

## Installing a Cigarette Lighter on a V-Star 1100

This documents the modification of the left front plastic neck guard, on the opposite side of the ignition key on the Yamaha V-Star 1100 Classic. This should also serve as a guide for a similar installation on a 1100 Classic, 650 Classic or Custom, Road Star, or Royal Star.

### Buying the Cigarette Lighter

I had long wanted a cigarette lighter on my V-Star, so as to have emergency power for a cell phone charger, air pump, or other equipment. I found at an auto parts store, an excellent accessory cigarette lighter, useful for installing in any vehicle with a 12 v electrical system (see below):



This lighter is in two parts, with an inner sleeve that screws into the outer, and has a lip at the outer end to secure the lighter against any flat surface of no more than a quarter inch thickness.

### Room for the Cigarette Lighter

When doing routine maintenance, I discovered room behind the neck of my V-Star, near where the neck cover goes over the bumper that holds the fuel tank in place. By eyeballing the room behind this area, I determined that the cigarette lighter would fit nicely, while not interfering with anything behind the cover or inside the neck of the frame.

### Making the hole

First, of course, the neck cover must be removed from the bike. This can be done while doing such maintenance as checking valves or syncing carburetors. Both neck covers have a 10mm bolt in front of the neck, securing them to the frame. After the fuel tank and bumpers have been removed, and these two bolts removed and put aside, lift up both covers in a 'gull wing' fashion and disconnect them where they lock together on top of the neck.

To make it easier to draw and cut the hole for the lighter, I put masking tape on the neck. After checking the ID of the inner sleeve of the lighter, I found that a nickel was just about perfect in size, so I put a nickel down on the masking tape where the lighter was to be and drew around it with a pen.

To cut the hole, I used a Dremel tool with a cone shaped cutting head and carefully cut holes around the ring I'd drawn, then connected them and finally shaped the hole carefully (see below):



Test fit the inner and outer sleeves to be sure you have a tight fit and that both side will lay flush against each side of the neck cover.



When you are satisfied with the fit, and have the weather proof cap of the lighter rotated to the angle you want it (I had the cover on top, to lessen the likelihood that it would fall out) then you can secure the lighter by screwing the outer sleeve in place and, if you like, adding some cement to the inside for good measure. I used "Pit Crew's Choice" which secured the lighter nicely.



### Reinstalling the Neck Cover

Provided you've done your homework and put the lighter in the right place in the neck cover, the lighter will slide right into the frame's neck when you reinstall the cover. You have only to hook up the wires – one to ground, the other to a hot lead – and check the lighter before putting the tank back on and finishing up.

Right below where the lighter will sit, is an excellent ground source. I checked this bolt with a multimeter against a hot lead to confirm. (see below)



You'll find this bolt just behind the neck cover.

There is a hot lead available just near the ignition switch, inside the frame neck. Look for the thick, red wire in the upper left of the block of wires connecting to the ignition switch (see picture, next page).



You can see the ‘hot’ wire for the cigarette lighter here. I inserted it just under the hot lead in the above block with a spade lug, some dielectric grease, and a little electrical tape to protect the wire.

With the hot wire and ground connected, now’s the time to check the lighter with a multimeter to be sure it’s getting juice. It is! Good deal! I purposely attached the wire to an always-hot lead, so that the bike didn’t have to be turned on to get power to any accessory I’d be using. By doing this, I’ll drain the battery less than if I’d had to turn the key to ‘on’ and have the lights, computer, fuel pump and others drawing power from the battery, and I can still use the cigarette lighter when the bike is running.

This picture shows the neck cover going back on, and the lighter being maneuvered into position – nice fit, eh?



It is a bit of work to get the two neck covers to hook up at the top (the “gull wing” thing again), before making sure their large holes go over the fuel tank bumper pipes. Check as you go that the wires don’t bind or pull loose.

## All Done!

Here's the completed neck cover, with cigarette lighter in place, and fuel tank back on. Notice that the lighter is a little behind the fuel tank. I could have moved the lighter over more to the left, and I recommend that anyone else attempting this do just that.



Looks like the V-Star was designed this way, doesn't it?