761—450.2 (321) Equipment requirements for specially constructed, reconstructed, street rod, and replica motor vehicles, other than motorcycles and motorized bicycles. The following standards are minimum requirements for constructing and equipping specially constructed, reconstructed, street rod, and replica motor vehicles other than motorcycles and motorized bicycles.

450.2(1) *Definitions.* The definitions in Iowa Code section 321.1 and rule 761—400.16(321) are hereby made part of this chapter.

450.2(2) *Application.* As outlined in rule 761—400.16(321), the applicant shall submit the required application forms and exhibits to the county treasurer. The vehicle and ownership documents shall be examined by the department. If the department determines that the motor vehicle complies with this rule, that the integral parts and components have been identified as to ownership, and that the application forms have been completed properly, the department shall assign an identification number to the vehicle and certify that the motor vehicle is eligible for titling and registration. If the frame or unibody specified on an application for a specially constructed, reconstructed, street rod, or replica motor vehicle is designated "not for highway use," the application shall not be approved. The exchange of compatible body parts does not constitute a specially constructed, reconstructed, street rod, or replica motor vehicle. The removal, addition, or substitution of reconstructed motor vehicle parts modifies the vehicle's external appearance so that it does not reflect the original make or manufacturer model for that model.

450.2(3) *Defroster and defogging device.* Every closed motor vehicle shall be equipped with a device capable of defogging or defrosting the windshield area.

450.2(4) *Door latches.* Every motor vehicle that is equipped with doors leading directly into a compartment that contains one or more seating accommodations shall be equipped with mechanically actuated door latches which firmly and automatically secure the door when pushed closed and which allow each door to be opened from the inside by the actuation of a convenient lever, handle or other nonelectric device. Interior handles must be visible.

450.2(5) *Floor pan.* Every motor vehicle shall be equipped with a floor pan under the entire passenger-carrying compartment. The floor pan shall support the weight of the number of occupants that the vehicle is designed to carry. The floor pan shall be so constructed that it prevents the entry of exhaust fumes.

450.2(6) *Glazing.*

a. Windshields. Every motor vehicle shall be equipped with a laminated safety glass windshield that complies with and bears the approval marking of the American National Standards Institute (ANSI) Z 26.1 Standard. The windshield shall be in such a position that it affords continuous horizontal frontal protection to the driver and front seat occupants. The minimum vertical height of the unobstructed windshield glass shall be 6 inches. This paragraph does not preclude the use of a windshield that can be folded down to a horizontal position, provided that the windshield can be firmly fastened in both the vertical and horizontal positions.

b. Side and rear glass. Side and rear glass is not required in motor vehicles. If present, however, this glass must be either laminated or tempered safety glass bearing the approval of the ANSI Z 26.1 Standard.

450.2(7) *Driver visibility.* Each motor vehicle shall provide the driver with a minimum outward horizontal vision capability of 90 degrees each side of a vertical plane passing through the fore and aft centerline of the vehicle. This plane of vision may be interrupted by window framing and windshield door support posts not exceeding 4 inches in width at each side location.

450.2(8) *Hood latches.* If a motor vehicle is equipped with a front-opening hood, that hood shall be equipped with a primary and secondary latching system to hold the hood in a closed position.

450.2(9) *Instruments and controls.* Each motor vehicle shall be equipped with:

a. An operating speedometer calibrated to indicate "miles per hour."

b. An operating odometer calibrated to indicate "total miles driven."

c. A steering wheel circular or nearly circular in shape, having an outside diameter of not less than 13 inches.

d. An accelerator control system that returns the engine throttle to an idle position automatically when the driver removes the actuating force from the accelerator control.

450.2(10) *Brakes.*

a. Every motor vehicle shall be equipped with brakes acting upon all wheels. The service brakes must be capable of meeting or exceeding the stopping requirements of Iowa Code section 321.431. If necessary, the braking system may be tested by a road test on a public roadway by an officer of the motor vehicle division of the department.

b. Every motor vehicle shall be equipped with a parking brake operating on at least two wheels applied with required effectiveness despite exhaustion of any source of energy or leakage of any kind in the service brake system. The parking brake shall meet the requirements of Iowa Code sections 321.430 and 321.431.

450.2(11) *Rearview mirror.* Every motor vehicle shall be equipped with two rearview mirrors, each having substantial unit magnification. One shall be mounted on the inside of the vehicle in such a position that it affords the driver a clear view to the rear. The other shall be mounted on the outside of the vehicle on the driver's side in such a position that it affords the driver a clear view to the rear. When an inside mirror does not give a clear view to the rear, a right-hand outside mirror shall be required in lieu thereof. The mirror mounting shall provide a stable support for the mirror, and shall provide for mirror adjustment by tilting in both horizontal and vertical directions. Each mirror shall have a minimum of 10 square inches of reflective surface.

450.2(12) *Seat belts.* Every motor vehicle shall be equipped with at least a Type I (lap belt) seat belt for the driver and each passenger seating position. The belts at each location shall comply with DOT Motor Vehicle Safety Standard No. 209, and shall be firmly anchored to the vehicle body.

450.2(13) *Seating.* All bench-type and individual seats in motor vehicles shall be firmly anchored to structural components or body parts.

450.2(14) *Fenders and mud flaps.* Rescinded IAB 9/8/10, effective 10/13/10.

450.2(15) *Bumpers.* Rescinded IAB 9/8/10, effective 10/13/10.

450.2(16) *Exhaust system.* Every motor vehicle shall have an exhaust system meeting the following requirements:

a. The system shall be free of leaks, including the exhaust manifold (or headers), piping forward of the muffler, the muffler(s), and tail piping.

b. Exhaust fumes shall be emitted to the extremity of the vehicle, behind the rear wheels, or to the extremity of the vehicle within 6 inches in front of the rear wheels. Exhaust fumes from trucks, other than enclosed vans, may be emitted to the rear of that part of the vehicle designed for and normally used for carrying the driver and passengers.

c. Each exhaust system must be equipped with a muffler that prevents excessive noise.

d. No part of the exhaust system shall pass through any area of the vehicle that is used as a passenger-carrying compartment, and shall be so constructed that persons entering the vehicle cannot make contact with the exhaust system.

e. All exterior side exhaust pipes must be fully shielded and any vertical truck exhaust stacks shall be shielded to the top of the cab.

450.2(17) *Frame.* Every vehicle shall be equipped with a frame consisting of wall box tubing, round tubing, wall channel or unitized construction capable of supporting the vehicle, its load and the torque produced by the power source.

450.2(18) *Fuel system.* Every motor vehicle shall have a fuel system in which all components are securely fastened with fasteners designed for this purpose, including the tank, tubing, hoses, clamps, etc. The filler from the system shall be located in a position not within the passenger-carrying compartment, and shall be capped. The system shall be leakproof, and fuel lines shall be positioned so as not to come in contact with high temperature surfaces or moving parts.

450.2(19) *Steering and suspension.*

a. Every motor vehicle shall have no parts extending below the wheel rims in their lowest position, except for tires and electrical grounding devices designed for this purpose.

b. The steering system shall remain unobstructed when turned from lock to lock.

c. The steering wheel shall have no less than two turns and no more than six turns when turning the road wheels from lock to lock.

d. While in a sharp turn at a speed between 5 and 15 MPH, release of the steering wheel shall result in a distinct tendency for the vehicle to increase its turning radius.

e. No motor vehicle shall be constructed so that the weight on any axle is less than 20 percent of the gross weight of the vehicle and load.

f. Motor vehicles shall be equipped with a damping device at each wheel location providing a minimum relative motion between the unsprung axle and the chassis of plus or minus 2 inches.

g. When each corner of the vehicle is depressed and released the damping device shall stop vertical body motion within two cycles.

h. There shall be no heating or welding on coil springs, leaf springs, or torsion bars.

450.2(20) *Tires.* Tires shall comply with Iowa Code section 321.440. Each tire shall have a load-bearing capacity in keeping with the size and weight of the vehicle.

450.2(21) *Lighting and electrical system.* Each motor vehicle shall be equipped with approved lighting devices in sufficient number, type, and locations to meet the requirements of Iowa Code sections 321.384 to 321.423, including headlamps, rear lamps, license plate lamp, rear reflectors, parking lamps, stop lamps, turn signals, and high-low beam indicator. In addition, every motor vehicle shall be equipped with:

a. A driver-controlled switch capable of selecting high and low beams (dimmer switch).

b. A motor vehicle more than 40 inches in width shall be equipped with turn signal lamps and have a manually operated switch controlled by the driver that shall cause the turn signal lamps to function. This switch shall be self-canceling.

c. A horn that shall be electrically actuated, and shall emit a sound clearly audible from a distance of 200 feet. The horn shall be actuated with a switch easily accessible to the driver when operating the vehicle.

d. All wiring shall be done in an orderly and workmanlike fashion, with no wiring in contact with high temperature surfaces or moving parts.

e. Headlamps shall be in a plane that is perpendicular to a vertical plane through the longitudinal centerline of the vehicle. The headlamps shall be mounted not less than 24 inches, nor more than 54 inches, above the road surface when measured to the headlamp center.

f. A tail lamp or lamps shall be mounted on the rear of the motor vehicle or vehicle, exhibiting a red light plainly visible from a distance of 500 feet to the rear. The tail lamp or lamps shall be mounted not less than 15 inches, nor more than 72 inches, above the roadway.

g. All original lamps and lighting equipment provided on the motor vehicle by the manufacturer shall be maintained in working condition or shall be replaced with equivalent equipment.

This rule is intended to implement Iowa Code section 321.23.

[**ARC 9048B**, IAB 9/8/10, effective 10/13/10]