



FOCUS FOR 2019 INTERNATIONAL ROADCHECK:

Steering and Suspension Systems

Steering and Suspension Violations from Last Year's International Roadcheck:
Out of 60,321 Inspections Conducted in the U.S. (Canada's Inspections Not Included)

Steering Violation Descriptions	OOS Violations	Non-OOS Violations	OOS and Non-OOS Violations Combined	Description of Common Issues
Steering system components worn, welded or missing	259	99	358	Ball and socket joint movement, loose nuts or any welded repairs
Loose steering column	11	3	14	Caused by loose mounting components
Power steering violations	7	425	432	Leaks or power steering assist cylinder loose
Excessive steering wheel lash	5	9	14	Caused by worn steering box or loose pitman arm (in some cases), or other loose steering components
Steering wheel not secured/broken	4	1	5	Steering wheel not secured or broken
GRAND TOTAL	286	537	823	

Suspension Violation Descriptions	OOS Violations	Non-OOS Violations	OOS and Non-OOS Violations Combined	Description of Common Issues
Axle positioning parts defective/missing	287	176	463	Loose suspension tracking rods or missing spring hanger bolts or cracked spring hangers
Air suspension pressure loss	109	205	314	Leaking air bag or air line to air bag
Leaf spring assembly defective/missing	88	56	144	Broken, missing or separated leaves
Adjustable axle locking pins missing or not engaged	54	53	107	Adjustable axle locking pins missing or not engaged
No/defective air suspension exhaust control	0	10	10	No or defective air suspension exhaust control
GRAND TOTAL	538	500	1,038	

The Commercial Vehicle Safety Alliance's 2019 International Roadcheck will take place June 4-6. Over that 72-hour period, commercial motor vehicle inspectors in jurisdictions throughout North America will conduct inspections on commercial motor vehicles and drivers. Each year, International Roadcheck places special emphasis on a category of violations. This year's focus is steering and suspension systems. **For more information, visit www.roadcheck.org.**



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What Inspectors Look For

Inspectors will check the following items during the inspection of the steering mechanism:

- ✓ Steering wheel lash (free play)
- ✓ Steering column and shaft
- ✓ Front axle beam (including hub)
- ✓ Steering gear box (rack and pinion, if applicable)
- ✓ Pitman arm and output shaft
- ✓ Upper and lower steering arms
- ✓ Power steering reservoir
- ✓ Ball and socket joints
- ✓ Tie rods and drag links
- ✓ Steering nuts

Inspectors will check the following suspension components during an inspection:

- ✓ Axle parts/members
- ✓ Spring hangers
- ✓ Leaf spring assembly
- ✓ Coil/rubber spring and air suspension
- ✓ Composite springs
- ✓ Torsion bar suspension
- ✓ Suspension connecting rods and bushings
- ✓ Other tracking components
- ✓ Sway bar components
- ✓ Adjustable axle(s) (locking pins, body rails, slider guides)

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Although checking the vehicle's steering and suspension is routinely part of roadside inspections, the Commercial Vehicle Safety Alliance is highlighting the importance of properly maintaining steering and suspension systems, as well as some common steering or suspension issues found during a roadside inspection.

Steering and suspension are safety critical systems for any commercial motor vehicle. Not only do they support the heavy loads carried by trucks and buses, but they also help maintain stability and control under acceleration and braking, keeping the vehicle safely on the road. Furthermore, they keep tires in alignment, reducing chances of uneven tire wear and possible tire failure, and they maximize the contact between the tires and the road to provide steering stability and good handling.

Your vehicle's suspension system must be routinely checked and maintained and in good operating condition. Worn suspension components may reduce the stability of the vehicle and reduce driver control, as well as accelerate wear on other suspension system components.

Identifying Issues with Steering and Suspension

- If you begin to feel more bumps and shakes as you drive, there may be an issue with your suspension.
- Take note if your vehicle pulls to the side or makes knocking or squealing sounds during turns.
- Pay attention to swaying and bouncing at low speeds. Your vehicle should have no difficulty withstanding bumps in the road at low speeds. If you go over a bump and feel your vehicle sway back and forth or bounce after passing the bump, the suspension may be struggling to support the weight of the vehicle.
- Your suspension should support the weight of your vehicle and keep it fairly level during most situations. With the vehicle parked, walk around it and visually assess how level it seems to be sitting. If one side of the vehicle rests higher than the other, worn out or broken suspension components may be to blame.

The steering and suspension systems play a huge role in how well a vehicle operates and how safe it is to drive. They require regular maintenance and care. If you suspect an issue (your steering wheel pulls, your truck drifts or you have trouble controlling speed or direction), get your vehicle checked out as soon as possible, before it becomes a dangerous (and expensive) problem.

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