Upper Coupler Inspection Fontaine Fifth Wheel



Visual inspection.

First, attempt to move the kingpin by hand. A trailer with a kingpin that can be moved by hand in any direction must be taken out of service. Any nick or gouge greater than 0.12 inches deep in the throat contact area or the jaws contact area requires that the kingpin be replaced. Also, any burr in those two areas that extends beyond the surface of the kingpin is not acceptable. Nicks, burrs or gouges should not exceed 0.25 inch in length, measured at the maximum length. There should be no more than ten nicks, burrs or gouges of 0.06 inch in length in the jaw contact area. Be certain that the kingpin has no cracks. If the kingpin has a crack, the trailer should be placed out of service. Never attempt to repair weld a kingpin. Never grind a kingpin.



Check the kingpin for wear. A new two-inch kingpin is 2.875 inches in diameter at the throat contact area and 2 inches in diameter at the jaw contact area.

The Fontaine Kingpin Gauge is designed to aid in inspection of the SAE J700 (2" diameter) kingpin. Take extra precautions to ensure the trailer is properly supported on level ground.

1. Slip gauge over kingpin.

2. Position the gauge onto portion of kingpin to be measured (throat contact area or jaw contact area). Be sure to rotate the gauge 360 degrees around the kingpin to measure diameter in all directions.

3. This gauge is designed as a no-go gauge. It indicates 1/8" (0.125") of wear. If the kingpin enters the area marked out of spec, check the kingpin with a more accurate gauge (i.e. caliper/micrometer) before replacing the kingpin.

4. Wear of 0.125 inches or more in these areas at any point around the circumference requires that the trailer be placed out of service.





Check the kingpin height and squareness to bottom plate.

1. Place the notched end of gauge onto the kingpin as shown above.

- 2. Check kingpin for correct height and squareness to bolster plate.
- 3. If kingpin does not fit into gauge it is bent or incorrect height.

4. Make sure to rotate gauge 360 degrees to check all sides of kingpin for squareness to bolster plate.

5. Replace any damaged or incorrect kingpins.







Upper Coupler Inspection (continued) Fontaine Fifth Wheel



Make sure that the bottom plate is flat and that the kingpin is perpendicular to the bottom plate.

1. Place the notched end of gauge over the kingpin as shown above.

2. Inspect bottom plate flatness. SAE J700 allows the amount of downward bow in the bottom plate to be no more than 0.125 inches within a 10-inch radius from the kingpin, or 0.25 inches within a 19-inch radius from the kingpin center (Figure A). The maximum amount of upward bow allowed is 0.06 inch in the 38-inch diameter around the kingpin (Figure B).

3. Inspect to make sure the kingpin is perpendicular to the bottom plate. The kingpin should be within one degree of perpendicular with the bottom plate at any point around the kingpin. Any trailer with a bent kingpin must be taken out of service until the kingpin is replaced.

4. Make sure to rotate gauge 360 degrees to check the entire bottom plate surface for flatness and the kingpin for perpendicularity to the bottom plate..

5. Replace any damaged or incorrect kingpins.



Caution: Use of excessively worn or bent kingpins can affect fifth wheel performance. Kingpins of improper height may also affect proper performance. Use of kingpins that are not within SAE J700 standards may also cause hazardous conditions.



IMPORTANT: For Fontaine publications that help you get the most out of your fifth wheel go to: http://www.fifthwheel.com/literature/ or scan this QR code with your mobile device.



IMPORTANT: Fontaine Training Videos are a great resource that can save time and improve the efficiency of your business. Subjects cover coupling and uncoupling a fifth wheel, rebuilding, maintenance and more. Check them out at: http://fifthwheel.com/videos/ or scan this QR code with your mobile device.

