How to install a Power Trailer Wiring Module on the Passenger Side of a Ford Escape.

This tutorial will describe the methods used to install and wire a powered trailer lighting module for installation on the passenger side of a Ford Escape. Most modules are designed for installation on the driver's side. I wanted to take advantage of the passenger side compartment door in the cargo area (aka - doggy door) in my Escape. I also did not want it behind the taillight, nor did I want it in the weather (underneath the vehicle).

A few disclaimers you should be aware of:

1. The wires of the trailer light wiring module will have to be cut. This may (will) void your warranty.

2. This installation was completed on a 2006 XLT with the full size spare and NO Cargo area - meaning the jack was located under the floorboards, and NOT in the passenger side compartment door.

3. The method to bring power through the firewall will require revision for Escapes with a standard transmission, and the blanking plug for the clutch pedal is used for this purpose.

4. For my mates who drive on the other side of the road, no worries. The driver's side is the right side of your rides, and unless the compartment door is located on the left, a module made for a right-drive Escape shouldn't require modification. Cheers!

Part 1- Configuring the Trailer Wiring Module

As stated in the opening paragraph, and the disclaimer above, many trailing light wiring modules (and the one you probably purchased) are configured for installation on the driver's side of the vehicle. The installer will have to cut the cables between the module and each pre-fabricated taillight connectors.

Step 1.1 - Cut the wires between the module and each pre-fabricated taillight connector at a distance 3 or 4 inches from the module. This will leave you ample wire to re-connect them later, after the wires are run through grommets behind the bumper cover.

Part 2 - Remove the Rear Bumper Cover (half way) and grommets.

Although the rear bumper cover does not require complete removal, the beginner may wish to remove it to facilitate the routing of wires. At a minimum, all fasteners holding the bumper

cover to the body of the vehicle on the passenger side will need to be removed. The cover can then be "moved out of the way" to complete the installation.

Detailed instructions on how to remove the bumper cover for an Escape can be found at the following URL:
http://www.escape-central.com/1forum/showthread.php?s=&threadid=24737

You may also wish to remove the taillight covers at this time.

Part 3 - Removing and preparing the grommet.

Step 3.1 - Open the passenger-side compartment door in the cargo area. Remove the grommet located on the passenger side shell - it is normally hidden behind the bumper cover. See Photos 3.1 and 3.2. The grommet removes with little effort from the exterior.

Photo 3.1 - Grommet as shown looking through the passenger side compartment door in the cargo area.

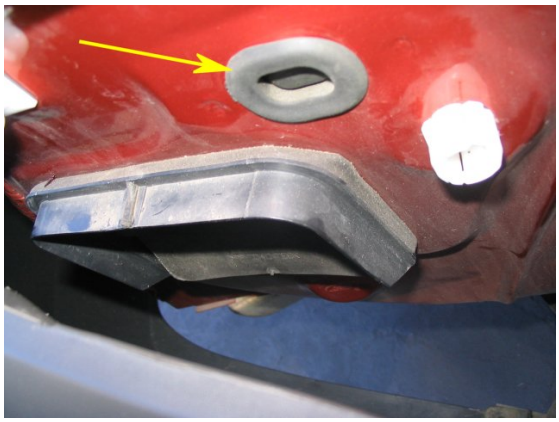

Photo 3.2 - Grommet from the exterior. You can see the bumper cover 'out of the way' at the bottom on this picture. The flapper vent below this grommet will be used to run the 4-flat wire from the module to the hitch.

Step 3.2 - Prepare the grommet. Four holes will be punched through this grommet in order to pass the sensing wires to the module. I chose to punch the holes in a diamond pattern. The longer (green in my case) wire may require yet more wire to reach the driver's side taillight, so I recommend adding a few feet of wire to the end of that sensing line before passing it through the grommet. (I had to do this, and this installation is not shown in next photo. IMPORTANT: It is important that the left turn signal sensing wire is run from the left taillight, under the bumper cover, and over to the passenger side BEFORE you pass the wire through the grommet. Please ensure that this is done, and that there is an ample length of wire to make this connection. If you choose not to do this now, pass a few feet of make-up wire through the grommet now, and leave the exterior side un-connected, as you can run the wire, connect it to the sensing line (from the left taillight), trimming off any excess, later during the installation process. The wires from the taillight connectors pulled through the module are shown in Photo 3.3 below.

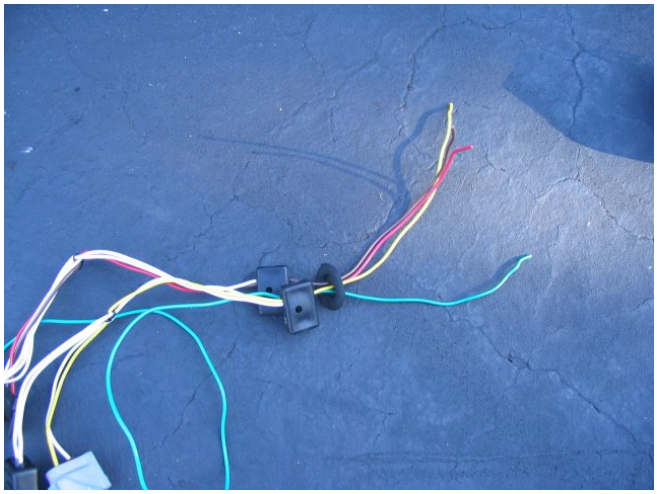

Photo 3.3 - Sensing wires passed through the grommet.

Step 3.3 - Put the grommet back. Simple enough. With the wires passed through the grommet, re-install the grommet. You should leave as little wire inside the vehicle as possible. I also recommend that once the wires are passed through the grommet, that the wires be stripped.

Clearances will be tight inside the compartment to do this later. See Photo 3.4 below to see how the grommet will look re-installed.

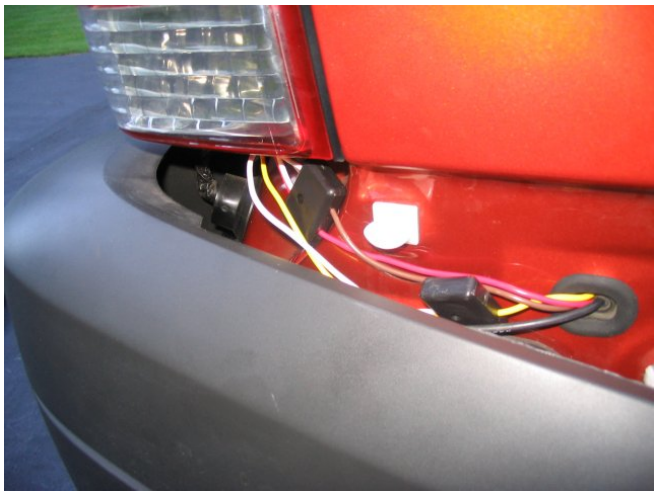

Photo 3.4 - Grommet re-installed. Note make-up piece of wire (black) installed in this picture. Wire taps were relocated to permit re-installation of bumper cover. (They were moved as close to the taillight as possible.)

Part 4 - Wiring the sensing lines back to the module.

Before re-connecting the sensing lines from the taillight connectors to the module, run the flat-4 wire through the flapper vent located below the grommet. There are vertical slits in this vent, and the flat-4 should pass right through. This can be left hanging down to the ground. We will route this later.

Most modules are designed to be used on the driver's side of the vehicle. We are installing ours on the passenger side. We will have to re-wire ours to reflect this. The only wires of concern for this effort are the yellow and green ones. The colors of your wiring may differ, depending on the model of module you have purchased, but for my installation, the following signals reflect the following colors:

Color	**Signal**
Green	Right
Yellow	Left

The signals for stop and lamp are of no concern, as these will be reconnected as a color-matching pair- "red to red" and "brown to brown" in my case. Be sure not to confuse the heavier gauge red power wire with the red signal wire. (The power wire should have a butt-connector on it. It shouldn't have been cut.)

The Green wire from the module needs to sense a right turn signal. Therefore, the yellow wire coming from the grommet must be connected to the green wire of the module, since we used the connector normally used on the driver's side on the passenger side. Similarly, the left turn signal signal must be connected to the yellow wire of the module. Therefore, connect your make-up wire (black in my case) or the green wire from the grommet to the yellow wire from the module.

I chose to use wire nuts for my installation, because they were available, and would permit me to easily remove later if needed. I taped up the wire nuts upon completion of the installation (and testing).

A hole located above the grommet on an interior body panel can be used for the module's ground. You can make this connection now. A picture of the module wired up in the compartment is shown in Photo 4.1 below.

Photo 4.1 - Wired module inside compartment. Note that make-up (black) wire from grommet is connected to yellow sensing line, yellow wire from grommet is connected to the green sensing wire from the module. Red is connected to red, and brown is connected to brown. White ground wire attached to body frame with nuts and bolt - no drilling required.

Part 5 - Bringing Power to the Module.

This portion will involve running a dedicated line from the fuse panel (under the hood) through the firewall, and back to the compartment on the passenger side of the cargo area. The wire required should be supplied with your module.

Step 5.1 - Prepare the fuseable link. Your kit should have come with a fuseable link. Mine was yellow, with a blade fuse holder. I had to cut mine, as it came in a 'loop'. I cut this about midway, but I'd cut it more one-sided on future installations. After cutting the loop, a wire eyelet will be connected to one end, and the other end will be connected to the long heavy gage

wire that was provided with your kit. Do not install the fuse in the fuse holder at this time. Let's look under the hood now, shall we?

Photo 5.1 shows the connection point in the fuse panel, as seen from the front of the Escape. The wire eyelet is installed on the panel. The screw was removed, and the eyelet placed over it. It was then re-secured. Photo 5.2 shows how the wire will be run from the fuse panel. Photo 5.3 shows how it will look with the cover re-installed. Your installation should not interfere with the removal of any fuses / relays, nor interfere with the closure of the cover.

Photo 5.1 - Connection Point in Fuse Panel for dedicated power line for module.

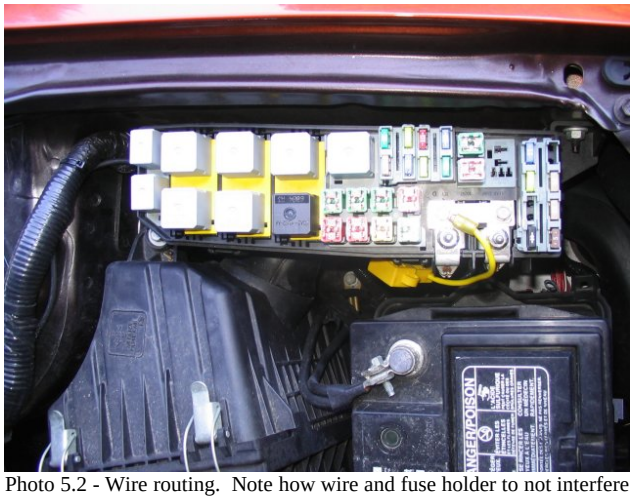

Photo 5.2 - Wire routing. Note how wire and fuse holder to not interfere with the removal of any fuse.

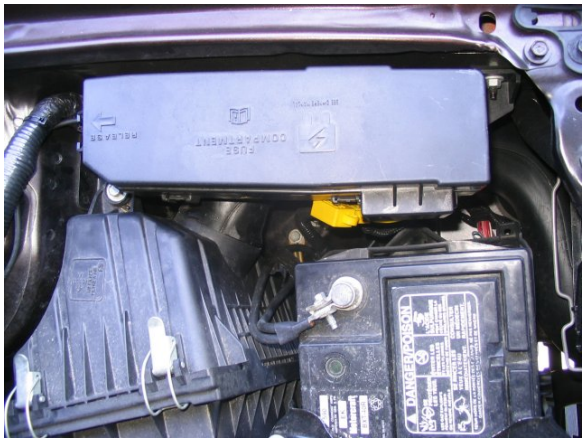

Photo 5.3 - Fuse Panel Cover Re-installed. Note how installation of dedicated line does not interfere with cover installation or removal.

A butt-type connector should have been provided with your kit for connecting the fuseable link to the dedicated power wire. No NOT make the connection between the provided wire and the fuseable link at this time.

We will now run the dedicated wire back through the firewall and to the compartment door in the cargo area.

Step 5.2 - Remove and Prepare the grommet in the firewall; run wire from fuse panel through firewall.

The grommet in the firewall (located above the pedals as viewed from the driver's leg room) removes from the exterior. It is effortless to do so. A hole will be required in the center of this grommet in order to pass the power line through. Use a nail to punch a hole through the center of this grommet. It is undesirable to pass more than half of the wire through the grommet. In order not to do so, the wire should be passed through the grommet from the passenger compartment. Lay the wire under the steering wheel, and pass it through the firewall. Orient the grommet correctly, as push / pull the wire through the hole made previously. It is estimated that 4 feet will be required to travel from the firewall grommet to the fuseable link. Field run the wire the way you desire under the hood. I chose to run it along existing items to prevent the need for its removal if work were every required. I suggest you do the same. The following photos illustrate the paths that I chose for my installation. I used the zip-ties provided with my kit to connect the power line to items under the hood.

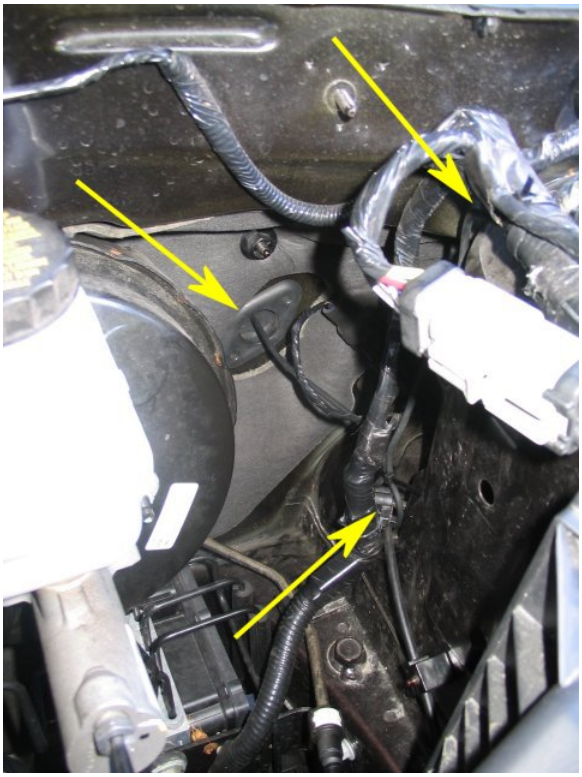

Photo 5.4 - Wire Passing Through Firewall grommet. Arrows highlight the grommet in the firewall, and points of interest where the dedicated power line was isntalled. Note use of zip-ties.

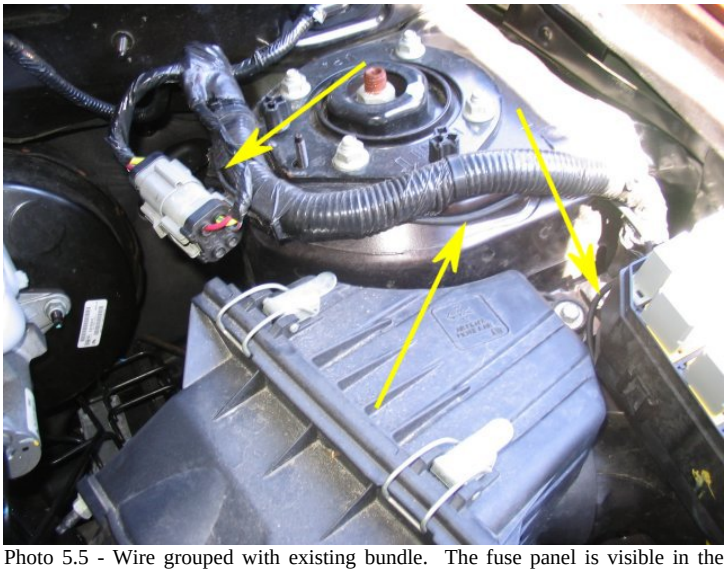

Photo 5.5 - Wire grouped with existing bundle. The fuse panel is visible in the lower right corner of this photo.

Once you have planned out a suitable routing, you can connect this wire to the fuseable link, using the butt-connector supplied with your kit.

Step 5.3 - Running the wire through the passenger compartment.

I am a big fan of not removing anything, and I was able to run the power wire to the cargo compartment without removing anything except the carpet and the jack cover in the cargo area.

I chose the run the wire down the passenger side of the vehicle. I ran it under the carpet, and used a spoon to force the wire between plastic parts and carpet where required. The path chosen was from the grommet in the firewall, towards the drivers door (I ran the wire around something, so that happy feet wouldn't pull on it) behind the clip which secures the kick panel, then under the carpet towards the passenger side. The carpet comes right up. This exercise is trivial. I also ran the wire behind the clip on the passenger side before the journey down the kick panels located under the doors.

Forcing the wire under the passenger side doors is easier if you pull the carpet away from the kick panel, and then use the spoon to push it back, along with the wire. Photos below show the finished installation from the firewall grommet, in way of the kick panels, rear seat, and cargo area.

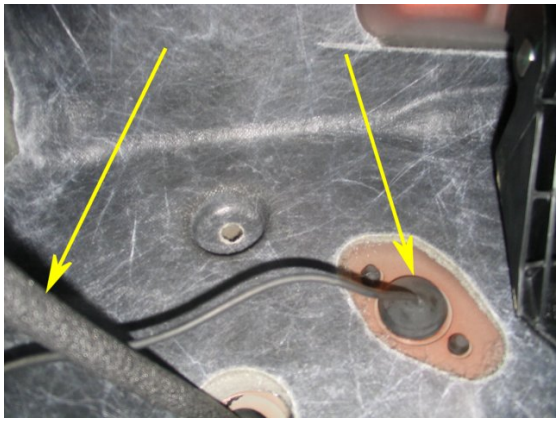

Photo 5.6 - Wire through firewall grommet. Arrow on left points to hood release cable.

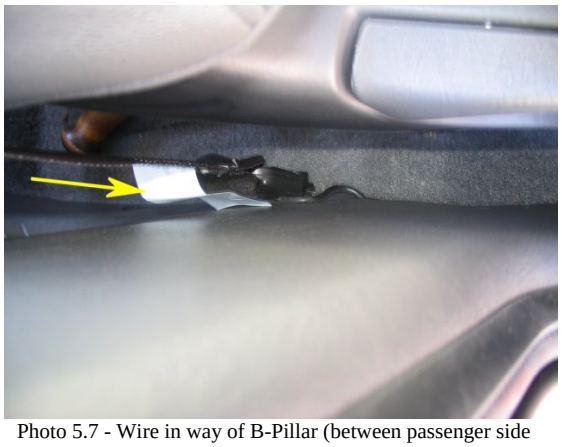

Photo 5.7 - Wire in way of B-Pillar (between passenger side doors. Run wire between seat belt anchor and plastic trim on B-Pillar (as shown by yellow arrow). Power wire is NOT visible. Wire shown is for seat-belt sensor.

Photo 5.8 - Wire under rear passenger door. Note spoon used to tuck wire.

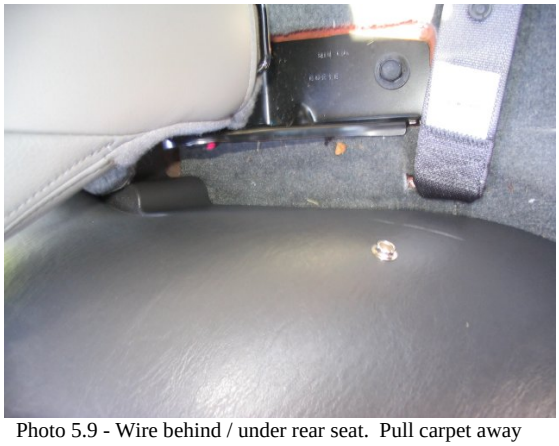

Photo 5.9 - Wire behind / under rear seat. Pull carpet away from plastic trim to aid in the tucking of wire.

Photo 5.10 - Wire under cargo area. Note the only visible portion of wire indicated by yellow arrow.

Photo 5.11 - Wire under cargo area, and between plastic side trim of cargo area. Configuration of this area may differ for Escapes equipped with the cargo convenience package.

Photo 5.12 - Power wire behind compartment door.

This black wire should then be connected to the power lead for the module. I chose to remove the provided butt-connector, and use a wire nut to make this connection.

Part 6 - Final Wiring

Step 6.1 - Adding auxiliary 12V Power Outlets (Optional)

My Escape did not come from the factory with any 12 VDC Accessory outlets in the cargo area. I decided to add a few, since I was doing electrical work.

I chose to install two - one behind the doggy door, and the other under the carpet on the driver's side of the vehicle. Once these were installed, I'd neaten up the wiring, and I'd be done. The outlets I purchased came with a spring loaded safety door to cover the outlet.

I first had to choose a location to install the outlet. My Escape has the Audiophile Sound System, so I was able to mount the outlet with one of its tabs behind the plastic sub-woofer amp support bracket. I used double-sided foam tape to secure the rest of it to the body panel. It's location is shown in Photo 6.1.

Photo 6.1 - 12VDC Accessory Outlet mounted inside Doggy-Door above Trailer Wiring Module.

I chose to install the second accessory outlet under the carpet on the drivers side. It can be pulled up into the cargo compartment by way of the cargo tie down hole in the carpet. Photos 6.2 and 6.3 depict the outlet in both configurations.

Photo 6.2 - 12VDC Accessory Outlet on driver's side of cargo area., in exposed position.


Photo 6.3 - 12VDC Accessory Outlet on driver's side of cargo area., tucked away.

Step 6.2 - Wire Connections

I added a second ground wire to handle the additional 12 VDC accessory outlets. I connected the power line which was run up from the battery to the positive wires for the trailer wiring module and the two 12 VDC Accessory outlets.

The power wires to the outlet on the driver's side were tucked under the carpet. I did use some electrical tape to keep the wires together, spaced about 18 inches apart. The outlets came with an ample wire leads. I trimmed the excess off before making the final connections. I used wire nuts to make the connections. I then used electrical tape to provide extra protection. I then tucked the wires. Photo 6.4 shows the complete installation.

Photo 6.4 - Final Installation

Some final notes:

1. The 12 VDC Accessory Outlets are optional.

2. Use of other equipment (air pump, inverters, etc.) in the 12 VDC Outlets may require the user to change the in-line fuse that was installed under the hood. My kit came with a 10 A fuse. The fuse holder is rated for 20 A. Be sure not to exceed the rated capacity of the in-line fuse holder.