

How to Make the CFMoto ZForce 800 Trail, 950 Trail and 950 Sport (2023+ Gen2) Street Legal

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A bit of background here first. The laws governing making an ATV or UTV street legal and driving it on public highways and roadways varies from State to State. Some States, like Texas where I live, don't register ATVs or UTVs so technically they aren't street legal. Other States only allow residents to make their ATVs and UTVs street legal, like Oklahoma. Others don't really care although the traffic laws in some cases prohibit driving them on public roadways. And because of reciprocity agreements between States regarding licensing, if a vehicle is street legal in one State it can be legally driven on streets in other States. The benefits of having a street legal ATV/UTV are that it makes it easier to get to and from trailheads (or gas stations) without having to trailer them, and that is my primary "need" for making my UTV street legal.

To do this I contacted Dirt Legal (<https://www.dirtlegal.com>), and for a small price (about \$500) they handled all the paperwork. They transferred the title from Texas to South Dakota which allows out-of-State ownership of titled and registered vehicles (unlike Texas), and they registered my UTV. I was sent a valid South Dakota license plate and title showing my Texas home address and my ownership of the vehicle. Now technically, I could get pulled over in Texas and cited for not re-registering the vehicle in Texas within 30 days since I'm a Texas resident, but since Texas doesn't register UTVs I'm stuck between two conflicting laws. I can live with that. The only other requirement is to carry minimum liability insurance which my Insurance Agent happily provided. Dirt Legal has a lot of information about the entire process on their web site including a list of insurance companies that will provide the necessary insurance for this arrangement.

So, now that I'm legally titled and registered in South Dakota and insured, I'm legally able to operate on _MOST_ public roads in just about any other State in the country. If I do get pulled over and the police ran the license plate it would match the VIN on my UTV, my insurance would be valid and the only other thing they might check is minimal equipment being present.

The minimal equipment required for South Dakota and about 35 other States are: mirrors, lighted license plate, horn and turn signals. Some States also require radial DOT approved street tires, windshields, wipers, etc. but in general nobody will be checking for that. In addition there are other complicating laws about operating ATVs/UTVs on public roads even if they are street legal, although that's a really grey area. Basically if you don't drive on Interstates, high traffic US highways, or on some roadways where the speed limit is above 40mph or operate in cities or towns that specifically prohibit off-road vehicles on city streets, you're OK.

Now, how about the CFMoto ZForce 800 Trail, 950 Trail or 950 Sport, G2 (or Gen2 which came out in 2023)? Well, there are two versions of the 800 Trail UTV, one built specifically for US sales (CF800SZ-2) and one built for everyone else in the world (CF800SU-2). The main difference is most of the street legal equipment is not present on the US version; the horn, side mirrors, flasher, turn signals, hazard lights, license plate holder and license plate light are all not installed at the factory on the US model. But all those parts are available and easily installed making it possible to convert a US model to a World model and be street legal compliant in about 35 States.

The good news part of this for the 2023 Gen2 is that CFMoto is using a common set of parts to build both models. So the main wiring harness, the dash panel, the light assemblies are all identical in both models. Unlike the Gen1 builds which generally required you to install different light assemblies or you own after-market lights to get turn signals for instance. So it's easily possible to make the Gen2 street legal using CFMoto parts without drilling holes or making any other modifications to your UTV.

Note on tires: These UTVs do not come with DOT rated tires and that may be an upgrade worth considering. The 800 Trail specs (and probably the 950 Trail/Sport specs as well) confusingly show 26x8xR14/26x9xR14 OR 26x9xR14/26x11xR14 front/rear both using the same factory rims which are 6" width in the front and 7" in the rear. It's probably not wise to go more than 3" wider in tire width over rim width, and the 11" in the rear violates this guidance. However both 8" and 10" tires in a 26" height on 14" rim are difficult to find, leaving one to go with tires from CFMoto (not DOT rated), violate the tire width rule, or step up in tire height which may require clutch clocking changes. Since CFMoto specs the 26x9xR14/26x11xR14 in some places, that might be the preferred way to go as these sizes are readily available in various tread patterns.

What you'll need are the following CFMoto parts available from CFMotoParts (<https://www.cfmotoparts.com>) or TTMotorsports (<https://cfmoto.ttmotorsports.com>). Both are authorized CFMoto distributors.

Turn Signals:

Turn switch	5ASV-169060-6001	\$24.99
Flasher module	5BWV-161000-5201	\$36.99
Hazard switch	5ASV-169070-6001	\$27.99

Horn:

Horn Kit	5ASV-800100-5000	\$49.99
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License plate:

License plate bracket	5BWV-223033-5200	\$13.99
Mounting screws	5BWV-040006-5000	
License light	9CR6-161400-10000	\$22.99

Mirrors:

Side view mirrors	5BWV-805500-5000	\$179.99
or		
Center rear view mirror alternatives	5BWV-805600-5000	\$74.99
Bevel Engineering UTV Rear View (Amazon)		\$59.99
or		
Side Mirror for Polaris/Can-Am (KemiMoto)		\$39.99

Switch Installations:

Remove the plastic center dash cover panel directly above the center console. The factory wiring harness ends are all plugged into the backs of the blank panel fillers. Remove the connectors from the blank fillers and push the blank filler out of the panel. Install your new Horn, Turn Signal Switch and optionally the Hazard Switch into the panel and plug the appropriate wire harness connector into the back of the corresponding switch. The wire harness is labeled, but the labeling is in Chinese. However the connectors are keyed so they only match up with the appropriate switch, but if you're paranoid you can use Google Translate on your phone to get an English translation of the Chinese label. You may want to rearrange the switches in the panel. On the far end I also put in an additional USB QC power port with voltage display. (My companion likes to keep her phone charged.) After installing the switches replace the center dash cover panel.

Horn Installation:

Remove the large front plastic hood. There are six Allen key head screws holding it down - three in the center and three along the front edge. The back side of the hood is held with rubber grommets, so just tug up slightly on the sides closest to the dash to release them, then slide the whole hood forward a few inches to release it.

The horn is mounted in front of the radiator just above the radiator and below the horizontal cross member. There's a threaded bolt hole there that is for mounting the horn with the bolt that comes in the kit. Directly below the cross member (connected to it in fact) is a wire connector with a dirt cover. Remove the dirt cover and plug the horn wire from the kit into that connector. The other two end connectors on the horn wire go to the horn itself. If you've done everything correctly to this point you should be able to turn on the key and hit the horn button and be rewarded with a "Beep-beep". Reinstall the plastic front hood.

Flasher Installation:

If you don't know, the flasher module is the component that interrupts the power to the turn signals to make them flash on and off. So it is required if you want turn signals or hazard lights.

Under the dash on the driver's side, locate the small rectangular cutout on the firewall. It's about 3/4"x3" in size and has a bolt hole on each end. This is where the flasher module is mounted. You'll need a couple of small bolts and nuts to mount it as it doesn't come with any mounting hardware. I used two 1/4"x20 3/4" hex head bolts and nylon locking nuts that I picked up from Lowe's Hardware. Mount the flasher with the connector pointing downward. Once it's mounted, locate the two dangling black connectors near it in the vehicle wiring harness. Only one is long enough to reach the flasher and that's the one that needs to be connected. They're both keyed so it's also the only one of the two that will fit.

If you've done everything correctly to this point and you installed a hazard switch, you should be able to turn on the hazard switch and see the two front amber turn signal lights flashing. It's not necessary to turn on the key as the hazard lights will work with the key turned off. If you turn on the key, the front left and right amber lights should work as turn signals (turn off the hazard flasher for this test).

Rear turn signals:

The CFMoto Gen2 taillight assembly is constructed such that you can have backup lights or rear turn signals, but not both. The factory wiring harness has a set of connectors in it that are used to select which option you want; in the US version it is connected up to provide backup lights, in the non-US version it is connected to provide rear turn signals.

The connectors are located on the passenger side behind the rear quarter panel, which is a bear to get into. You need to remove the rear fender flare and remove all the screws and push pin rivets holding the panel in place. (It helps tremendously to have a push pin removal tool. An inexpensive one can be picked up or ordered from Harbor Freight for about \$10). Once the side panel is removed, or opened up enough, you should see a couple of white 2-pin connectors just above the rear wheel. You will probably only see the one currently connected as the unused connector is normally taped to the wire harness. In this case, remove the black tape to expose the necessary white connector. The connectors have labels (in Chinese), but the simple way to tell which is active is knowing if you have back up lights or rear turn signals. Disconnect the connector (labeled “reversing”) going from the vehicle wire harness to the taillight assembly wire harness, and plug the other connector (labeled “signals”) into it, removing the dirt cover first. Probably a good idea to put the dirt cover you had to remove from the unused connector onto the connector you just deactivated.

If you’ve completed this correctly you should now have 4-way hazard lights and rear turn signals. Replace the rear quarter panel making sure you reinstall all the push pin rivets and screws in their proper places. The holes for the push pin rivets are larger and the screws don’t work in them, also the screws are used on the outside of the fender and one near the rear attaching the fender to the taillight assembly.

License plate light and trailer connection: You may notice two connectors under the right rear fender in the rear, one grey and one white. The grey connector is for a trailer wire harness, and the white is for the license plate light. The mating connector for the trailer is a Sumitomo HW-8P, part number 6181-0075; the license plate light is a Sumitomo HM-2S, part number 6180-2451 both available from <http://www.corsa-technic.com>.

That’s it! If you have any problems or questions don’t hesitate to post them on the forums or contact me via e-mail and I’ll try to help you out.