**Section 443.APPENDIX I Seat Belts through Steps**

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| a) SEAT BELTS | | | | | | | | | PROCEDURES/SPECIFICATIONS: | | | | | | | |
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|  | | | | | | | | | *A seat belt shall be installed for the driver.* (Section 12-807 of the Illinois Vehicle Equipment Law) | | | | | | | |
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|  | | | | | | | | | Seat belts shall be installed for each pupil as required by 49 CFR 571.222. At all times, each seat belt shall be readily available for quick and easy use. If retractors are installed, they shall be the automatic locking type. Each belt assembly shall be clean. Belt material, buckle, tongue, etc., of each driver's belt shall remain above floor when not in use. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Exception: On a bus with incomplete vehicle (chassis) manufactured in March 1977 or earlier, pupil belts are not required. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Exception: On a bus manufactured in August 1974 or earlier, driver's belts; etc., need not remain above floor. | | | | | | | |
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|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Seat belts are not secured, not adjustable, cracked, broken, frayed, torn or dirty. Retractor or buckle does not operate properly. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
| b) SEAT, DRIVER'S | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | PROCEDURES/SPECIFICATIONS: | | | | | | | |
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|  | | | | | | | | | The driver's seat shall be rigidly positioned and have a forward and backward adjustment without the use of tools or other nonattached devices. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Seat padding and covering shall be in good condition (i.e., fre from holes and tears). Seat cushions shall be securely fastened to the seat frame. | | | | | | | |
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|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Driver's seat is not securely anchored to floor; in poor condition; adjustment mechanism does not function properly. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
| c) SEATS, PASSENGER | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | PROCEDURES/SPECIFICATIONS: | | | | | | | |
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|  | | | | | | | | | For buses purchased after September 1974 all seats shall have a minimum depth of 14 inches and a minimum back rest height of 20 inches with a 13 inch allowable average hip room in determining seating capacity. All seats shall be forward facing and securely fastened to part or parts of bus which support them. No bus shall be equipped with jump seats or portable seats (does not include child restraint systems). The center-to-center seat spacing shall be no more than 24 inches, measured from the seating reference point to the seat back or guard barrier in front of the seat. Padding and covering shall be of fire resistant material. Minimum 36 inch headroom for sitting position above top of undepressed cushion line on all seats (measured vertically not more than seven inches from sidewall at cushion height and at front and rear center of cushion). Backs of all seats of similar size shall be of the same width at top and the same height from floor and shall slant at the same angle with the floor. The top and side rails and seat backs shall be padded to cushion level. Seat padding and covering shall be in good condition (i.e., free from holes and tears). Seat cushions shall be securely fastened to the seat frame. (49 CFR 571.222) | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Exception: All buses purchased prior to September 1974 and after January 1, 1972, shall have a seating plan for 16 pupils consisting of four rows of 30 inch forward facing seats with a minimum 12 inch aisle down the center. No jump or portable seats allowed. No seat or other object placed in the bus which restricts passageway to emergency door to less than 12 inches. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Exception: Those vehicles used as a school bus by school districts and private contractors prior to January 1, 1972, and are still in their possession that had previously passed a school bus safety inspection can still be utilized if they continue to meet the inspection requirements that were in effect at that time. These vehicles will not have to be brought up to the above standards. | | | | | | | |
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|  | | | | | | | | | A flip-up seat may be located only adjacent to any side emergency door. For buses manufactured on or after September 1, 1994, the flip-up seat must conform to the following: | | | | | | | |
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|  | | | | | | | | | 1) | The seat must be designed so that, when in the folded position, the seat cushion is flat against the seat back to prevent a child's limb from becoming lodged between the seat cushion and seat back. | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | 2) | The seat must be designed to discourage a child from standing on the seat cushion when in the folded position. | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | 3) | The working mechanism under the seat must be covered to eliminate any tripping hazard. | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | 4) | All sharp metal edges on the seat must be padded to prevent any sagging hazard. | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | 5) | No portion of the door latch mechanism be obstructed by a seat. | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | 6) | There must be at least 11.7 inches (30 cm) measured from the door opening to the seat back in front. (49 CFR 571.217) | | | | | | |
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|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Passenger seats are not firmly attached to body; broken frame; cushions not firmly attached; padding and covering not fire resistant. Padding or covering is loose, in poor condition, or missing; seats are torn or have holes; minimum seat dimensions or seat spacing is not in compliance. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
| d) STEERING SYSTEM | | | | | | | | |  | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | 1) Exterior | | | | | | | |  | | | | | | | |
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|  | | | A) King Pins | | | | | | PROCEDURES/SPECIFICATIONS: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Raise vehicle so as to unload kingpins (brakes should be applied to eliminate wheel bearing looseness). Either grasp wheel at top and bottom or use a bar for leverage. Attempt to rock wheel in and out. Check movement at extreme top or bottom of tire. If movement exists, place a dial indicator, tape measure, or a fixed device at the wheel and measure amount of movement. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Place leverage bar under tire. Raise bar to check for vertical movement between spindle and support axle. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Wheel bearing movement exceeds ¼ inch; or kingpin movement exceeds: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Wheel size | | | | Max allowed | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | 16" or less | | | | ¼" | | | |
|  | | | | | | | | | 16.1" to 18" | | | | ⅜" | | | |
|  | | | | | | | | | over 18" | | | | ½" | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | B) Linkage | | | | | PROCEDURES/SPECIFICATIONS: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | For buses with single "I" beam or tube type front axle, hoist bus under axle. For buses with twin "I" beam type front axles or with "A frame" control arms, each axle or arm must be hoisted independently so as to load the ball joints. Grasp front and rear of tire and attempt to shake assembly right and left to determine linkage looseness. Measure movement of wheel. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Inspect for damage to or looseness in the following linkage components: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | i) | | Ball Joints | | | | | |
|  | | | | | | | | | ii) | | Cotter Pins | | | | | |
|  | | | | | | | | | iii) | | Drag Link | | | | | |
|  | | | | | | | | | iv) | | Idler Arm | | | | | |
|  | | | | | | | | | v) | | Pitman Arm | | | | | |
|  | | | | | | | | | vi) | | Steering Box | | | | | |
|  | | | | | | | | | vii) | | Tie Rod | | | | | |
|  | | | | | | | | | viii) | | Tie Rod Ends | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Measurement is found to be in excess of: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Rim Diameter | | | Maximum Allowable Movement | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | 16" or less | | | | | | ¼" | |
|  | | | | | | | | | 17" and 18" | | | | | | ⅜" | |
|  | | | | | | | | | over 18" | | | | | | ½" | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Any linkage component is bent; welded; loose; insecurely mounted or missing. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | C) Power Steering | | | PROCEDURES/SPECIFICATIONS: | | | | | | | |
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|  | | | | | | | | | Manually and visually inspect. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | i) | | Belts | | | | | |
|  | | | | | | | | | ii) | | Cylinders | | | | | |
|  | | | | | | | | | iii) | | Fluid Level | | | | | |
|  | | | | | | | | | iv) | | Hoses | | | | | |
|  | | | | | | | | | v) | | Mounting Brackets | | | | | |
|  | | | | | | | | | vi) | | Power Assist | | | | | |
|  | | | | | | | | | vii) | | Pump | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Steering components are: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | i) | | Loose, frayed, cracked, missing, incorrect belts | | | | | |
|  | | | | | | | | | ii) | | Loose and/or leaking | | | | | |
|  | | | | | | | | | iii) | | Low fluid level | | | | | |
|  | | | | | | | | | iv) | | Cracked, leaking, rubbed by moving parts | | | | | |
|  | | | | | | | | | v) | | Cracked, loose, or broken | | | | | |
|  | | | | | | | | | vi) | | No assist is evident | | | | | |
|  | | | | | | | | | vii) | | Loose, leaking | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | D) Toe-In/  Toe-Out | | PROCEDURES/SPECIFICATIONS: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | With wheels held in a straight ahead position, drive vehicle slowly over the approved drive-on side slip indicator. | | | | | | | |
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|  | | | | | | | | | Excessive toe-in or toe-out is a general indication that complete check should be made of all front wheel alignment factors (caster, camber, steering axis inclination). | | | | | | | |
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|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | More than 30 feet per mile on the approved side slip indicator. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | E) Wheel | |  | | | | | | | |
|  | | | | | | | | Bearings | PROCEDURES/SPECIFICATIONS: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | With the front end of the vehicle lifted so as to load any ball joints, grasp the front tire top and bottom, rock it in and out. Record movement. To verify that any looseness detected is in the wheel bearing, notice the relative movement between the brake drum or disc and the backing plate or splash shield. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | AGENCY NOTE: | | | | | | | Wheel bearing play can be eliminated by applying service brakes. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Relative movement between drum and backing place, measured at tire, is ¼ inch or more. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | 2) Interior | | | | | | |  | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | A) Column | | PROCEDURES/SPECIFICATIONS: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Inspect to determine that column support bracket is properly tightened and all bolts are present. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Column support bracket is not properly tightened or bolts are missing. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | B) Lash | | PROCEDURES/SPECIFICATIONS: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | With road wheels in straight ahead position, turn steering wheel unit a turning movement can be observed at the left road wheel. Slowly reverse steering wheel motion and measure lash. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Lash exceeds following acceptable limits: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Steering wheel maximum diameter inches | | | | | | Acceptable lash (inches) measured at maximum circumference | |
|  | | | | | | | | |  | | | | |  |  |  |
|  | | | | | | | | | 16 or less | | | | | | 2 | |
|  | | | | | | | | | 18 | | | | | | 2¼ | |
|  | | | | | | | | | 20 | | | | | | 2½ | |
|  | | | | | | | | | 22 | | | | | | 2¾ | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | C) Shaft | | | | PROCEDURES/SPECIFICATINS: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Grasp steering wheel with both hands and attempt to move shaft up and down. | | | | | | | |
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|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Steering shaft moves up and down. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | D) Steering Wheel | | | | PROCEDURES/SPECIFICATIONS: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Inspect steering wheel condition. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Steering wheel is damaged. Any spokes are missing or reinforcement ring is exposed. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | E) Travel | | | | PROCEDURES/SPECIFICATIONS: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Turn steering wheel through a full right and left turn checking for binding, jamming and complete travel left and right. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Binding or jamming is present. Does not complete full turn from left to right. Tire rubs on fender or frame during turn. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
| e) STEPS | | | | | | | | | PROCEDURES/SPECIFICATIONS: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | The first service entrance step shall be no more than 13½ inches off the ground. If necessary, a step of adequate width and length shall be installed to meet this requirement. Provision shall be made to prevent road splash from the wheel from accumulating on the step if installed outside the body. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Risers shall be approximately equal in height, upper risers no more than ½ inches in height. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | The surface entrance steps shall have a nonskid material applied. A 1½ inch to three inch white nosing is required on the floor at the top riser. | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | REJECT VEHICLE IF: | | | | | | | |
|  | | | | | | | | |  | | | | | | | |
|  | | | | | | | | | Steps or risers are not solid. Steps, risers or nonskid material covering is missing, loose, or not in good condition. White nosing is missing or in poor condition. | | | | | | | |

(Source: Amended at 22 Ill. Reg. 15371, effective August 7, 1998)