
CONSENT

Bill No: AB 545
Author: Davies (R)
Amended: 3/24/25 in Assembly
Vote: 21

SENATE TRANSPORTATION COMMITTEE: 13-0, 6/10/25
AYES: Cortese, Strickland, Arreguín, Blakespear, Cervantes, Dahle, Grayson,
Limón, Menjivar, Richardson, Seyarto, Umberg, Valladares
NO VOTE RECORDED: Archuleta, Gonzalez

SENATE APPROPRIATIONS COMMITTEE: Senate Rule 28.8

ASSEMBLY FLOOR: 69-0, 5/8/25 (Consent) - See last page for vote

SUBJECT: Vehicles: electric bicycles

SOURCE: Author

DIGEST: This bill adds applications to the list of products that a person cannot sell to modify the speed capability of an electric bicycle (e-bike) such that it no longer meets the statutory definition of an e-bike.

ANALYSIS:

Existing law:

- 1) Prohibits a person from tampering with or modifying an electric bicycle as to change the speed capability of the bicycle unless the modification keeps within the existing speed allowances of an electric bicycle. (Vehicle Code (VEH) 24016)
- 2) Prohibits a person from selling a product or device that can modify the speed capability of an electric bicycle such that it no longer meets the definition of an electric bicycle. (VEH § 24016)

- 3) Defines an e-bike as a bicycle equipped with fully operational pedals and an electric motor that is not physically capable of exceeding 750 watts of power. (VEH § 312.5)
- 4) Defines a class 1 e-bike as a bicycle equipped with a motor that provides assistance only when the rider is pedaling, that is not capable of exclusively propelling the bicycle, that ceases to provide assistance when the bicycle reaches the speed of 20 miles per hour (mph), and is not capable of providing assistance to reach speeds greater than 20 miles per hour. (VEH § 312.5)
- 5) Defines a class 2 e-bike as a bicycle equipped with a motor that may be used exclusively to propel the bicycle, and that is not capable of providing assistance when the bicycle reaches the speed of 20 mph. (VEH § 312.5)
- 6) Defines a class 3 electric bicycle as a bicycle equipped with a motor that provides assistance only when the rider is pedaling, that is not capable of exclusively propelling the bicycle, and that ceases to provide assistance when the bicycle reaches the speed of 28 mph. (VEH § 312.5)

This bill prohibits a person from selling an application that can modify the speed capability of an e-bike such that it no longer meets the definition of an e-bike.

Comments

- 1) *Purpose of this bill.* According to the author, “California prides itself on having the safest and cleanest forms of transportation in the country. To help our state meet its climate goals, the expansion of various forms of modes of transportation has increased within the past 10 years. One of these modes is electric bicycles. These devices are categorized in three speed classes. AB 545 is a common-sense measure to ensure that no manufacturer may sell or utilize an application that would alter the speed of a designated electric bicycle. This small, but important change will keep riders, especially younger riders, safe from technology that could inadvertently allow them to go faster than they are used or anticipate.”
- 2) *E-bikes.* Electric bicycles, or e-bikes, look like regular bicycles but include an electric motor and battery. These bikes are rapidly growing in popularity. The global e-bike market size was valued at \$43.59 billion in 2023. The market is projected to grow from \$50.14 billion in 2024 to \$148.70 billion by 2032. In California, e-bikes must be equipped with fully operable pedals and an electric motor that does not exceed 750 watts of power. The fastest e-bikes are class 3,

with a maximum pedal assisted speed of 28 mph. Class 2 e-bikes are the only e-bikes with throttle assist and max out at 20 mph on throttle assist alone. A bicycle that is capable of going faster than 20 mph using a throttle alone or faster than 28 mph because of pedal assist is not an e-bike under California law. Many e-bikes can technically go above the legal speed limits, but manufacturers have installed devices and/or software that prevents the bike from exceeding the allowable speed for legal and safety reasons.

- 3) *E-bike safety.* As e-bike popularity has surged in recent years, so have concerns about their safety—in addition to safety concerns about other micromobility devices, such as electric scooters and hoverboards. According to a 2023 report from the federal Consumer Product Safety Commission (CPSC) *Micromobility Products-Related Deaths, Injuries, and Hazard Patterns: 2017–2022*, “injuries associated with all micromobility devices increased nearly 21% in 2022 from 2021. Micromobility-related injuries have trended upward since 2017, increasing an estimated average 23% annually.” The report estimated that e-bikes accidents led to 53,200 emergency department visits from 2017 through 2022, which accounts for 15% of the overall micromobility (e-bikes, e-scooters, and hoverboards) injury estimate in the same timeframe.
- 4) *E-bike accelerating apps.* Currently, internet-based applications—commonly known as “apps”—are available on the Apple and Google App Stores that suggest they can “unlock” an e-bike to allow it to exceed the legal e-bike speed limit. For example, one such app states that it can “adjust speed limits and throttle settings with precision.” One user states in the app’s reviews: “I have had a super 73 for 2 years now. One of the reasons I got a super 73 was because it could go faster than 20mph. When I saw you could not switch it to off road mode anymore I call my local shop to ask them. That is how I ended up here. This is the best \$8.99 that I have ever spent! I also noticed that it is a little bit faster. I would highly recommend it if you have a super 73.”

Super73 is a bicycle with an electric motor capable of traveling at speeds considerably faster than the law permits. However, as a result of the passage of SB 1271 (Min, Chapter 891, Statutes of 2024) which clarified the speed limits of e-bikes, the manufacturer of Super73 removed the 1st party application feature that allowed riders to unlock “unlimited mode.” This mode allowed riders to travel at speeds greater than what would classify the device as an e-bike under the law. While Super73 removed this feature from their application, the device still can be modified through third-party applications to

travel at much greater speeds. This bill would prohibit the sale of such applications.

Related/Prior Legislation

SB 586 (Jones, 2025) – Defines an eMoto as an electric two-wheeled device built on a bicycle infrastructure that does not have pedals or an engine number and designates eMotos as off-highway vehicles. This bill is currently in the Assembly Transportation Committee.

AB 875 (Muratsuchi, 2025) – Authorizes a peace officer to either impound a bicycle with an electric motor capable of going speeds greater than what is permitted by an e-bike or a class 3 e-bike if the person operating it is under the age of 16. This bill is currently in the Senate Transportation Committee.

AB 1774 (Dixon, Chapter 55, Statutes of 2024) – Prohibits the sale of a device that makes it someone can increase the speed of an e-bike beyond the speed permitted by law (28 mph).

SB 1271 (Min, Chapter 891, Statutes of 2024) – Modified the definition of an e-bike to make it clear that it cannot be capable of going speeds greater than 20 miles per hour (class 1 or 2) or 28 miles per hour on pedal assist (class 3).

SB 381 (Min, Chapter 869, Statutes of 2023) – Requires the Mineta Transportation Institute at San Jose State University, in consultation with relevant stakeholders, to conduct a study on electric bicycles and the safety of riders and pedestrians by January 1, 2026.

AB 1096 (Chiu, Chapter 568, Statutes of 2015) – Established the definitions, classification, and requirements for the operation, sale, and manufacturing of e-bikes.

FISCAL EFFECT: Appropriation: No Fiscal Com.: Yes Local: Yes

SUPPORT: (Verified 6/30/25)

AAA Northern California, Nevada & Utah
Automobile Club of Southern California
California Coalition for Children's Safety and Health
City of Laguna Niguel
County of Marin

Marin County Board of Supervisors
Streets are for Everyone
Streets for All

OPPOSITION: (Verified 6/30/25)

None received

ARGUMENTS IN SUPPORT: Writing in support, the Marin County Board of Supervisors states, “we know that one of the serious dangers of e-bikes is the illegal tampering of these devices to go well-beyond their legal motor-assisted speed limits. For Class 1 and Class 2 e-bikes, that speed limit is 20mph. For Class 3 e-bikes, the legal motor-assisted speed limit is 28mph. Yet our school and law enforcement partners have encountered instances of e-bikes modified—sometimes via mobile apps—to reach speeds of 40 to 50 mph. These speeds pose a serious safety risk for any rider, but particularly for young and inexperienced riders who may not fully understand the risks of tampering with speed controls.”

ASSEMBLY FLOOR: 69-0, 5/8/25

AYES: Addis, Aguiar-Curry, Ahrens, Alanis, Alvarez, Ávila Farías, Bains, Bauer-Kahan, Bennett, Berman, Bonta, Bryan, Calderon, Caloza, Castillo, Chen, Connolly, Davies, DeMaio, Dixon, Elhawary, Ellis, Fong, Gabriel, Garcia, Gipson, Mark González, Hadwick, Haney, Harabedian, Hart, Hoover, Jackson, Kalra, Krell, Lackey, Lee, Lowenthal, Macedo, McKinnor, Muratsuchi, Nguyen, Ortega, Pacheco, Papan, Patel, Patterson, Pellerin, Petrie-Norris, Quirk-Silva, Ramos, Ransom, Michelle Rodriguez, Rogers, Blanca Rubio, Schiavo, Schultz, Sharp-Collins, Solache, Soria, Stefani, Ta, Tangipa, Valencia, Ward, Wicks, Wilson, Zbur, Rivas

NO VOTE RECORDED: Arambula, Boerner, Carrillo, Flora, Gallagher, Jeff Gonzalez, Irwin, Celeste Rodriguez, Sanchez, Wallis

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