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## FJ60 Heavy Duty Roll Out Drawer

By Jim Brantley

The FJ60 wagon has a wonderful capacity to haul people, gear, and supplies. It's great for taking just about everything you could possibly want  $\frac{3}{4}$  or need  $\frac{3}{4}$  just about anywhere you want to go. Unfortunately, whatever you take ends up somewhere in the back of the wagon. And, whatever you're looking for is usually buried underneath everything else.

At other times, the wagon can be almost empty. Whatever is stashed in the back is sliding around, or worse, flying around. Some of these things, especially toolboxes and recovering gear, could become very unfriendly toward passengers during a panic stop, accident or rollover.

I decided a heavy-duty roll out drawer bolted to the bed of the wagon's cargo area would provide a safe and convenient storage compartment.

### First Things First


The key component is the extra heavy-duty ball bearing drawer slide. Unfortunately, this type of specialty hardware is not readily available at most retail hardware stores. Eventually, I was able to locate the type of drawer slide I needed after calling some cabinet shops and their suppliers. One of the suppliers provided the name of a local lumberyard where I was able to order the drawer slides I needed.

I ended up using the *Hettich Model 3320 Extra Heavy Duty Drawer Slide*. This drawer slide extends its full 36-inch length and can support up to 300 pounds. I also found another slide, the *Accuride Model 9301 Extra Heavy Duty Slide*, that is essentially the same and should also work quite well. The Accuride slide is available in lengths to 60 inches, which would be ideal for a "full length" drawer  $\frac{3}{4}$  if you don't need your back seat. These extra heavy-duty drawer slides are not cheap, but every time you slide a heavily loaded drawer in and out easily with one finger you are guaranteed a smile.

### The Trade Offs

On one hand, I wanted a big drawer, on the other, I wanted to maximize the remaining space within the wagon's cargo area. Ultimately, I decided on a case height of 9 inches. This left a drawer height of about 8 inches. The width was determined by the wheel wells and the length by the distance between the tailgate and back seat. I chose inch plywood for the case

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First, I am not an experienced cabinet builder nor do I have any special tools. This is something anyone can do. I did take the time to prepare detailed drawings showing the exact dimensions of each piece. I accounted for the thickness of the plywood, drawer slide hardware and necessary clearances. Using this information, I prepared a detailed list of materials ([Figure No. 1](#)), which I took to my local hardware store. The kind folks at the hardware store were very helpful. Using their panel saw, they carefully cut each piece of plywood to the dimensions shown on my material list. I took the resulting stack of wood home and labeled each piece with its name and orientation. Frankly, I'll admit I was pleasantly surprised to be able to assemble all the pieces without even using my saw!

Check out my detailed drawings



[Adobe Arcobat drawings](#)

I used wood glue on all of the joints and about eighty 1- inch flat head wood screws to assemble the pieces. I predrilled the screw holes. The drawer slides came with mounting screws and instructions.

### Assembly

There may be an easier way to put this box together, I don't know, but the following worked for me. Start by playing with all the pieces to see how they fit together. I know this doesn't sound very professional, but it does help to become familiar with the pieces and to visualize what the finished product will look like.

Begin by building the drawer (without the drawer front). It's easiest to mount the drawer slides to the center of each side before attaching the sides to the drawer bottom. Place the assembled drawer upon the case bottom and shim it to provide some clearance between the drawer bottom. Put the case sides in their positions and mark the corresponding location of the drawer slide while the drawer is fully closed. Then extend the drawer slides and the mounting screws can be installed. Some of the mounting holes are slotted to facilitate minor adjustments, if necessary. The alignment should be checked at this point by removing the shims and sliding the drawer in and out while the case sides support it. I found everything lined up easily and I didn't need to adjust anything.

The case back is attached to the case sides (Photo No. 1) and then the case top can be placed and fastened. Flip the entire assembly over and the case bottom can be attached. At this point, only the drawer front remains and it should fit inside the front opening of the case. Check for clearances and attach it to the drawer sides and drawer bottom.



Photo No. 1

I've found that the top of the case can deflect up to inch when heavy loads are placed on it. This may cause the top of the drawer front to bind against the top of the case. Trimming the top of the drawer front on a curve, deepest at its center, solves this problem. Another solution would be to simply reduce the height of the drawer front over its entire length to provide a larger gap. The drawer back is shorter and does not have this problem.

### Installation

The carpeting in the back of my 14-year-old wagon was starting to fall apart so it was an easy decision to remove it and mount the box directly to the bed. I removed the entire piece of carpet before cutting and reusing the portion on the back of the back seat. I also salvaged and reinstalled the sides and back portions adjacent to the wheel wells and tailgate.

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Notching the sides of the case about an eighth inch deep at the wheel well solved that problem. I found the snug fit helps prevent the rear of the case from shifting or lifting up. I notched the case by using a circular saw with the guard set for an eighth inch deep cut. I made several parallel cuts with the saw then used a wood chisel to remove the remaining material. The eighth inch deep notches on each side ended up about 3 inches wide by about 8 inches long. This allowed the case to fit snugly between the wheel wells without damaging the padded wheel well covers (Photo No. 2).

Photo No. 2



The back of the case is positioned next to the back of the upright rear seat back without interfering with its operation. At the other end, the dimensions of the case provide a few inches of open space between the case and the tailgate. I've found this space is a handy location for storing all sorts of things including a full size shovel.

Simple metal "L"s are used to fasten the case to the bed of the wagon. I modified four galvanized metal "L"s used for wood framing by drilling a hole large enough for a 7/16 inch diameter bolt. I also slightly enlarged the small "nail" holes on the other side of the bracket so they would accept inch wood screws.



Photo No. 3

At the end of the case behind the rear seat I drilled two holes through the floor and bolted the metal "L"s to the bed (Photo No. 3). Finding a clear location to drill is made easy by referencing the nearby rear seat belt bolts which also extend through to floor. I used oversized washers and a metal adhesive/sealant underneath with the lock washers and nuts inside. I similarly installed metal "L"s on each side of the case near the tailgate. Looking up from underneath it was easy to find a clear spot at this location by referencing the corrugations molded into the bed (Photo No. 4). On one side, the bolt lined up on one of these corrugations so I used a couple of extra washers under the oversized washer that spanned the corrugation.

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Photo No. 4



### A few notes...

The drawer really does slide easily and will open by its self when parked on an uphill slope (or when under the acceleration g-forces of the mighty 2F). I use small brass latches on each side to keep the drawer shut.

Rather than using drawer pull hardware, I simply drilled a "finger" hole in the drawer front. I've also found that the drawer will not stay open when parked facing downhill. However, a small wedge placed between the drawer and case holds the drawer open nicely.

### Load it up!

Load your tools, tool box, tire chains, spare parts, snatch strap, choker chain, gloves, fluids, rags, and repair manuals (Photo No. 5), the heavier the better! The drawer will roll in and out with ease. The best part is there's no need to unpack the cargo area to get at these important trailside items.



Photo No. 5

### What's next?

As with most cruiser projects, there's always more to do. Besides covering the case with carpet and installing some tie down cleats, my future plans include adding, "wings" to cover the space behind the wheel wells. (Although, I've found these spaces are great as is for hauling grocery bags.) I'm thinking about flip up hatches using piano hinges. Plus, there's the "removable" box that will fit in front of drawer case to make a full size bed when the back seat is folded down. Well, you get the idea.

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