



**CURT**<sup>TM</sup>

The **FIRST** Name  
in Towing Products<sup>TM</sup>

# DOUBLE LOCK GOOSENECK

## INSTRUCTION MANUAL



Installer: Read and understand this manual. Fully instruct and demonstrate the operation of this gooseneck hitch to the end user. Include the importance of observing all warnings. Provide this manual in its entirety to the end-user.

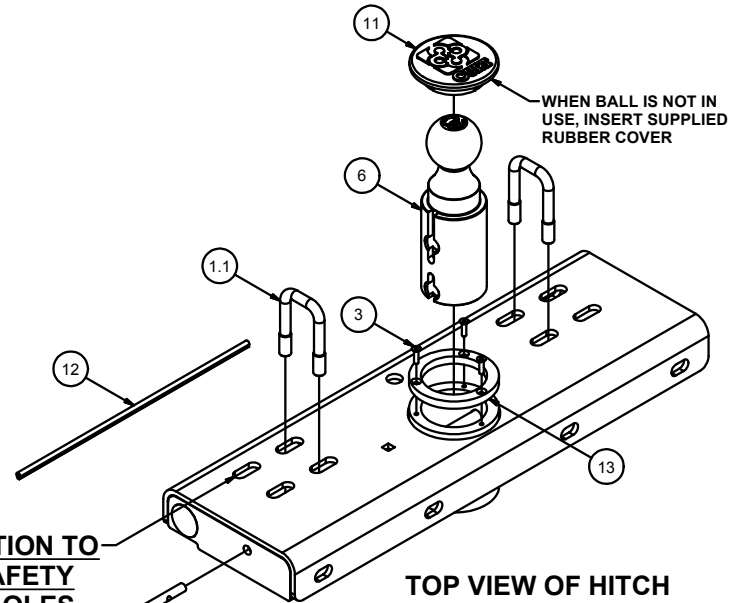
# 60607

# GOOSENECK HITCH

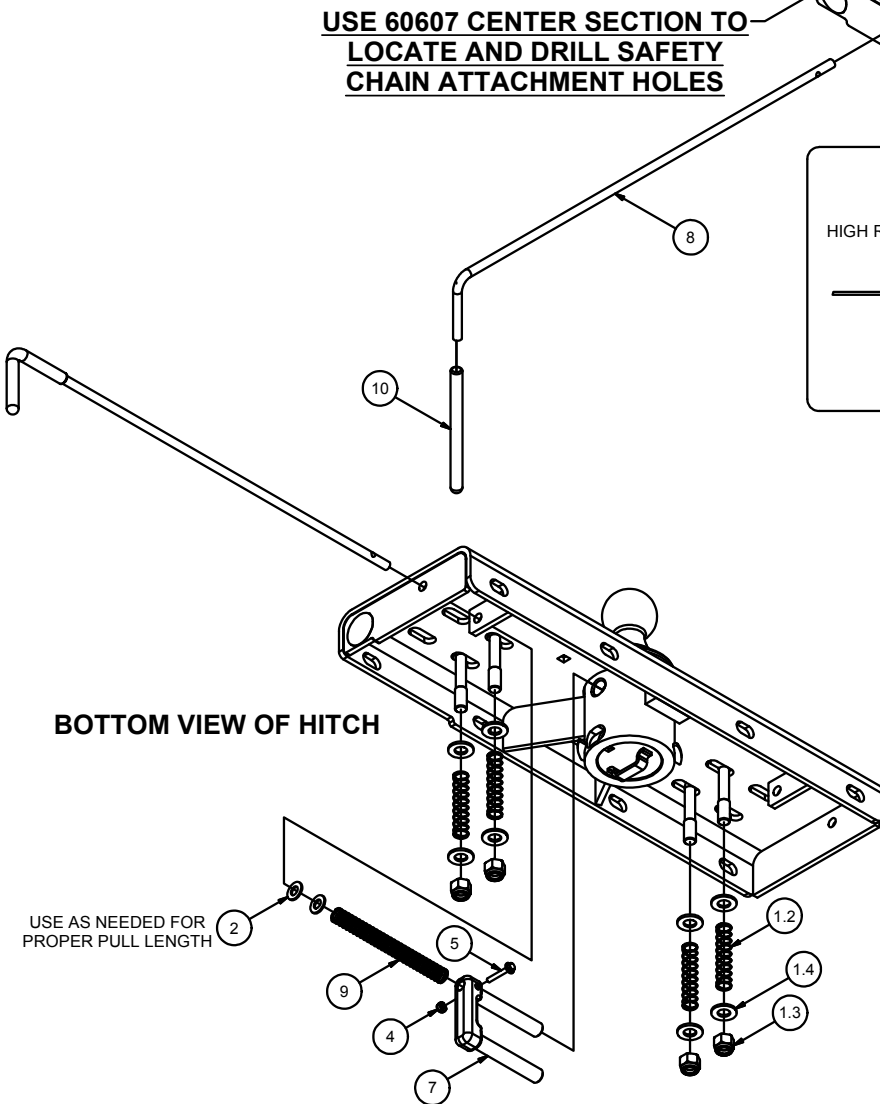
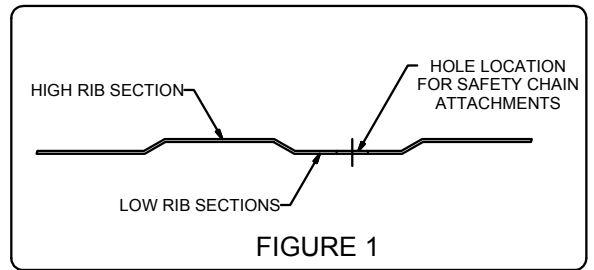
2/26/2013

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	CM-C60-CLA	SAFETY CHAIN LOOP ASSEMBLY
1.1	1	CM-C60-CL	2" x 3" SAFETY CHAIN LOOP
1.2	2	CM-C60-S	U-BOLT SPRING
1.3	2	1_2 - 13	NYLOCK HEX NUT
1.4	4	FW12SAE	FW, 1/2 SAE, ZP
2	2	3/8"	WASHER
3	3	#10-32 x 3/4	FLAT HEAD C'SUNK CAP SCREW
4	1	#10-24 NYLOCK HEX NUT	NYLOCK HEX NUT
5	1	#10-24 x 1.25 HHFS	HEX HEAD FLANGE SCREW
6	1	CM-C60-B	TURNOVER BALL COMPLETE
7	1	CM-C600-CLP	CAST LOCK PIN
8	1	CM-C60-R	.375" HANDLE ROD
9	1	CM-C60-CS	7.5 LB COMPRESSION SPRING
10	1	CM-C60-H	VINYL HANDLE GRIP
11	1	CM-C60-RC	RUBBER COVER
12	1	CM-UE1	.300" U-SHAPED EDGING
13	1	CM-C600-CR	3.75 DIA. x .375" CHROME RING

**WARNING DO NOT** invert ball when carrying heavy loads on 2 wheel drive trucks. The ball may hit the top of the differential, brake lines, or sensors.  
**(NOTE: Do not invert ball on any Toyota Tundra Models)**



**USE 60607 CENTER SECTION TO LOCATE AND DRILL SAFETY CHAIN ATTACHMENT HOLES**



**U-EDGING INSTALLED AROUND EDGE OF 4" HOLE IN TRUCK BED**

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**Warning!!** Carefully examine the location of fuel lines, brake lines, and electrical wires BEFORE INSTALLATION. Brake, fuel, and electrical lines may need to be loosened or repositioned to provide clearance for new hardware. The installation of this hitch may require modification or removal of heat shields. The use of overload springs, air bags, etc. may be required when towing heavy loads.

### **Installing 60607 Turnover Gooseneck After Cross Arm Sub-kit Installation**

- 1) Install rubber edging (CM-UE1) on cut edge for 60607 cylinder, trim excess.
- 2) Position the 60607 over the rear axle and up to the rear cross arm with the cylinder facing the correct direction for the application. Install four 1/2" x 1 3/4" carriage bolts into the 60607 first, then through the rear cross arm and secure with 1/2" flange nuts, finger tighten.
- 3) Move the front cross arm to the 60607 and install the 1/2" x 1 3/4" carriage bolts into the cross arm then through the 60607 and secure with 1/2" flange nuts.
- 4) Torque all 1/2" hardware to 110 ft-lbs.

### **Installing Safety Chain Attachments**

- 1) From under the truck use the 60607 gooseneck as a template to drill four 1/2" holes for the safety chain attachments.
- 2) Using a 1/2" drill bit, drill the center of each slotted hole in the gooseneck. (**Note: Be sure the holes are drilled in the lower rib section of the truck bed as shown in FIGURE 1.**)
- 3) From inside the truck box place the two U-bolts (1.1) through the predrilled holes in the bed of the truck.
- 4) From beneath the truck place a washer (1.4), a spring (1.2), a washer (1.4) and a nylock nut (1.3) on each of the four U-bolt legs. Tighten the nylock nuts until flush with the bottom of the U-bolt.

### **Installing handle / lock**

- 1) Insert Locking Pin (7) into the ball cylinder with handle rod hole located on top.
- 2) Slide rubber grip (10) onto handle rod.
- 3) Insert handle rod from outside vehicle, through the hole in the 60607 endplate, and through the rod guide as shown. (Handle rod may be installed on driver side or passenger side, depending on preference).
- 4) Slide the compression spring (9) over handle rod before inserting the handle rod into the locking pin. Insert handle rod into locking pin and secure with #10 screw (5) and nylock nut (4) as shown.  
(**Note: Use 1-2 additional 3/8" washers (2) as needed to ensure proper pull length of locking pin.**)

### **Caution!!!**

1. Check that all 1/2" hardware has been torqued to 110 ft-lbs.
2. Check that all side plate hardware has been torqued. Some hardware listed will not apply to your application.
  - 3/8" to 45 ft-lbs.
  - 1/2" to 110 ft-lbs.
  - 9/16" to 150 ft-lbs.
  - 5/8" to 210 ft-lbs.
  - 3/4" to 380 ft-lbs.
3. Re-attach Brake, Fuel, and Electrical lines so they do not contact any of the added fasteners.

### **60607 Operation**

1. Pull the handle out as far as possible and rotate clockwise until the locking pin is disengaged and locked out.
2. Insert ball in the tow position into the cylinder by aligning the ball groove with the cylinder pin. If the groove and pin are not aligned simply rotate ball until the ball drops into place.
3. Rotate handle counter clockwise until locking pin snaps back into position. (Note: Be certain the locking pin passes completely through the ball and securely into the cylinder.)

### **60607 Installation check**

1. Set ball in towing position and handle in locked position.
2. Connect the trailer to the hitch ball.
3. Check truck box clearance, there should be a minimum clearance of 6" between the bottom of the trailer overhang and the top of the box sides. Verify clearance between the truck and trailer at cab and box corners.

### **Maintenance (Required every 30 days or prior to use)**

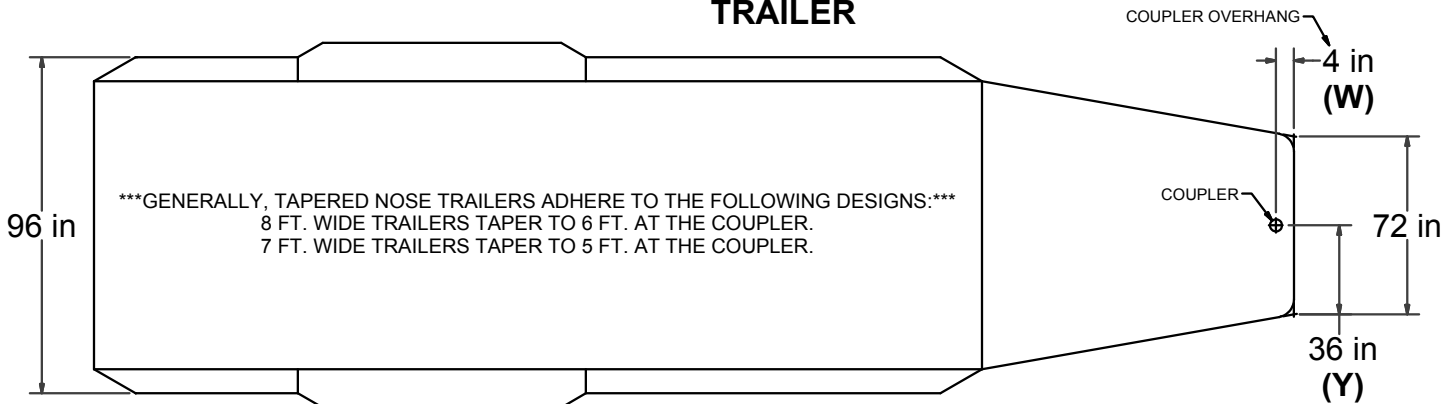
1. Keep hitch ball lubricated regularly. Use silicone spray or equivalent to prevent wear and rust.
2. Keep hitch assembly free of dirt and other foreign debris.
3. Check for proper torque on all nuts and bolts before each use. Also check for excessive wear.
4. Check for ball wear before each use. (**Note: Do not tow trailer with worn or damaged parts.**)

\*\*\*DO NOT EXCEED VEHICLE MANUFACTURER'S RECOMMENDED TOWING CAPACITY.\*\*\*

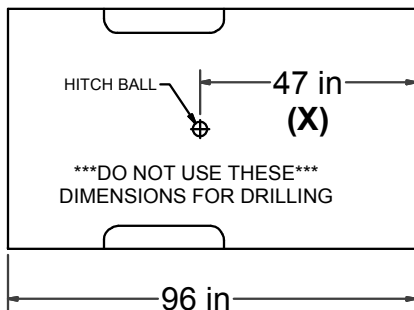
## CAB TO TRAILER CLEARANCE

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

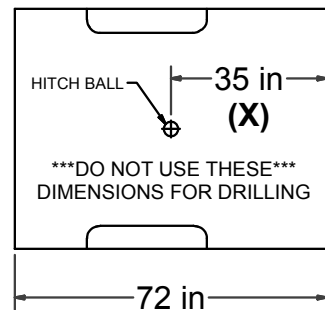
### TRAILER



### LONG & SHORT TRUCK BEDS



CAB OF TRUCK



CAB OF TRUCK

## \*\*WARNING REFERENCE CLEARANCE CALCULATOR BEFORE TOWING\*\*

### CLEARANCE CALCULATION

$$\begin{matrix} \text{(CAB TO BALL CENTER)} & - & 1/2 \text{ (TRAILER WIDTH)} & = & \text{(MINIMUM CLEARANCE)} \\ \text{(X)} & - & \text{(Y)} & = & \text{(Z)} \end{matrix}$$

IF THERE IS AN OVERHANG FROM THE COUPLER THEN THE EQUATION IS:

$$[(X) - (W)] - (Y) = (Z)$$

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

### EXAMPLE:

#### STANDARD TRAILER

$$\begin{aligned} X - Y &= Z \\ 35 - 36 &= -1 \\ \text{(TRAILER **WILL INTERFERE** WITH CAB)} \end{aligned}$$

#### TRAILER WITH OVERHANG

$$\begin{aligned} [(X) - (W)] - Y &= Z \\ [35 - 4] - 36 &= -5 \\ \text{(TRAILER **WILL INTERFERE** WITH CAB)} \end{aligned}$$

### YOUR CALCULATION:

$$\begin{aligned} \text{(CAB TO BALL CENTER)} & \quad \underline{\hspace{2cm}} \\ - & \quad \underline{\hspace{2cm}} \\ \text{(COUPLER OVERHANG)} & \quad \underline{\hspace{2cm}} \\ - & \quad \underline{\hspace{2cm}} \\ 1/2 \text{ (TRAILER WIDTH)} & \quad \underline{\hspace{2cm}} \\ = & \quad \underline{\hspace{2cm}} \\ \text{(MINIMUM CLEARANCE)} & \quad \underline{\hspace{2cm}} \end{aligned}$$

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**\*\*\*MAX. TONGUE WEIGHT - 4500 lb. (2043 kg)\*\*\*****C-667 SUBKIT****TOYOTA TUNDRA  
6.5 FT. STANDARD BED**

**WARNING!!** BRAKE, FUEL, AND ELECTRICAL LINES MAY NEED TO BE LOOSENED OR REPOSITIONED TO PROVIDE CLEARANCE FOR NEW HARDWARE. ALL 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.

**INSTALLATION STEPS**

**WARNING!!** ON TWO WHEEL DRIVE TRUCKS A CLEARANCE CHECK MUST BE PERFORMED WHEN TRUCK IS LOADED AND UNLOADED TO VERIFY THE INVERTED BALL WILL NOT INTERFERE WITH THE TOP OF THE DIFFERENTIAL

**BEFORE INSTALLING**

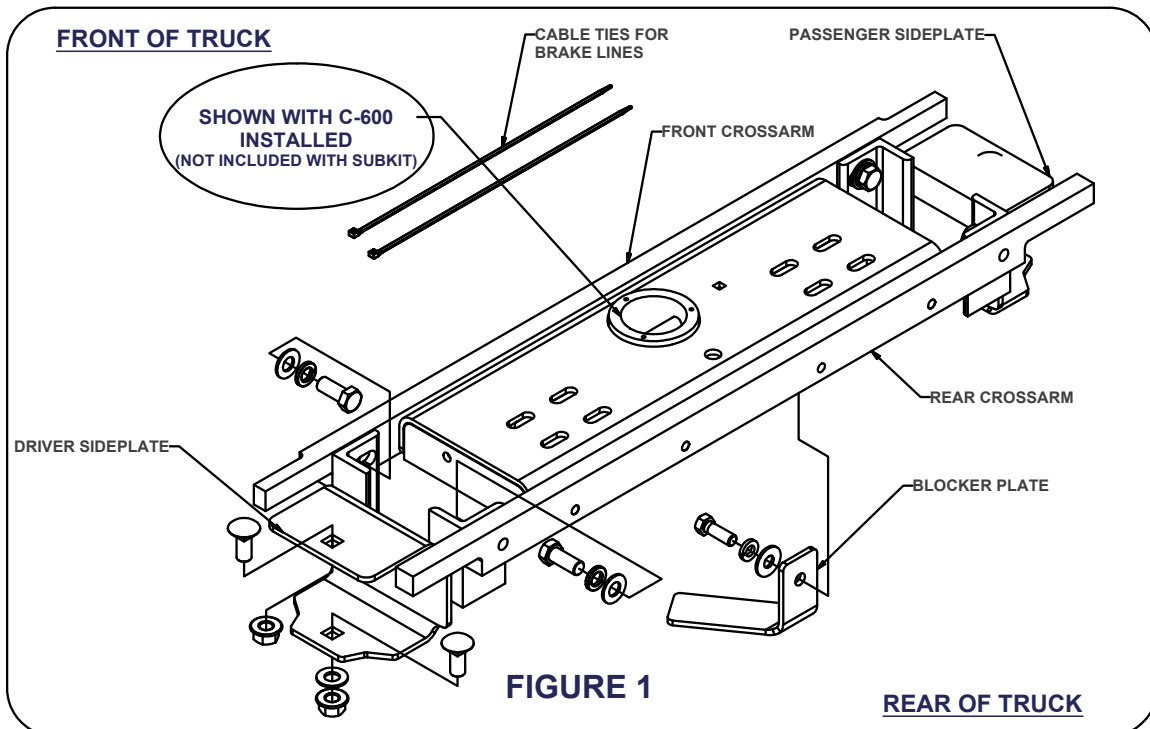
- \*\*\*Brake lines MUST be cable tied as shown to prevent pinching of or cutting of brake lines when truck is loaded!\*\*\***
- \*\*\*An air bag suspension is recommended to be installed to prevent downward travel of bed and the cutting or pinching of brake lines, or damage to the rear axle when truck is loaded!\*\*\***
- \*\*\*Ball can not be turned over with this kit! Ball will interfere with rear axle if turned over and heavy load is applied!\*\*\***
- \*\*\*Curt Mfg. is NOT responsible for any damage to the brake lines or rear axle when these guidelines are ignored!\*\*\***

- 1) Mark the location for the hole in the truck bed. Measure from the tail gate end of the truck bed, by hooking a tape measure over the **back of the truck box** and marking the correct location. **(NOTE: DO NOT MEASURE FROM EDGE OF TAILGATE)** Next, mark the center between the wheel wells. This marks the center point for the 4" hole. This hole location is critical for the correct installation of this hitch. Measure, mark, and saw carefully. This location will put the ball 4"-6" in front of the axle.

**6.5' Standard Bed Installation      42 1/4"**

**NOTE:** If truck has a plastic bed liner, you may drill through both, but it is more difficult to accurately locate the midpoint between the wheel wells, and to keep the bed liner from moving while cutting the hole. Make a 4" hole at this location using a 4" hole saw, or by making a 4" circle and cutting it out with a saber saw equipped with a metal cutting blade.

- 2) For ease of installation, lower spare tire and remove rear most heat shield just above the exhaust pipe. Before installing the cross arms, remove the electrical wire harness by pulling the plastic clip loose from the passenger side frame rail and using pliers, bend the two weld nut tabs (between the two bed frame rails) straight down. This will allow the room needed between the bed frame rails to install this kit. Select the rear cross arm (only one set of notches) and from under the truck, lift the passenger side of the arm over the exhaust and on top of the frame. Push it above the frame as far in as possible and rotate the driver side of arm up on to the driver side frame rail. When the arm is spanning the frame, push it back against the bed frame rail. Repeat this process for the front cross arm (two sets of notches) keeping the second set of notches facing the front of the truck. Once the arm spans the frame, push it forward to the front bed frame rail.

**FIGURE 1****REAR OF TRUCK**

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**\*\*DO NOT EXCEED RECOMMENDED VEHICLE TOWING WEIGHT!\*\***

## C-667 SUBKIT

TOYOTA TUNDRA  
6.5 FT. STANDARD BED

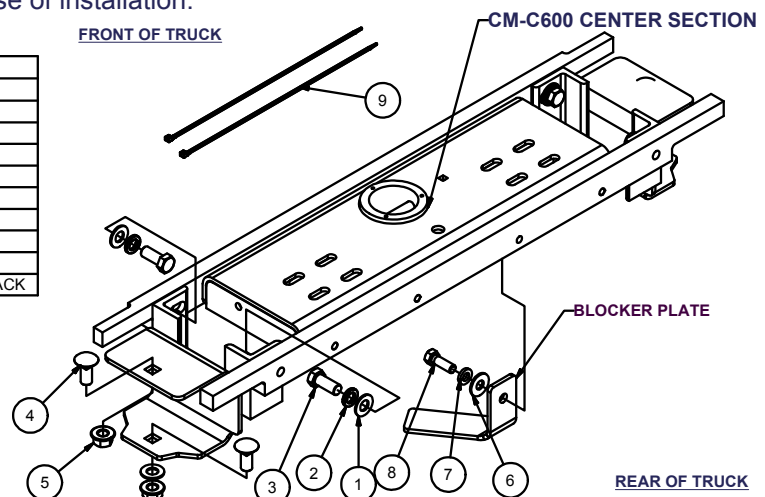
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### Installation Steps

- At this time, remove the rear most exhaust hanger bracket from the exhaust pipe. This will allow movement and more room to install the center section and sideplates. While under the truck at this time, disconnect the fuel pump control box on the driver side frame rail. This is necessary for installation of the sideplates.
- Raise the center section into position between the cross arms from beneath the truck. The round receiver tube that protrudes from the center section must face towards the front of the truck and fit through the hole in the truck bed floor. If you are using an overhead-lifting device, attach it to the receiver tube to help support the center section. Align the middle four threaded holes in the cross arms with the center section slots, and fasten the center section to the cross arms using (8) 1/2" x 1 1/2" bolts, with a flat washer and 1/2" lock washer on each. At this time, install the blocker plate to the inside flange of the center section as shown in the figure below. Use the overhead lifting device to put some upward pressure on the center section if necessary to aid alignment.
- Install the mounting plates at this time to the inside of the frame rails. First you must slide the angles up between the cross arms with the slotted holes toward the top. Then push them towards the frame of the truck. When properly fit, the two flanges of the sideplates will fit in between the C-channel of the frame. At this time, the loose exhaust is able to be pushed aside for ease of installation of the passenger sideplate. When the plates are in position, attach them to the crossarms using 5/8-11 x 1 1/2" hex bolts, 5/8" washers, and 5/8" lock washers as shown in the figure below. When finished, attach the plates to the frame using 5/8-11 x 1 1/2" carriage bolts and flange nuts as shown below. Make sure to install the carriage bolts correctly, or the handle to the center section will not install properly.
- With the sideplates installed on both sides, torque all 1/2" fasteners to 110 ft.-lbs and all 5/8" fasteners to 210 ft.-lbs. in the following order:  
**First:** Torque the sideplates to the frame.  
**Second:** Torque the sideplates to the cross arms.  
**Third:** Torque the center section to the cross arms.
- After everything is torqued, re-attach the exhaust to the exhaust hanger. Also, re-attach the fuel pump control box to the inside of the driver side frame just behind the driver sideplate, where it was removed earlier. Discard the heat shield and raise the spare tire back into position, if removed for ease of installation.

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	6	5/8	WASHER
2	4	5 8 LOCK WASHER	5/8" LOCK WASHER
3	4	5/8-11 x 1 1/2 HEX BOLT	5/8-11 HEX BOLT
4	4	5/8-11 x 1 1/2 CARRIAGE	CARRIAGE BOLT
5	4	5/8-11	HEX FLANGE NUT
6	8	FW12	FW, 12_ZP
7	8	1/2"	LOCK WASHER
8	8	1/2 - 13 x 1 1/2	HEX BOLT
9	2	CM-116415-CT	CABLE TIE 11/64 X 15" 50# UV BLACK



**(REFER TO GOOSENECK HITCH INSTRUCTIONS FOR INSTALLATION AND OPERATING PROCEDURES)**

### Maintenance (Required every 30 days or prior to use)

- Keep hitch ball lubricated regularly. Use silicone spray or equivalent to prevent wear and rust.
- Keep hitch assembly free of dirt and other foreign debris.
- Check for proper torque on all nuts and bolts before each use. Also check for excessive wear.
- Check for ball wear before each use. **(Note: Do not tow trailer with worn or damaged parts.)**

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### **\*\*BRAKE LINE ILLUSTRATIONS\*\***

**REAR AXLE, HITCH, AND BRAKE LINES**



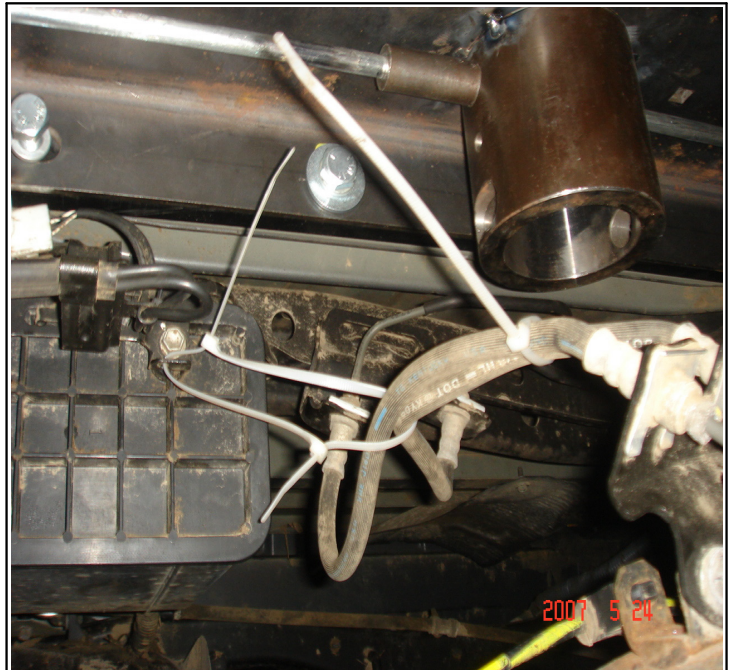
**DISTANCE BETWEEN C-600 AND REAR AXLE**



**FACTORY DISTANCE BETWEEN BUMP STOPS**



**MODIFIED BRAKE LINES USING CABLE TIES**



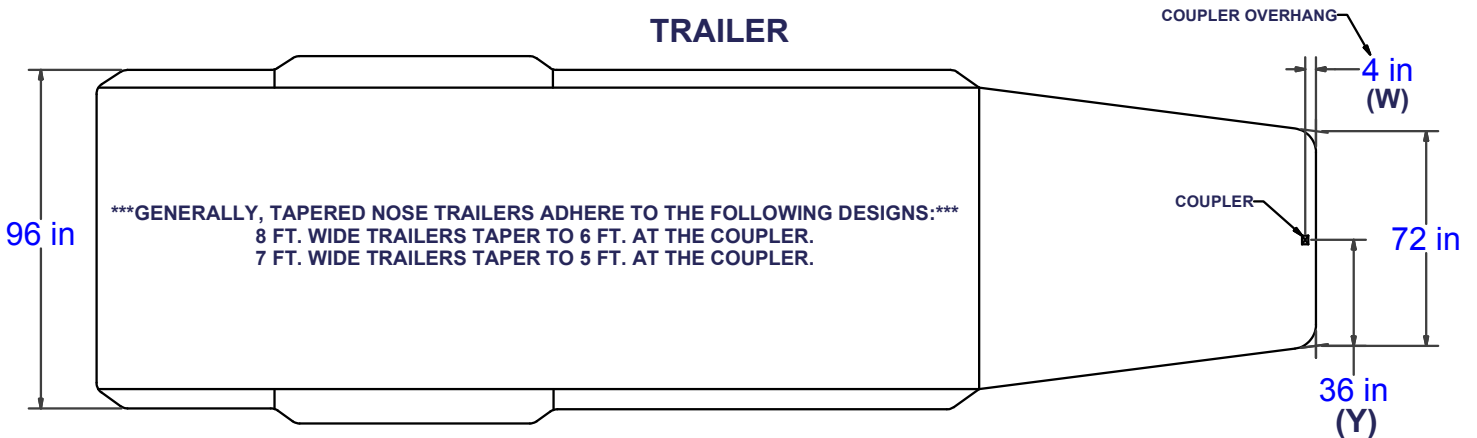
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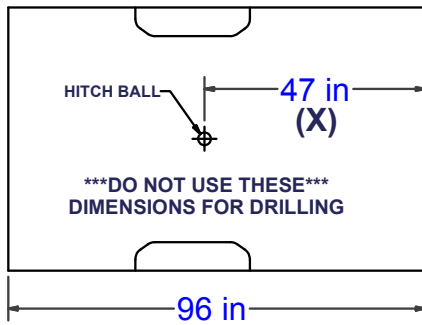
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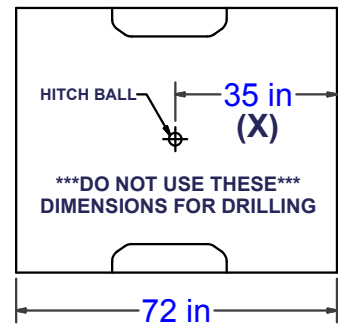
### TRAILER



### LONG & SHORT TRUCK BEDS



CAB OF TRUCK



CAB OF TRUCK

### CLEARANCE CALCULATION

$$\text{(CAB TO BALL CENTER)} - \frac{1}{2} \text{(TRAILER WIDTH)} = \text{(MINIMUM CLEARANCE)}$$

$$(X) - (Y) = (Z)$$

IF THERE IS AN OVERHANG FROM THE COUPLER THEN THE EQUATION IS:

$$[(X) - (W)] - (Y) = (Z)$$

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

#### EXAMPLE:

##### STANDARD TRAILER

$$X - Y = Z$$

$$35 - 36 = -1$$

(TRAILER **WILL INTERFERE** WITH CAB)

##### TRAILER WITH OVERHANG

$$[(X) - (W)] - Y = Z$$

$$[35 - 4] - 36 = -5$$

(TRAILER **WILL INTERFERE** WITH CAB)

#### YOUR CALCULATION:

(CAB TO BALL CENTER) \_\_\_\_\_

(COUPLER OVERHANG) - \_\_\_\_\_

1/2 (TRAILER WIDTH) - \_\_\_\_\_

(MINIMUM CLEARANCE) = \_\_\_\_\_

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