



Low-Power and Unconventional Vehicles

August 2020

Overview

This brief summarizes lower-power vehicle laws in Minnesota. As used here, the term “low-power and unconventional vehicle” covers a variety of vehicle types, including autocycles, all-terrain vehicles, electric-assisted bicycles, golf carts, mini-trucks, motor scooters, motorized foot scooters, motorized bicycles (or mopeds), and neighborhood electric vehicles.

Although all of the vehicles are motorized they vary greatly in form, size, features, and intended use. In most cases the vehicles are smaller and less powerful than a typical car, truck, or SUV. Some are devices marketed mainly to children, whereas others present an alternative to a passenger automobile.




Minnesota law regulates vehicle operation on public streets and highways and establishes licensing, insurance, and equipment requirements. Legislation in recent years has established new classifications of vehicles and devices and, in many cases, specific regulations for each type of vehicle. The expansion of vehicle categories in law reflects a rise in the variety of vehicles and devices available to consumers.




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Summary of Regulations

The tables below outline basic requirements for each type of vehicle. Subsequent sections provide detail on the regulations.

	All-Terrain Vehicle and Utility Task Vehicle	Autocycle	Electric-Assisted Bicycle
Example			
Legal attributes	ATV: up to 960 cc engine, three to six flotation tires, max. 1,800 lbs. dry weight UTV: four wheels, up to 1,200 cc engine, 1,800 to 2,600 lbs. dry weight	Three wheels, nonstraddled seats, steering wheel, anti-lock brakes, meets federal safety standards for motorcycle	Bicycle with saddle, pedals for human propulsion, two to three wheels, max. 1,000-watt electric motor, 20 m.p.h. top speed, meets federal standards
Registration	Local special permit; typically DNR registration for ATV use	Title, vehicle registration, tax, license plate	Not required
Operator licensing	Not required	Driver's license (no endorsement needed)	None required; minimum operator age is 15
Insurance	Liability coverage (same as passenger autos)	Liability coverage (same as passenger autos)	Not required
Operating rules	Generally same traffic laws as other motor vehicles; some limitations on operating at night and in low visibility	Generally same traffic laws as other motor vehicles; various limitations	Generally same traffic laws as motor vehicles; various limitations
Safety equipment	Most equipment laws do not apply; rearview mirror	Helmet if under age 18 and cabin is unenclosed; various equipment requirements; headlight on at all times	Lighting generally required for night; helmet not required
Notes "ATV" refers to an all-terrain vehicle. "UTV" refers to a utility task vehicle. "DNR" refers to the Department of Natural Resources.			

	Golf Cart	Mini-Truck	Motor Scooter
Example			
Legal attributes	Not specifically defined in law	Up to 660 cc or 7,500-watt engine, 900 to 2,200 lbs. dry weight, does not meet certain federal safety standards	Not specifically defined in law (but part of motorcycle classification, which includes: seat or saddle, up to three wheels)
Registration	Local special permit	Local special permit; possible DNR registration as ATV	Title, vehicle registration, tax, license plate
Operator licensing	Not required	Driver's license or permit	Driver's license with two-wheeled vehicle endorsement
Insurance	Liability coverage (same as passenger autos)	Liability coverage (same as passenger autos)	Liability coverage (same as passenger autos)
Operating rules	Generally same traffic laws as other motor vehicles; some limitations on operating at night and in low visibility	Generally same traffic laws as other motor vehicles	Generally same traffic laws as other motor vehicles; various limitations; no operation on sidewalks
Safety equipment	Most equipment laws do not apply; rearview mirror; slow-moving vehicle emblem	Headlights; taillights; turn signals; mirrors; windshield; seat belt; parking brake	Helmet if under age 18; various equipment requirements; eye protection for all operators; headlight on at all times
Notes "ATV" refers to an all-terrain vehicle. "DNR" refers to the Department of Natural Resources.			

	Motorized Bicycle	Motorized Foot Scooter	Electric Vehicle	Segway and Self-Balancing Scooter
Example				
Legal attributes	Up to 50 cc and 2 HP engine, 30 m.p.h. top speed	Handlebars, motor, max. 12-inch wheels, 15 m.p.h. top speed	NEV: electric motor, three to four wheels, 20 to 25 m.p.h. top speed MSEV: electric motor, misc. equipment, 35 m.p.h. top speed	Electric motor, two nontandem wheels, designed for one person, 15 m.p.h. top speed
Registration	Title, vehicle registration, tax, license plate	Not required	Title, vehicle registration, tax, license plate	Not required
Operator licensing	Driver's license or operator's permit	Not required; minimum operator age is 12	Driver's license or permit	Not required
Insurance	Liability coverage (same as passenger autos)	Not required	Liability and personal injury coverage (same as passenger autos)	Not required
Operating rules	Generally same traffic laws as motorcycles and other motor vehicles; various limitations; no operation on sidewalks	Generally same traffic laws as bicycles; no operation on sidewalks; allowed on certain bike paths and trails	Generally same traffic laws as other motor vehicles; no operation on roads with speed limit above 35	Generally same traffic laws as pedestrians; allowed on bike paths
Safety equipment	Helmet if under age 18; eye protection; certain lighting generally required for night; if so equipped, headlight on at all times	Helmet if under age 18; headlight and reflector required for night	Must meet federal equipment requirements	Reflectors required
Notes "NEV" refers to a neighborhood electric vehicle. "MSEV" refers to a medium-speed electric vehicle.				

Identifying the Vehicle Classification

Due to the wide variety of low-power and unconventional vehicles that are now on the market, it can be challenging to determine how a specific make and model in a particular year is classified under Minnesota law. In particular, autocycles, motor scooters, motorized bicycles, and motorcycles have many similarities.

Classifications. Because state regulation varies with each vehicle, a primary question is whether the vehicle in question fits one of the legal definitions established in Minnesota Statutes. See [Minn. Stat. § 169.011](#). The specific characteristics of a particular vehicle can lead to its classification. Although other features are relevant, engine size is a key factor in identifying scooters, mopeds, and motorcycles under Minnesota law. Top speed, vehicle weight, and safety equipment are also important characteristics.

A vehicle that has two or three wheels and does not clearly fit another vehicle definition is most likely classified in law as a “motorcycle” (even though it might not be considered one in the traditional sense). This is the most general class of motorized vehicle that has less than four wheels. As discussed below, requirements for a vehicle classified as a motorcycle include a title, registration, and license plates.

The broad categorization for a vehicle or device that does not conform to any specific motorized vehicle definition is likely a “motor vehicle.” As such, it would need to be registered and have license plates, the operator must have a driver’s license, it must have full insurance coverage, and the vehicle must have safety equipment that includes lights, turn signals, and brakes at both the front and rear.

Making determinations. Several governmental entities are resources for questions and could potentially become involved in making a determination about a specific vehicle. The table below provides a general summary.

Governmental Entity	Role
Deputy registrar	Offices for vehicle registration, titling, and registration tax collection
Driver and Vehicle Services (Department of Public Safety)	Vehicle registration and titling – final decisions; Registration tax administration
Law enforcement agency (e.g., municipal police department)	Enforcement of regulations; Citations
Courts	Judicial (e.g., contested citation)

Vehicle Descriptions and Key Regulations

Motorized vehicles face limited state regulation while operated on private land. Once they venture onto streets, roads, and even alleys they are subject to a wider array of state and local regulations. In response to the introduction of new models and offerings in the marketplace, recent changes in Minnesota law have addressed many of the assorted vehicles that can be operated on public roadways.

The following sections cover each vehicle type classified under Minnesota law, outlining their legal definitions and general characteristics, highlighting some recent law changes, providing an overview of notable regulatory provisions, and noting some laws in other states.

A variety of regulations apply generally to motorized vehicles and are not specifically addressed in provisions that govern a specific low-power or unconventional vehicle. A couple of examples are below.

- **Driving rules.** Most driving regulations such as speed limits and rules of the road are applicable when operating low-power and unconventional vehicles. Some operating rules are established for specific vehicles. (Licensing, registration, operation, and equipment are discussed with each vehicle in the following sections.)
- **DWI/DUI laws.** Prohibitions on operating under the influence of alcohol and other drugs extend to a number of low-power and unconventional vehicles. However, courts have found that impaired driving restrictions do not apply to some devices that are not designed to operate on roads, such as Segways and motorized wheelchairs.¹
- **Noise limits.** Minnesota law sets noise limits for motor vehicles (separately for heavier trucks, motorcycles, and other types of vehicles). [Minn. Stat. § 169.693](#); [Minn. Rules ch. 7030](#). The limits apply based on whether the vehicle must be registered to operate on public roads, and registration is not required for some of the vehicles described in this briefing. Most motor vehicles are also required to have a muffler meeting various characteristics. [Minn. Stat. § 169.69](#).

¹ See *State v. Brown*, 801 N.W.2d 186 (Minn. App. 2011); *State v. Greenman*, 825 N.W.2d 387 (Minn. App. 2013).

All-Terrain Vehicles and Utility Task Vehicles

Classification²

All-terrain vehicles. All-terrain vehicles (ATVs) under Minnesota law are motorized vehicles having three to six tires, a dry weight of up to 2,000 pounds, and a total width of up to 65 inches. Seating is not specifically identified under the statutory definition; ATV designs include a seat or a saddle so that the operator (and any passenger) sits straddling the vehicle. ATVs are further categorized based on width into class 1 (total width of 50 inches or less) and class 2 (from over 50 to 65 inches in width). They are often used for off-road recreation on trails or private land. [Minn. Stat. § 84.92](#), subds. 8 to 10; [169.045](#), subd. 1.



Utility task vehicles. To be considered a utility task vehicle (UTV) in Minnesota law, the vehicle must have four wheels, four-wheel drive, an internal combustion engine with a displacement of no more than 1,200 cc, and a dry weight of 1,800 to 2,600 pounds. Also known as a “side-by-side” (among other terms), a UTV has side-by-side seating, in some cases carries multiple passengers in a cab-like space, and often includes an open bed located behind the driver and passengers (like a pickup truck). The vehicle is similar to an ATV in its off-road purposes although with an arguably greater capability for nonrecreational activities. [Minn. Stat. § 169.045](#), subd. 1.



Regulations

Unlike most motor vehicles using public roads, ATVs and UTVs are not titled or registered with the Department of Public Safety. Permissible operation on public roads is limited. ATVs and UTVs can be operated on public roads and in some public rights-of-way under two distinct sets of state statutes governing the vehicles.

- 1) Operation on local roads can be by **special permit**. The permit is issued by a local unit of government (a city, county, or town) following a local ordinance that must meet requirements set in state statute, and it only authorizes driving on particular roads under the jurisdiction of the issuing authority. This is a discretionary program that each local government may choose to set up, so ATV and UTV operation is essentially prevented if a local government has not taken the steps of establishing the ordinance and issuing special permits. [Minn. Stat. § 169.045](#).

² Image sources: <http://www.gekgo.com/cpi-gas-atvs.html>; <https://www.arcticcat.com>; <http://www.cubcadet.com>.

- 2) ATVs and other types of off-road vehicles are subject to various **off-highway vehicle regulations** set in state law and primarily administered by the Department of Natural Resources. They can operate on some parts of public rights-of-way (that is, on the roadway itself, the road shoulder, the inside bank or slope, the ditch, and the outside bank or slope) and on bridges under some circumstances. Allowed operation depends on several factors: the type of road (trunk highway, county highway, town road, or city street), the type of ATV (class 1 versus class 2), and time of year for some regions of the state. [Minn. Stat. §§ 84.92 to 84.928](#).

While ATVs are not registered for on-road use in the same manner as passenger vehicles, in many cases they must be registered with the Department of Natural Resources for use on designated trails, public lands, and other off-road locations. ATVs and riders are also subject to various regulations that include: display of registration information, where the vehicle can be ridden, operating rules, passenger restrictions, required vehicle equipment, and other limitations for youth operators. (General off-highway vehicle and ATV regulations, under [Minnesota Statutes, chapter 84](#), are not discussed further in this publication.)

Requirements Under the Special Permit

Registration. The vehicles are not registered with the Department of Public Safety in the manner of other motor vehicles and do not require titling or license plates. (In many cases, ATV or UTV registration is required under off-highway vehicle regulations.)

Operation of ATVs and UTVs can be allowed via a special permit issued to the vehicle owner by counties, cities, or towns. [Minn. Stat. § 169.045](#), subd. 1. The Minnesota Department of Transportation cannot issue the permit for use on trunk highways (including the interstate system).

A key requirement is that the governing body must establish a special permit ordinance, and the ordinance must provide for permit application and confirmation that insurance requirements are met. The ordinance can also set additional conditions and require certification by a physician of ability to safely operate the vehicle. The permit can limit use to certain roads and must be renewed at least every three years, as determined by the unit of government. It can be revoked at any time based on evidence of inability to safely operate the vehicle.

Operator licensing. By statute, a person is not required to have a driver's license or instruction permit to operate the vehicle under a special permit. [Minn. Stat. § 169.045](#), subd. 7. (However, a driver's license may be required for operating on public road rights-of-way under off-highway vehicle regulations.)

Insurance. Insurance requirements must be established as part of the local ordinance and must match that of motorcycles. Thus liability insurance (which covers certain

claims from another driver) is required and is the same as for passenger automobiles.³ However, the vehicles are exempt from the requirements of personal injury protection under the Minnesota No-Fault Automobile Insurance Act (which establishes minimum required coverage levels for medical, lost wages, and related expenses). [Minn. Stat. §§ 65B.48](#), subd. 5; [169.045](#), subd. 2.

If insurance cannot be obtained on the private market, it can be purchased from the Minnesota Automobile Insurance Plan with a rate determined by the Department of Commerce. [Minn. Stat. § 169.045](#), subd. 8.

Use. Vehicle operation under a special permit is only allowed on roadways under the jurisdiction of the issuing unit of government. A city-issued permit, for instance, does not authorize driving on county roads; a separate permit would be required. (The law is silent on coordination between local units of government for permit issuance and applicability.)

Drivers of ATVs and UTVs are subject to the same traffic laws and duties as operators of other motor vehicles, although additional limitations apply. The vehicles can only be operated on designated roadways, but they may cross other roads and highways. The vehicles can only be operated between sunrise and sunset unless original equipment includes headlights, taillights, and brake lights. They cannot be used (1) in bad weather unless the authorizing ordinance provides an exception for emergencies, or (2) if there is not enough visibility to see people and other vehicles from 500 feet away. [Minn. Stat. § 169.045](#), subds. 3, 5, 6.

Safety equipment. Standard equipment requirements for motor vehicles do not apply to vehicles operating under the special permit, except that a rearview mirror is necessary. The mirror must provide a view to the rear for at least 200 feet. [Minn. Stat. § 169.045](#), subd. 7.

³ The minimum liability coverage is \$30,000 per person for injuries, \$60,000 per occurrence for injuries, and \$10,000 for property damage.

Autocycles

Classification⁴

Autocycles represent a specialized type of motorcycle that, generally speaking, resemble a car. To meet the classification, the vehicle must have three wheels, driver and passenger seating (as opposed to a saddle that is straddled), a steering wheel, and antilock brakes. It must also meet federal safety standards established for motorcycles (there is not a separate federal autocycle classification for vehicle manufacturers).

[Minn. Stat. § 169.011](#), subd. 3a.



The statutory definition does not specify a configuration for the three wheels, so two wheels could be located in either the front or the back. Similarly there are no restrictions regarding the number of passengers, seating positions, cabin enclosure (versus an open air cockpit), hinged doors, and availability of seatbelts.

The autocycle category reflects some of the offerings to most recently enter the automotive market. Some new models increasingly blur the traditional distinctions between a motorcycle and a passenger vehicle, such as by providing car-like driving dynamics without the same crash protections available in passenger autos (which must meet various federal safety standards that are more extensive compared to ones for motorcycles).

Regulations

Registration. Like other motorcycles, the owner of an autocycle must register it, and the vehicle is subject to a registration tax of \$10. [Minn. Stat. § 168.013](#), subd. 1b. The license plate must be displayed on the rear of the vehicle. [Minn. Stat. § 169.79](#), subd. 3. A certificate of title also must be obtained. The vehicle is subject to the motor vehicle sales tax. [Minn. Stat. §§ 297B.01](#), subd. 11; [297B.02](#).

Operator licensing. Required licensing differs from a standard motorcycle in that a two-wheeled vehicle endorsement is not necessary. Instead an autocycle can be operated with a standard driver's license.

Insurance. Liability insurance (which covers certain claims from another driver) is required and is the same as for passenger automobiles.⁵ Like motorcycles generally, autocycles are exempt from the requirements of personal injury protection under the Minnesota No-Fault Automobile Insurance Act (which establishes minimum required

⁴ Image source: Polaris, <http://www.polaris.com>.

⁵ The minimum liability coverage is \$30,000 per person for injuries, \$60,000 per occurrence for injuries, and \$10,000 for property damage. Note that the insurance requirements do not appear to apply to all motorcycles and motor scooters: under the definition of "motorcycle" in the chapter on automobile insurance, the vehicle's engine must be "rated at greater than five horsepower." [Minn. Stat. § 65B.43](#), subd. 13.

coverage levels for medical, lost wages, and related expenses). [Minn. Stat. §§ 65B.43](#), subds. 2, 13; [65B.48](#), subd. 5.

Use. Autocycle operators are subject to the same traffic laws as operators of other motor vehicles (except those that by their nature would not be relevant). The vehicles can potentially be operated two abreast, although they must be narrow enough to fit within a single traffic lane. Passengers are allowed based on the vehicle's seating capacity.

Some prohibitions also apply, such as on carrying cargo that prevents operation with both hands, passing other vehicles by going between traffic lanes, and passing vehicles that occupy the same lane as the autocycle. [Minn. Stat. § 169.974](#), subd. 5.

Safety equipment. The vehicle must be equipped with various safety features, including at least one rearview mirror, a horn, a hand or foot brake, at least one headlight that has both low and high beams and is lighted at all times, a taillight, a brake light, rear license plate illumination, and floorboards (or footrests) for any passenger seating. [Minn. Stat. §§ 169.49; 169.50; 169.57](#), subd. 1; [169.60; 169.67](#), subd. 2; [169.974](#), subd. 3 and subd. 5(i).

A seatbelt must be worn if the autocycle is equipped with it. [Minn. Stat. § 169.686](#), subd. 1.

Unless the autocycle has an enclosed cab, a helmet is required for operators and passengers under the age of 18 and eye protection is required for all operators. [Minn. Stat. § 169.974](#), subd. 4.

Other States

The introduction of autocycles into the marketplace has prompted state legislative responses in recent years. One federal report identifies 38 states that have established an autocycle classification.⁶ States define autocycles in a wide variety of ways, which is perhaps due to the lack of a corresponding federal classification. According to a 2017 study by the National Conference of State Legislatures (NCSL), three wheels and a steering wheel are standard features nationwide but there are state-by-state differences in requirements on:

- having seatbelts (required in nearly two-thirds of the state classifications);
- being fully enclosed (required in about half the states);
- containing a passenger vehicle-type seat instead of a saddle (required in roughly half of the states);
- having pedals (again a requirement in roughly half of the states); and

⁶ National Highway Safety Administration, "A Report to Congress on the Federal and State Regulatory Status of Autocycles," January 2020, <http://motorcycleridersfoundation.wildapricot.org/resources/Documents/Autocycles%20Report%20to%20Congress%20-%20FINAL.PDF> (accessed May 26, 2020), p. 14.

- meeting federal safety standards for motorcycles (necessary in about one-third of the states).⁷

One of the key questions in autocycle regulations regards licensing and registration. Across the states, an autocycle is most commonly registered similar to a motorcycle but carries the same licensing requirements as a passenger vehicle, so that a motorcycle endorsement is not required. In addition, at least 11 states do not explicitly define or classify an autocycle, but permit three-wheeled vehicle operation with just a driver's license in some circumstances (such as through a different vehicle classification, or—in some cases—if the vehicle has an enclosed cabin).

⁷ National Conference of State Legislatures, "Autocycles," April 17, 2017, <http://www.ncsl.org/research/transportation/transportation-review-autocycles.aspx> (accessed November 7, 2017).

Electric-Assisted Bicycles

Classification⁸

Electric-assisted bicycles, or “e-bikes,” are bicycles equipped with a small electric motor. To be classified as an “electric-assisted bicycle” in Minnesota, the bicycle must have a saddle and operable pedals, two or three wheels, and an electric motor of up to 1,000 watts, as well as meet federal motor vehicle safety standards. The motor must disengage during braking and have a maximum unassisted speed of 20 miles per hour (so that it does not assist further when human-powered riding is above that speed). [Minn. Stat. § 169.011](#), subd. 27.



Regulations

Legislative changes in 2012 significantly altered the regulatory structure for e-bikes, establishing them as a subset of bicycles. As a result, e-bikes are regulated in roughly the same manner as bicycles and nearly all bicycle laws apply. [Minn. Stat. §§ 169.011](#), subd. 27; [169.222](#).

Registration. The owner of a bicycle is not required to register it. [Minn. Stat. § 168.012](#), subd. 2d. A title is not necessary, and a license plate is not required to be displayed on the rear. [Minn. Stat. §§ 168A.03](#), subd. 1; [169.79](#), subd. 3. It is not subject to motor vehicle sales tax (the general sales tax would instead be due on e-bike purchases).

Operator licensing. A driver’s license or permit is not required. Unlike an unpowered bicycle, the minimum operator age is 15 years old. [Minn. Stat. § 169.222](#), subd. 6.

Insurance. The device does not need to be insured. See [Minn. Stat. § 65B.43](#), subds. 2, 13.

Use. Electric-assisted bicycle operators must follow the same traffic laws as operators of motor vehicles (except those that by their nature would not be relevant).

The bicycles may be operated two abreast. Operators must generally ride as close as practical to the right-hand side of the road (while there are some exceptions, such as when overtaking another vehicle, preparing for a left turn, riding in a bicycle lane or on the shoulder, and to avoid unsafe conditions). The bicycle must be ridden within a single lane. Travel on the shoulder of a road must be in the same direction as the direction of adjacent traffic.

Some operating prohibitions also apply, such as on carrying cargo that prevents keeping at least one hand on the handlebars or prevents proper use of brakes, riding more than

⁸ Image source: Wikimedia Commons, <https://commons.wikimedia.org/wiki/File:ZOOMLP-5467-Overvolt-HT-900-075.jpg> (accessed April 1, 2020).

two abreast on a roadway or shoulder, and riding while attached to another vehicle. [Minn. Stat. § 169.222](#), subds. 3-5.

The vehicles may be operated on a sidewalk except in a business district or when prohibited by a local unit of government, and must yield to pedestrians on the sidewalk. [Minn. Stat. § 169.223](#), subd. 3.

By default, electric-assisted bicycles are allowed on road shoulders as well as on bicycle trails, bicycle paths, and bicycle lanes.⁹ A local unit of government having jurisdiction over a road or bikeway—as well as the Department of Natural Resources for state bike trails—are authorized to restrict e-bike use if:

- the use is not consistent with the safety or general welfare of others; or
- the restriction is necessary to meet the terms of any legal agreements concerning the land on which a bikeway has been established.

Electric-assisted bicycles can be parked on a sidewalk unless restricted by local government (although they cannot impede normal movement of pedestrians). They can be parked on streets where parking of other motor vehicles is allowed. [Minn. Stat. § 169.222](#), subd. 9.

Safety equipment. During nighttime operation, the bicycle must be equipped with a front headlamp, a rear-facing red reflector, and reflectors on the front and rear of pedals, and the bicycle or rider must have reflective surfaces on each side. [Minn. Stat. § 169.222](#), subd. 6.

An electric-assisted bicycle can be equipped with a front-facing headlamp that emits a flashing white light, a rear-facing lamp that has a flashing red light, or both. The bicycle can have studded tires designed for traction as well as a horn or bell.

Helmets are not mandatory for e-bike use.

Other States

The market for electric-assisted bicycles has expanded noticeably in recent years, prompting legislative activity to revise state regulations.

From a 2020 NCSL report, about two-thirds of the states have a specific e-bike classification.¹⁰ A majority among these use a similar three-tier system of bicycle classification that is based

⁹ A “bicycle path” is a dedicated bikeway that is separated from a shoulder or marked route on a street. [Minn. Stat. § 169.011](#), subd. 6. A “bicycle lane” is a portion of the roadway or shoulder of a street designated for exclusive use by bicyclists. [Minn. Stat. § 169.011](#), subd. 5. A “bicycle trail” is a path developed under the Department of Natural Resources state trail system. [Minn. Stat. § 169.011](#), subd. 8.

¹⁰ National Conference of State Legislatures, “State Electric Bicycle Laws,” June 15, 2020, <https://www.ncsl.org/research/transportation/state-electric-bicycle-laws-a-legislative-primer.aspx> (accessed July 24, 2020).

largely on the capability of the motor. In such states, some are more restrictive with the e-bikes equipped with the most powerful motors, such as in setting a minimum operator age or preventing their use on trails where other e-bikes are allowed. In other states, the device is not considered a type of bicycle and is instead regulated within a motor vehicle category (such as a moped or scooter). As a result, an operator's license and registration can be required.

Across the states there is a mixture in whether electric-assisted bicycles are allowed to operate on bicycle paths and trails. In a number of states, their use is generally permitted on bicycle paths and trails but local units of governments are authorized to be more restrictive. Helmet requirements also vary, ranging from no mandate to required helmet use for all operators. Some require helmets depending on operator age (e.g., if under age 16) or the top speed capacity of the motor.¹¹

¹¹ Also see Montana Legislative Services Division, "Electric Bikes and Scooters," September 2019, <https://leg.mt.gov/content/Committees/Interim/2019-2020/Transportation/Committee-Topics/Autonomous-Electric/e-bikes-montana.pdf> (accessed July 24, 2020).

Golf Carts

Classification¹²

A golf cart is not specifically defined in statute. Models generally seat two to four people and can be powered by an electric or gasoline engine ranging from under 4 to over 20 horsepower. Vehicle weight is commonly around 500 to 800 pounds, but can be over 2,000 pounds. Top speed is typically less than 20 miles per hour. Some models can go up to 25 miles per hour and may under Minnesota law be considered a neighborhood electric vehicle or medium-speed electric vehicle. Originally manufactured for golf courses, uses of the vehicle have become more varied, particularly in low-traffic - settings.



Regulations

Motorized golf carts are not titled or registered with the Department of Public Safety, and ordinarily they cannot be operated on public roads. However, Minnesota law does allow local units of government, such as counties and cities, to authorize via a special permit golf cart operation on streets and highways under that local government's jurisdiction. (This is the same special permit provision that is in place for ATVs, UTVs, and mini-trucks.) [Minn. Stat. § 169.045](#).

Registration. The vehicles are not registered with the Department of Public Safety in the manner of other motor vehicles and do not require titling or license plates.

Operation of golf carts can be allowed via a special permit issued to the vehicle owner by counties, cities, or towns. [Minn. Stat. § 169.045](#), subd. 1. The Minnesota Department of Transportation cannot issue the permit for use on trunk highways (including the interstate system).

A key requirement is that the governing body must establish a special permit ordinance, and the ordinance must provide for permit application and confirmation that insurance requirements are met. The ordinance can also set additional conditions and require certification by a physician of ability to safely operate the vehicle. The permit can limit use to certain roads and must be renewed at least every three years, as determined by the unit of government. It can be revoked at any time based on evidence of inability to safely operate the vehicle.

¹² Image source: Wikimedia Commons, https://commons.wikimedia.org/wiki/File:Club_Car_Onward%E2%84%A2_Lifted_4_Passenger_PTV.jpg (accessed December 18, 2017).

Operator licensing. By statute, a person is not required to have a driver's license or instruction permit to operate the vehicle under a special permit. [Minn. Stat. § 169.045](#), subd. 7.

Insurance. Insurance requirements must be established as part of the local ordinance and must match that of motorcycles. Thus liability insurance (which covers certain claims from another driver) is required and is the same as for passenger automobiles.¹³ However, the vehicles are exempt from the requirements of personal injury protection under the Minnesota No-Fault Automobile Insurance Act (which establishes minimum required coverage levels for medical, lost wages, and related expenses). [Minn. Stat. §§ 65B.48](#), subd. 5; [169.045](#), subd. 2.

If insurance cannot be obtained on the private market, it can be purchased from the Minnesota Automobile Insurance Plan with a rate determined by the Department of Commerce. [Minn. Stat. § 169.045](#), subd. 8.

Use. If a local government establishes special permits, vehicle operation under the permit is only allowed on roadways under the jurisdiction of the issuing unit of government. A city-issued permit, for instance, does not authorize driving on county roads; a separate permit would be required. (The law is silent on coordination between local units of government for permit issuance and applicability.)

Drivers of golf carts are subject to the same traffic laws and duties as operators of other motor vehicles, although additional limitations apply. The vehicles can only be operated on designated roadways, although they may cross other roads and highways. The vehicles can only be operated between sunrise and sunset unless original equipment includes headlights, taillights, and brake lights. They cannot be used (1) in bad weather unless the authorizing ordinance provides an exception for emergencies, or (2) if there is not enough visibility to see people and other vehicles from 500 feet away. [Minn. Stat. § 169.045](#), subds. 3, 5, 6.

Safety equipment. Standard equipment requirements for motor vehicles do not apply to vehicles operating under the special permit, except that a rearview mirror is necessary. The mirror must provide a view to the rear for at least 200 feet. Golf carts must also display a triangular slow-moving vehicle emblem. [Minn. Stat. § 169.045](#), subds. 4 and 7.

¹³ The minimum liability coverage is \$30,000 per person for injuries, \$60,000 per occurrence for injuries, and \$10,000 for property damage.

Mini-trucks

Classification¹⁴

Mini-trucks often resemble pickup trucks or straight trucks, but are distinctly smaller in size and weight. They are defined in law as a motor vehicle that:

- has four wheels;
- uses an electric motor rated at 7,500 watts or less, or uses an engine with a maximum displacement of 660 cc;
- weighs between 900 and 2,200 pounds;
- resembles a pickup truck or van and has a cargo area;
- has an enclosed cabin; and
- was **not** originally manufactured to meet federal motor vehicle safety standards for passenger automobiles or “low-speed vehicles.” [Minn. Stat. § 169.011](#), subd. 40a.



Although they come in different forms, the typical mini-truck design is an open bed located behind a small enclosed cab for the driver and one passenger. Features can include air conditioning and all-wheel drive. They have traditionally been imported for off-road uses like recreational off-road activity, agricultural work on farms and ranches, at construction sites, in industrial parks, and in grounds maintenance.

The vehicles do not typically meet most federally mandated equipment standards for motor vehicles (such as for vehicle lighting and occupant safety). Also, they might not meet some emissions requirements for on-road vehicles.

Regulations

Mini-trucks cannot be registered with the Department of Public Safety to be driven on public roads in Minnesota. The vehicles can be operated on authorized streets and highways via a special permit issued by counties, cities, or towns. The permit and regulations are mostly the same as authorized for ATVs, UTVs, and golf carts (discussed previously). [Minn. Stat. § 169.045](#).

Legislation in 2009 first authorized special permits for mini-truck operation. The permitting authority was initially set to expire July 31, 2012, and the legislature subsequently extended the sunset date. In 2015 the legislature removed the sunset entirely, providing ongoing authorization for local units of government to allow their use by special permit. [Laws 2015, ch. 75](#), art. 2, § 47.

¹⁴ Image source: <http://www.made-in-china.com>.

Registration. The vehicles are not registered with the Department of Public Safety in the manner of other motor vehicles and do not require titling or license plates.

Operation of mini-trucks can be allowed only through a special permit that is issued by counties, cities, or towns. [Minn. Stat. § 169.045](#), subd. 1. The Minnesota Department of Transportation cannot issue a permit for use on trunk highways (including the interstate system).

The local governing body must establish a special permit ordinance, and the ordinance must provide for permit application and confirmation that insurance requirements are met. The ordinance can also set additional conditions and require certification by a physician of ability to safely operate the vehicle. The permit can be limited to use on certain roads and must be renewed at least every three years, at the discretion of the unit of government. The local government can revoke it at any time based on evidence of inability to safely operate the vehicle.

Operator licensing. Unlike ATVs, UTVs, and golf carts operated under the local permit, a driver's license or instruction permit is required to drive a mini-truck. [Minn. Stat. § 169.045](#), subd. 7.

Insurance. The local ordinance must establish insurance requirements, which must match that of motorcycles. Thus liability insurance (which covers certain claims from another driver) is required and is the same as for passenger automobiles.¹⁵ However, the vehicles are exempt from the requirements of personal injury protection under the Minnesota No-Fault Automobile Insurance Act (which establishes minimum required coverage levels for medical, lost wages, and related expenses). [Minn. Stat. §§ 65B.48](#), subd. 5; [169.045](#), subd. 2.

If insurance cannot be obtained on the private market, it can be purchased from the Minnesota Automobile Insurance Plan with a rate determined by the Department of Commerce. [Minn. Stat. § 169.045](#), subd. 8.

Use. If a local government establishes special permits, vehicle operation under the permit is only allowed on roadways under the jurisdiction of the issuing unit of government. A city-issued permit, for instance, does not authorize driving on county roads; a separate permit would be required. (The law is silent on coordination between local units of government for permit issuance and applicability.)

Drivers are subject to the same traffic laws as operators of other motor vehicles. The vehicles can only be driven on designated roadways, although they may cross other roads and highways. Mini-trucks are not restricted from operation at night or in inclement weather. [Minn. Stat. § 169.045](#), subds. 5, 6.

¹⁵ The minimum liability coverage is \$30,000 per person for injuries, \$60,000 per occurrence for injuries, and \$10,000 for property damage.

Safety equipment. Some vehicle equipment requirements apply, including headlights and taillights; turn-signal lamps; some rearview mirrors; a windshield; front driver and passenger seat belts; and a parking brake. [Minn. Stat. § 169.045](#), subd. 7a.

Other States

Nationally, about half of the states permit mini-trucks on public roads.¹⁶ They are usually restricted from operating on interstates and specified other roads, but the nature of the limitations varies across the states. Some states restrict the vehicle based on the posted speed limit, ranging from 25 to up to 55 miles per hour. In a number of cases, local units of government such as counties and cities can authorize or restrict vehicles on roads under their jurisdiction. Many mini-trucks are classified based on the vehicle's top speed, which varies from 25 miles per hour to no limit. A few states require that the truck meets federal safety standards for "low-speed vehicles;" this is similar to the standard that Minnesota requires for MSEVs. The vehicles go by a wide variety of terms under state laws, including "off-highway vehicle" and "utility vehicle."

¹⁶ Insurance Institute for Highway Safety, "Low- and Medium-speed Vehicles," November 2017, <http://www.iihs.org/iihs/topics/laws/minitrucks?topicName=low--and-medium-speed-vehicles> (accessed November 7, 2017).

Motor Scooters (and Motorcycles)

Classification¹⁷

Motor scooters are not specifically defined in Minnesota law. Rather, they are included in a broader motorcycle classification. Motorcycles are defined as motor vehicles that have no more than three wheels and a seat or saddle for the driver. The motorcycle classification is broad but excludes motorized bicycles (or “mopeds”), electric-assisted bicycles, and tractors. [Minn. Stat. § 169.011](#), subd. 44.



Motor scooters, as generally understood, differ from motorcycles in a couple of ways. See [Minn. Stat. § 169.974](#). The standard motor scooter design is step-through with a low platform for the operator’s feet, and the engine is most often located underneath the operator’s seat. Compared to a motorcycle they are generally lighter (200 pounds), smaller (145 cc engine), and slower (top speed under 60 miles per hour).



Regulations

Motor scooters are treated under Minnesota law as motorcycles; the following summary is the same for both. [Minn. Stat. §§ 169.011](#), subd. 44; [169.974](#).

Registration. The vehicle owner must register the vehicle. It carries a registration tax of \$10. [Minn. Stat. § 168.013](#), subd. 1b. The license plate must be displayed on the rear of the vehicle. [Minn. Stat. § 169.79](#), subd. 3. A certificate of title also must be obtained. The vehicle is subject to the motor vehicle sales tax. [Minn. Stat. §§ 297B.01](#), subd. 11; [297B.02](#).

Operator licensing. A valid driver’s license with a two-wheeled vehicle endorsement is required. A two-wheeled vehicle instruction permit is available to a person who is over 16 years old, has a driver’s license, is enrolled in a two-wheeled driver’s safety course, and passes a written exam.

Insurance. Liability insurance (which covers certain claims from another driver) is required and is the same as for passenger automobiles.¹⁸ Motor scooters and

¹⁷ Image sources: Wikimedia Commons, <https://upload.wikimedia.org/wikipedia/commons/8/8e/2006HondaCBR600RR-profile.png> (accessed April 1, 2020); Wikimedia Commons, [https://commons.wikimedia.org/wiki/File:St-4428695-s1000_\(1\).jpg](https://commons.wikimedia.org/wiki/File:St-4428695-s1000_(1).jpg) (accessed December 18, 2017).

¹⁸ The minimum liability coverage is \$30,000 per person for injuries, \$60,000 per occurrence for injuries, and \$10,000 for property damage. Note that the insurance requirements do not appear to apply to all motorcycles

motorcycles are exempt from the requirements of personal injury protection under the Minnesota No-Fault Automobile Insurance Act (which establishes minimum required coverage levels for medical, lost wages, and related expenses). [Minn. Stat. §§ 65B.43](#), subds. 2, 13; [65B.48](#), subd. 5.

Use. Operators are subject to the same traffic laws as operators of other motor vehicles (except those that by their nature would not be relevant). The vehicles may be operated two abreast. Additional passengers are allowed under some circumstances.

Some prohibitions also apply, such as on carrying cargo that prevents keeping both hands on the handlebars, passing other vehicles by going between traffic lanes, and passing vehicles that occupy the same traffic lane as the motor scooter or motorcycle. Instruction permit holders face additional limits, including prohibitions on carrying passengers and driving at night. Operation is allowed on streets but not sidewalks. [Minn. Stat. § 169.974](#), subd. 5.

Safety equipment. The vehicle must be equipped with various safety features, including: at least one rearview mirror, a horn, a hand or foot brake, at least one headlight that has both low and high beams and is lighted at all times, a taillight, a brake light, rear license plate illumination, and footrests if it has passenger seating. [Minn. Stat. §§ 169.49; 169.50; 169.57](#), subd. 1; [169.60; 169.67](#), subd. 2; [169.974](#), subd. 3 and subd. 5(i).

A helmet is required for operators and passengers under the age of 18 as well as those operating with an instruction permit, and eye protection is required for all operators. [Minn. Stat. § 169.974](#), subds. 2, 4.

and motor scooters: under the definition of “motorcycle” in the chapter on automobile insurance, the vehicle’s engine must be “rated at greater than five horsepower.” [Minn. Stat. § 65B.43](#), subd. 13.

Motorized Bicycles (Mopeds)

Classification¹⁹

Motorized bicycles, commonly referred to as mopeds, are among the lightest of motorized two-wheeled devices. State law defines a motorized bicycle as a bicycle propelled by an electric or liquid fuel motor that has an engine displacement of up to 50 cc and up to two horsepower, and is capable of a top speed of 30 miles per hour on a flat surface. Although under the definition in law it appears to be classified as a type of bicycle, pedals are not specifically required and the device is self-propelled.²⁰ [Minn. Stat. § 169.011](#), subd. 45.



A key characteristic of mopeds is that they are less powerful than motor scooters or motorcycles. They are available in a number of styles that generally resemble a bicycle or a small scooter, although compared to a bicycle they weigh more (from 55 to over 250 pounds), have additional features such as built-in headlights and turn signals, and can have a platform for feet instead of pedals for manual use. Because the top speed of the device must not exceed 30 miles per hour, a number of scooters with 50 cc engines are classified as motorcycles under Minnesota law (since such scooters can commonly reach 35 to 40 miles per hour).

Regulations

Most of the same regulations that apply to motor scooters and motorcycles also apply to motorized bicycles, with a few differences. [Minn. Stat. §§ 169.223; 169.974](#).

Registration. The vehicle owner must register the vehicle and pay an annual registration tax of \$6. [Minn. Stat. § 168.013](#), subd. 1h. A license plate must be displayed on the rear of the vehicle. [Minn. Stat. § 169.79](#), subd. 3. A title is required. The vehicle is subject to the motor vehicle sales tax. [Minn. Stat. §§ 297B.01](#), subd. 11; [297B.02](#).

Operator licensing. An operator must have a motorized bicycle operator's permit, motorized bicycle instruction permit, or driver's license (although a two-wheeled vehicle endorsement is not required). Minors who are at least 15 years old can obtain an operator's or instruction permit. [Minn. Stat. § 171.02](#), subd. 3.

¹⁹ Image source: Pixabay, <https://pixabay.com/illustrations/moped-two-wheeled-vehicle-2632383/> (accessed July 23, 2020).

²⁰ While the statutory definition of motorized bicycle refers to the device as a bicycle, a "bicycle" under state law is defined as a "device capable of being propelled solely by human power..." [Minn. Stat. § 169.011](#), subsd. 4, 45.

Insurance. Liability insurance (which covers certain claims from another driver) is required and is the same as for passenger automobiles.²¹ [Minn. Stat. §§ 65B.43](#), subds. 2, 13; [65B.48](#), subd. 5. The vehicle is exempt from the requirements of personal injury protection under the Minnesota No-Fault Automobile Insurance Act (which establishes minimum required coverage levels for medical, lost wages, and related expenses).

Use. Operators must follow the same traffic laws as operators of motor scooters, motorcycles, and other motor vehicles (except those that by their nature would not be relevant). Operators must generally ride as close as is practical to the right-hand side of the road. The vehicles may be operated two abreast.

Some operating prohibitions also apply, such as on carrying cargo that prevents keeping both hands on the handlebars, passing other vehicles by going between traffic lanes, and passing vehicles that occupy the same traffic lane as the motorized bicycle, and operating on a sidewalk except to access a road. [Minn. Stat. §§ 169.223](#), subds. 1, 3, 5; [169.974](#), subd. 5.

A person who possess a motorized bicycle instruction permit is limited to riding within one mile of that person's residence. [Minn. Stat. § 171.05](#), subd. 3.

Motorized bicycles are subject to the same parking regulations as bicycles. Both can be parked on streets where parking of other motor vehicles is allowed and can park on a sidewalk unless restricted by local government (although they cannot impede normal movement of pedestrians). [Minn. Stat. §§ 169.222](#), subd. 9; [169.223](#), subd. 1(4).

Safety equipment. The vehicle must be equipped with various safety features that largely parallel those of motor scooters and motorcycles, including: at least one rearview mirror, a horn, a hand or foot brake, certain vehicle lighting, and footrests if it has passenger seating. For operation at night, as well as for motorized bicycles sold after June 1, 1987, lighting requirements consist of at least one headlight that has both low and high beams as well as a taillight (and the lights must meet the requirements for motorcycles).²² If so equipped, the headlight must be on at all times that the vehicle is operated. [Minn. Stat. §§ 169.223](#), subd. 4; [169.49](#); [169.50](#); [169.57](#), subd. 1; [169.60](#); [169.67](#), subd. 2; [169.974](#), subd. 3.

A motorcycle or bicycle helmet is mandatory for operators under the age of 18. Eye protection is also required.

²¹ The minimum liability coverage is \$30,000 per person for injuries, \$60,000 per occurrence for injuries, and \$10,000 for property damage.

²² In addition, a brake light and rear license plate illumination may be required.

Motorized Foot Scooters

Classification²³

Motorized foot scooters (also termed “electric scooters” or “e-scooters”) have a marked increase in use recently, primarily due to their introduction in fleets of shared rental offerings in numerous cities throughout the country. A motorized foot scooter is defined in statute as a device that:

- has handlebars;
- can be stood or sat on by the operator (so that a seat or saddle is not required);
- is powered by an internal combustion engine or an electric motor;
- has up to two wheels that are no more than 12 inches in diameter; and
- uses a motor capable of a maximum speed of not more than 15 miles per hour on a flat surface. [Minn. Stat. § 169.011](#), subd. 46.



The devices are usually lightweight platforms with two small wheels, designed similarly as a skateboard but with a motor as well as steering and acceleration control via handlebars. Braking is through a hand brake on the handlebar or by using a foot-operated rear-wheel brake. Some models have a seat or saddle that sometimes is removable (especially on more powerful and expensive offerings). Many motorized foot scooters weigh around 20 to 65 pounds, although heavier designs are available.

Models are available with gas and electric motors. Electric models generally have a top speed just below 15 miles per hour and a range of up to 20 miles. Ones with gas engines commonly range from 25 to 50 cc (1.5 to 2.5 horsepower). Some of the devices have a top speed of over 30 miles per hour, which prevents them from being classified as a motorized foot scooter under Minnesota law since they do not meet the statutory definition.

Most pocket bikes are excluded from the motorized foot scooter category (see the discussion on page 31).

Regulations

Minnesota law largely treats motorized foot scooters like bicycles, so that operators have the same rights as bicyclists and must generally follow the same laws. [Minn. Stat. § 169.225](#).

²³ Image source: Wikimedia Commons, https://commons.wikimedia.org/wiki/Category:Electric_kick_scooters#/media/File:Egret_One.jpg (accessed April 1, 2020).

Registration. The owner of a motorized foot scooter does not need to register it or pay registration taxes, and a certificate of title is not necessary. See [Minn. Stat. §§ 168.002](#), subd. 18 (e); [168.013](#), subd. 1; [168.09](#), subd. 1.

Operator licensing. A driver's license or permit is not required for operation. The minimum operator age is 12 years old.

Insurance. The device does not need to be insured. See [Minn. Stat. §§ 65B.43](#), subds. 2, 13; [65B.48](#), subd. 5.

Use. A motorized foot scooter may not be operated on a sidewalk, except to cross it. The device can be operated on a bicycle path, bicycle trail, bicycle lane, or bikeway unless (1) the pathway is reserved for nonmotorized use, or (2) operation is restricted by local government.

Motorized foot scooter operators must follow the same traffic laws as bicyclists, except that when making a left turn, the rider must dismount and cross the roadway on foot (and the person is then subject to any restrictions applicable to a pedestrian). Operators must ride as close as is practical to the right-hand side of the road.

No passengers besides the operator can be carried.

Safety equipment. Any person under age 18 must wear a helmet. The device can be operated when it is dark out, but under current Department of Public Safety regulations it must meet the same lighting requirements that apply to a bicycle: a headlight that is visible at least 500 feet ahead and a red reflector that can be seen from 600 feet behind when in the path of a motor vehicle's headlight.

Other States

Many states have addressed the status of motorized foot scooters, and there is variation among those states that have specific laws. Some prohibit operation on public roads, trails, or sidewalks.²⁴ States also have varying provisions for:

- minimum operator age (ranging from no state minimum to age 16);
- maximum permitted operating speed or top speed capability (most often at 15 or 20 miles per hour);
- maximum speed limit of streets on which they can be operated (such as 25 miles per hour in a few states);
- helmet requirements (required for minors in a handful of states); and

²⁴ See Del. Code tit. 21 § 4198N(a)-(b); N.J. Stat. § 39:4-14.12.

- degree of local authority powers to regulate the devices.²⁵

In addition to state laws, a number of cities regulate motorized foot scooter rental operations, covering topics that range from rental company licensing operational requirements to scooter parking.²⁶

²⁵ See National Conference of State Legislatures, “Trends | Coronavirus, Teen Vaping, E-Scooters and More”, March 24, 2020, <https://www.ncsl.org/bookstore/state-legislatures-magazine/trends-coronavirus-teen-vaping-e-scooters-and-more.aspx> (accessed July 23, 2020).

²⁶ For instance, see National Association of City Transportation Officials, “Guidelines for Regulating Shared Micromobility,” September 2019, https://nacto.org/wp-content/uploads/2019/09/NACTO_Shared_Micromobility_Guidelines_Web.pdf (accessed July 23, 2020).

Neighborhood Electric Vehicles and Medium-Speed Electric Vehicles

Classifications²⁷

Neighborhood electric vehicles and medium-speed electric vehicles are somewhat similar to golf carts, but have more power, can carry more passengers or cargo, and are designed for potential operation on public roads.

Neighborhood electric vehicle. Minnesota law defines a neighborhood electric vehicle (NEV) as a three- or four-wheeled, electrically powered motor vehicle that has a maximum speed of between 20 and 25 miles per hour on a flat surface. [Minn. Stat. § 169.011](#), subd. 47.



Medium-speed electric vehicle. A related classification is the medium-speed electric vehicle (MSEV). It is four-wheeled, electrically powered motor vehicle, but it can have a top speed of up to 35 miles per hour on a flat surface. It also must be fully enclosed, have at least one door for entry, be equipped with a roll cage or crush-proof design, have a minimum wheelbase of 40 inches, have wheels with a diameter of at least 10 inches, and other than speed capability, it must meet the federal safety standard for low-speed vehicles. [Minn. Stat. § 169.011](#), subd. 39.



The electric vehicles are rechargeable through the electrical grid and normally have a range of 30 to 75 miles before needing to recharge. Models come in styles ranging from two-seaters to small-scale trucks, normally weighing between 1,000 and 1,500 pounds. Originally produced mostly for niche uses such as military bases and planned communities, their use has widened.

Federal Low-Speed Vehicle Classification

In order to be legally operated on public roads in Minnesota, both NEVs and MSEVs must meet equipment and safety requirements set in a federal safety standard for “low-speed vehicles.”²⁸

²⁷ Image sources: <http://www.gemcar.com>; <http://electriccarsofamerica.com/ev-car-news/1-latest-news/2-30-electric-cars>.

²⁸ Federal law establishes a number of safety standards that regulate manufactured motor vehicles. The U.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA) establishes and oversees the safety standards through federal regulations. 49 U.S.C. § 30111; 49 C.F.R. § 571. The regulations cover technical and engineering specifications for motor vehicle safety equipment and crashworthiness, ranging from windshield wipers and brake hoses to crash resistance and material flammability. Each specification is referred to as a “federal motor vehicle safety standard.” The motor vehicle safety standard for low-speed vehicles was first established in 1998, and excludes most of the safety features required of other passenger motor vehicles.

[Minn. Stat. § 169.224](#), subd. 2. However, the NEV and MSEV definitions under state law do not completely match the federal classification. There are a couple of differences, but a key one regards the top speed capability of MSEVs, which under state law is allowed to be higher than the 25 miles per hour maximum set in the federal low-speed vehicle standard. (This might raise issues with federal preemption as well as the ability of vehicle manufacturers to legally produce MSEVs.)

Primarily because of the federal safety standard governing low-speed vehicle manufacture, most golf carts would not be considered an NEV or an MSEV that could be operated on public roads (except under the special permit discussed earlier in this briefing). Similarly, because of the safety standards mini-trucks would not be classified as an NEV or MSEV (as part of the statutory definition of a mini-truck, it is not manufactured to meet the safety standard for low-speed vehicles).

Regulations

Under Minnesota law NEVs and MSEVs are treated similarly to passenger vehicles, but their use is restricted to slower streets. See [Minn. Stat. § 169.224](#).

Registration. Both NEVs and MSEVs are considered passenger automobiles and the vehicle owner must register it. They are subject to the same registration tax (based on vehicle value, depreciated over time) as cars, pickup trucks, and vans. License plates must be displayed on the vehicles.

A certificate of title also must be obtained (which requires a vehicle identification number and a manufacturer's certificate of origin).²⁹ Homemade electric vehicles and retrofitted golf carts do not qualify for titling. [Minn. Stat. § 168A.05](#), subd. 9.

Operator licensing. A valid driver's license or instruction permit is required, and no special endorsement is necessary. A three-wheeled NEV can be operated without a motorcycle endorsement.

Insurance. Insurance requirements match that of other passenger automobiles, including liability coverage (which covers certain claims from another driver) and personal injury protection under the Minnesota No-Fault Automobile Insurance Act (which establishes minimum required coverage levels for medical, lost wages, and related expenses).³⁰

Use. Drivers of an NEV or MSEV are subject to the same traffic laws as operators of other motor vehicles. Neither class of vehicle can be operated on a street or highway

²⁹ The certificate of origin is created by the vehicle manufacturer and sent to a dealer along with the vehicle itself. The dealer then provides the certificate to the Department of Public Safety when the vehicle is sold.

³⁰ The minimum liability coverage is \$30,000 per person for injuries, \$60,000 per occurrence for injuries, and \$10,000 for property damage. The minimum personal injury protection (PIP) coverage is \$40,000 per person per accident (\$20,000 for hospital and medical expenses, and \$20,000 for other expenses such as lost wages).

with a speed limit above 35 miles per hour except to directly cross it. A local government can restrict use of the vehicle on its roads.

Safety equipment. The vehicle may only be operated on public streets and highways if it meets federal equipment standards established for low-speed vehicles. This includes a windshield, headlamps, tail-lamps, brake lights, front and rear turn signals, reflectors at the rear, rearview mirrors, a parking break, a seat belt, and a vehicle identification number. An NEV or an MSEV must also have a slow-moving vehicle emblem. [Minn. Stat. §§ 169.224](#), subd. 2; [169.522](#), subd. 1.

Other States

Almost all states have enacted regulations permitting NEVs or “low-speed vehicles,” as they are called in some states as well as in federal regulations.³¹ Across the states, definition of an NEV often overlaps with Minnesota’s and is based on the federal safety standard. Like Minnesota, the top speed of the vehicle is typically limited to 25 miles per hour. Unlike Minnesota, however, laws in a number of states—as well as in federal regulations—do not limit the vehicle category to electrically powered vehicles. Almost all states restrict NEV operation based on roadway speed limit, most commonly allowing their operation on roads with a limit of up to 30 or 35 miles per hour. A handful of states allow further regulation by local units of government and a couple restrict operation to daylight hours.

Nationally, most states do not have a classification for vehicles that can attain higher speeds equivalent to Minnesota’s MSEV category. (Similarly, the federal agency administering vehicle safety standards has not created a category for “medium-speed vehicles.”³²) One summary identifies nine states that have enacted legislation establishing a medium-speed vehicle class (Kentucky, Maryland, Minnesota, Montana, Oklahoma, Oregon, Tennessee, Texas, and Washington; also, the vehicles are authorized in Colorado once there are corresponding federal standards).³³ Across these states, the vehicle can have a top speed of 35, 45, and in one case 55 miles per hour. As with NEVs, MSEV operation is generally restricted to slower roads, generally with a maximum posted limit of 35 to 45 miles per hour.

³¹ Insurance Institute for Highway Safety, “Low- and Medium-speed Vehicles,” November 2017, <http://www.iihs.org/iihs/topics/laws/lowspeedvehicles?topicName=low--and-medium-speed-vehicles> (accessed November 7, 2017). Also see 49 CFR §§ 571.3 (“low-speed vehicle” definition) & 571.500 (Federal Motor Vehicle Safety Standards for “low-speed vehicles”).

³² 73 F.R. 55804 (Sept. 26, 2008), available at: <https://www.gpo.gov/fdsys/pkg/FR-2008-09-26/pdf/E8-22737.pdf> (accessed November 7, 2017).

³³ Insurance Institute for Highway Safety, “Low- and Medium-speed Vehicles,” November 2017, <http://www.iihs.org/iihs/topics/laws/mediumspeedvehicles?topicName=low--and-medium-speed-vehicles> (accessed November 7, 2017).

Pocket Bikes

Classification³⁴

Pocket bikes (also referred to as mini-bikes, mini-motorcycles, and mini-choppers) are not specifically defined in Minnesota law. They come in a variety of styles that most often resemble a miniature motorcycle, with a saddle that is commonly located about two feet off the ground. The vehicles are typically powered by a 49-cc gas engine (although electric models are available). They have wheel sizes around 10 inches, weights ranging from just over 30 pounds to about 100 pounds, and top speeds ranging from 30 to over 50 miles per hour.



Regulations

Devices considered pocket bikes are not likely to be permitted on public roads in Minnesota, based on device classifications and associated title and registration requirements.³⁵ A two-wheeled device that does not fit any more specific vehicle definition—which is likely the case for most pocket bikes—would most probably be classified under Minnesota law as a motorcycle. This is effectively the default category for two- and three-wheeled motorized vehicles.

However, smaller devices such as pocket bikes often lack safety equipment required under federal regulations faced by manufacturers for motorcycles, preventing a vehicle identification number (VIN) from being assigned. A VIN is necessary in order for Driver and Vehicle Services in the Department of Public Safety to issue a title as a motorcycle, so the vehicle would accordingly not be able to be titled or registered. A title and registration are necessary steps for legal operation on public roads. See [Minn. Stat. §§ 168.013](#), subd. 1; [168.09](#), subd. 1; [168A.04](#), subd. 1; [168A.085](#).

Other States

Legislative activity on pocket bikes has primarily consisted of prohibiting operation on public streets and roads, sidewalks, trails, and other public lands. Concerns expressed about the vehicles include engine noise, lack of safety equipment such as horns and mirrors, stability at higher speeds, and reduced visibility of both the vehicle (due to its small size) and the operator (due to positioning low to the ground). A couple of states have also enacted labeling and

³⁴ Image source: <http://www.squidoo.com/gas-pocket-bikes>.

³⁵ The regulatory structure shifted in 2012. Before the 2012 change, the classification for motorized foot scooters included devices with small wheels (up to 10 inches) or a modest top speed, which had the effect of including many pocket bikes. Following the change, for a device to be categorized as a motorized foot scooter it must have both a small wheel size (up to 12 inches) as well as a modest top speed (of 15 miles per hour). Most pocket bikes are too powerful to fit the current motorized foot scooter definition.

disclosure laws, such as requiring that manufacturers or retailers provide various forms of disclosure concerning limitations on legal pocket bike operation on public roads.³⁶

³⁶ See Cal. Veh. Code § 9955; Fla. Stat. § 316.2128; Conn. Stat. § 14-289j(f).

Segways and Self-Balancing Scooters

Classification³⁷

Segways, first introduced in 2001, can be identified with establishment of a category in Minnesota law termed “electric personal assistive mobility devices.” To be considered an electric personal assistive mobility device, it must be self-balancing, have two nontandem (that is, parallel) wheels, be able to transport only one person, use an electric motor, and have a maximum speed of up to 15 miles per hour. [Minn. Stat. § 169.011](#), subd. 26.

More recently there has been an expansion in self-balancing motorized devices. “Self-balancing scooters” and “hoverboards,” as they are often termed, include an array of electric gyroscopic devices that have small wheels, generally lack handlebars or seating, and have a platform that tilts independently with each foot. Like Segways, self-balancing scooter movement is controlled by shifts in balance and body position.



Regulations

Operators of an electric personal assistive mobility device have the same rights and responsibilities as pedestrians, with some additional requirements. [Minn. Stat. § 169.212](#).

Registration. They do not need to be registered, and a certificate of title is not necessary.

Operator licensing. A driver’s license or permit is not required for operation.

Insurance. The device does not need to be insured.

Use. The device may be operated on a bicycle path. Operators must use due care and go at speeds that are “reasonable and prudent under the conditions.” The personal mobility device can only be operated on a road under limited conditions, including to directly cross the roadway, if the sidewalk is obstructed or unavailable, under direction of a traffic control device, or temporarily to reach a motor vehicle. [Minn. Stat. § 169.212](#), subd. 2.

No passengers may be carried.

Local units of government are prevented from further regulating the device except concerning operation on roads with a speed limit of up to 35 miles per hour.

³⁷ Image sources: <http://www.segway.com>; Wikimedia Commons, https://commons.wikimedia.org/wiki/File:Hoverboard_2.jpg (accessed December 18, 2017).

Safety equipment. The device must have reflectors on its front, back, and wheels, which can be seen from 600 feet when in the path of a motor vehicle's headlights.

Other States

The majority of states allow Segways to be used on public sidewalks and bike paths. Segway laws in some states like Minnesota encompass self-balancing scooters; at least a few states and localities have specifically addressed the devices. For instance, California permits their operation but sets a minimum age of 16, mandates a bicycle helmet, and limits the device to up to 15 miles per hour.³⁸

³⁸ Cal. Veh. Code §§ 21291, 21292, 21294

Wheelchairs

Classification³⁹

Wheelchairs are in an altogether separate category from other low-power and unconventional vehicles. The statutory classification includes scooters and tricycles “used by a disabled person as a substitute for walking.” [Minn. Stat. § 169.011](#), subd. 93.



Regulations

Under Minnesota law, persons in wheelchairs are considered pedestrians rather than vehicle operators and have the same rights and responsibilities as pedestrians. This is true whether the wheelchair is powered or not. Wheelchairs are required to remain on sidewalks and stay off streets, except to cross them or in situations where a passable or useable sidewalk is not available. [Minn. Stat. § 169.21](#), subd. 5.



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³⁹ Image source: Pixabay, <https://pixabay.com> (accessed April 1, 2020).