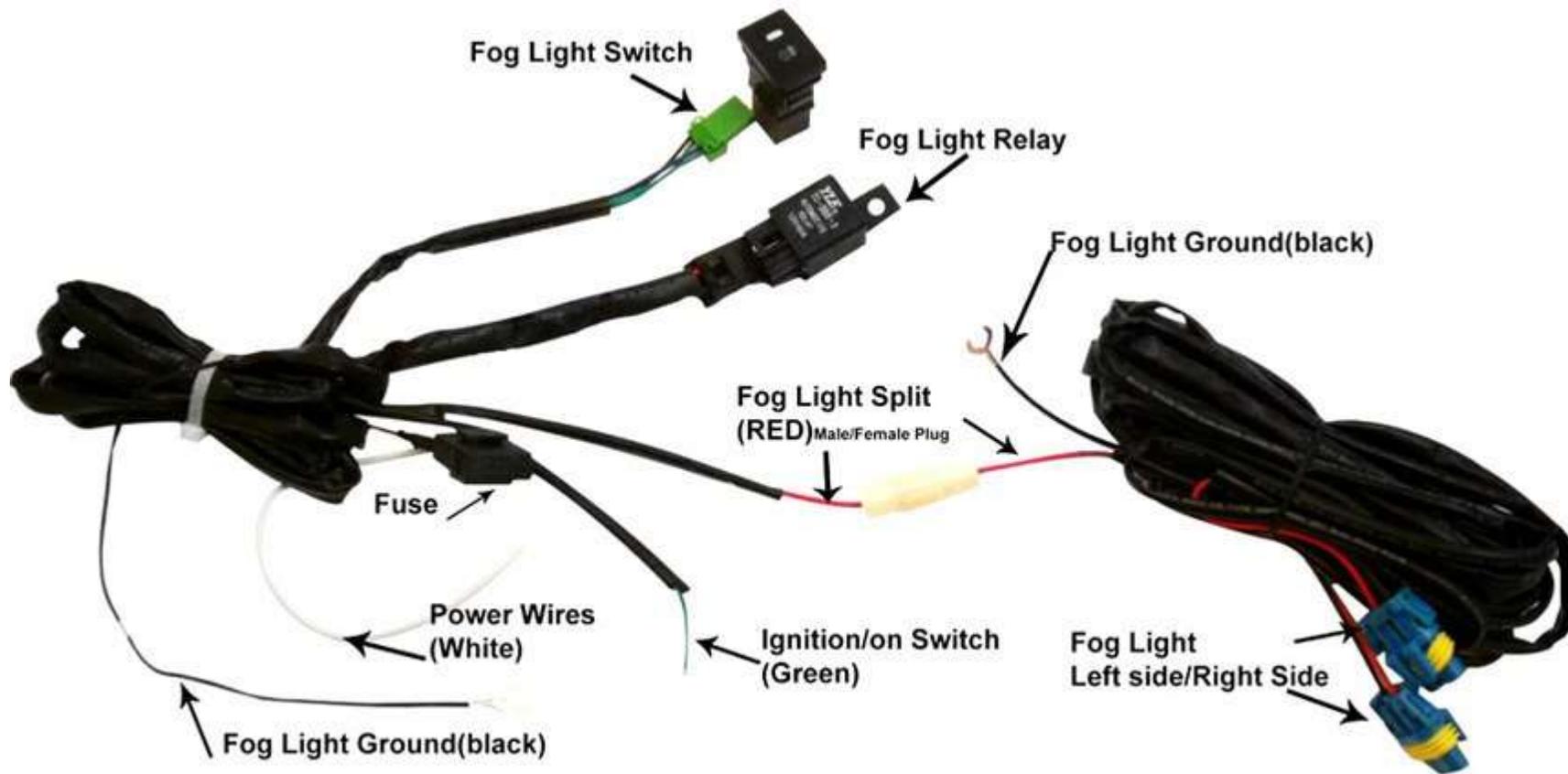




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- **How To Install Fog Lights**
Installing Wiring For Your New Fog Lights



This picture shows the hardware typically included in a universal fog light add-on kit.



Here, the wiring you'll find in a typical universal fog light add-on installation kit is shown.

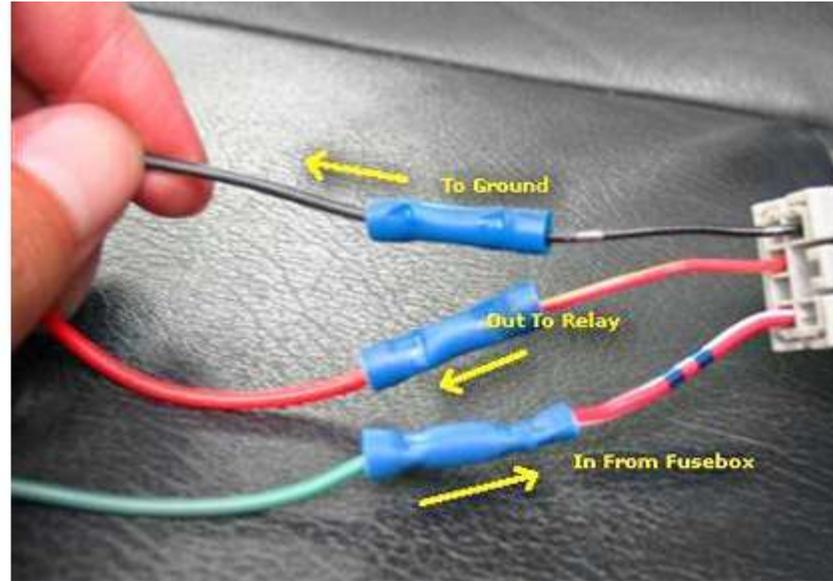
Locate Your Vehicle's Pass Through Hole In The Firewall Designed For Wires To Run Through



Most vehicles have a hole in the firewall pre-drilled at the factory for the purpose of running wires from under the hood to the interior.

If you're adding fog lights to a vehicle not originally equipped with them, you'll need to start by running the wiring for an on-off switch from under the hood to the inside of the vehicle. The easiest and most direct way to do so is to run the wire through the vehicle's firewall. Most vehicles will already have such a hole drilled on the driver's side as a pass-through for other cables, so locate this hole. In the unlikely chance your vehicle doesn't already have a pass-through hole under or behind the dash, you'll need to drill one and install a tight rubber grommet around the wire to seal out the elements.

Connect Your Fog Light Switch

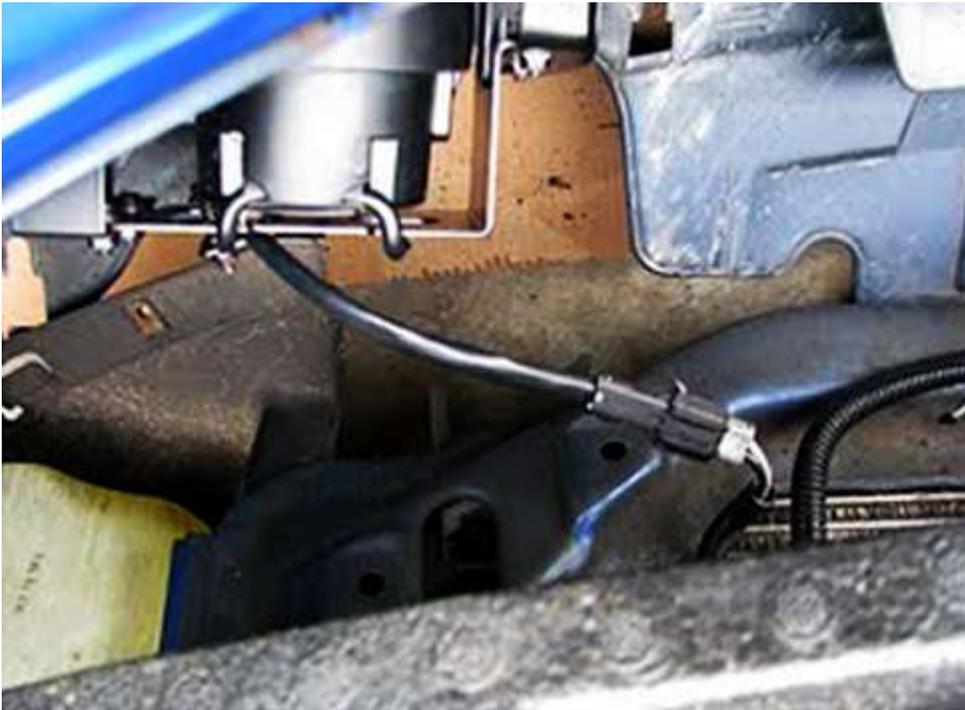


Next, take the black ground wire included for the switch and connect one end to the grounding terminal on the back of the switch. Connect the other one to an unpainted metal section under the dash - you may need to drill in order to create a hole if a suitable one can't be found.

A wire with a fuse connected to it should be included also - these are often red in color. Hook this into the corresponding terminal on the back of the switch, then run the other end out through the firewall hole back into the hood area. The red wire will have a

connector piece designed to snap in place with another section of red wire that connects to the relay, then the battery. Connect this last.

Synch Power For The Fog Lights To Your Ignition



Your kit may come with a wire (usually green in color) that's designed to be connected to the ignition fuse inside the fuse box - ensuring the fog lights will only operate when the vehicle's ignition is in the 'on' position. If your fuse box is inside the vehicle, run this

wire through the firewall hole. If the fuse box is under the hood, connect it there - the fuse panel cover and your owner's manual should direct you the applicable fuse.

Finally, snap the connectors on each section of the red wire together to bring power to the entire setup.

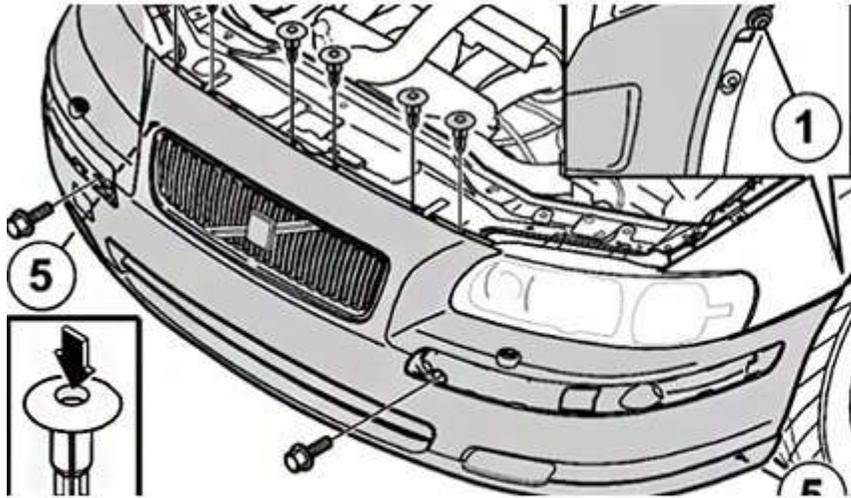
You'll see black ground wire extensions that came in the kit. Connect them to the matching black ground wires running out of the back of the fog lights, then connect them to an unpainted section of the vehicle frame. Connect (white) power wires together with the matching (white) power wires from each light. After that, connect them to the Y-shaped (white) power wire that's had the other end of it run inside the vehicle.

Performing some of the above wiring work may require use of common electric wiring and cable tools.

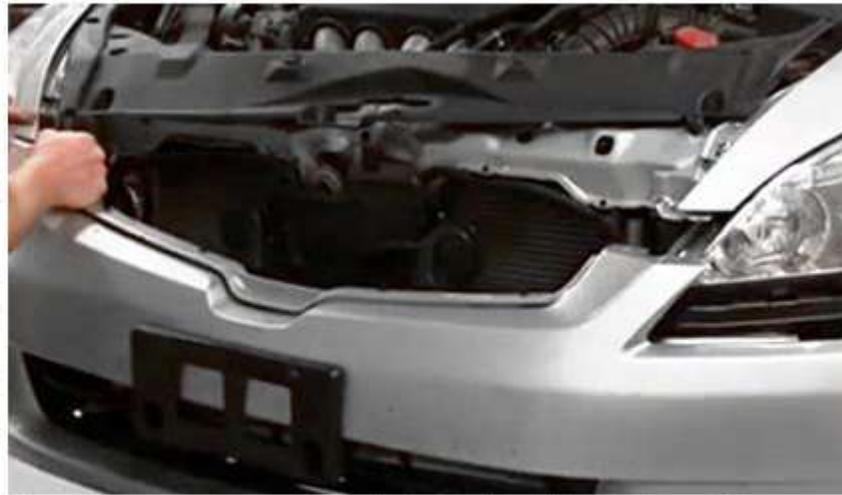
Removing A Bumper Cover To Install Fog Lights

If your vehicle was not equipped with fog lights from the factory, it's a good chance the bumper cover already has openings for them or pre-defined cutout areas marked on the inside. Vehicles that have nothing at all will require measuring and cutting by eye.

In order to remove the front bumper cover for any of these jobs, look for bolts and screws that secure it in place. On some vehicles, you'll see attachment points after opening the hood where the top of the bumper cover meets the cowl panel. You'll definitely find securing points underneath the vehicle where the bumper cover meets splash shields and close to the edge of wheel well openings where the bumper cover meets the wheel well liner. If there are flat plastic caps or clips, remove them with a small flathead screwdriver by wedging up.



This illustration shows the typical locations of bolts and hold-down clips that need to be removed in order to take a front bumper cover off. Fasteners for rear bumper covers may need to be accessed through the trunk after removing one or more cover panels.



Many bumper covers are designed to slide horizontally along special brackets mounted underneath before coming completely loose. Perform final removal with care.

Remove the bolts with an applicable socket wrench or flat wrench. In the event your vehicle manufacturer has used rivets to secure things, they'll need to be drilled out with a traditional drill. Then you'll need a rivet gun to reinstall new ones - not an expensive purchase, but the proper tool to ensure parts stay safely on.

Once all fasteners are removed, the bumper cover can be detached. Many are designed to slide horizontally along special bracket pieces mounted underneath before coming

completely loose, so move the bumper cover in this fashion first if you aren't able to obtain specific instructions on your make and model.

Cutting Holes In Your Bumper Cover To Mount New Fog Lights

If you don't already own a cutting tool, a kit that includes small cutting wheels and all other bits needed to drill, grind, sharpen, and polish to perfection will be invaluable at this point - get one. Once your front bumper cover has been removed from the vehicle, use your fog light as a stencil to draw a line around where you'll be cutting - it's okay to make the hole slightly bigger than the fog light because your add-on kit will come with plastic bezel pieces that mount on the outside of the bumper cover. The bezels will hide any gaps.



This picture shows the inside of a front bumper that was not originally equipped with fog lights, but has a pre-determined area for mounting them.

Be Carefully! When cut along the lines, then see how the lights and the bezel pieces fit. Install your mounting brackets to the bumper cover with hardware included in the kit, then connect wiring as discussed earlier in the article.



If your vehicle has pre-determined areas for fog lights, surrounding bezel pieces that fit precisely (as seen here) may be available from your vehicle manufacturer or aftermarket suppliers.



Here, the outside of the bumper cover in the previous photo is shown. It's always a good idea to use the fog light you'll be installing as a template. After drawing a line around it on the back side of the bumper cover, follow the lines as closely as possible when cutting.

Mounting Universal Fog Light Brackets Directly To A Metal Section Of Your Vehicle

A fog light kit will include universal mounting brackets designed to bolt onto the bumper of your vehicle, to the framework underneath the bumper, or on a cross member just behind the grille. It's pretty much your choice where you wish to put them.



Drill bits specified for metal are recommended when drilling into any bumper or vehicle frame sections during fog light installation.



If you've already got a grille guard or bull bar mounted on your vehicle, they'll have pre-existing holes for easy installation of fog lights.

If you've got a grille guard or bull bar mounted on your vehicle already, you'll typically find pre-existing holes along tubular bar sections put there solely for the purpose of mounting lights and other accessories. When drilling into metal is required, it's important to use drill bits rated for metal because they can handle greater levels of heat buildup. Use the size of drill bit specified by the instructions in the kit because you'll want a hole big enough to slide the bracket bolt through, but not so big that that the corresponding nut and washer are loose and wobble.

Next, secure the fog light mounting bracket on the vehicle and tighten all nuts in place firmly. Mount the fog light onto the bracket, then connect wiring to the lights as discussed in the wiring section of this article.



Here, a fog light mounting bracket for a vehicle-specific kit is shown after being installed.



This picture shows just one example of how a universal aftermarket fog light bracket and lights can be installed after custom drilling.



Mounting fog light brackets.