



E-Moto vs. E-Bike - Michigan

Understanding the Problem and Crafting Effective Solutions

Electric bicycles (e-bikes) are a widely adopted, legally defined form of transportation that provide affordable, low-speed mobility for people of all ages and abilities. Increasingly, consumers are, often unknowingly, purchasing high-powered electric motorcycles or mopeds that are incorrectly marketed or assumed to be e-bikes. These vehicles are commonly referred to as “e-motos.”

When serious crashes occur, e-motos are frequently mischaracterized as e-bikes, creating confusion for policymakers and the public while undermining legitimate e-bike use.

E-Bike



“Pedal-assist electric bicycle (≤750W)”

1. Traditional bicycle frame
2. Visible pedals and chain
3. Compact motor and battery

E-bikes are legally defined in Michigan (MCL 257.13e) and almost every state using a three-class system and must meet federal safety standards. Across all classes, an electric bicycle must have:

- Operable pedals + seat or saddle
- An electric motor of 750 watts or less
- Motor-assisted speed limited to: 20 mph (Class 1 + 2) or 28 mph (Class 3)
- E-bikes are designed to function as bicycles, rather than motor vehicles, and are regulated accordingly.

- A **class 1** e-bike can be motor-assisted up to 20 miles per hour when pedaling.
- A **class 2** e-bike can also have a throttle to engage the motor without pedaling.
- A **class 3** e-bike can be motor-assisted up to 28 miles per hour when pedaling.

E-Moto



“High-powered electric motorcycle (motor vehicle)”

1. Motorcycle-style frame
2. Bench seat and wide tires
3. Large battery and motor housing

E-moto is a general term for electric mopeds, motorcycles, and dirt bikes that do not meet the legal definition of an e-bike. E-motos are motor vehicles but are often conflated with e-bikes despite having vastly different performance and risks.

Common e-moto characteristics include:

- Motors ranging from 1,000 to 6,000+ watts
- Top speeds of 30 to 65 mph
- Fake or non-functional pedals, or no pedals
- Weights often exceeding 100 pounds
- Bench-style seats, “moto-style” open frames, and large battery systems

E-Moto Risks

Many buyers reasonably assume that any product marketed as an “e-bike” is low-speed and appropriate for youth. Misleading marketing and inconsistent regulation allow high-powered electric motorcycles to be sold as e-bikes both in stores and online, often without clear warnings that they are motor vehicles. Parents may unknowingly purchase an unregistered motor vehicle for their child.



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Safety and Legal Risks

- Underage riders often lack road experience and knowledge of traffic laws.
- High speeds and vehicle weight significantly increase crash likelihood and severity.
- E-motos are frequently illegally operated in bike lanes, trails, or sidewalks where motor vehicles do not belong.
- Operators may be cited for operating an unregistered motor vehicle.
- Operators must have a driver's license and possibly a motorcycle license.
- Violations may affect driving records and future insurance costs.
- Legitimate bike retailers may face liability exposure or reputational harm due to consumer confusion.
- E-moto crashes and citations are increasing, while unclear definitions complicate consumer awareness, law enforcement, and policymaking.

Addressing E-Motos

Michigan e-bike law was designed for low-speed bicycles that coexist safely with pedestrians. Allowing high-speed e-motos to masquerade as e-bikes undermines public trust and endangers access that legal e-bike cyclists enjoy. Despite the growing problem of these unregulated and under-defined vehicles, there are solutions available to lawmakers:

Better define these vehicles in state vehicle code.

- Update vehicle codes to exclude any vehicle capable of exceeding 20 mph under motor power alone from the definition of “electric bicycle.”

Create new regulatory standards for e-motos.

- Ban vehicles and devices designed to easily bypass e-bike speed or power limits.
- Prohibit false or misleading claims about what is “street legal.”
- Require disclosure of true vehicle type in all advertising.

Regulate the sellers of e-motos.

- Enforce existing and new laws against manufacturers and retailers selling deceptive or illegal e-motos.
- Require compliance with motor vehicle and dealer licensing regulations.

Educate the public and enforce new and existing laws.

Provide education for consumers, parents, schools, law enforcement, and government officials on the differences between e-bikes and e-motos.

E-bikes are a proven, low-speed transportation solution that expand mobility and access. E-motos are fundamentally different vehicles that require appropriate regulation. Clear definitions, strong enforcement, and public education will protect riders, communities, and the integrity of e-bike policy without limiting access to safe, affordable transportation.

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Information provided by People For Bikes