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Assistance On Vehicle Information

I was tasked to find out how your state classifies the following:

Electra Meccanica Solo
The Elio
Arcimoto SRK

Also, what type of license do you need to operate these vehicles?

We are working to update our motorcycle/autocycle definitions and requirements and wanted to see how your state addresses these vehicles.

Thank you so much in advance

MARYLAND

Aloha Christy,

I had to Google the first and third vehicles listed as I was not familiar with them.

The Electra Meccanica Solo and the Elio would be classified as Autocycles in Maryland since they share characteristics of a car, automotive style seating and a steering wheel, and those of a motorcycle, 3-wheels. In MD you only need a Class C (car) license to operate one, but you cannot take your licensing test with one. MD has a universal helmet law, but because both have a operantly attached roof/enclosed cab, the operator and passenger would not be required to wear a helmet.

The Arcimoto SRK closely resembles a Can Am Spyder. It has handlebar steering and you straddle it, so it would be classified as a motorcycle and you would need a Class M license to operate it. Because it does not have an enclosed cab the operator and passengers would be required to wear a helmet.

Hope this helps.

~Phil Sause

ILLINOIS

In Illinois. These would be considered an Autocycle, which does not require any special licensure to drive. As long as you have a valid driver's license you can drive an autocycle .

Autocycle definition:

An autocycle is a three-wheeled vehicle that has a steering wheel and seating that does not require the driver to straddle or sit astride it. This type of vehicle may be operated on Illinois roadways when correctly titled and registered with the Secretary of State. The operator of the vehicle must have a valid Illinois driver's license to legally operate the vehicle.

In Illinois the requirements for motorcycles licenses are as follows:

If the scooter/motorcycle has an engine with less than 150cc displacement, it is a motor-driven cycle and a Class L motorcycle license is required.

If the scooter/motorcycle has an engine with 150cc displacement or greater, it is a motorcycle and a Class M license is required.

One other thing to note, these are not counted or classified as motorcycles in our crash/fatality reports.

The only one of the three that may fall into the classification of motorcycle is the Arcimoto, since it uses standard motorcycle controls, and driver straddles the seat.

~Christopher Rector

VIRGINIA

Hi Christy, the Elio and the Electra Meccanica Solo are autocycles in Virginia! You only need a driver's license to operate and if it has a non-removable top you do not have to wear a helmet. If it is open they have to wear a helmet.

"Autocycle" means a three-wheeled motor vehicle that has a steering wheel and seating that does not require the operator to straddle or sit astride and is manufactured to comply with federal safety requirements for motorcycles. Except as otherwise provided, an autocycle shall not be deemed to be a motorcycle.

Now the Arcimoto SRK is interesting because it has motorcycle handle bars, no foot controls and you sit astride it. So here it would be a motorcycle and they would need a Motorcycle Classification. It has a non-removable top you do not have to wear a helmet.

~Bruce Biondo

TENNESSEE

Tennessee is much the same as the other replies with the Autocycle classification. Licensing is the same.

~John Milliken

NORTH CAROLINA

Hello Christy,

The Autocycle question was huge a couple of years ago in NC. The following describes how the NC

Legislature decided to address these vehicles. This is a summary of the items covered in the bill. This bill became law in 2015. I started to parse out all of the qualifiers in the law and found this to be accurate and much easier to follow.

HOUSE BILL 6:

Autocycle Definition and Regulation

Committee: Senate Transportation Date: July 15, 2015

SUMMARY: House Bill 6 would amend the motor vehicle laws of the State to define and regulate three-wheeled enclosed motorcycles, known as autocycles. Operators of autocycles would only need a regular driver's license and would not have to wear a helmet.

CURRENT LAW: Under current law, autocycles are treated as motorcycles under the State's motor vehicle laws. This includes a requirement for operators of these vehicles to wear a motorcycle type helmet.

BILL ANALYSIS: House Bill 6 amends the State's motor vehicle laws to specially address autocycles. Specifically, the bill makes the following changes:

Section 1 of the bill defines autocycles as a special type of three-wheeled motorcycle with: a steering wheel, pedals, seat safety belts for each occupant, antilock brakes, airbags, an enclosed seating area, no saddle seat, and otherwise manufactured to comply with federal laws.

Sections 2 and 3 of the bill amend the States' driver's license law to require a regular driver's license, with no motorcycle endorsement, to operate an autocycle.

Section 4 of the bill specifies that State motor vehicle law concerning brakes applies to autocycles.

Section 5 of the bill specifies that State motor vehicle law concerning turn signals applies to autocycles.

Section 6 of the bill specifies that State motor vehicle law concerning lights applies to autocycles.

Section 7 of the bill specifies that State motor vehicle law concerning spot lamps applies to autocycles.

Section 8 of the bill specifies that State motor vehicle law concerning headlamps applies to autocycles.

Sections 9 and 10 amend the State seat belt law to require a seat safety belt for each front and rear seat of the autocycle. The belts must meet the same standards as required in State law for a motor vehicle belt.

Section 11 of the bill exempts the operator and any passenger inside an autocycle from the State motorcycle helmet law.

Section 12 of the bill amends State law allowing the riding of motorcycles two abreast, to specify that autocycles may only be ridden one abreast in a single lane.

Section 13 of the bill is a conforming change to a statutory citation.

EFFECTIVE DATE: House Bill 6 would become effective October 1, 2015.

BACKGROUND: An example of an autocycle is the proposed Elio vehicle. More information about this vehicle can be found at: <http://www.eliomotors.com/>

~Robert Wagner

MISSOURI

Electra Meccanica Solo

Based on the information I could find this would be a motorcycle. That means the operator would need an endorsement and helmet.

The Elio

It would appear that the Elio would qualify as an AutoCycle however I couldn't find if it has a roll cage. If the roll cage requirement is met no endorsement would be required. Helmet requirement is beyond me. The law was set up such that the roof would have to meet the DOT standards for a helmet.? Supposedly they are fixing that part of the law this year.

Arcimoto SRK

Based on what I've seen on their website, this would be a motorcycle which would require an endorsement and helmet.

Here is the law that went into effect last August.

Be it enacted by the General Assembly of the State of Missouri, as follows:

Section A. Section 304.005, RSMo, is repealed and one new section enacted in lieu thereof, to be known as section 304.005, to read as follows:

304.005. 1. As used in this section, the term "autocycle" means a three-wheeled motor vehicle on which the drivers and passengers ride in a partially or completely enclosed, tandem non-straddle seating area that is equipped with air bag protection, a roll cage, safety belts for each occupant, and antilock brakes and, that is designed to be controlled with a steering wheel and pedals, and that has met applicable Department of Transportation National Highway Traffic Safety Administration requirements or Federal Motorcycle Safety Standards.

2. Notwithstanding subsection 2 of section 302.020, a person operating or riding in an autocycle shall not be required to wear protective headgear if

the vehicle is equipped with a roof that meets or exceeds the standards established for protective headgear.

3. No person shall operate an autocycle on any highway or street in this state unless the person has a valid driver's license. The operator of an autocycle, however, shall not be required to obtain a motorcycle or motor tricycle license or endorsement pursuant to sections 302.010 to 302.340.

~Ray Pierce

TOTAL CONTROL

Hi Christie,

Below is the text from my upcoming column in Motorcycle Consumer News, which addresses this very subject. I hope you find it helpful.

The Power of 3

As you've no doubt noticed, three wheeled vehicles are becoming more and more popular these days. Unfortunately, when it comes time to decide on appropriate laws to govern their use, there has been much understandable confusion. As the vehicles vary greatly from one genre to another, there is no effective one-size-fits-all approach. To help make it easy for federal and state legislators, as well as our readers to understand their differences, I thought it would be useful to break them down into three primary categories. This is very important in states like California where I live, as currently there is no distinction made between the categories. Additionally, there is no specific endorsement required other than an automobile license, to legally operate them on California roadways.

As several states have already done, I'd suggest a creating a new class of motorcycle endorsement (along with specialized operator training), which I'll generically refer to here as an M3, or three-wheel restricted motorcycle endorsement. This would apply to the types of vehicles fitting in Group 1 below.

Group 1—Standard 3-wheel motorcycles

These standard three-wheeled vehicles include the following configurations:

1. One wheel in the front, two wheels in the back commonly called "trikes" (3 track vehicle—symmetrical). Harley-Davidson currently sells two models of trikes from the factory, and there are many aftermarket conversions available to transform your two wheeler into a three wheeler.

2. One wheel in the front, two wheels in the back commonly called "sidecars" (2 track vehicle—asymmetrical). Ural currently sells both one and two-wheel drive variations from the factory and there are many aftermarket conversions available to transform your two wheeler into a sidecar or "outfit." These vehicles turn differently to the left than the right due to their asymmetrical wheel placement and are therefore the most challenging to learn to ride safety.

3. Two wheels in the front, one wheel in the back (3 track vehicle—symmetrical). This configuration was popularized by BRP's Can-Am Spyder models, which come in several designs. Lots of specialized technology makes these the safest and easiest three wheelers in the group to learn how

to ride.

The second group of three-wheelers behave, for all intents and purposes, like two-wheeled motorcycles in terms of handling and steering dynamics. There is certainly additional stability available on these units but they should be classified, trained and licensed as regular motorcycles.

Group 2—Leaning 3-wheel motorcycles

These leaning three-wheeled vehicles include the following configurations:

1. Two wheels in the front, one wheel in the rear (3 track vehicle—symmetrical) With leaning three wheelers, the whole bike leans in a turn, similar to two wheel bikes. Piaggio's MP3 has been for sale in the US since 2006 and is basically a three-wheeled scooter. Yamaha is introducing the Niken for 2019 and labels it as a LMW (Leaning Multi-Wheeler), which is a similar design idea to the MP3 but uses a motorcycle as its base architecture instead of a scooter like the Piaggio. Honda has also gotten in to the act when it debuted its prototype NeoWING at the 2017 Tokyo Motor Auto Expo. Companies like Tilting Motor Works currently offer leaning three-wheel conversions for select Harley-Davidsons and Hondas.

2. One wheel in the front, two wheels in the back (3 track vehicle—symmetrical)

These unusual bikes have a leaning front wheel, rider and chassis, but two non-leaning rear wheels. Introduced with the BSA Ariel 3 in 1970 and later popularized by Honda with its Gyro line starting in 1982.

The third group of three-wheelers behave, for all intents and purposes, like four-wheeled cars in terms of handling and steering dynamics, including the use of a steering wheel instead of handlebars. These models also have you sit "in" rather than "on" them with your feet forward of your hips. While there is less stability available on these units than their four-wheeled cousins, they should be classified, trained and licensed as regular automobiles.

Group 3—Autocycles

1. Two wheels in the front, one wheel in the rear (3 track vehicle—symmetrical)

Morgan Motor Company in the U.K. introduced this category way back in 1909. Campagna put a modern twist on this type of vehicle in 1988 with its T-Rex. However, it was the mass-produced Polaris Slingshot that finally brought legitimacy to this category when it was brought to market in 2015.

Vanderhall's Laguna also joined the scene in 2017. All of them feature side-by-side seating for two.

2. Two wheels in the front, one wheel in the rear (3 track vehicle—symmetrical)

Unlike all the other Autocycles, Elio Motors mounts it two seats front to back. This makes for a significantly more aerodynamic profile, but makes driver/passenger conversations a little more difficult.

3. One wheel in the front, two wheels in the back (3 track vehicle—symmetrical)

Perhaps the most unusual of the autocycles is Thoroughbred's Stallion. It utilizes side-by-side seating but a trike-like wheel configuration.

Hopefully this analysis will help state and federal agencies make legislation that makes sense and can be consistent from one state to the next. Otherwise, the owners of these specialized vehicles will continue to find themselves unknowingly in violation of state or local vehicle codes when they cross state lines.

~Lee Parks

VERMONT

Vermont defines the Electra Meccanica Solo and the Elio as Autocycles. An Autocycle is defined as a three-wheeled motorcycle:

- (i) in which the occupants sit with their legs forward;
- (ii) designed to be controlled with a steering wheel and pedals; and
- (iii) equipped with safety belts for all occupants

Operator must have a valid driver's license. No motorcycle endorsement required.

The Acrimoto would be considered a three-wheeled motorcycle and the operator must have a valid driver's license with a motorcycle endorsement.

~Paul Graves

HAWAII

I just wanted to thank everyone for their response.

It seems that there are a few states that are in the same boat we are on this.

Every response was greatly appreciated!

I hope that everyone has a fantastic week!

~Christy Cowser

CONNETICUT

Christy,

In CT these are Autocycles and require a driver license to operate. Here is our definition of an Autocycle as of July 1st 2015:

Under the bill, an "autocycle" is a motor vehicle with up to three wheels that (1) is designed to be controlled with a steering wheel and foot pedals, (2) has partially or fully enclosed seats in which occupants sit with their legs extended, and (3) has seat belts. Autocycles must meet federal motorcycle safety standards (49 CFR § 571).

Under current law, a motorcycle has up to three wheels and a (1) saddle or seat on which a rider sits or (2) platform on which he or she stands. The bill (1) classifies autocycles as a type of motorcycle and (2) refines the definition of motorcycles to distinguish them from autocycles.

Accordingly, the bill (1) specifies that a motorcycle rider must straddle the saddle or seat on which he or she sits; (2) adds a requirement that a rider uses handlebars to control a motorcycle; and (3) includes as motorcycles vehicles that have, or are designed to have, a completely enclosed driver's seat and a motor that is not in the enclosed area.

~Nicholas Just

