

## **Pilothouse Pickup Box Reflooring**

### **Decisions**

When you replace the wood floor in your Pilothouse pickup, several decisions must be made at the onset. First, you must decide how you want the completed floor project to look. With the advent of bed hardware reproduction, some fancy cabinet work has emerged. Floor boards are available readymade with all holes drilled and cut to the correct dimensions. This work can easily be done yourself with a cost savings of more than two hundred dollars at this writing, if you are willing to do a little measuring and cutting. You will need only an electric hand saw and a drill to accomplish this job.

Some folks prefer to have the metal strips between each floor board recessed to a depth that puts the strips flush with the wood top surface. Some also countersink the six frame attachment bolt heads so their tops are flush with the top of the boards. None of this is original nor necessary. If you choose to relieve the boards either for the strips or for the six carriage bolts, these operations must be done before you begin any installation work. With my own bed project, I just drilled holes for the attaching bolts and left the strips sit above the wood surface to act as rub rails on the floor.

You can purchase all your wood parts precut and drilled, so that only the installation is left to be done. If you buy your own wood, the best quality lumber to use is white oak, but this is not easy to find. Most commercial bed shops sell flooring in red oak or pine, but white oak is superior to the others. Bed attaching hardware can be purchased from your hardware locally for an added savings, with the exception of the six 3-inch flat washers used on the bed-to-chassis attaching bolts. These are specially made for this application.

Finally, wood finish decisions need to be made while the boards are still loose. Mar-K's own web site carries some excellent information on this subject. Many people favor stained and varnished oak or pine floor boards. This is your truck, so it's also your decision. Some like the "show" look, with polished stainless strips and bolts and varnished and stained wood. This is a wide departure from the original Dodge bed floors, which were painted black.

Mar-K has done some interesting tests on various varnished and painted finishes. Check their web site for in-depth information on this subject. Personally, I have never seen a natural wood finish on a pickup bed that did not eventually darken and "ugly out" over time. I painted mine black primer and enamel – both the wood and the strips.

Whatever finish you choose to use, the boards need to be finished before they are assembled into the box. Pay special attention to end grain and drilled holes when you apply your paint or varnish. Of course you will want the same finish on the bottom as you put on top. Even though they will not show, finish the individual board edges, too.

### **The Job At Hand**

Dodge Pilothouse pickup boxes are much like stepside pickup beds produced by other marques. Their design and construction are not much different from other beds in the industry from the same time period, with just a few exceptions.

Firstly, the weight of the entire metal box – sides, front and tailgate – rests on the two angle strips on each side of the bed. These angle strips sit on and bolt to the two outside floor boards inside the bed. The exception to this statement is that the very last inch of the back of each floor board is bolted to a cross sill just inside the tailgate, which also helps support the metal bed box to some extent.

These same two outer floor boards are also the attaching point for the six ½-inch bolts that hold the entire bed assembly onto the frame proper. So it is that when a Pilothouse bed wood floor fails, it is usually the two outermost boards that wear out first, since they both support the full weight of the bed sides and also secure the whole bed unit to the vehicle chassis. These two boards are also the only floor wood to have holes drilled in them.

### **Measuring and Cutting**

What you must understand at this point is that with the old wood out of the bed, the metal box assembly is completely loose and unattached except for the running boards-to-fender bolts and tail lamp wires. The box assembly can be moved sideways or front and back, and up and down several inches, but must be positioned accurately on the truck frame or it will be installed crooked. There is a lot of room for error here.

You will need some scrap lumber or cribbing to prop up the four corners of the box. (You can also use cement blocks if they are available.) With the metal box sitting above the frame and propped in an approximate position – the box sides are completely loose and independent of the chassis at this point – measure to be certain the box is centered on the frame. Be careful to check the front-to-back measurement between the cab and bulkhead. There should be about one inch of space between the two body panels. Also make sure the box is centered side-to-side. This is critical for proper bed-to-frame alignment.

### **Pick the Best Boards**

Six boards are used on Dodge stepside floors. Look your bed lumber over carefully. Select the best side of each board for the top and mark each top side selected with a “T” for this purpose. The two outer boards need to be cut narrower than the four center floor boards. I tried to find the two very best boards to use for the outer pair, since these are the only ones that get holes drilled in them and since they support the entire weight of the metal box sides.

### **Marking the Holes**

There will be three holes drilled in each of these two outer boards for frame attachment points, and seven holes drilled in each board for metal angle strips on the outer edges. If your old bed floor wood is too far gone to use for patterns, some method must be found to align these hole positions with the frame holes, so they can be drilled accurately.

The method I used and suggest to others is this: with the four loose bed crossmembers sitting in place on the frame, drop the six ½ –inch diameter bolts through the crossmember and frame holes. Secure these six bolts loosely with nuts, so they cannot move around or get knocked off.

The second crossmember from the rear just sits on the frame and supports the board flooring. It is not bolted to the frame, even though holes are drilled in the frame at this point. Do use rubber pads underneath this and all other crossmembers. When you see a finished bed floor with eight large carriage bolts instead of six, you are seeing a job where someone added two extra bolts not used by the factory.

Carefully center the metal box on the frame. Now place one of the outer floor boards on top of the crossmembers and against one box side, on top of the carriage bolts. Carefully check that the board is positioned against the front bulkhead sheetmetal and ends at the right spot inside the tailgate at the back. With the board held carefully against the box side, smack it with a dead blow hammer just above each crossmember. The objective here is to get an impression on the board surface immediately above each of the three carriage bolt heads that are sitting in the frame attaching holes. These impression marks made in the boards will serve as your drill marks. Hit the board hard enough to make a mark on the wood from the bolt heads, but not hard enough to crack the lumber. (Ask me how I know . . . .)

Next, take one of the two metal angle strips and lay it on top of the outer board. Clamp the angle in place with the outer edge aligned with the board edge and mark seven 3/8-inch holes for the angle attaching bolts.

### **Drilling the Holes**

Once you have the three bolt head marks made on one of the two outer boards and the seven metal angle holes marked, lay this marked board on top of the other outer board and align them carefully, then clamp the two boards together so they cannot move. Now drill three 9/16-inch holes through both boards simultaneously at the marks made by the bolt heads. Next drill the seven 3/8-inch angle holes through both boards.

When you drill these holes, the top board will be right side up and the bottom board will have its top side inverted. This makes a mirror pattern for the holes in the boards for each side. It is a good idea to use a piece of scrap lumber under the drill so the wood will not splinter when the bit comes through the other side. The three large holes will be toward the inside edge of these boards and the seven angle holes along the outside, as the boards will lay inside the box.

### **Beginning Assembly**

Before you bolt these two outer boards to the truck frame, bolt the two metal angle strips to them, using 5/16 carriage bolts. Where the bolts pass through metal crossmembers, these holes will line up with the three larger holes. Leave the nuts off at these three angle attaching holes. Wherever bolts do not hit crossmembers, use a wide fender washer under your lock washer and nut for added strength. Now when you install these outer boards, the angle strips will already be attached.

**NOTE:** The original Dodge angle strips were welded to the box sides. Mar-K suggests that if your old angle strips are still okay, leave them in place and install the new angles over top of the old ones. This idea helps to align the bed sides properly for height and saves one potential mis-alignment issue.

Install the two outside floor boards first. Put the six ½-inch x 6-inch carriage bolts through the wood, through the crossmembers and through the upper frame rails. Remember to install square rubber washer pads between the crossmembers and the frame rails. These rubber pads and all bed attaching hardware are available from two or three bed parts vendors. Put the six large carriage bolts through the crossmembers and the frame rails, but don't bolt them down yet.

### **One Important Measurement**

Pilothouse trucks have a nice little feature that is not shared by other marquees of stepside trucks. In front of each rear wheel there is a hole in the running board apron made to give access to the grease zerk for the front spring hanger of the rear axle. This feature makes a fine level for positioning the bed on the truck frame. Before you tighten down the six main carriage bolts, check out these two holes. The grease fittings should be equally distant from the sheetmetal apron on each side. Don't worry now about up-and-down alignment, just side-to-side. Once you are satisfied that the bed is really centered on the frame using this index, now add your lock washers and tighten the six main bolts to the frame.

If you find that the box is not properly centered at this point – left-to-right or front-to-back, you can re-drill the six large holes up to ¾-inch size to allow for “finegle room” adjustment movement.

### **Measuring Bed Height on the Frame**

What follows here is the most critical part of the flooring job. Once the two outside boards have been bolted to the frame securely, the next step is to install the outer angle metal strips to the metal box sides. These strips bolt to the outside floor boards and will be welded or bolted to the metal box sides. Carefully check the box height at this point, for once the angle strips have been welded into place, their position cannot be changed.

If your box is securely blocked up and level, it is sometimes easier to jack the truck up or down to get the box in proper alignment vertically before the angles are attached to the box. Once again, check the grease fitting positions through the apron holes, this time for vertical alignment. If the bed sides are at the proper height, the grease fitting will be centered in the sheetmetal holes. This is a critical measurement, for the bed sides can still be moved up or down at this point. Whatever shimming or jacking is necessary, take the few minutes to get this right.

Looking at the box side panel from inside the bed, there is a sheetmetal design lip pressed into the bed side that should align with the top edge of the side angle strip when everything is adjusted properly. Once you are satisfied that the bed height is correct – grease fittings lined up with apron holes and angle strips lined up with the bed side lip – tack weld the strips with a mig welder. Some prefer to drill holes into the angle strips and rosette weld through these holes into the box sides. I just migged the top edge of the angle to the bed side, for it appeared this was how the original angles were attached at the factory.

Alternately, if you do not have access to a mig, you could drill holes through both the bed metal side and the metal angle strip. Install 3/8-inch carriage bolts from the inside, using acorn nuts on the outside with lock washers. The fastening of these metal angle strips to the bed sides is critical, for it will carry all the metal box weight. Bed crossmembers carry the floor and cargo

weight, but all the metal box weight is carried by the angle strips resting on the outer edges of the two outer boards.

### **Finishing Up the Job**

After the angle strips have been secured to the bed sides, the remaining boards and rub strips can be installed, working in from each side. There should be 1/2-inch space between each board though which pass the bed strip carriage bolts. The boards should not touch each other anywhere. Unless the bed is off the frame, try to install as many of the 3/8-inch bolts and washers from the top, reaching underneath, as possible. There are 49 carriage bolts holding the wood flooring down. A few of these – over the fuel tank, for example – are difficult to reach from underneath. One front strip bolt above the fuel tank is extremely difficult to see or reach from underneath. Don't forget about it.

### **Suggestions**

Use this recipe throughout the entire job. When installing the 5/16-inch bolts, for those that pass through metal crossmembers, use either lock washers or locking nuts. For bolts that pass through wood only and not thru crossmembers – like the angle strip bolts – use wide diameter fender washers above the lock washers. Also use fender washers in spots where bolts secure rub strips but do not sit above crossmembers.

On all nuts everywhere, use either lock washers or lock nuts, if you want the floor to stay together for a long time. Where access was limited and it was difficult to thread lock washers and nuts into place, I used shouldered one piece lock nuts with the lock washer built in.

**NOTE:** If you are a mechanic and not a woodworker, it is an easy mistake to use an impact on these strip bolts. Don't over tighten them or the strips will buckle. I estimate that for the 5/16-inch nuts, 30 to 35 pounds of torque is sufficient for the job. Don't over tighten these. One hand is usually sufficient to get these tight.

There are no bolts used on the front steel bulkhead lip at the front of the wood floor. There are bolts used at the rearmost box crosspiece immediately in front of the tailgate. These bolts are difficult to install and tighten, for they are in close proximity to a crossmember just in front of his crosspiece.

Many of the nuts used will require tightening with a wrench rather than a socket because of their position inside "C" channel crossmembers or due to their proximity to other chassis components. It is usually necessary to have one person helping topside to tap or hold the bolt heads down while washers and nuts are started. I used a dead blow hammer for this job.

When working alone, a large floor magnet on top of the bolt heads can be substituted for the topside helper, and serves to magnetize the bolt to hold the washer in place until the nut is started. This is time consuming and tedious work. Because my hands are large and somewhat numb, I had my 10-year-old grandson start many of the nuts and lock washers for me, then I did the final tightening myself.

When the job is finished properly, the box will sit square and level on the truck frame and look very sturdy. The design is a good one and makes a good looking package. My suggestion is that just because vendors sell stainless hardware and fasteners, and just because show trucks have varnished flooring, the nicest and most practical look is that which was original. JMHO

### **Disclaimers**

These trucks are more than fifty years old. They have fought the good fight, and show all the signs of well-earned wear. Many of them have had loads shift into front bulkheads and tail gates, pooching out the sheet metal at each end. These two areas may require individual attention before floor lumber is put into place, for discrepancies will become more noticeable with straight board edges bolted up to crooked panels.

The natural stance of these trucks was tailgate-high. This design put any bed moisture against the front bulkhead. It is suggested that 1/8-inch be trimmed from overall board length to keep front ends of bed lumber away from direct bulkhead contact, to preclude further rust.

Good Luck

### **Vendor Listing**

Mar-K Corp.  
6625 W. Wilshire Blvd.  
Oklahoma City, OK 73130  
405-721-7945  
Mar-K.com

Bruce Horkey Wood Parts  
46254 440th. Street  
Windom, MN 561401  
507-831-5625  
[www.horkeywoodandparts.com](http://www.horkeywoodandparts.com)

Both vendors sell wood, fasteners, metal strips, rubber pads and bed accessories.

### **Lumber Dimensions**

Thickness  $\frac{3}{4}$ -inch  
Length 78 inches  
Width outer boards –  $7\frac{3}{4}$  inches  
Inner boards –  $7\frac{3}{8}$  inches  
Spacing  $\frac{1}{2}$  inch

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