

## OUT-OF-SERVICE CRITERIA

This is an extract from Appendix A, Part II, North American Uniform Out-Of-Service Criteria, Commercial Vehicle Safety Alliance. It contains Out-Of-Service criteria that apply to our vehicles.

This Out-Of-Service criteria represents minimum maintenance standards and should serve as a guide for drivers on pre-trip inspection and for relay personnel in determining the necessity of enroute repairs.

Drivers are encouraged to discuss these items with garage personnel so that we can develop a common understanding and consistent application of these criteria.

This extract was prepared 4/1/99 based on Out-Of-Service criteria effective 4/1/99. The Out-Of-Service criteria are subject to change.

This criteria is applied by regulatory inspectors during roadside inspections. However, in no case is this information to be used to take issue with law enforcement officials regarding findings at a roadside or on-site vehicle inspection.

In the event that a Roadway vehicle is placed in an Out-Of-Service status it must not be moved until all defects comprising the Out-Of-Service condition(s) are corrected. (Only exception would be at the specific direction of a law enforcement official.)

Application of this criteria to pretrip inspection will prevent Out-Of-Service findings at Roadside inspections. A vehicle should never leave a Roadway Facility with a known Out-Of-Service defect.

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**1. BRAKE SYSTEM.**

a. Defective Brakes. The number of defective brakes is equal to or greater than 20% of brakes on the vehicle or combination. A defective brake includes any brake that meets one of the following criteria: (NOTE: Steering axle brakes under 1.b. are to be included in 20% criterion.)

- (1) Absence of effective braking action upon application of the service brakes (such as brake linings failing to move or contact braking surface upon application.) (393.48(a))
- (2) Missing or broken mechanical components including shoes, linings, pads, springs, anchor pins, spiders, cam rollers, push-rods and air chamber mounting bolts. (393.48(a))
- (3) Loose brake components including air chambers, spiders and cam shaft support brackets. (393.48(a))
- (4) Audible air leak at brake chamber. (Example - ruptured diaphragm, loose chamber clamp, etc.) NOTE: Also check under 1.h--Air Loss Rate. (396.3(a))
- (5) Readjustment limits. Bring reservoir pressure between 90 to 100 psi turn engine off and then fully apply the brakes.
  - (a) One brake at 1/4 inch or more beyond the adjustment limit. (EXAMPLE: Type 30 clamp type brake chamber push-rod measured at 2-1/4 inches would be one defective brake.) (396.3(a)(1))
  - (b) Two brakes less than 1/4 inch beyond the adjustment limit also equal one defective brake. EXAMPLE: Type 30 clamp type brake chamber push rods measure:

Two at 2-1/8 inches.

The above example would equal one defective brake.  
(396.3(a)(1))

(See the following chart.)

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 BRAKE ADJUSTMENT REFERENCE CHART

Brake Adjustment. Shall not exceed those specifications contained hereunder relating to "Brake Adjustment Limit". (Dimensions are in inches.)

CLAMP TYPE BRAKE CHAMBER DATA

<u>Type</u>	<u>Outside Diameter</u>	<u>Brake Adjustment Limit</u>
6	4-1/2	1-1/4
9	5-1/4	1-3/8
12	5-11/16	1-3/8
16	6-3/8	1-3/4
20	6-25/32	1-3/4
24	7-7/32	1-3/4
30	8-3/32	2
36	9	2-1/4

NOTE: A brake found at the adjustment limit is not a violation.

LONG STROKE CLAMP TYPE BRAKE CHAMBER DATA

<u>Type</u>	<u>Outside Diameter</u>	<u>Brake Adjustment Limit</u>
16	6-3/8	2.0
20	6-25/32	2.0
24	7-7/32	2.0
24*	7-7/32	2.5
30	8-3/32	2.5

\*For 3" maximum stroke chambers

NOTE: A brake found at the adjustment limit is not a violation.

(6) Brake Linings or Pads. (Except on power unit steering axles.)

(a) Cracked, loose or missing lining.

i. Lining cracks or voids of 1/16" in width observable on the edge of the lining.

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- ii. Portions of a lining segment missing such that a fastening device (rivet or bolt) is exposed when viewing the lining from the edge.
  - iii. Cracks that exceed 1-1/2" in length.
  - iv. Loose lining segments. (Approximately 1/16" or more movement.)
  - v. Complete lining segment missing. (393.47)
- (b) Evidence of oil seepage into or out of the brake lining/drum interface area. This must include wet contamination of the lining edge accompanied by evidence that further contamination will occur--such as oil running from the drum or a bearing seal. NOTE: Grease on the lining edge, back of shoe, or drum edge and oil stains with no evidence of fresh oil leakage are not conditions for Out-Of-Service. (393.47)
  - (c) Air Brakes: Lining with a thickness less than 1/4 inch or to wear indicator if lining is so marked. measured at the shoe center for drum brakes or less than 1/8 inch for disc brakes. (393.47)
  - (d) Hydraulic & Electric Brake: Lining with a thickness 1/16 inch or less at the shoe center for disc or drum brakes. (393.47)
- (7) Missing brake on any axle required to have brakes. (393.42)
- b. Steering Axle Brakes. In addition to being included in the 20% criterion, the following criteria places a vehicle in an Out-Of-Service condition:
- (1) Absence of braking action on any steering axle of any vehicle required to have steering axle brakes, including the dolly and front axle of a full trailer. (393.48(a))
  - (2) Mismatch across any power unit steering axles of:
    - (a) Air chamber sizes. (396.3(a)(1))
    - (b) Slack adjuster length. (396.3(a)(1))
  - (3) Brake linings or pads on the steering axle of any power unit.
    - (a) Cracked, loose, or missing lining.
      - i. Lining cracks or voids of 1/16" in width observable on the edge of the lining.
      - ii. Portions of a lining segment missing such that a fastening device (rivet or bolt) is exposed when viewing the lining from the edge.
      - iii. Cracks that exceed 1-1/2" in length.
      - iv. Loose lining segments (approximately 1/16" or more movement.)

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- v. Complete lining segment missing (393.47)
- (b) Evidence of oil seepage into or out of the brake lining/drum interface area. This must include wet contamination of the lining edge accompanied by evidence that further contamination will occur—such as oil running from the drum or a bearing seal. NOTE: Grease on the lining edge, back of shoe, or drum edge and oil stains with no evidence of fresh oil leakage are not conditions for Out-Of-Service. (393.47)
- End of 20% Factor ---
- c. Parking Brakes
- (1) Inoperable breakaway braking system on trailer(s). (NOTE: No trailer brake application upon actuation of the parking brake control indicates an inoperable breakaway braking system.) (See Item I. - Tractor Protection.)
- (2) Any non-manufactured holes or cracks in the spring brake housing section of a parking brake. (396.3(a)(1))
- d. Brake Drums or Rotors
- (1) Drums with an external crack or cracks that open upon brake application. (NOTE: Do not confuse short hairline heat check with flexural cracks.) (396.3(a)(1))
- (2) Any portion of the drum or rotor (discs) missing or in danger of falling away. (396.3(a)(1))
- e. Brake Hose.
- (1) Hose with any damage extending through the outer reinforcement ply. (Rubber impregnated fabric cover is not a reinforcement ply.) (Thermoplastic nylon may have braid reinforcement or color difference between cover and inner tube. Exposure of second color is Out-Of-Service.) (396.3(a)(1))
- (2) Bulge/Swelling when air pressure is applied. (396.3(a)(1))
- (3) Hose with audible leak at other than a proper connection. (396.3a(a)(1))
- (4) Two hoses improperly joined such as a splice made by sliding the hose ends over a piece of tubing and clamping the hose to the tube. (393.46)
- (5) Air hose cracked, broken or crimped in such a manner as to restrict air flow. (393.45(a)(4))
- f. Brake Tubing.
- (1) Tubing with an audible leak at other than a proper connection. (396.3(a)(1))
- (2) Tubing cracked, damaged by heat, broken or crimped. (396.3(a)(1))

- | INSPECTION ITEM  | OUT-OF-SERVICE CONDITION  |
|--|---|
| g. Low Pressure Warning  | Low pressure warning device missing, inoperative, or does not operate at 55 psi and below and below, or 1/2 the governor cut-out pressure whichever is less. NOTE: If either an audible or visual warning device is working, vehicle should not be placed out-of service. (393.51)  |
| h. Air Loss Rate   | If an air leak is discovered and the reservoir pressure is not maintained when: <ol style="list-style-type: none"> <li>(1) governor is cut-in.</li> <li>(2) reservoir pressure is between 80 and 90 psi.</li> <li>(3) engine is at idle, and</li> <li>(4) service brakes are fully applied. (396.3(a)(1))</li> </ol>  |
| i. Tractor-Production  | Inoperable or missing tractor protection valves on power unit. (393.43) (See item c.(1) - Parking Brakes)   |
| j. Air Reservoir   | Air reservoir security, separated from its original attachment points. (393.50)   |
| k. Air Compressor<br>(Normally to be inspected when readily visible or when conditions indicate)     | <ol style="list-style-type: none"> <li>(1) Loose compressor mounting bolts. (396.3(a)(1))</li> <li>(2) Cracked, broken or loose pulley. (396.3(a)(1))</li> <li>(3) Cracked or broken mounting brackets, braces or adapters. (396.3(a)(1))</li> </ol>  |
| l. Hydraulic Brakes<br>(Including: Power Assist Over Hydraulic and Engine Driven Hydraulic Booster.) | <ol style="list-style-type: none"> <li>(1) No pedal reserve with engine running. (396.3(a)(1))</li> <li>(2) Master cylinder less than 1/4 full. (NOTE: Normally to be inspected when readily visible or problems are apparent.) (396.3(a)(1))</li> <li>(3) Power assist unit fails to operate. (396.3(a)(1))</li> <li>(4) Seeping or swelling brake hose(s) under application of pressure. (396.3(a)(1))</li> <li>(5) Missing or inoperable breakaway braking device. (396.43)</li> <li>(6) Hydraulic hose(s) abraded (chafed) through cover-to-fabric layer. (393.45)</li> <li>(7) Fluid lines or connections restricted, crimped, cracked or broken (396.3(a)(1))</li> <li>(8) Any visually observed leaking hydraulic fluid in the brake system upon full application. (396.(a)(1))</li> </ol> |

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- (9) Hydraulic System: brake failure light/low fluid warning light on and/or inoperative. (393.51)

**2. COUPLING DEVICES**  
(When in use.)

a. Fifth Wheels  
(Lower Couples  
Assembly)

- (1) Mounting to frame.
- (a) More than 20% of fasteners on either side missing or ineffective. (393.70)
  - (b) Any movement between mounting components. (393.70)
  - (c) Any mounting angle iron cracked or broken. SPECIAL NOTE: Any repair weld cracking, well defined (especially open) cracks in stress or load-bearing areas, cracks through 20% or more original welds or parent metal. (393.70)
- (2) Mounting plates & pivot brackets.
- (a) More than 20% of fasteners on either side missing or ineffective. (393.70).
  - (b) Any welds or parent cracked. SPECIAL NOTE: Any repair weld cracking, well defined (especially open) cracks in stress or load-bearing areas, cracks through 20% or more original welds or parent metal. (393.70)
  - (c) More than 3/8 inch horizontal movement between pivot bracket pin and bracket. (393.70)
  - (d) Pivot bracket pin missing or not secured. (393.70)
- (3) Sliders.
- (a) More than 25% of latching fasteners, per side, ineffective. (393.70)
  - (b) Any fore or aft stop missing or not securely attached. (393.70)
  - (c) Movement of more than 3/8 inch between slider bracket and slider base. (396.70)
- (4) Operating Handle:
- Operating handle not in closed or locked position. (393.70)

## (5) Fifth wheel plate

Cracks in fifth wheel plate. (393.70) SPECIAL NOTE:  
Any repair weld cracking, well defined especially open) cracks in stress or load-bearing areas, cracks through 20% or more original welds or parent metal.

EXCEPTIONS: (1) Cracks in fifth wheel approach ramps, and (2) casting shrinkage cracks in the ribs of the body of a cast fifth wheel.

## (6) Locking mechanism.

(a) Locking mechanism parts missing, broken or deformed to the extent the kingpin is not securely held. (393.70)

## b. Upper Coupler

(1) Horizontal movement between the upper and lower fifth wheel halves exceeds 1/2 inch. (393.70)

(2) Kingpin can be moved by hand in any direction. NOTE: This item is to be used when uncoupled semitrailers are encountered, such as at a terminal inspection, and it is impossible to check item (1) above. Kingpins in coupled vehicles are to be inspected using items (1) above and (3) and (4) below. Vehicles are not to be uncoupled. (393.70)

(3) Kingpin not properly engaged. (393.70)

(4) Any semitrailer with a bolted upper coupler having fewer effective bolts than shown in the following table:

## MINIMUM TOTAL QUANTITY OF BOLTS

(Total minimum quantity of bolts must be equally divided with 1/2 on each side of the coupler.)

## BOLT SIZE

1/2 inch (13mm)

5/8 inch (16mm) or larger

10 - (5 each side)

8 - (4 each side)

(5) Any welds or parent metal cracked SPECIAL NOTE:  
Any repair weld cracking, well defined (especially open) cracks in stress or load-bearing areas, cracks through 20% or more original welds or parent metal. (393.70)

## c. Pintle Hooks

(1) Mounting and Integrity.

(a) Loose mounting, missing or ineffective fasteners or insecure latch. (393.70(c))



NOTE: A fastener is not considered missing if there is an empty hole in the device but not corresponding hole in the frame and vice versa.

- (b) Cracks anywhere in the pintle hook assembly including mounting surface and frame cross member. (393.70(c))
  - (c) Any welded repairs to the pintle hook. (393.70(c))
  - (d) Section reduction visible when coupled. NOTE: No part of the horn should have any section reduced by more than 20%. If wear can be seen when the hook and eye are coupled, it is probable that either this condition or that described below in "d(4)" exists. (393.70(c))
- d. Drawbar Eye
- (1) Mounting and Integrity.
    - (a) Any cracks in attachment welds or drawbar eye. (393.70(c))
    - (b) Any missing or ineffective fasteners. (393.70(c))
    - (c) Any welded repairs to the drawbar eye. (393.70(c))
    - (d) Section reduction visible when coupled. NOTE: No part of the eye should have any section reduced by more than 20%. If wear can be seen when the hook and eye are coupled, it is probable that either this condition or that described above in "c(4)" exists. (393.70(c))
- e. Drawbar/Torque
- (1) Slider (power manual).
    - (a) Ineffective latching mechanism. (393.70(c))
    - (b) Missing or ineffective stop. (393.70(c))
    - (c) Movement of more than 1/4 inch between slider and housing. (370.70(c))
    - (d) Any leaking air or hydraulic cylinders, hoses or chambers (other than slight oil weeping normal with hydraulic seals). (393.70(c))
  - (2) Integrity
    - (a) Any cracks. (393.70(c))
    - (b) Movement of 1/4 inch between subframe and drawbar at point of attachment. (393.70(c))

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- f. Safety Devices
- (1) Missing. (393.70(c))
  - (2) Unattached or incapable of secure attachment. (393.70(c))
  - (3) Improper repairs to chains and hooks including welding, wire, small bolts, rope and tape. (393.70(c))
3. EXHAUST SYSTEM.
- (1) Any exhaust system leaking at a point forward of or directly below the driver/sleeper compartment and when the floor pan is in such a condition as to permit entry of exhaust fumes. (393.83(e))
  - (2) No part of the exhaust of any motor vehicle shall be so located as to be likely to result in burning, charring, or damaging the electrical wiring, the fuel supply, or any combustible part of the motor vehicle. (393.83(a))
4. FRAME
- a. Frame Member
- (1) Any cracked, loose, sagging or broken frame member permitting shifting of the body onto moving parts or other condition indicating an imminent collapse of the frame. (Truck, Truck Tractor - 393.201(a), Trailers - 396.3(a)(1))
  - (2) Any cracked, loose or broken frame member adversely affecting support of functional components such as steering gear fifth wheel, engine, transmission, body parts and suspension. (Truck, Truck tractor - 393.201(a), Trailers - 396.3(a)(1))
  - (3) One and one half inches or longer crack in frame web which is directed toward bottom flange. (Truck, Truck Tractor - 393.201(a), Trailers - 396.3(a)(1))
  - (4) Any crack extending from the frame web around the radius and into the bottom flange. (Truck, Truck Tractor - (393.201(a), Trailers - 396.3(a)(1))
  - (5) One inch or longer crack in bottom flange. (Truck, Tractor - 393.201(a), Trailers - 396.3(a)(1))
- b. Tire and Wheel Clearance
- (1) Any condition, including loading that causes the body or frame to be in contact with a tire or any part of the wheel assemblies, at the time of inspection. (396.3(a)(1))
- c. Adjustable Axle
- (1) Adjustable axle assembly (sliding subframe) with more than one-fourth of the locking pins missing or not engaged. (393.207(b))

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**5. FUEL SYSTEM**

- (1) A fuel system with a visible leak at any point (including refrigeration or heater fuel systems.) (393.67)
- (2) A fuel tank not securely attached to the motor vehicle.  
(NOTE: Some fuel tanks use springs or rubber bushings to permit movement.) (393.65)

**6. HEADLAMPS, TAIL LAMPS,  
STOP LAMPS AND TURN  
SIGNALS.**

- a. When lights are required.
  - (1) Headlamps - The single vehicle or towing vehicle does not have at least one head lamp operative on low beam. (393.24(b), (393.17, (393.9 - Inoperable)
  - (2) Lamps on Rear - Truck, truck tractor, and towed vehicle not having at least one steady burning tail lamp on the rear of the rearmost vehicle visible from 500 feet. (393.25(b), (393.9 Inoperable))
- b. At Anytime - Day or Night
  - (1) Does not have at least one operative stop lamp on the rear of a single unit vehicle or the rear of the rearmost vehicle of a combination of vehicles visible at 500 feet. (393.25(f), (393.17), (393.9 - Inoperable).
  - (2) Does not have operative turn signals visible on each side of the rear of a single unit vehicle or the rear of the rearmost vehicle of a combination of vehicles. (Truck tractors unless the turn signals on the front are so constructed (double faced) and located as to be visible to passing drivers, two turn signals on the rear of the cab, one at each side.) (393.9 - Inoperable), (393.11 - missing).

**7. SAFE LOADING.**

- (1) Part(s) of a vehicle or condition of loading such that the spare tire or any part of the load or dunnage can fall onto the roadway. (392.9)
- (2) Containers relying solely on fittings and twist locks for securement to container chassis not having four such attachments per container, two per side, properly latched. (393.100)

**8. STEERING MECHANISM.**

- a. Steering Wheel (See Chart: When any of these values - inch movement or degrees - are met or exceeded, vehicle shall be placed out-of-service.)  
393.209(b) (For power steering systems, engine must be running.)

STEERING WHEEL DIAMETER	MANUAL SYSTEM MOVEMENT 30 DEGREES OR:	POWER SYSTEM MOVEMENT 45 DEGREES
16" (41cm)	4-1/2" (11.5cm)(or more)	6-3/4" (17cm)(or more)
18" (46cm)	4-3/4" (12cm) (or more)	7-1/8" (18cm)(or more)
19" (48cm)	5" (13cm) (or more)	7-1/2" (19cm)(or more)
20" (51cm)	5-1/4" (13cm) (or more)	7-7/8" (20cm)(or more)
21" (53cm)	5-1/2" (14cm) (or more)	8-1/4" (21cm)(or more)
22" (56cm)	5-3/4" (15cm) (or more)	8-5/8" (22cm)(or more)

\*For power systems, if steering wheel movement exceeds 45 degrees before steering axle tires move, proceed as follows: rock steering wheel left to right between points of power steering valve resistance. If that motion exceeds 30 degrees (or the inch movement values shown for manual steering) vehicle shall be placed out-of-service.

- b. Steering Column. (1) Any absence or looseness of U-bolt(s) or positioning part(s). (393.209(c))  
(2) Worn, faulty or obviously repair-welded universal joint(s). (393.209(d))  
(3) Steering wheel not properly secured. (393.209(a))
- c. Front Axle Beam and all Steering Components Other Than Steering Column (Including Hub) (1) Any crack(s) (396.3(a)(1))  
(2) Any obvious welded repair(s). (396.3(a)(1))
- d. Steering Gear Box (1) Any mounting bolt(s) loose or missing. (393.209(d))  
(2) Any crack(s) in gear box or mounting brackets. (393.209(d))  
(3) Any obvious welded repair(s) (396.3(a)(1))
- e. Pitman Arm. (1) Any looseness of the pitman arm on the steering gear output shaft. (393.209(d))  
(2) Any obvious welded repair(s). 396.3(a)(1)
- f. Power Steering Auxiliary power assist cylinder loose. (393.209(e))

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|-----------------------------|--|
| g. Ball and Socket Joint    | <ul style="list-style-type: none"> <li>(1) Any movement under steering load of a stud not. (396.3(a)(1))</li> <li>(2) Any motion, other than rotational, between any linkage member and its attachment point of more than 1/8 inch measured with hand pressure only. (396.3(a)(1))</li> <li>(3) Any obvious welded repair(s). (396.3(a)(1))</li> </ul> |
| h. Tie Rods and Drag Links. | <ul style="list-style-type: none"> <li>(1) Loose clamp(s) or clamp bolt(s) on tie rods or drag links. (396.3(a)(1))</li> <li>(2) Any looseness in any threaded joint. (396.3(a)(1))</li> </ul>   |
| i. Nuts                     | Loose or missing on tie rods, pitman arm, drag link, steering arm or tie rod arm. (396.3(a)(2))  |
| j. Steering System          | Any modification or other condition that interferes with free movement of any steering component. (393.209(d))   |

## 9. SUSPENSION.

- |                           |   |
|---------------------------|---|
| a. Axle Parts/<br>Members | <ul style="list-style-type: none"> <li>(1) Any U-bolt(s) or other spring to axle clamp bolt(s) cracked, broken, loose, or missing. (393.207(a))</li> <li>(2) Any spring hanger(s), or other axle positioning part(s) cracked, broken, loose or missing resulting in shifting of an axle from its normal position. (393.207(a))</li> </ul> |
|---------------------------|---|

NOTE: After a turn, lateral axle displacement is normal with some suspensions. Forward or rearward operation in a straight line will cause the axle to return to alignment.

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|--------------------|--|
| b. Spring Assembly | <ul style="list-style-type: none"> <li>(1) One-fourth or more of the leaves in any spring assembly broken. (393.207(c))</li> <li>(2) Any leaf or portion of any leaf in any spring assembly is missing or separated. (393.207(c))</li> <li>(3) Any broken main leaf in a leaf spring.</li> </ul> |
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NOTES: 1. Any leaf of a leaf spring assembly is a main leaf if it extends, at both ends, to or beyond

- (a) The load bearing surface of a spring hanger or equalizer.
- (b) The spring end cap or insulator box mounted on the axle.

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- (c) A spring eye, further: Any leaf of a helper spring assembly is a helper main leaf if it extends, at both ends, to or beyond the load bearing surface of its contact pad, hanger or equalizer.
2. The radius rod leaf, in springs having such a leaf, has the same function as the torque or radius components referenced in item 9.d "Torque Radius, or Tracking Components" and should be treated as such a component for purposes of out-of-service. (393.207(c))
- (4) Coil spring broken. (393.207(d))
- (5) Rubber spring missing. (393.207(a))
- (6) One or more leave displaced in a manner that could result in contact with a tire, rim, brake drum, or frame. (393.207(c))
- (7) Broken torsion bar spring in torsion bar suspension. (393.206(e))
- (8) Deflated air suspension, (i.e. system failure, leak, etc.) (393.207(f))
- c. Composite Trailer (1) Intersecting cracks of any length.
- (2) If a crack extends beyond 3/4 the length of the spring, or if cracks regardless of length, are visible on either side, and the top or bottom of the spring.
- NOTE: A crack is a separation in any axis which passes completely through the spring.
- d. Torque, Radius or Tracking Components Any part of a torque, radius or tracking component assembly or any part used for attaching same to the vehicle frame or axle that is cracked, loose, broken or missing (including spring leaves used as a radius or torque rods, missing bushings but not loose bushings in torque or track rods). (393.207(a))

**10. TIRES**

- a. Any Tire on Any
- (1) With less than 2/32 inch tread when measured in any two adjacent major tread grooves at any location on the tire. (393.75(b))
  - (2) When any part of the breaker strip or casing ply is showing in the tread. (393.75(a))
  - (3) When sidewall is cut, worn or damaged to the extent the ply cord is exposed. (393.75(a))
  - (4) Labelled "Not For Highway Use" or carrying other markings which would exclude use on steering axle. (396.3(a)(1))
  - (5) Visually observable bump, bulge or knot apparently related to tread or a sidewall separation. (396.3(a)(1)) **EXCEPTION:** A bulge due to a section repair is allowed not to exceed 3/8" (1cm) in height. This bulge may sometimes be identified by a blue triangular label in the immediate vicinity.
  - (6) Tire is flat or has noticeable (e.g. can be heard or felt) leak. (393.75(a)(3))
  - (7) So mounted or inflated that it comes in contact with any part of the vehicle. (396.3(a)(1))
  - (8) Steering Axle: Weight carried exceeds tire load limit. This includes overloaded tire resulting from low air pressure. (393.75(f)) *Exception: Does not apply to vehicles being operated under the special permit exclusion found in Federal Motor Carrier Safety Regulation 393.75(f)(1 and 2).*
- b. All tires other than those found on the steering axle of a powered vehicle.
- (1) Tire is flat or has noticeable (e.g. can be heard or felt) leak. (393.75(a)(3))
  - (2) Bias Ply Tire: When more than one ply is exposed in the tread area or sidewall or when the exposed area of the top ply exceeds 2 square inches. Note: for single tire, one tire must meet this condition. On dual wheels, both tires must meet this condition. (393.75(a)(1))
  - (3) Radial Ply Tires: When two or more plies are exposed in the tread area or damaged cords are evident in the sidewall or when the exposed area exceeds 2 square inches in the sidewall. Note: For single tire, one tire must meet this condition. On dual wheels, each tire must meet this condition. (393.75(a)(1))
  - (4) Any tire with visually observable bump or knot apparently related to tread or sidewall separation. (396.3(a)(1)) **EXCEPTION:** A bulge due to a section repair is allowed not to exceed 3/8" in height.

- (2) Broken floor accompanied by protruding freight and sagging crossmembers. (396.3(a)(1))
- d. Side Panels on Fiberglass Reinforced Plywood (FRP) Trailers (1) Damage in the bay area that penetrates completely through the fiberglass and plywood resulting in a sagging lower rail. (396.3(a)(1))
- GENERAL NOTES:
- (a) These conditions are only considered out-of-service if the failure is in the bay area (aft of kingpin couples plate and forward of the axle subframe rails.)
- (b) Trailers 30 feet or less in length have a short bay area and are not as susceptible to catastrophic failures, therefore, only rail breaks accompanied by a sagging floor, rail, or crossmember are out-of-service for them.
- (c) Rail, post, bow, crossmember, and side/front panel damage in areas outside the bay area are not imminently hazardous and should not be considered out-of-service unless they lead to conditions described in other sections of the out-of-service criteria. i.e. "10.a(7) Tires."

## 12. WHEELS AND RIMS

- a. Lock or Side Ring Bent, broken, cracked improperly seated, sprung or mismatched ring(s). (393.205(a))
- b. Rim Cracks Any circumferential crack except an intentional manufactured crack at a valve stem hole. (393.205(a))
- c. Disc Wheel Cracks (1) Any single crack 3" or more in length.
- (2) A crack extending between any two holes including hand holes, stud holes and center hole.
- (3) Two or more cracks any place on the wheel. (393.205(a))
- d. Stud Holes (Disc Wheels) 50% or more elongated stud holes (fasteners tight). (393.205(b))
- e. Spoke Wheel Cracks:
- (1) Two or more cracks more than 1 inch long across a spoke or hub section (393.205(a))
- (2) Two or more web areas with cracks. (393.205(a))



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|----|--|--|
| f. | Tubeless Demountable<br>Adapter Cracks | Cracks at three or more spokes. (393.205(a))   |
| g. | Fasteners                              | Loose, missing, broken, cracked, or stripped (both spoke and disc wheels) ineffective as follows: for 10 fastener positions - 3 anywhere. 2 adjacent; for 8 fastener positions or less (including spoke wheels and hub bolts) - 2 anywhere. (393.205(c))   |
| h. | Welds                                  | <ul style="list-style-type: none"> <li>(1) Any cracks in welds attaching disc wheel to rim. (393.205(a))</li> <li>(2) Any crack in welds attaching tubeless demountable rim to adapter. (393.205(a))</li> <li>(3) Any welded repair on aluminum wheel(s) on a steering axle. (396.3(a)(1))</li> <li>(4) Any welded repair other than disc to rim attachment on steel disc wheel(s) mounted on the steering axle. (396.(a)(1))</li> </ul> |
| i. | Hubs                                   | <ul style="list-style-type: none"> <li>(1) When any axle bearing (hub) cap is missing or broken allowing an open view into hub assembly. (396.3(a)(1) or 396.7)</li> <li>(2) Smoking from wheel hub assembly due to bearing failure. (396.3(a)(1) or 396.</li> </ul>   |

NOTE: Not to be associated with smoke from dragging brake.

### 13. WINDSHIELD WIPERS.

Any power unit that has an inoperative wiper or missing or damaged parts that render it ineffective on the driver's side. (Applicable only in inclement weather requiring use of windshield wipers.) (393.78)