

761—450.3(307,321) Minimum requirements for constructing and equipping specially constructed or reconstructed motorcycles or motorized bicycles. The following standards are minimum requirements to meet the definition of a specially constructed or reconstructed motorcycle or motorized bicycle as defined in Iowa Code section 321.1:

450.3(1) Upgrade pulls—minimum speed. Iowa Code section 321.382 applies.

450.3(2) Frame/chassis. The motorcycle or motorized bicycle frame/chassis, including the suspension components and engine mountings, is of sufficient strength, capable of supporting the combined weight of all vehicle components and riders for which the vehicle was designed.

450.3(3) Front end assembly.

a. Trail (extended fork measured in inches). The reconstructed or specially constructed motorcycle or motorized bicycle does not have the front fork so extended as to place the center of the front wheel axle farther than 36 inches from a vertical plane through the steering axis.

b. Rake (extended fork measured in degrees). The reconstructed or specially constructed motorcycle or motorized bicycle does not have the front fork so extended as to exceed a 45-degree angle between the fork assembly and a vertical plane through the steering axis.

c. Extensions. The reconstructed or specially constructed motorcycle or motorized bicycle is not equipped with extension slugs. However, one-piece extension tubes and springer units, if approved, are acceptable.

d. Wheelbase. The reconstructed or specially constructed motorcycle or motorized bicycle does not have an overall wheelbase, measured from the center of the front axle to the center of the rear axle, of less than 40 inches.

e. Motorcycle front end geometry. A representation of the front end geometry of a motorcycle is depicted in the Appendix to this rule.

450.3(4) Brakes. The motorcycle and motorized bicycle is equipped with at least a rear brake. If the vehicle is also equipped with a front brake, all control cables, lines and hoses are located and secured so as not to become pinched between the fork and frame members when the wheel is turned completely to the left or right. Brake-actuating devices are in a readily accessible location, unencumbered by vehicle components. A suitable mechanism is provided for the purpose of automatically returning the actuating devices to a normal position upon release.

450.3(5) Tires, wheels, rims. The motorcycle tires are of pneumatic design with a minimum width of two and twenty-five hundredths inches and designed for highway use. Wheel rim diameters are not less than 10 inches and rims otherwise comply with applicable federal standards.

450.3(6) Steering and suspension.

a. Stability. The motorcycle or motorized bicycle steering and suspension provides the operator with the means of safely controlling vehicle direction.

b. Wheel alignment. The rear wheel of a two-wheel motorcycle or motorized bicycle tracks behind the front wheel within one inch with both wheels in a vertical plane when the vehicle is operating on a straight course. On a three-wheel motorcycle or motorized bicycle, the two wheels mounted on the rear axle have a wheel track distance not less than 30 inches and the midpoint of the rear wheel track distance is within 1 inch of the front wheel track when the vehicle is proceeding on a straight course.

c. Steering.

(1) The steering head is provided with a bearing or similar device that will allow the steering shaft to turn freely in rotational motion only. All handlebar-mounted control cables, wires, lines and hoses are located and secured so as not to become pinched between the fork and frame members when the wheel is turned completely to the right or the left.

(2) A steering wheel may be used on a three-wheel reconstructed or specially constructed motorcycle or motorized bicycle provided:

1. The steering wheel is circular or nearly circular in shape, having an outside diameter of not less than 13 inches.

2. The steering wheel has no less than two turns and no more than six turns when the road wheels are turned from lock to lock.

d. Handlebars. Handlebars are of sturdy construction, adequate in size (length) to provide proper leverage for steering, and capable of withstanding a minimum force of 100 pounds applied to each hand grip in any direction. The handlebars provide a minimum distance of 18 inches between grips after final assembly.

e. Hand grips. The motorcycle or motorized bicycle has handlebars equipped with hand grips of nonslip design or material.

f. Suspension. The motorcycle or motorized bicycle is equipped with a suspension system, and the suspension system applies to at least the front wheel. The suspension system(s) is designed for the purpose of maximum vehicle stability.

450.3(7) Fuel system. All fuel system components, including the tank, pump, tubing, hoses, clamps, etc., are securely fastened to the motorcycle or motorized bicycle so as not to interfere with vehicle operation and are leakproof when the vehicle is in its normal operating attitude. Fuel lines and tank are positioned in a manner so as to prevent their contact with the engine head, manifold, exhaust system, or other high temperature surfaces or moving components. The fuel system is adequately vented and provided with a fuel shutoff valve located between the fuel supply and the engine.

450.3(8) Exhaust system. The motorcycle or motorized bicycle with an internal combustion engine is equipped with an exhaust system incorporating a muffler or other mechanical device for the purpose of reducing engine noise. Cutouts and bypasses in the exhaust system are prohibited. The system is leakproof and all components are securely attached to the vehicle and located so as not to interfere with the operation of the motorcycle or motorized bicycle. Shielding is provided to prevent inadvertent contact with the exhaust system by the operator and/or passenger during normal operations.

450.3(9) Mirrors. The motorcycle and motorized bicycle is equipped with at least one mirror of unit magnification, securely affixed to the handlebar and capable of adjustment within a range that will reflect an image that includes at least the horizon and the road surface to the rear of the motorcycle or motorized bicycle. The mirror consists of a minimum reflective surface of ten square inches. All mirrors are regular in shape (circular, oval, rectangular, or square) and do not contain sharp edges or projections capable of producing injury.

450.3(10) Seat or saddle. A seat or saddle securely attached to the vehicle is provided for the use of the operator. The seat or saddle is not less than 20 inches above a level road surface when measured to the lowest point on top of the seat or saddle cushion with the driver seated in a driving position. The seat or saddle adjustment locking device prevents relative movement of the seat from its selected and secured position under all normal vehicle operating conditions.

450.3(11) Horn. The motorcycle or motorized bicycle complies with Iowa Code sections 321.432 and 321.433.

450.3(12) Speedometer and odometer. The motorcycle or motorized bicycle is equipped with a properly operating speedometer and odometer calibrated in miles per hour and miles respectively and is fully illuminated when the headlamp(s) is activated.

450.3(13) Lighting equipment. The motorcycle or motorized bicycle is equipped with at least one headlamp but not more than two, mounted securely. Headlamp(s) are mounted not less than 24 inches, nor more than 54 inches, above the level road surface. A headlight beam indicator light is located within the operator's field of vision and illuminated automatically when the high beam of the headlamp is actuated. The motorcycle or motorized bicycle is equipped with a tail and brake light assembly and a license plate light. All original lamps and lighting equipment provided on the motor vehicle by the manufacturer are maintained in working condition or are replaced with equivalent equipment.

450.3(14) Footrest. The motorcycle is equipped with two footrests, one on each side of the vehicle and footrests are provided for each designated seating position. Footrests are located so as to provide reasonable accessibility. Footrests are able to fold upward if they protrude beyond the side of the motorcycle's fixed items. The motorized bicycle is equipped with either two footrests or two pedals, one on each side of the vehicle, to provide reasonable accessibility.

450.3(15) Highway bars. If a motorcycle or motorized bicycle is so equipped, highway bars (alternate footrests) are located at a maximum distance of 26 inches from the foot controls and do not interfere with the operation of the foot controls.

This rule is intended to implement Iowa Code sections 307.12(1)“j” and 321.23.
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