EACH SIDE AT A TIME. PULL A LITTLE OFF THE PASSENGER SIDE, THEN A LITTLE OFF THE DRIVER SIDE. THEN GO BACK TO PASSENGER SIDE AND POP IT OFF, THEN BACK TO DRIVER SIDE.



**STEP SIX:**  
UNPLUG THE HARNESS TO YOUR  
FORWARD VIEW CAMERA



**STEP SEVEN:**  
PLACE YOUR BUMPER ON A SOFT  
BLANKET SO YOU DO NOT SCRATCH IT.



**STEP EIGHT:**

REMOVE THE SCREWS HOLDING THE  
AIR VENT TO THE BUMPER.  
TOTAL OF 5 SCREWS.

**STEP NINE:**

CAREFULLY POP AIR VENT OFF FROM  
THE RETAINING TABS THAT ARE HOLDING  
IT TO THE BUMPER. BE CAREFUL IF YOU  
USE A SCREW DRIVER, YOU WANT TO  
MAKE SURE YOU DO NOT DAMAGE THE  
RETAINING CLIPS AS YOU WILL NEED  
THEM TO HOLD ON YOUR NEW LED VENTS.



## STEP TEN :

NOW THAT THE VENT IS ALL REMOVED, COMPARED IT SIDE BY SIDE TO THE NEW LED AIR VENT.

THE OLD VENT VS THE NEW VENTS IS ALMOST THE SAME. THE ONLY DIFFERENCE BETWEEN THE TWO IS THE SIZE/DEPTH AND LOCATION OF THE MOUNTING BRACKETS ON THE NEW LED AIR VENT.

THESE WE WILL BE MODIFYING TO FIT YOUR STOCK BUMPER. NO MODIFICATIONS WILL BE MADE TO YOUR STOCK BUMPER.

## STEP ELEVEN :

IN THE IMAGES TO THE LEFT YOU WILL SEE THE BRACKETS YOU WILL NEED TO MODIFY. THE TOP LEFT AND BOTTOM BRACKET, YOU WILL JUST NEED TO WIDEN THE HOLE TO FIT OVER THE BUMPER MOUNTS. THE PICTURE SHOWS THE BRACKETS COLORED BLACK WHERE YOU WILL NEED TO CUT OUT THAT AREA. USE A 1/2 DRILL BIT TO MAKE THE HOLES LARGER

THE BRACKET ON TOP RIGHT YOU WILL CUT COMPLETELY OFF. I USED A DREMEL TO CUT IT.





## STEP TWELVE :

THE OPENING ON THE NEW LED VENT FOR THE BUMPER TABS WILL NEED TO BE LONGER. CUT IT ABOUT AN INCH LONGER. DO NOT MAKE THE OPENING WIDER. JUST LONGER. USE A DREMEL TO LENGTHEN THE TAB INSERT. NOTE: IN THIS IMAGE YOU CAN SEE THE OTHER BRACKETS THAT I ALREADY CUT OUT.

## STEP THIRTEEN :

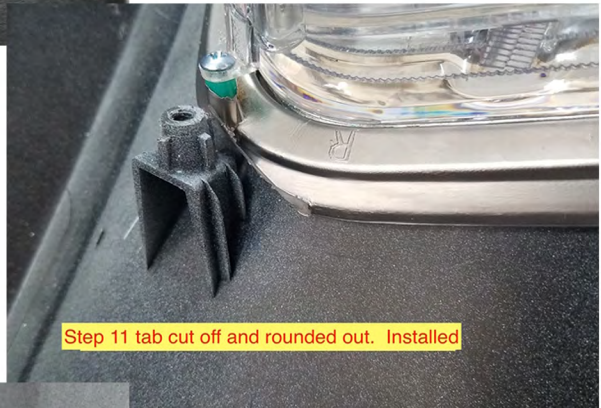
NOW THAT YOU HAVE MADE THE MODIFICATIONS TO THE MOUNTING BRACKETS YOU ARE READY TO INSTALL. IT TAKES A LITTLE FINESSE AS THE VENT SITS INTO THE BUMPER. START BY POPPING THE BUMPER TABS INTO THE INSERTS THAT YOU MADE WIDER ABOVE IN STEP 11: ONCE YOU HAVE SNAPPED THOSE IN, WHILE LOOKING FROM THE FRONT OF THE BUMPER, YOU WILL NEED TO SNAP IN THE VENT IN PLACE. IT IS PRETTY STRAIGHT FORWARD ON HOW IT SITS IN PLACE. THE BUMPER ITSELF SITS INTO THE VENT.

USE WASHERS WHEN PUTTING SCREWS BACK IN SINCE THE BRACKET HOLES WERE WIDENED.





STEP 11 Tab Cut and Installed



Step 11 tab cut off and rounded out. Installed



**IMAGES :**  
THESE IMAGES SHOW THE CUTS YOU  
MADE TO THE BRACKET IN STEP 11 AND  
HOW THEY LOOK INSTALLED.





## IMAGES :

THIS IMAGE SHOWS THE TAB INSERT  
IN STEP 12 THAT YOU CUT LONGER.



## STEP FOURTEEN :

WIRE THE LIGHTS UP WITH THE ADAPTER  
THAT CAME WITH YOUR KIT. UNPLUG THE  
FOG LIGHT WIRE HARNESS FROM THE  
RELAY BOX. PLUG IN LIGHT ON ONE SIDE  
AND THEN YOU CAN ZIP TIE THE WIRE  
HARNESS TO THE FORWARD VIEW CAMERA  
HARNESS OVER TO THE OTHER SIDE AND  
PLUG IN THE OTHER LED LIGHT.

## **STEP FIFTEEN :**

**INSTALL BUMPER BACK ON THE CAR. NOTE: THE BLACK AIR DUCTS THAT WERE ON THE ORIGINAL AIR VENTS WILL NOT BE USED AS THEY DO NOT FIT WITH THE NEW LED AIR VENTS. LEAVE THEM OFF.**

**WHEN PUTTING THE BUMPER BACK ON IT IS EASIEST TO SWING THE BUMPER ON FROM THE TOP OVER THE HOOD LATCH FIRST. THEN MOVING FROM THE MIDDLE OF THE BUMPER OUT, POP THE BUMPER BACK INTO THE RETAINING CLIPS UNDER THE HEADLIGHTS. ONCE THOSE ARE IN, POP EACH SIDE OF THE BUMPER INTO THE FENDER RETAINING CLIPS.**

**THEN DO EVERYTHING IN REVERSE. PUT ALL FASTENERS BACK IN ON TOP, UNDER CAR AND ON THE FENDER LINERS. SCREW IN EACH SCREW ON BOTH SIDE FENDER WELLS AND PUT INTAKE RAM BACK ON WITH 2 10MM SCREWS.**

**I WILL POST THE DIY FOR THE WIRING AS SOON AS I CAN. THE RELAY THAT COMES WITH THE KIT HAS TWO POWER WIRES AND A GROUND. THE RED POWER WIRE IS FOR FULL ILLUMINATION DURING THE DAYTIME. THE YELLOW WIRE IS FOR HALF ILLUMINATION FOR NIGHT TIME TO MATCH THE REST OF YOUR LIGHTS BRIGHTNESS. THE BEST SOURCE TO MAKE THESE WORK LIKE OEM IS TO TAP INTO THE HEADLIGHT WIRE HARNESS. THE RED WIRE WILL GO INTO LED DRL WIRE AND YELLOW WIRE WILL GO INTO HEADLIGHT POWER WIRE. THAT WAY WHEN YOU SWITCH ON YOUR HEADLIGHTS, THE NEW LED AIR VENTS WILL AUTOMATICALLY SWITCH OVER TO HALF ILLUMINATION MODE. THE BLACK WIRE FROM THE RELAY JUST GOES TO A CHASSIS GROUND.**

**DIY WRITTEN AND SUBMITTED BY CHARLIE ASHBY**

## IMAGES :

HERE ARE SOME IMAGES OF THE FINAL PRODUCT

