

**C-321 SUBKIT****FORD F-150**30,000 GTW GOOSENECK KIT

**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

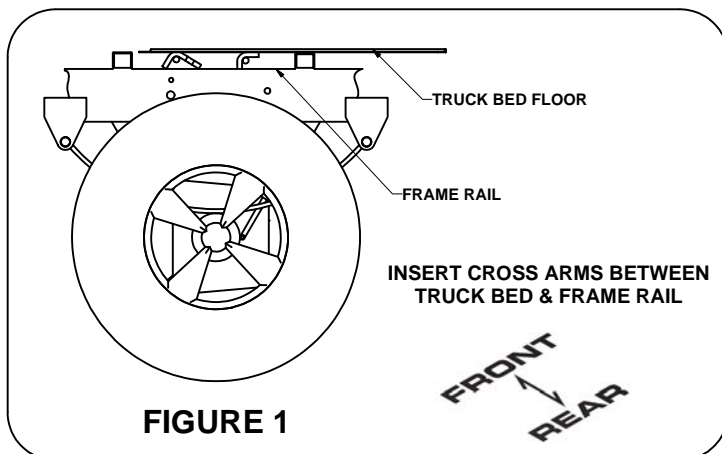
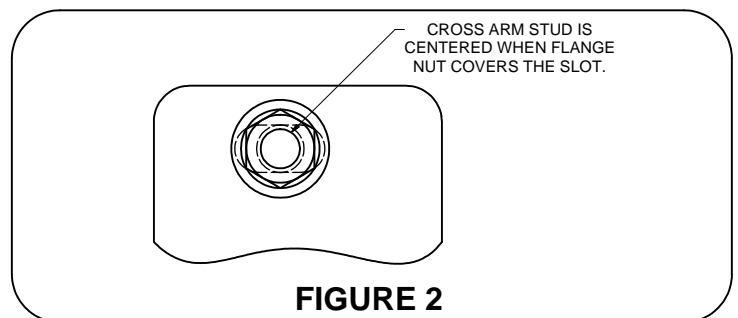
**PARTS LIST**

- (2) CM-1203-UBS (U-Bolt)
- (2) CM-C641-UB (U-BOLT BUSHING)
- (4) 1/2-13 Flange Nut
- (12) Half Moon Spacer (CM-SP27)
- (1) Tube Spacer (CM-TS)
- (4) 5/8" Flange Nuts

**INSTALLATION STEPS**

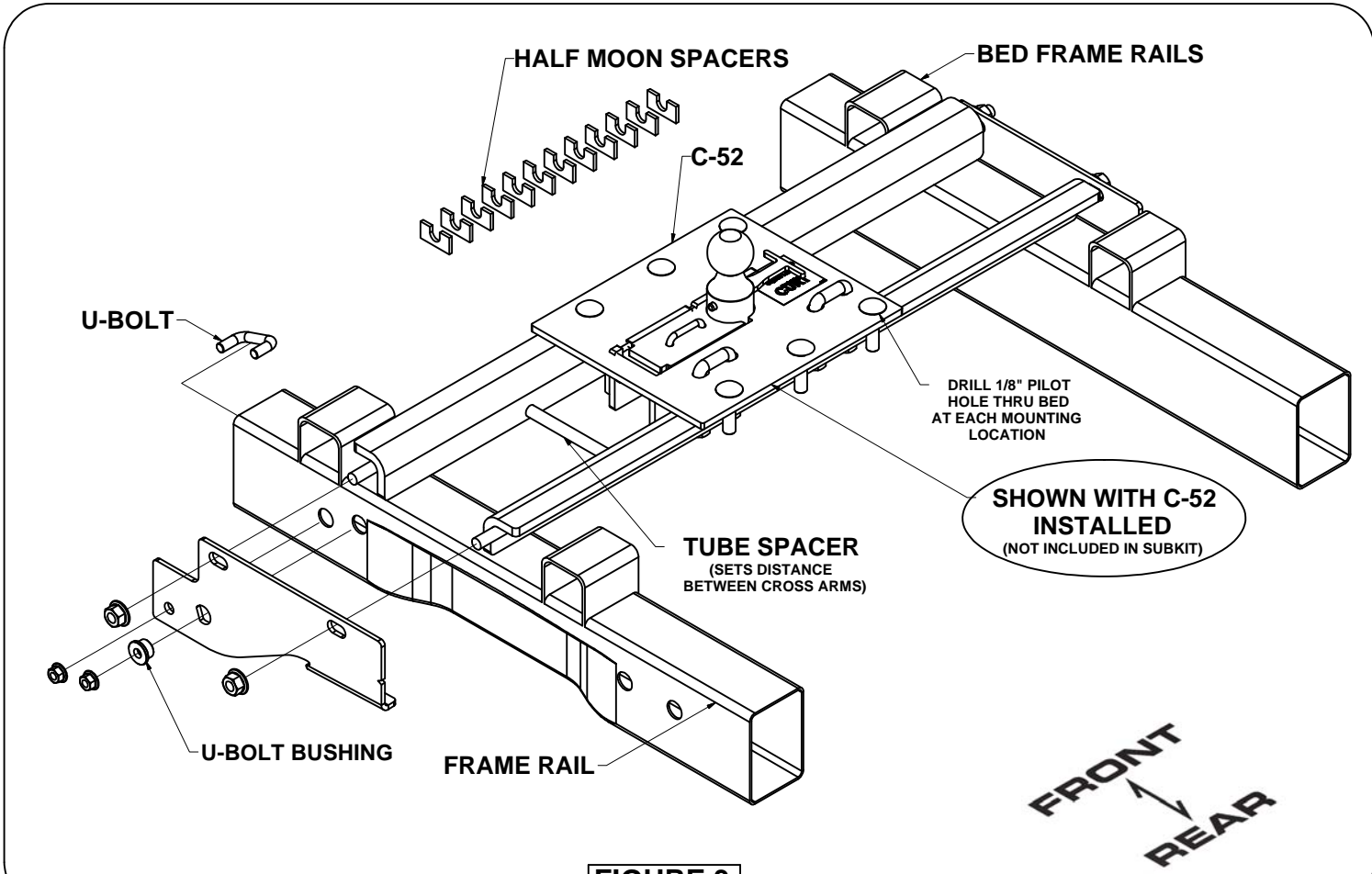
\*\*REMOVE SPARE TIRE FOR INSTALLATION\*\*

- 1) Install cross arms by sliding them into gap between the truck bed and frame from inside the wheel well. **As shown in Figure 1.**
- 2) **For all applications, the notched side plate indicates that it is for the driver side.** Hang the side plates from 5/8" studs, which extend from the cross arms. Fasten each plate with two 5/8" flange nuts provided. Finger tight only.
- 3) Using the U-Bolt and U-Bolt bushing as shown in **Figure 3** (Page 2), secure each side plate to existing holes in the frame rail. Use 1/2" flange nuts to secure in place. Finger tight only.
- 4) Rotate the cross arms until they contact the truck bed. Center the rear cross arm studs in the side plate slots as shown in **Figure 2.** Use a 15/16" wrench to tighten the 5/8" flange nuts on the rear cross arm to the side plates. Repeat for front cross arm. (Use the tube spacer for correct spacing between the cross arms.)  
**(Note: Do not tighten cross arms until center section installation is complete.)**
- 5) **Be sure the cross arms are vertical to the truck bed before drilling!** With cross arms secure and evenly spaced, drill a hole through the truck bed at the center of each cross arm mounting hole.
- 6) From inside the truck bed, center the six pilot holes with the letter "A" on the C-52 cutting template. Fasten the template to the truck bed with tape. Once fastened, drill four 1/8" pilot holes through section lettered "B".  
**(Be sure to check for brake lines and/or fuel lines before drilling.)**
- 7) With the pilot holes drilled, use a sabre saw to cut out section "C".
- 8) Remove template and drill out the six pilot holes with a 21/32" drill bit. Set your C-52 folding hitch ball into place.
- 9) Attach the C-52 to the cross arms using six 5/8" carriage bolts and flange nuts. Torque bolts to 115 lb-ft.  
**(Note: Spacers must be installed at all bolt locations to prevent truck corrugations from collapsing.)**
- 10) After the C-52 has been fastened to the cross arms. Torque all 5/8" hardware to 115 lb-ft.
- 11) Torque all 1/2" hardware to 75 lb-ft.

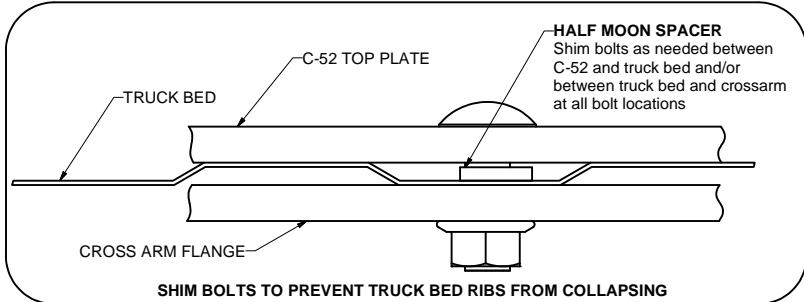
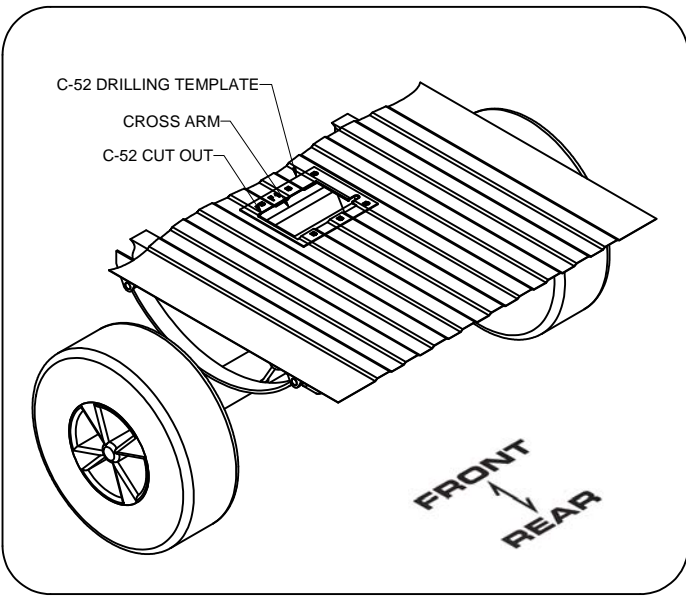
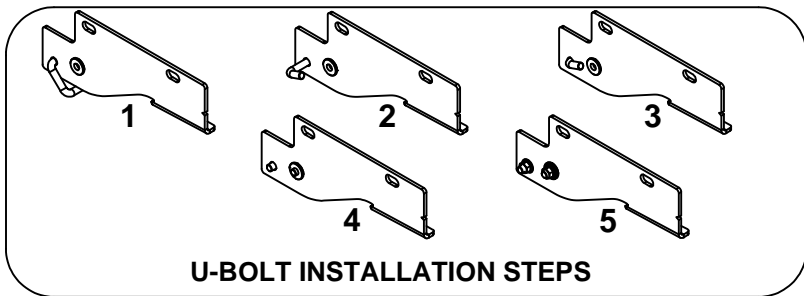
**FIGURE 1****FIGURE 2**

**C-321 SUBKIT** **FORD F-150**

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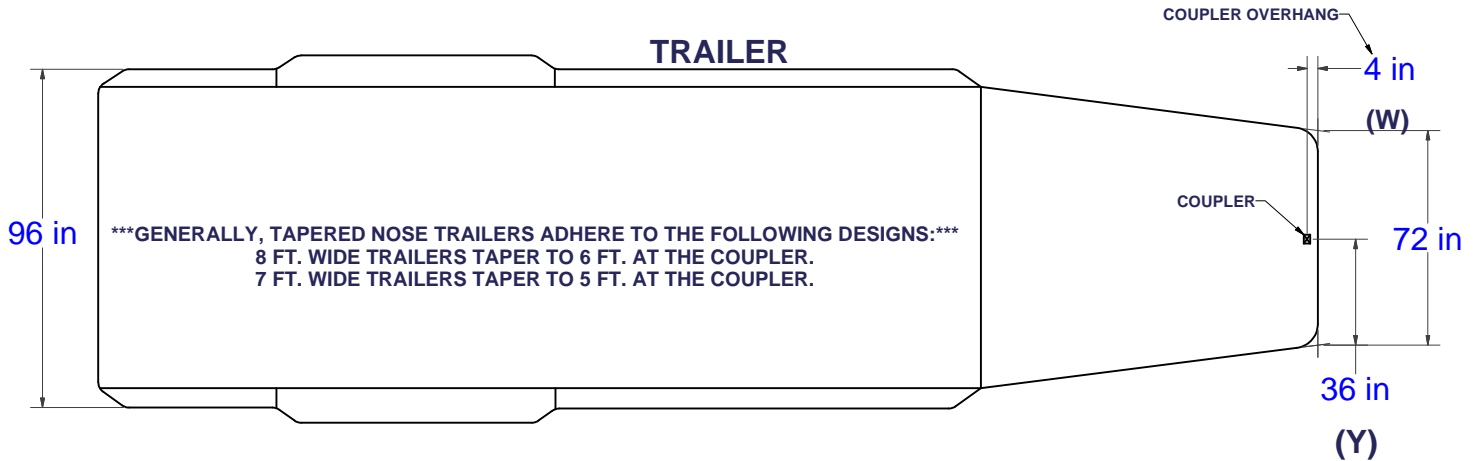


**FIGURE 3**

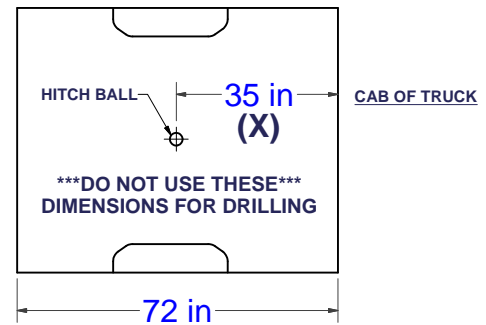
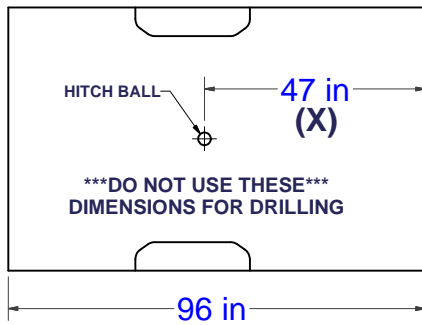


## CAB TO TRAILER CLEARANCE

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



### LONG & SHORT TRUCK BEDS



**\*\*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:

$$\text{[(X) - (W)]} - \text{(Y)} = \text{(Z)}$$

\*\*\*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

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

#### **YOUR CALCULATION:**

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