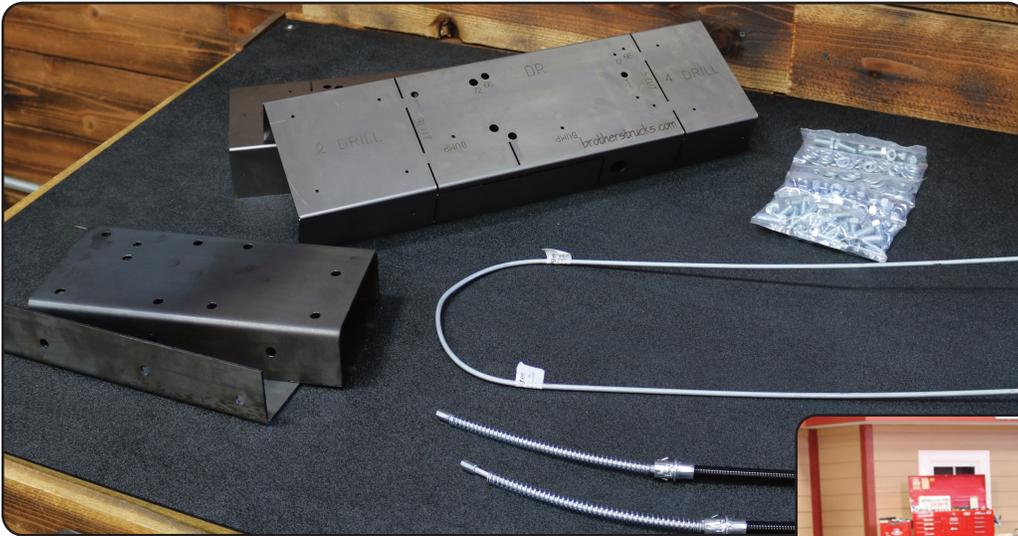


63-72 Longbed to Shortbed Conversion



Kit Contents:

- * 2 Templates (Driver and Passenger sides)
- * 2 "C" Channels (Driver and Passenger sides)
- * Hardware Kit
- * Shortbed Parking Brake Cable(s) (varies by application)
- * Shortbed intermediate Hydraulic Brake Line

Tools Required:

- * Reciprocating Saw / Sawsall (mandatory)
- * Hand Grinder or Angle Grinder with Cut-Off Wheels and Grinding Wheels
- * Air Punch/Chisel (STRONGLY suggested, although the work can be done using a grinder and hand punch)
- * Floor Jack
- * Jack Stands (total of 6 needed)
- * Drill
- * Drill Bits, 1/8", 3/8" and 1/2" (it is useful to have PLENTY of extra bits available during this project)
- * Small Square
- * 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 Line (disconnect at rubber hose junction under cab and plug off to avoid leaking)

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

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 #1). Some trucks will have hangers on both sides, some will only have a Driver Side hanger.
- * Remove Rear Cab Mount Bolts, Washers and Sleeves
- * Lift and support the rear of the cab with jack stands under the Outrigger support brace (as shown in #2).
- * After the cab is lifted and supported, remove Rear Cab Mount Bushings.
- * Support the front half of the frame directly under the Front Cab Mounts (as shown in #3)
- * Support the rear half of the frame under the forward most Bed Mounts (as shown in #4)

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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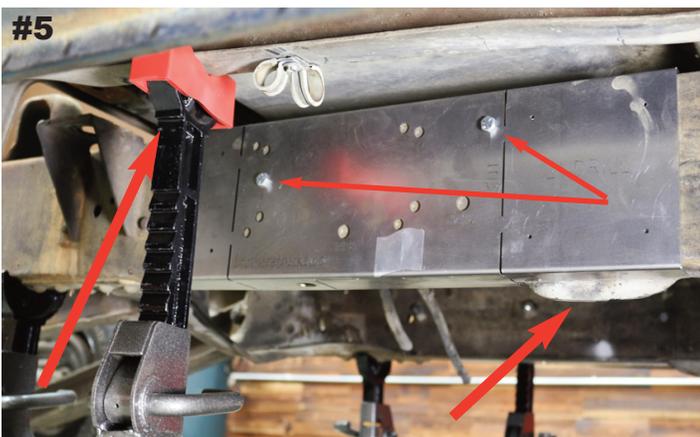
Template Steps - Frame Modification

Template Step 1. Mount Driver (DR) and Passenger (PA) templates to frame using 5/16" hardware and two (2) holes marked "1" on the Template. These holes will line up with holes that are already in your trucks frame (as shown in #5). You MUST remove any wiring, brake and fuel line clips or debris that will interfere with the template mounting securely and uniformly to the frame. **TEMPLATE OPTION NOTE:** Some frames have a "spoon like" relief formed into the lower area of the frame (also shown in #5). If your frame has this relief, cut the template using the laser cut guides located the bottom of the panel marked **2 DRILL**. This will provide a clearance notch for your frame.

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 Sawsall as you begin to drill and cut.

Template Step 2. Drill all holes in the panel marked **2 DRILL** on the template using a 1/8" drill bit. Do this for BOTH the DR and PA sides before moving on to Step 3. There are 4 holes on the face of this panel, and one additional hole in the bottom (total of five 1/8" holes per side).

Template Step 3. With a 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. 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 a lack of material will create a large gap in the Butt Joint when the frame is reconnected.



Note mounting location of template is almost butted up to the rear cab mount. Also note location of jack stand under the outrigger and the template notch cut out to clear the spoon like variance found on some frames.



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At this point, your frame is ready to move out from under the cab so you can perform the balance of the modifications as guided by the template.

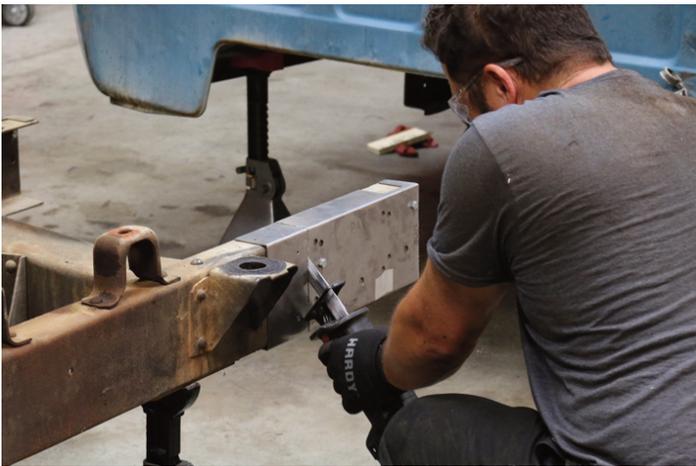
* Using a jack, support the rear half of the frame under the center crossmember and remove the jack stands that are supporting the rear half of the frame (as shown in #6).

* Roll the rear half of the frame out from under the cab so you have good access to the Templates and rear cab mounts. Place jack stands under the frame at the rear portion of the rear cab mounts (as shown in #7).



Template Step 4. Drill all holes in the panel marked **4 DRILL** on the template using a 1/8" drill bit. Do this for BOTH the DR and PA sides before moving on to Step 5. There are 2 holes on the face of this panel, and 1 additional hole on the top and bottom (total of four 1/8" holes per side).

Template Step 5. With a Sawsall, cut through the frame AND template using the vertical laser slot marked **5 CUT** on the DR and PA templates. TAKE YOUR TIME and carefully cut the frame AND template following the laser slot right down the center. 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 a lack of material will create a large gap in the Butt Joint when the frame is reconnected.



At this point you are done 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 and set the Template aside, you will be using it for additional modifications later.

Next, Using a 3/8" drill bit, drill out all of the 1/8" pilot holes in the frame that you created during Step #2 and Step #4 of the template. There are 18 holes total (9 per side). Be careful to drill them straight and true, as these will align and square the frame when the frame is reconnected. Do this for BOTH the DR and PA sides as well as the Front and Rear halves of your frame before moving on to the next step.



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Next, you'll be removing the rear cab mounts and forward most bed mounts from the frame. Using an air chisel (or alternatively a grinder), cut off the heads of the rivets holding the rear cab mounts and forward bed mounts to the frame. Once you have removed the heads of the rivets, use a punch to drive the rivets out of the mounts and the frame (as shown below).

NOTE: BROTHERS Strongly Recommends the use of an air chisel and air punch for rivet removal.



Now that BOTH sides have been drilled, cut-off and the bed and cab mounts have been removed, it's time to relocate the cab mounts. You'll be using the center section of the template that was set aside earlier, but first the Template needs to be prepped.

* To prep the Template, use a die-cutter and follow the laser cut guides on the bottom to remove the clearance notch in the template (as shown in #8). This notch will allow the Template to be mounted back on the frame with clearance for the crossmember rivets located on the bottom of the frame. DO NOT remove more than what is marked on the Template by the laser cut guides, this notch will be used again later in the Short Bed Conversion process.

* Mount the template to the frame using some of the 3/8" hardware and the holes left by the rearmost cab mount holes that you punched out in the previous step (as shown in #9). These holes will correspond with your trucks year range (72 for '67-'72, 66 for '63-'66) and you will use the holes that are underlined as the mounting holes.



* With the Template in place, using a 1/8" drill bit, drill the NON-underlined holes that correspond with your year range (72 for '67-'72, 66 for '63-'66) as shown above in #9 on a 67-72 frame.

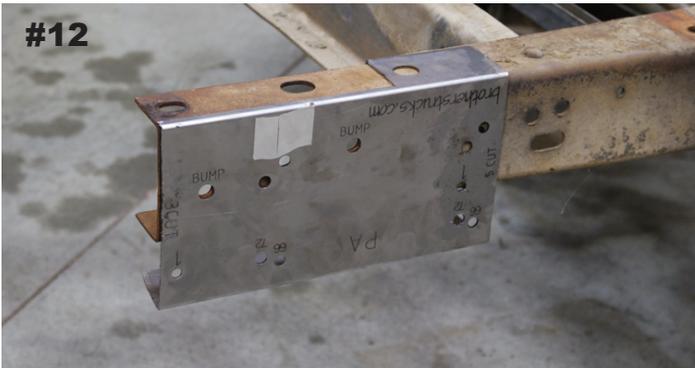
63-72 Longbed to Shortbed Conversion

- * Remove the Template from the frame and drill out the 1/8" holes you just created to 3/8". Now, using 3/8" hardware supplied, attach your cab mount through it's two forward holes to the new 3/8" holes (as shown in #10).
- * With the cab mount attached, use your 3/8" drill to drill through the rear holes of the cab mounts and frame. Use supplied hardware to attach the rear of the cab mount (relocated mount shown in #11).



Final modifications using the Template will be done at the rear of the frame.

- * With the Template flipped upside down, align the rear edge of the Template with the rear of the frame (as shown in #12).
 - * With the Template in place, scribe a mark at the rear of the notch you cut out in Step #8 as well as the oval hole in the Template next to the notch.
- NOTE:** It is helpful to put a little paint on the frame prior to scribing to make scribe marks more obvious.
- * Using the scribe line on top of the frame, align a Square and scribe vertical line on the side of the frame.
 - * Using your scribe lines, cut the rear of the frame off with a Sawsall. Repeat on DR and PA sides.



Another part of this step is fabricating an oval hole where your scribe marks are. We have routinely drilled a pair of 1/2" holes side by side and connected them using a grinder, dremmel or boring tool. As an option, you can make a single 1/2" hole aligned on center in the location of the oval scribe marks. This hole is your rear bed mounting hole and may need some amount of front to rear adjustment if you choose to make a single hole. Repeat on BOTH the DR and PA sides.



Next you will relocate the bumper bracket mounting holes.

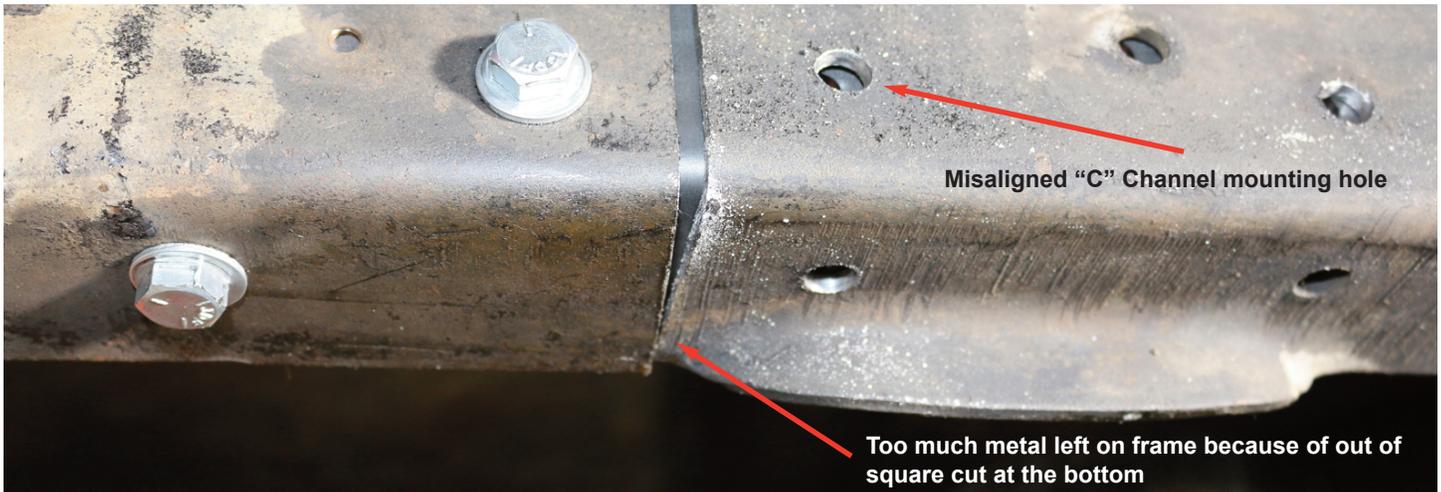
*With the Template flipped upside down, again you will align the rear edge of the Template with the rear of the cut-off frame. While aligned, use a 1/8" drill and drill through the two holes marked **BUMP**.

* Remove the Template and use a 1/2" drill to open up those holes on the DR and PA sides of the frame. **NOTE:** Template will NOT work on Leaf Spring trucks for this step, you will have to improvise your own bracket locations.

63-72 Longbed to Shortbed Conversion

Installing the "C" Channel - Reassembly

VERY IMPORTANT: Before installing the "C" Channel, you need to check to make sure your cuts made previously with the Sawsall are square and make corrections if necessary. If you have any extra material on the frame at the top or 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. The picture below shows a frame that had too much material and would NOT slide back to gether 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 3/8" hardware, attach the "C" Channel to the rear half of the frame. The channel will align to the forward holes left by the removal of the cab mount, and the 3/8" holes you drilled during Step #4.



You are now ready to reconnect the front and rear of the frame.

* Place a floor jack under the center crossmember and lift the rear half of the frame off the jack stands (as shown in #13).

* Guide the rear of the frame under the cab and slide the "C" Channels into the front half of the frame using the jack to steer.

NOTE: You will need to guide the hard fuel line through a "V" shaped opening in the crossmember as you move the frame forward under the cab. Additionally, the raised center of the crossmember may interfere with cab. If it does, lower the jack slightly to clear the cab and then raise it up again to align the frame once you have pushed it passed the interference.

* Install the remaining 3/8" hardware in the front half of the frame and "C" Channel and tighten.



Congratulations! Your frame is now a Shortbed.

IMPORTANT NOTE: BROTHERS recommends welding the frame together at the butted seam. 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.

Reassembly Continued

- * Remove the jack stands supporting the frame. DO NOT remove the jack stands supporting the cab.
- * Install the Rear Cab Bushings. Lift the cab with a jack so you can remove the jack stands and slowly lower the cab back onto the frame.
- * Install Rear Cab Bushing hardware.

Now that the frame halves are back together and the cab has been re-mounted to the frame, 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** - 12" must be removed from the driveshaft. If you have a 2 piece driveshaft, you will simply remove 12" from the front section of the driveshaft (the half in front of the carrier bearing). For those of you with a single piece driveshaft, you will just simply shorten the driveshaft 12".

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 intermediate 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 reconnect 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 line - It is possible to reconnect your existing fuel line after the shortbed conversion is complete. However, **BROTHERS** recommends you check and replace the rubber fuel line if necessary as well as the fuel line clamps while you have the opportunity.

* Bed and Bumper - Install your Bed, Bumper Brackets, Bumper and reconnect the rear wiring harness to the harness extension... You're done!

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.

