

16150

MOUNTING RAIL KIT

10/30/2017

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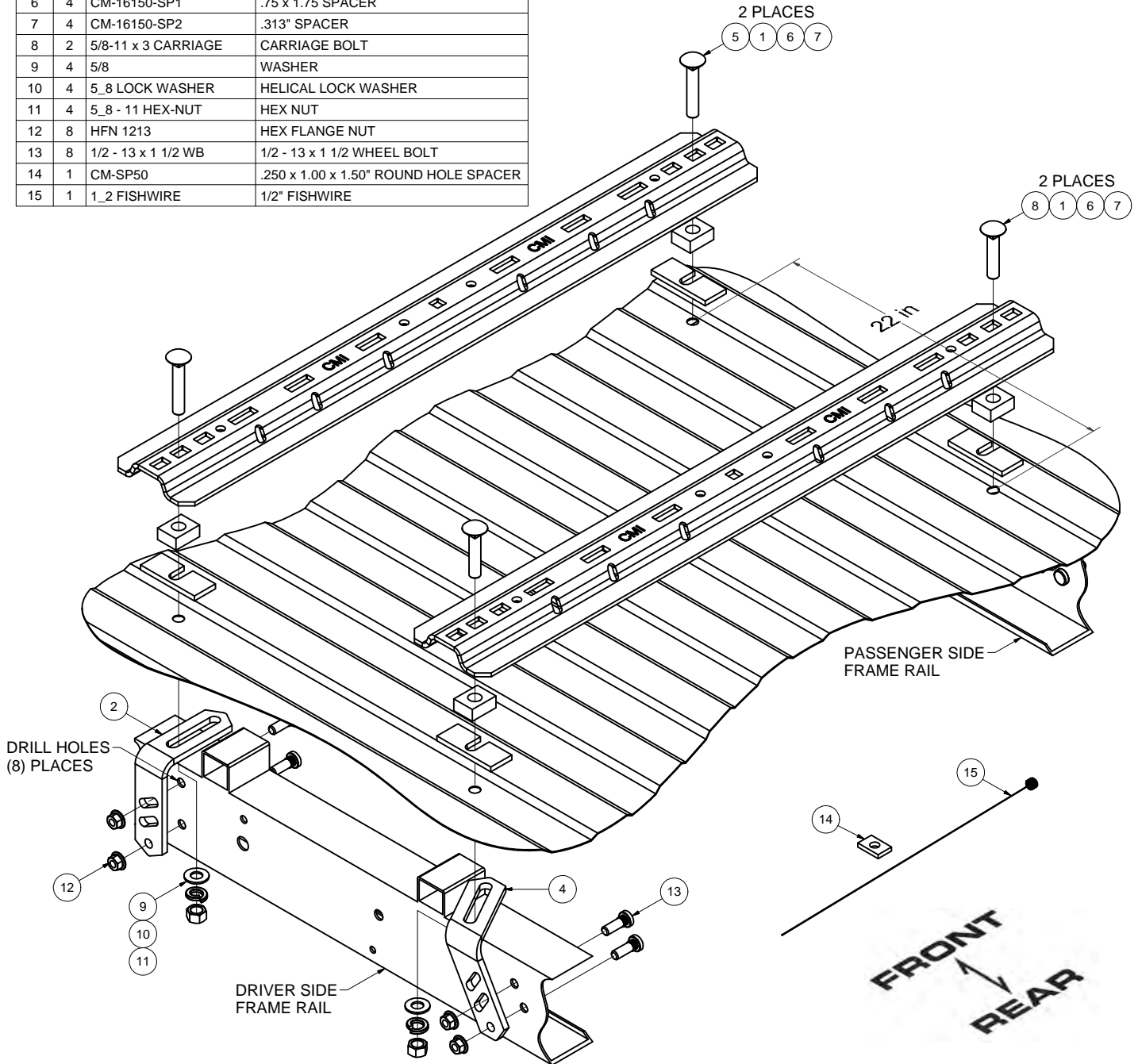


DO NOT EXCEED VEHICLE MANUFACTURER'S RECOMMENDED TOWING CAPACITY.
 HAVING INSTALLATION QUESTIONS? CALL TECHNICAL SUPPORT AT 1-800-798-0813



WARNING!! BRAKE, FUEL, AND ELECTRICAL LINES MAY NEED TO BE LOOSENED OR REPOSITIONED TO PROVIDE CLEARANCE FOR NEW HARDWARE. SOME MODELS REQUIRE MODIFICATION OR REMOVAL OF HEAT SHIELDS. ON SHORT BED MODELS, CHECK FOR ADEQUATE TURNING CLEARANCE BETWEEN THE FRONT OF ALL TRAILERS AND THE TRUCK CAB.

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	CM-16150-MR	MOUNTING RAILS
2	2	CM-16150-FB	.375" FRONT BRACKET
3	1	CM-16150-PSRB	.375" PASSENGER SIDE REAR BRACKET
4	1	CM-16150-DSRB	.375" DRIVER SIDE REAR BRACKET
5	2	5/8-11 x 3 1/2 CARRIAGE	CARRIAGE BOLT
6	4	CM-16150-SP1	.75 x 1.75 SPACER
7	4	CM-16150-SP2	.313" SPACER
8	2	5/8-11 x 3 CARRIAGE	CARRIAGE BOLT
9	4	5/8	WASHER
10	4	5_8 LOCK WASHER	HELICAL LOCK WASHER
11	4	5_8 - 11 HEX-NUT	HEX NUT
12	8	HFN 1213	HEX FLANGE NUT
13	8	1/2 - 13 x 1 1/2 WB	1/2 - 13 x 1 1/2 WHEEL BOLT
14	1	CM-SP50	.250 x 1.00 x 1.50" ROUND HOLE SPACER
15	1	1_2 FISHWIRE	1/2" FISHWIRE



Scan for more information

PERIODICALLY CHECK THIS HITCH TO ENSURE THAT ALL FASTENERS ARE TIGHT AND THAT ALL STRUCTURAL COMPONENTS ARE SOUND.

CURT Manufacturing LLC., warrants this product to be free of defects in material and/or workmanship at the time of retail purchase by the original purchaser. If the product is found to be defective, CURT Manufacturing LLC., may repair or replace the product, at their option, when the product is returned, prepaid, with proof of purchase. Alteration to, misuse of, or improper installation of this product voids the warranty. CURT Manufacturing LLC.'s liability is limited to repair or replacement of products found to be defective, and specifically excludes liability for incidental or consequential loss or damage.



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INSTALLATION STEPS:

NOTE: Due to vehicle variations these installation steps are to be used as a general guide for all installs, additional adjustments and fabrication steps may be needed to complete each install properly. Custom 5th wheel bracket application information is available at <http://curtmfg.com/>

1. Place the (2) mounting rails across the truck bed between the wheel wells. Position the 5th wheel legs between the mounting rails so that the tabs in the base of each leg will fit into the slots in the ends of the mounting rails. Secure the legs in place with the rail hitch pins and clips supplied with the 5th wheel hitch. Securely attach the 5th wheel head to the legs.
2. On most applications the 5th wheel assembly should be positioned so that it is approximately centered over the truck axle and between the wheel wells on the bed floor. **Note:** To keep the trailer from damaging the cab on tight turns there must be at least 52" between the hitch and the cab. On long bed pickups, the hitch center line can be up to 3" forward of the axle. On short bed pickups this position is not possible. A 5th wheel roller such as a #16560 is required so the hitch can be moved rearward before making a tight turn.
3. When hitch is correctly positioned in the bed and the mounting rails are parallel, mark (4) attachment points on the truck bed using (1) of the (3) 5/8" rectangular slots at the end of each mounting rail that fit best with the truck frame rails. Check below the bed before drilling holes to see that all wiring, brake lines or other obstructions are moved out of the way and will not be contacted by the drill. Move the hitch assembly away and drill (4) 5/8" diameter attachment holes down through the bed at the previously marked points.
4. Reposition the mounting rails in the bed so that the square 5/8" hole in the end of each rail is lined up over the drilled holes. Place a 3/4" thick spacer (CM-16150-SP1) under the ends of each mounting rail, in line with the drilled holes as shown.
5. Under the bed of the truck if the bed corrugation above the angle bracket is UP, leaving a space above the angle bracket, place a spacer (CM-16150-SP2) in the bed, under the mounting rail as shown. Bolt parts loosely in place as shown.
6. Position (1) of the mounting brackets under the bed and align with the 5/8" carriage bolts protruding down through the bed. Use the driver and passenger side angle brackets at locations where frame obstructions will not allow the straight "L" brackets to be positioned. If frame rail is clear of obstructions, the angle brackets may be placed at any location.
7. Move the installed straight "L" or angle brackets so that they rest tightly against the side of the truck frame rail and underneath the surface of truck bed. Install the 5/8" carriage bolts down through the mounting rails and brackets.

Note: There are 2 lengths of 5/8" carriage bolts. Use the shorter bolts on applications where vehicle frame rail clearance may be close to attachment point. Bolts can be used in any attachment location. Securely bolt brackets in place. Be sure they are tight against the side of the truck frame rail. Torque all 5/8" fasteners to 150 lb-ft.
8. Before drilling any holes, check inside the frame rail to be sure that there are no wires, brake lines or other obstructions in the frame which may be contacted by the drill. Each of the brackets must be attached to the frame rail of the truck with (2) 1/2" wheel bolts. Drill (2) 17/32" holes through the frame rail using (2) of the holes in each angle bracket as guides.

CAUTION: Holes MUST be drilled 17/32" diameter, so that the wheel bolts will seat properly. If the holes are too small the bolt may break. If the hole is too large it will not grip properly.

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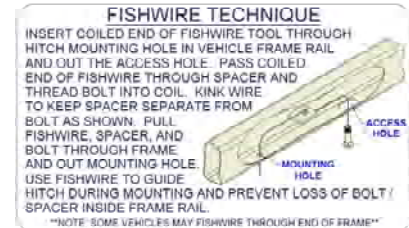
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SPECIAL NOTE: On 1999-2001 Chevrolet Silverado and GMC Sierra applications, it will be necessary to modify the bolt installation procedure on the forward driver side bracket attachment. Drill a 5/8" diameter hole in the frame rail at the lower bracket attachment point. Place (1) of the 1/2" wheel bolts in the 1/4" spacer (CM-SP50). Place this bolt assembly into the frame rail so that the threaded end of bolt protrudes out through the frame rail. Bolt bracket in place at this location. The remaining bolts will be installed as normal.

9. Place the wheel bolts into the frame rail first and then out through the brackets as shown on first page. Some applications will require the use of a fishwire to align the bolts into the drilled holes in the frame. Thread the fishwire coil over the end of the wheel bolt and pull through the frame rail and bracket. See fishwire diagram. Secure each bracket to the truck frame rail with 1/2" hex flange nuts. The knurled portion of the bolts will lock into the frame holes as the nuts are tightened. Use of an air wrench will simplify installation.



10. Torque all 1/2" attachment bolts to 75 lb-ft.
11. Check each hitch pin for freedom of movement in the bed rail connection. Remove the (4) pins and lift the 5th wheel up out of the mounting rail slots. If tabs are tight in mounting rail slots check to be sure the mounting rails are parallel to each another and square. If not, loosen 5/8" bolts and adjust mounting rails. Also check that the 5th wheel legs are sitting vertically straight. It may be necessary to shim the 5th wheel legs by placing a washer between it and the 5th wheel head.
12. Re-torque the 5/8" bolts to 150 lb-ft if loosened in step 11.

Mounting Rail Installation Tips by Vehicle

Due to variations in vehicle assembly through the years listed, the under bed cross member location on your truck may not be the same as listed below. *The following information is to be used as a guide for placement of the mounting rail system. Slight adjustments to these positions may be required.*

Dodge Applications

1993-Earlier Dodge full size truck (ahead of axle installation)

Position the assembled 5th wheel (with mounting rails) so that the center line is approximately 2" ahead of the truck axle center line. The rear mounting rail should be located 32-1/2" from rear edge of bed on all trucks. The left and right angle brackets can be positioned at any location that will allow them to clear obstructions on the truck frame rail.

1994-2001 Dodge short bed full size truck (ahead of axle installation)

Position the assembled 5th wheel (with mounting rails) so that the rear mounting rail is located 25-3/16" from rear edge of bed.

1994-2001 Dodge long bed full size truck (over axle installation)

Position the assembled 5th wheel (with mounting rails) so that the rear mounting rail is located 29-3/16" from rear edge of bed. **Note:** On some long bed applications, the edge of the under bed supports may not allow the formed angle brackets supplied with the bed rail kit to align with the bed rail attachment points. The use of (2) straight "L" brackets at these location, will eliminate this issue.

Toyota Applications

2000-04 Toyota Tundra long and short bed truck (over axle installation)

Position the assembled 5th wheel (with mounting rails) so that the centerline is over the truck axle. The rear mounting rail should be located 30-7/8" from rear edge of bed on all trucks. The left and right angle brackets will be placed at the rear attachment points and the straight brackets will be at the forward attachment points.

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Chevrolet/GMC Applications

1987-earlier Chevrolet/GMC long bed truck *(ahead of axle installation)*

Position the assembled 5th wheel (with mounting rails) so that its centerline is over of the truck axle centerline. The rear mounting rail should be located 33-5/8" from rear edge of bed. The left and right angle brackets may be placed at any location that will give the best attachment points on the truck frame rails.

1987-earlier Chevrolet/GMC short bed truck *(over axle installation)*

Position the assembled 5th wheel (with mounting rails) so that its centerline is over the truck axle centerline. The rear mounting rail should be located 23-5/8" from rear edge of bed. The left and right angle brackets may be placed at whatever location will give the best attachment points on the truck frame rails.

1988-2000 Chevrolet/GMC long bed truck *(over axle installation)*

Position the assembled 5th wheel (with mounting rails) so that the centerline is over the truck axle centerline. The rear mounting rail should be located 29-7/8" from rear edge of bed on long bed trucks. The left and right angle brackets may be placed at any location that will give the best attachment points on the truck frame rails. Use angle brackets opposite of opposing shock absorbers.

1988-99 Chevrolet/GMC short bed truck *(over axle installation)*

Position the assembled 5th wheel (with mounting rails) so that it is directly over the truck axle centerline. The rear mounting rail should be located 24-3/8" from rear edge of bed on short bed trucks.

1999-06 Chevrolet/GMC Silverado/Sierra long bed truck *(ahead of axle installation)*

Position the assembled 5th wheel (with mounting rails) so that its centerline is approximately 1" forward of the truck axle centerline. The rear mounting rail should be located 31-1/2" from rear edge of bed on long bed trucks. The left and right angle brackets will be placed at the rear attachment points and the straight brackets will be at the forward attachment points. The front attachment bolts will need to be fishwired into the forward box frame section. The driver and passenger side angle brackets may be placed at any location that will give the best attachment points on the truck frame rails. Use angle brackets opposite of opposing shock absorbers. See "special note" after step 8.

1999-06 Chevrolet/GMC Silverado/Sierra short bed truck *(behind axle installation)*

Position the assembled 5th wheel (with mounting rails) so that the centerline is approximately 1" behind the truck axle centerline. The rear mounting rail should be located 24" from rear edge of bed on short bed trucks. The left and right angle brackets will be placed at the forward attachment points and the straight brackets will be at the rear attachment points. The front frame bracket attachment bolts will need to be fishwired into the forward box frame rail section. Use the 5/8" x 3" bolts at the forward mounting rail attachment points and the 5/8" x 3-1/2" bolts at the rear mounting rail attachment points. See "special note" after step 8.

Ford Applications

1973-91 Ford F-Series truck *(over axle installation)*

Position the assembled 5th wheel (with mounting rails) so that it is centered over the truck axle. The rear mounting rail should be located 28-5/8" from rear edge of bed on long bed trucks and 29-3/4" from rear edge of bed on short bed trucks. Use the left and right angle brackets to clear the shock mount brackets on the side of the truck frame rail, at the rear attachments. On some Ford short bed applications there may be frame rail obstructions. The use of (4) angled brackets can ease installation.

1992-96 Ford F-150, F-250 and F-250 HD truck *(over axle installation)*

Position the assembled 5th wheel (with mounting rails) so that it is centered over the truck axle. The rear mounting rail should be located 28-3/8" from rear edge of bed on long bed trucks and 27-3/4" from rear edge of bed on short bed trucks. This will place both of the hitch mounting rail attachment points to the rear of both truck under bed supports. Use the left and right angle brackets to clear the shock mount brackets when attaching to the side of the truck frame rails.

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Ford Applications *(continued)*

1997-98 Ford F-350 truck *(behind axle installation)*

Due to some heavy duty suspension components on various models of this truck, the assembled 5th wheel (with mounting rails) must be positioned to the rear of the axle centerline. The rear mounting rail should be located 28-3/8" from rear edge of bed on long bed trucks and 27-3/4" from rear edge of bed on short bed trucks. Check the angle bracket to frame rail attachment points to find the best location as close to the axle centerline as possible.

1997-04 Ford F-150 and F-250 truck (except HD F-250 and 2004 F-150 new body) *(over axle installation)*

Some installations may position the mounting rails so that the attachment holes are drilled down through the front under bed support and the truck frame rail. On these applications, use the tube spacer which is purchased separately. The angle brackets from this kit are used at the rear locations. The rear mounting rail should be located 26-3/4" from rear edge of bed on long and short bed trucks.

1999-02 Ford F-250 and F-350 super duty truck *(over axle installation)*

Position the assembled 5th wheel (with mounting rails) so that its centerline is centered over the truck axle. The rear mounting rail should be located 28-1/4" from rear edge of bed on all trucks. If the truck is equipped with overload springs, the spring bracket on the side of the frame rail will have to be temporarily removed. Holes in the frame rail and spring brackets must be enlarged to accept 1/2" bolts. Use the straight brackets on the front mounting rail and the angled brackets at the rear mounting rail. The rear angle brackets will line up with the previously removed overload spring brackets. Reinstall the spring brackets on top of the angle brackets. The rear spring bracket attachment points will require 3/8" thick spacers and longer 1/2" bolts, not supplied in kit.

**** IMPORTANT TOWING INFORMATION ****

BEFORE TOWING THE FIRST TIME:

- Verify adequate turning clearance between the truck cab / box corners and trailer(s).
SEE CAB CLEARANCE CALCULATION SHEET
- Verify truck bed clearance at various angles and maneuvering positions.
- Verify all hardware is torqued to the proper specification.

BEFORE TOWING EVERY TIME:

- Ensure all fasteners are tight and that all structural components are sound.
Note: Do not tow trailer with worn or damaged parts.
- Ensure the trailer weight does not exceed any part of your towing system. Be sure load is heavier towards front of the trailer while not exceeding the hitch tongue weight. Be sure trailer load is secured to prevent shifting and centered from left to right. **Note:** Never load the trailer heavier behind the trailer axle(s).
- Check tires to ensure they are inflated to the proper specification. Follow vehicle and trailer recommendations.
- Verify trailer lights, electric brakes, and breakaway switches are working properly.

WARNING!!

- Vehicle performance (braking, handling, acceleration, turning radius) can be drastically affected by the trailer. Allow additional time / space for stopping, changing lanes, passing and turning.
- Do not tow more than one trailer at a time. This may cause loss of control.
- Severe bumps can damage your towing system. Avoid or drive slowly over rough terrain.

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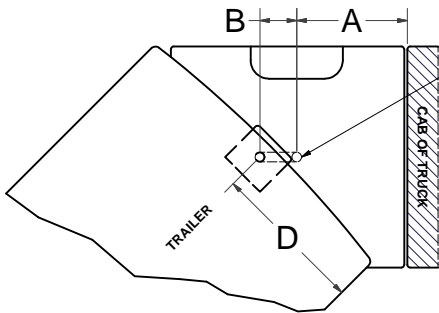
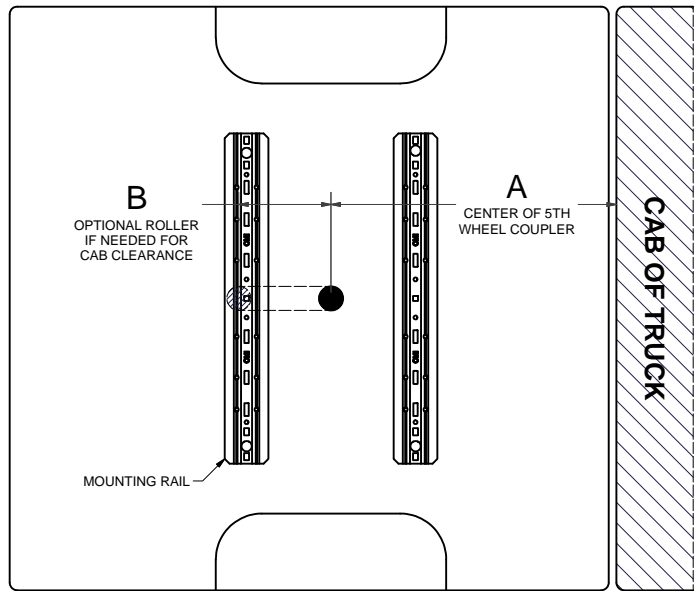
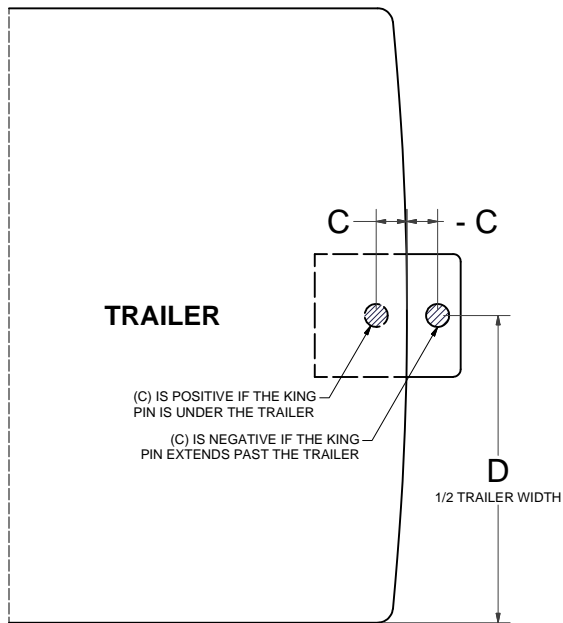
CAB TO TRAILER CLEARANCE



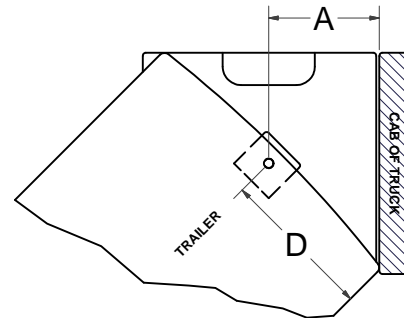
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****REMOVAL OF REAR WINDOW ACCESSORIES MAY BE REQUIRED****



NOTE: CURT MFG ROLLERS WILL GIVE AN ADDITIONAL 12" OF TRAVEL AWAY FROM THE CAB IN THE MANEUVER POSITION (VERIFY TRAVEL DISTANCE WITH YOUR HITCH SYSTEM)



CLEARANCE CALCULATIONS



ATTENTION: CAB CLEARANCE CALCULATIONS ARE FOR REFERENCE ONLY. ALWAYS PHYSICALLY CHECK CLEARANCES PRIOR TO TOWING FOR THE FIRST TIME WITH A NEW VEHICLE, TRAILER, OR 5TH WHEEL HITCH SYSTEM.



IF (X) IS POSITIVE, TRAILER **WILL NOT** INTERFERE WITH CAB OF TRUCK.
 IF (X) IS NEGATIVE, TRAILER **WILL** INTERFERE WITH CAB OF TRUCK!!!

CLEARANCE CALCULATION:

$$[(A) - (C)] - D = X$$

EXAMPLE:

$$[(37) - (-2)] - 48 = \mathbf{-9 \text{ INTERFERENCE}}$$

CLEARANCE CALCULATION WITH ROLLER:

$$[(A+B) - (C)] - D = X$$

EXAMPLE:

$$[(37+12) - (-2)] - 48 = \mathbf{3 \text{ ADEQUATE CLEARANCE}}$$

ENTER MEASUREMENTS BELOW:

A - CAB TO 5TH WHEEL COUPLER = _____

B - ADDITIONAL ROLLER TRAVEL = _____

C - KING PIN OVERHANG OR EXTENSION = _____

D - 1/2 TRAILER WIDTH = _____

PERIODICALLY CHECK THIS RECEIVER HITCH TO ENSURE THAT ALL FASTENERS ARE TIGHT AND THAT ALL STRUCTURAL COMPONENTS ARE SOUND.

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