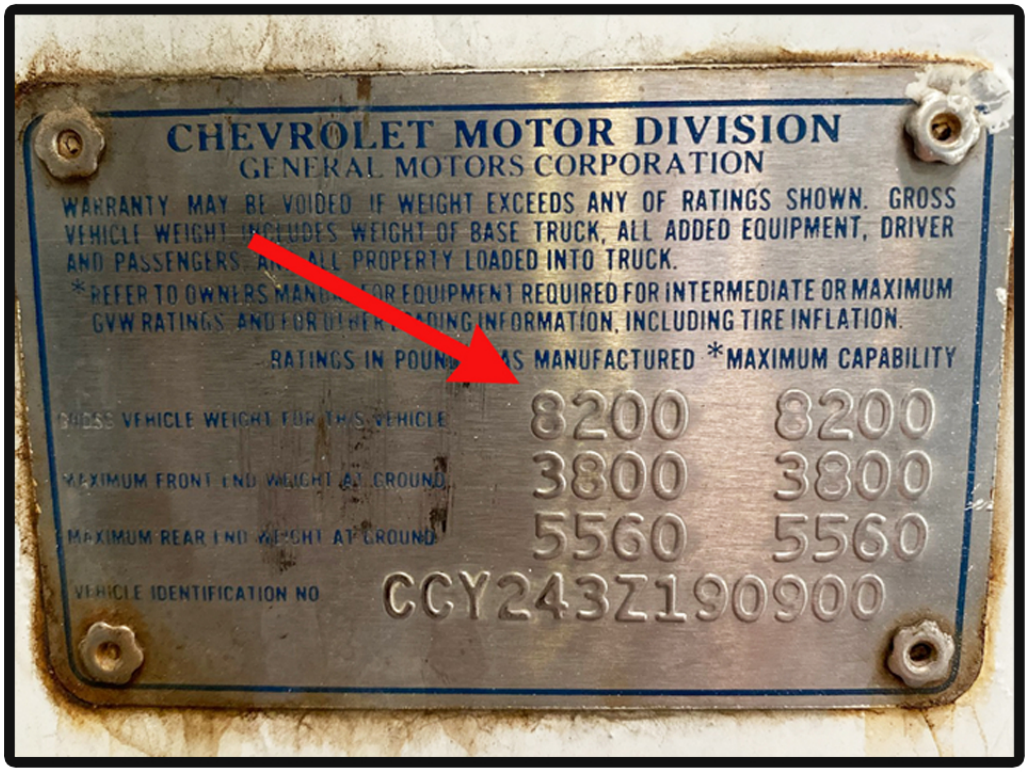
IMPORTANT NOTICE for 3/4 Ton Trucks:

Before starting this project, check your trucks GVW or GVWR on the door jamb tag as shown in the picture. If your tag shows a GVW or GVWR of 8200 or more, DO NOT PROCEED. This kit WILL NOT work on your truck and you will end up with a truck cut in half with no way to put it back together.



Please note this kit does not work on ANY 1 ton trucks

73-87 Longbed to Shortbed Conversion



Video Instructions QR



Kit Contents:

* 2 Templates (Driver and Passenger sides)
* 2 “C” Channels (Driver and Passenger sides)
* Hardware Kit
* Shortbed Parking Brake Cable (varies by application)
* Shortbed Intermediate Hydraulic Brake Line

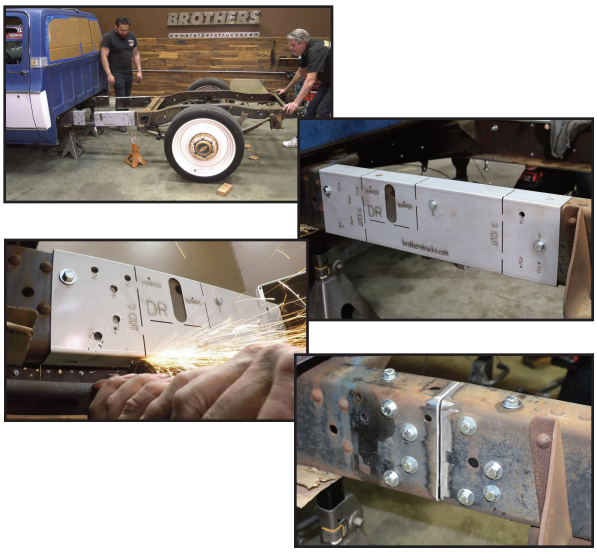
Tools Required:

* Hand/Die Grinder or Angle Grinder with Cut-Off Wheels and Grinding Wheels or a Sawsall
* Air Punch/Chisel (STRONGLY suggested, although the work can be done using a grinder and hand punch)
* Floor Jack
* Jack Stands (4 mandatory, up to 8 may be necessary), Jack Stand Shims (cardboard slices will work)
* Drill & Drill Bits, 1/8”, 3/8”, 7/16” and Step Drills if possible (we recommend a minimum of 3ea 1/8” and 7/16” bits be available during this project)
* Small Square/Straightedge
* Brake Line Wrenches

This project will also require common garage tools and supplies such as Screwdrivers, Open End, Box and Ratchet Wrenches, Pliers, Paper Towels, Shop Rags, etc. Additionally, you will likely need a couple of buddies to help you remove and replace your trucks bed.

Project Overview:

BROTHERS Longbed to Shortbed Conversion Kit will walk you step-by-step through the process of creating a Shortbed frame out of your Longbed frame. Our Kit will eliminate any guess-work and give you a finished product that is Square, Level, Structurally Sound and simple enough to do in your own garage!



During development and testing of this product, we have routinely been able to complete the project in a single day*. With the recommended tools and supplies ready, we estimate a garage installer can finish this project in 8-10 hours*.

* Timing and estimates based on having a complete bed ready to reinstall, and do not include outside modification of driveshaft, exhaust, etc

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Disassembly & Prep

Remove:

* Rear Bumper and Complete Bed (Doing this FIRST provides easy access to other items in this list)
* Driveshaft
* Exhaust
* Front to Rear Wiring Extension (DR Side)
* Front to Rear Hard Brake Line (PA Side, cap at front junction to avoid leaking)
* Intermediate Parking Brake Cable
* Fuel Tank(s), Mounting Bracket & Line (disconnect at rubber hose junction and plug off to avoid leaking)

NOTE: This general list might not be complete for your application. Please check and remove any items that connect the front half of the frame to the rear (items between Rear Cab Mounts & Front Spring Mount).

Frame & Project Preparation:

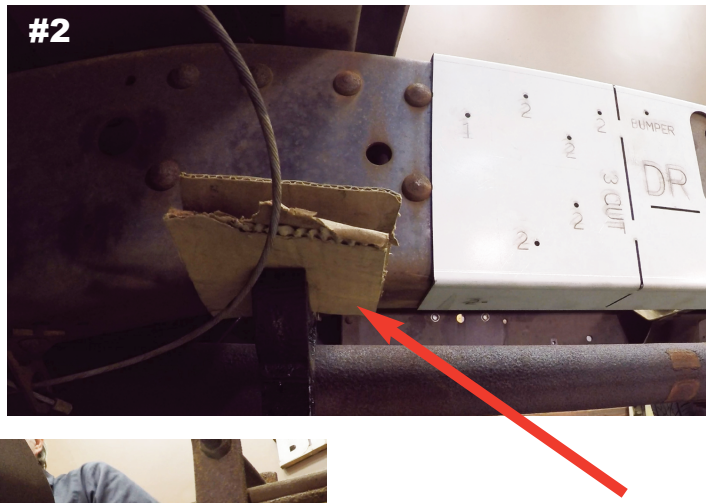
IMPORTANT: During this modification, your truck will remain on the ground, resting on it's wheels/tires. At no point should the wheels/tires need to be jacked up or lifted for any reason. Start on a level surface.

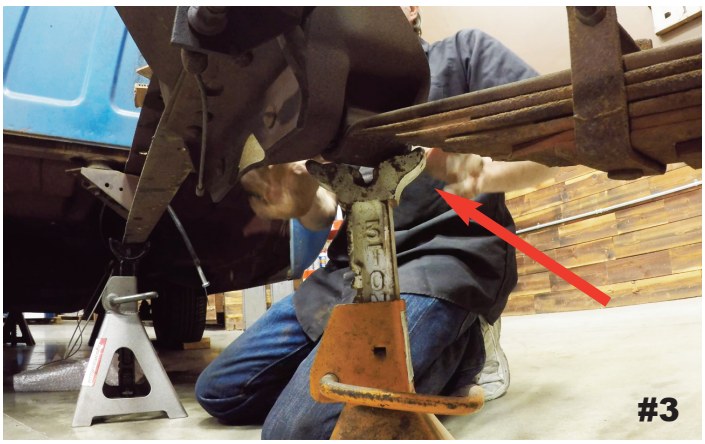
* Remove riveted exhaust hangers as shown in figure **#1**. Some trucks will have hangers on boths sides, some will only have a Driver Side hanger.

* Support the front half of the frame directly under the Rear Cab Mounts as shown in figure **#2**.
* Support the rear half of the frame under the forward most Spring Mounts as shown in figure **#3**.

IMPORTANT NOTE: **DO NOT LIFT THE FRAME WITH THE JACK STANDS**. Simply provide support for the frame so when the initial cut is made the frame will continue to rest on the supports/stands and not drop or spring upward. It may be necessary to use Jack Stand Shims to achieve a solid support without creating lift.







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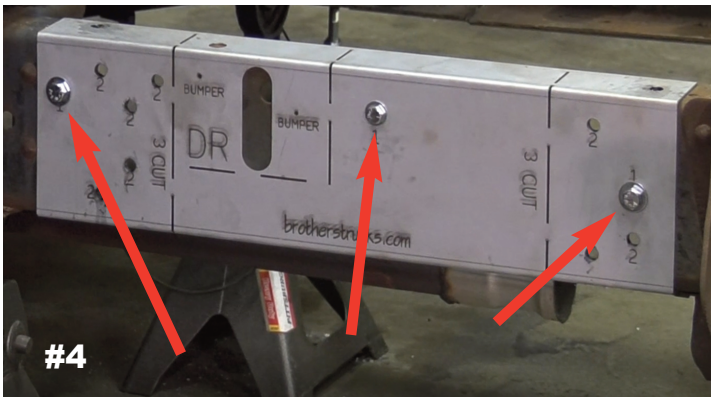
Template Steps - Frame Modification

Template Step 1. Mount Driver (DR) and Passenger (PA) templates to frame using 3/8" & 7/16" hardware and holes marked **"1"** on the Template. You MUST remove any wiring, brake or fuel line clips and debris that will interfere with the template mounting flush, secure and uniformly to the frame.

Mounting Option A - One or more of the #1 holes will line up with holes that are already in your trucks frame. The center #1 hole will exist in 95% of frames, this will be a 3/8" hole. Attach the Template using your existing holes and supplied 3/8" hardware. After it's firmly attached drill any additional #1 holes using a 1/8" drill to create a pilot hole, then step them up to 7/16" using a larger bit. Firmly attach those #1 holes with the supplied 7/16" hardware as shown in figure **#4**.

Mounting Option B - NONE of the #1 holes will exist from the factory. In this case simply slide the Template over the frame and forward until it bottoms out on the rivets as shown in figure **#5**. Once aligned, clamp the Template in place and drill the #1 hole in the center of the Template using a 1/8" bit to create a reasonably centered pilot hole, then step it up to 7/16" and attach the Template with the supplied hardware. Once you have that hole drilled and the Template attached, repeat the previous steps on the remaining #1 holes.

IMPORTANT SAFETY NOTE: Before you cut or drill, confirm that there are no fuel lines, brake lines, wiring or additional accessories that will conflict with the drill or cutter as you begin to drill and cut.



#4



#5

Template Step 2. Drill ALL holes on the Template marked **#2** using a 1/8" drill bit. There are holes on the Face, Top and Bottom of the Templates, do not skip any as these are what will help you align the frame to keep it level and square during reassembly. Once you have completed ALL the 1/8" pilot holes, go back and step them ALL up to 7/16" using a 7/16" drill bit. Do this for BOTH the DR and PA sides before moving on to Step 3.

Template Step 3. With a Die Grinder and thin cutting wheel or Sawsall, cut through the frame **AND** template using the forward most vertical slot marked **3 CUT** on both DR and PA templates. TAKE YOUR TIME and carefully cut the frame AND template following the laser slot right down the center. Cont next page ...

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Step 3 Cont. ... Any variance from the center of the laser slot will cause either extra material or a lack of material on the frame. Extra frame material will make it difficult to slide the frame back together and align holes, and a lack of material will create a large gap in the Butt Weld Joint when the frame is reconnected. Once cut, roll the rear half of the frame away from the cab so you have better access to the Template. Place jack stands under the frame at the spring perches again as shown in figure **#6**. Once supported, cut through the frame **AND** template again using the remaining **3 CUT** vertical laser slot on both DR and PA templates.

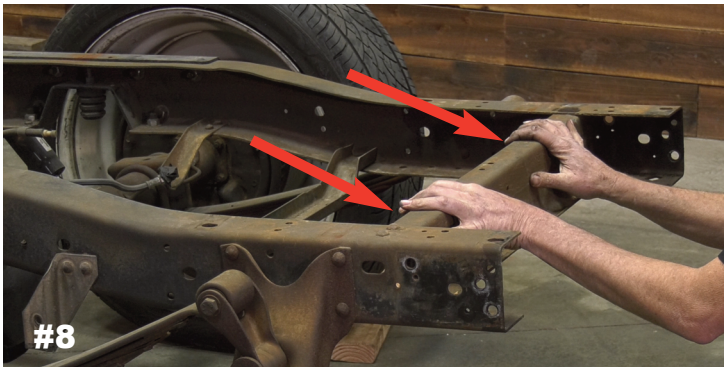


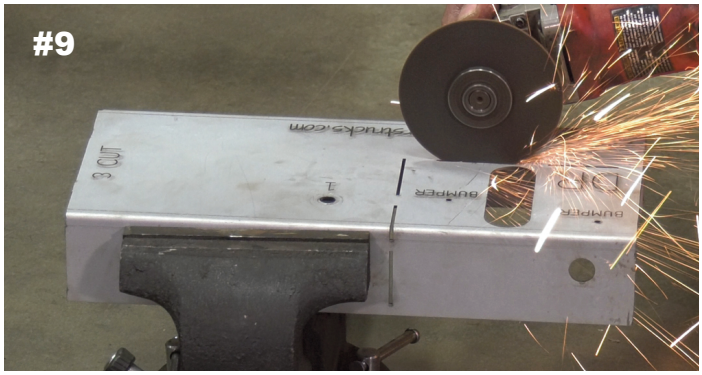


You are now finished with the Template Steps, however, you are NOT done with the Template. Un-bolt the center section of the Template from the cut out center section of frame. Final modifications using the Template will be done at the rear of the frame.

First you will need to remove the rear cross brace shown in figure **#8**. This brace typically has 4 rivets on the top and 2-4 additional rivets on the bottom. Remove the rivets using a grinder and a punch and remove the brace. After a few more frame modifications, you will be moving this brace FORWARD approximately 6" to identical holes that already exist in your frame, but not yet.

Next, using the laser cut lines in the Template, cut-out the section marked "Bumper" with your Die Grinder as shown in figure **#9**.





Align the Template flush to the rear of the frame as shown in figure **#10**. Draw or scribe a line on the side and top of the frame and use a square edge to continue the line down the side and around the bottom. Do this for both the DR and PA side of the frame. Once you have the line marked, use a Die Grinder with a cutoff wheel to cut this portion of the frame off and clean it up to remove sharp edges and slag metal.

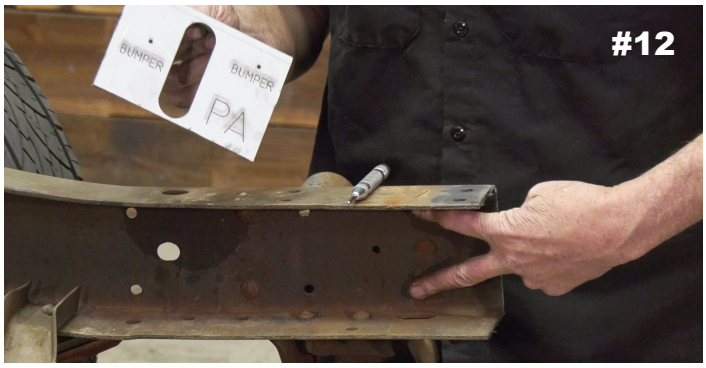
PROCESS TIP: It is often easier to scribe a line if you put a little fresh paint on the surface before you apply your scribe marks.



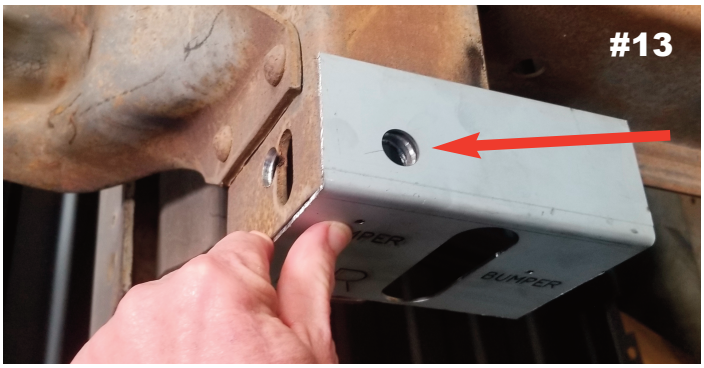
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Now that the rear of the frame has been shortened, place the piece of the Template on the INSIDE of the frame as shown in figure **#11** and align it flush to the rear of the frame then mark new bumper hole locations through the 2 1/8" holes in the Template. On frames with 56" springs, the Template will clear the two rivets holding the spring perch through the large Oval hole as shown in figure **#12**. Once you have the holes marked, drill pilot holes with a 1/8" drill bit and then use a step drill to open those holes up to 1/2".

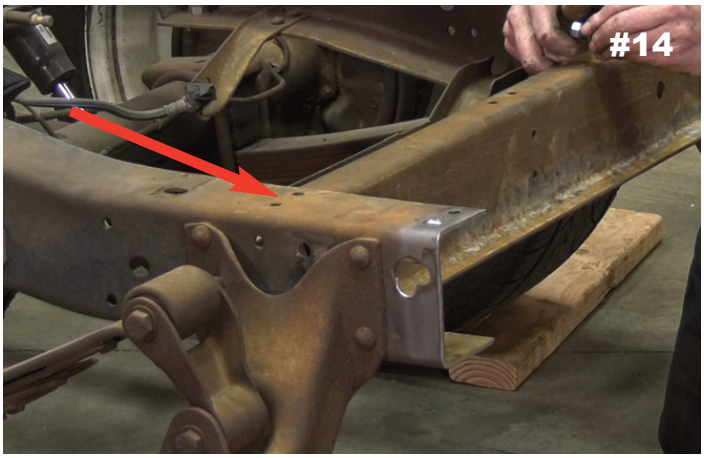


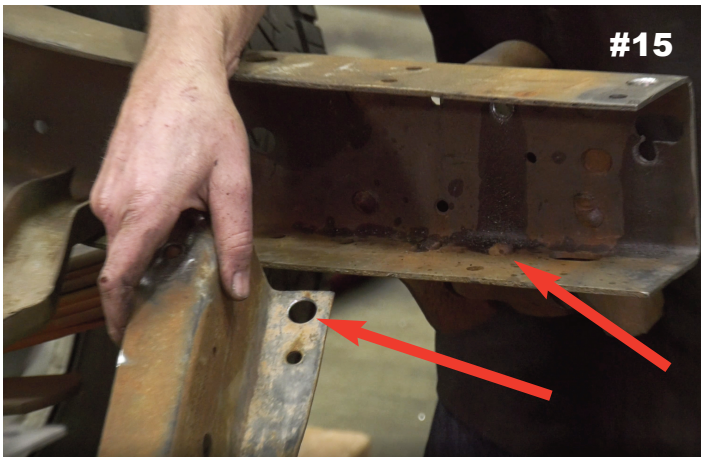


The last step fot the Template is to use it to place the hole for your rear bed mount on top of your frame. Place the Template on the frame as shown in figure **#13**. Trace the hole with a marker or a scribe and then remove the Template. Using a step drill or large drill bit, open this hole up to 1/2" - 3/4" to allow for the large bed mounting hardware to be insterted and some room for adjustment.



After those modifications are complete, you'll be re-installing the rear brace into the frame. The holes for this brace will already be in your frame and they will match the holes in your brace as shown in figure **#14** below. In order to clear the outer rivet supporting the rear spring perch, we recommend opening the outer hole on the bottom of the brace so that the brace can slip over the rivet as shown in figure **#15**. Use the 3/8" hardware supplied with your kit to re-attach the brace to the frame.

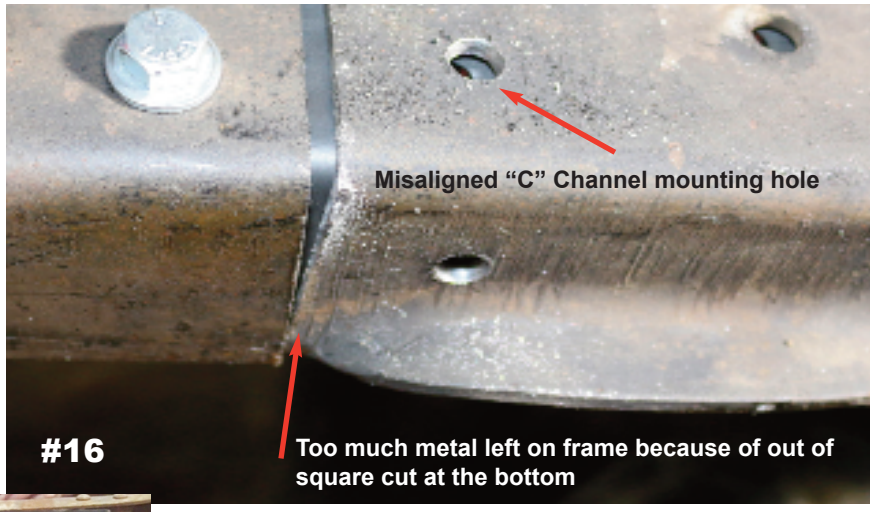




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Installing the “C” Channel - Reassembly

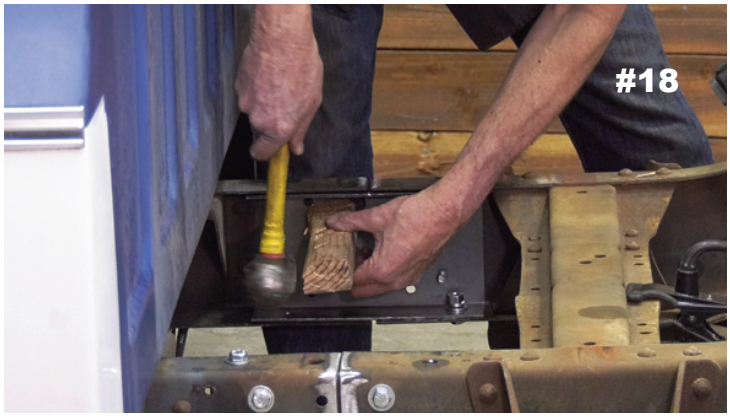
VERY IMPORTANT: Before installing the “C” Channel, you need to check to make sure your cuts are square and make corrections if necessary. If you have any extra material on the frame at the top, bottom, front or rear you will NOT be able to slide the frame all the way together. This condition will cause miss-alignment of the “C” Channel holes and an out of square frame. Figure **#16** shows a frame that had too much material and would NOT slide back together completely. A simple adjustment with a grinder or cut-off wheel will fix this and allow the frame gap to close and the bolt holes to align.

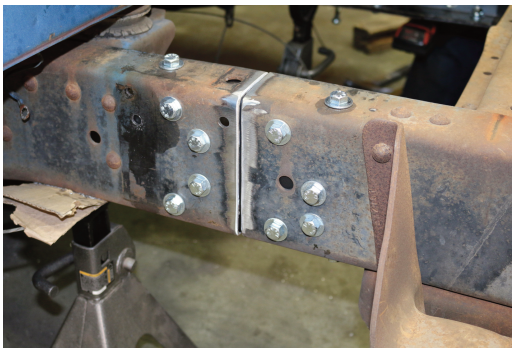




Using the supplied 7/16” hardware, you will attach the “C” Channel to the frame. Push the rear half of the frame back to where it is almost butted together with the front half as shown in figure **#17**. Depending on the “rake” of your chassis, it might be necessary to adjust the height of the front, rear or BOTH sets of Jack Stands at this point to get the frame to line up better. You want them to come together similar to how they do in figure **#17**, otherwise it will be very difficult to install the “C” Channel. ***BROTHERS*** recommends painting the frame and “C” Channels with a weldable paint prior to installation.

Work the “C” Channel into the frame as shown in figure **#18**. It is helpful to use a Plastic or Rubber mallet or a block of wood and a metal hammer to fit the “C” Channel. Do not use a metal hammer or sledge directly on the “C” Channel to avoid damaging the “C” Channel and compromising the fit. Once you have the Channel insterted into the frame, use a punch or similar tool to help align the holes in the Channel with the holes you drilled in the frame. NEVER waller out or open up any of the holes to get the bolts in, this will compromise the alignment of the frame and cause out of level or out of square conditions. If you have followed the steps, the bolts will go through the frame and “C” Channel. If you have to run them in with a socket or wrench, that is OK, the Channel and the holes have tight tolerances to emilimate any play that could cause frame mis-alignment. Once ALL bolts are installed, tighten them to 35 ft-lbs.





Congratulations! Your frame is now a Shortbed.

IMPORTANT NOTE: Welding the frame together at the butted seam and perimeter of the “C” Channel is required. If you need to drive, or otherwise transport, your truck to a professional for this work you can do so with confidence. The “C” Channel connection in ***BROTHERS*** kit is structurally sound and engineered based on decades of proven frame designs used by Tractor Trailer and Big Rig manufacturers.

Project Continued

Now that the frame halves are back together, there are a few things that you took apart during the prep process that need to be put back together and/or modified to work with your new Shortbed frame. Some of these parts have been supplied with your kit and just simply need to be installed, some of your original items will be reused, and a couple things will need to be modified to fit back on your shortened frame. Let's look at the list...

Items requiring modification:

* **Driveshaft** - 14" must be removed from the driveshaft. If you have a 2 piece driveshaft, you will simply remove 14" from the rear section of the driveshaft (the half behind the carrier bearing). For those of you with a single piece driveshaft, you will just simply shorten the driveshaft 14".

NOTE: Shortening the driveshaft is NOT something you should be doing at home, ***BROTHERS*** recommends you take your driveshaft to a qualified driveline specialist for this modification.

* **Exhaust** - Depending on your application and previous exhaust layout, you may be able to modify and reuse your existing exhaust components. We have been able to shorten and reuse the exhaust system on 90% of the trucks we have used this kit on during development. If you are not able to shorten and reuse your existing system, a new system will need to be installed. ***BROTHERS*** recommends taking your truck to a qualified exhaust specialist for the modification of existing exhaust or installation of a new system.

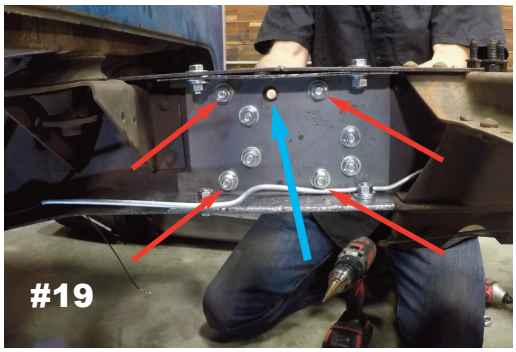
Items supplied with your kit or reuseable:

* Your kit came with a new shortbed Parking Brake Cable. Use this supplied cable to reattach the Parking Brake system.

* Your kit came with a new shortbed intermediate Hydraulic Brake Fluid line. Use this supplied line to re-connect your front to rear braking system. **NOTE**: DO NOT forget to bleed your brake system after reassembly.

* Front to rear wiring extension harness - ***BROTHERS*** recommends reusing your original harness. Simply take up the extra length by folding or rolling the harness and secure with a cable tie or electrical tape. Always make sure to route the harness through the original clips.

* Fuel Tank Mounting Bracket & Tank - Reuse your existing Fuel Tank Bracket after the shortbed conversion is complete. To do so, simply remove the 4 bolts shown in figure **#19** and install the bracket using the original mounting bolts you removed during disassembly. Additionally, open up the hole marked with a Blue arrow in figure **#19** to 3/4" to allow the Tank Strap to be tightened. **NOTE**: you WILL need to replace your Longbed fuel tank with a Shortbed fuel tank. We do not supply a replacement Shortbed tank with the kit in order to leave you options when determining what style of tank you want to go with (Side Mount, Rear Mount, etc). ***BROTHERS*** recommends you check and replace the rubber fuel line if necessary as well as the fuel line clamps while you have the opportunity.



NOTE: Again, this general list might not be complete for your application. Please check and reinstall any additional accessories and option items that are specific to your truck.

* Bed - ***BROTHERS*** sells everything you need to create a complete bed from scratch if necessary. We also have a Video on our YouTube channel that will help you shorten your own Bedsides if you are a DIY'er who wants to tackle that project at home. Here is a QR code that will link you directly to that video.

Last and Final Step(s) - Install your Bed, Bumper Brackets, Bumper and reconnect the rear wiring harness to the harness extension... You're done! Enjoy your new Shortbed Classic Truck!



