**Section 436.APPENDIX I Seat Belts through Steering System**

a) SEAT BELTS

PROCEDURES/SPECIFICATIONS:

Each MFSAB shall be equipped with a retractable lap belt assembly for the driver's seat. (See Section 12-807 of the Illinois Vehicle Equipment Law.) A shoulder harness is optional. Belt material, buckle, tongue, etc., of each driver's belt shall remain above floor when not in use.

Passenger safety belts that meet 49 CFR 571.222 are required on any MFSAB that has a GVWR of 10,000 pounds or less. Passenger safety belts are optional on any MFSAB that has a GVWR of more than 10,000 pounds. However, optional safety belts installed on any MFSAB are required to meet 49 CFR 571.222. At all times, each seat belt shall be readily available for quick and easy use. Retractors must be the emergency locking type. Each belt assembly shall be clean.

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:

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., free from holes and tears). Seat cushions shall be securely fastened to the seat frame.

Optional: MFSAB may be equipped with a durable safety belt webbing cutter with a full-width handgrip and a protected, replaceable, or non-corrodible blade. The webbing cutter cannot be mounted on the dash but must be mounted in a location accessible to the seated driver in an easily detachable manner.

REJECT VEHICLE IF:

Driver's seat is not securely anchored to floor; in poor condition; adjustment mechanism does not function properly. Optional webbing cutter does not meet requirements.

c) SEATS, PASSENGER

PROCEDURES/SPECIFICATIONS:

Each seat and each barrier are required to conform to FMVSS 222 (49 CFR 571.222).

All seats shall be forward facing and securely fastened to part or parts of MFSAB that support them. No MFSAB 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 (60.96 cm), 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 (91.44 cm) headroom for sitting position above top of undepressed cushion line on all seats (measured vertically not more than seven inches from side wall 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)

Seat bottom cushions must also be equipped with a self-latching mechanism that is designed to flip up or be removable without tools.

REJECT VEHICLE IF:

Passenger seats do not meet requirements; are not firmly attached to body; seat frames are broken; cushions not firmly attached; padding and covering are 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

A) King Pins

PROCEDURES/SPECIFICATIONS:

Raise vehicle so as to unload king pins (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 king pin movement exceeds:

|  |  |  |
| --- | --- | --- |
| Wheel Size  (in inches) |  | Max. Allowed  (in inches) |
| 16 or less |  | ¼ |
| 16.1 to 18 |  | ⅜ |
| over 18 |  | ½ |

B) Linkage

PROCEDURES/SPECIFICATIONS:

For MFSAB with single "I" beam or tube type front axle, hoist MFSAB under axle. For MFSAB 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 (Grasp wheel at top and bottom to attempt to rock wheel in and out. Check movement at extreme top or bottom of tire.)

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 (in inches) |  | Max. Allowable Movement (in inches) |
| 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:

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.

Excessive toe-in or toe-out is a general indication that a complete check should be made of all front wheel alignment factors (caster, camber, steering axis inclination).

REJECT VEHICLE IF:

More than 30 feet (914.4 cm) 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 plate, measured at tire, is ¼ inch (.635 cm) 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 until 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  Max. Diameter  (inches) |  | Acceptable Lash (inches) Measured at Max. Circumference |
| 16 or less | 2 |
| 18 | 2¼ |
| 20 | 2½ |
| 22 | 2¾ |

C) Shaft

PROCEDURES/SPECIFICATIONS:

Grasp steering wheel with both hands and attempt to move shaft up and down.

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.

(Source: Amended at 37 Ill. Reg. 6823, effective May 3, 2013)