

## **Hackney Aluminum Shelving Installation Guide**

### **Ford Transit – 148” and 148” Extended Wheelbase – Medium or High Roof**

#### **Getting Started**

The following guide provides recommendations by Hackney when installing Hackney’s aluminum shelving in the Ford Transit. It is important that when installing to refer to the installation drawings for critical measurements as they will differ based on the shelving package purchased. One of the main goals when designing the Hackney Aluminum shelving was to allow end user installation. The shelving was designed to attach easily to the van sides and to allow clearance through the floor to avoid frame, cross member, and other possible obstructions. While the installation of the shelving is not complicated, it can be time consuming. Before getting started, we recommend the following:

1. Refer to the provided drawings for a parts list and resource for installation. If you do not have the drawings, visit [www.vthackneyparts.com](http://www.vthackneyparts.com) and find the corresponding set. The installation drawings along with this guide can be downloaded.
2. Estimated Installation Time = 2 people @ 3-4 hours per side depending upon shelf package. We do not recommend installing it by yourself.
3. Install with the van on a level surface. Installing on a non-level surface could create incorrect measurements and cause difficulty when attaching to the van side and floor.
4. Spread out all shelving parts to make sure you have received and can identify everything listed in the parts list.
5. Install the wheel well section first. This section can be assembled inside or outside the van. If installed outside the van, two people can lift the section in the van after assembly. Do not install the entire shelving kit outside the van. Once the wheel well section is set in place inside the van, assemble the additional shelving inside the van.
6. When attaching the shelves, always build from the bottom shelf up. The recommended spacers will make installation faster if installed in this order.
7. Attach the shelving to the side of the van before drilling through the floor. This allows you to adjust any imperfections before drilling.

#### **Recommended Tools/Materials**

- Locknut set/Electric Screwdriver
- Rubber Mallet
- Tape Measure
- Marking pen/pencil
- Level
- Drill (120 amp)
- 3/8” steel drill bit
- Wrench
- Creeper

- Shelving Spacers – Recommend buying 2x4 wood and cutting to the following lengths.
  - (4) - 5 3/8" spacers
  - (4) - 7 7/8" spacers

**Step #1 – Install 46" Middle Shelving Over Wheel Well**

- a) Double unistrut sections are necessary when attaching shelves on both sides. Single unistrut sections serve as end pieces. Review installation drawing and locate correct unistrut sections to install 46" shelving over wheel well. Measure 20" from bottom. Mark at 20".

Double unistrut has unistrut nut channels on both sides. Single unistrut only has nut channel on one side.



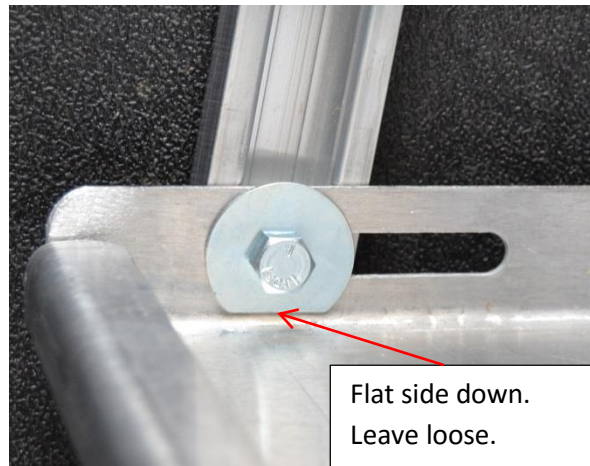
- b) When attaching the bottom shelf, we recommend you use the spacers to support the assembly.



- c) Attach the 46" shelf as the bottom shelf to both double unistruts. Align the bottom portion of the shelf with the marks. Do not align at the top lip. There should be no portion of the shelf below the marks. Make sure the teeth of unistrut nut is facing the shelf. This will allow for a stronger grip when tightening. For best results, drop the unistrut nut through the top section of unistrut and guide down with hand.



Using the flat edge washer and the unistrut screw, loosely tighten the shelf to the unistrut at the four ends. Make sure it is somewhat loose as shelf height adjustments will have to be made.



- d) Align bottom shelf and tighten to specified height.

Align the bottom of the bottom shelf with the 20" mark you made on the unistrut. If you did not make a mark, you can re-measure and align accordingly. Make sure all four sides are 20" from the ground. Also, make sure the rear section of the shelf is offset by 3" towards the rear.



- e) Once aligned 20" from bottom and 3" at rear, tighten the unistrut bolts. Make sure to re-measure during the tightening process. Use the rubber mallet to tap on the shelves to re-align. Do not overtighten. If the washer begins to indent into the unistrut, that is a sign of overtightening.

- f) Assemble 2<sup>nd</sup> shelf

Place (4) of the 7 7/8" spacers at the corners of the bottom shelf. Lay the next shelf on top of the wooden spacers. Make sure the shelf is lying flat on the spacers. This will provide you with a quick method to get the correct height between shelves. Again, measure to make sure you are 3" from rear. Tighten the second shelf in place.



g) Assemble shelves 3-6

Repeat step f), assemble the 3<sup>rd</sup> and 4<sup>th</sup> shelf. The standard kit allows for 3 rows of 6" tall bins and 3 rows of 3" tall bins. Therefore, use the 5 3/8" spacers on the 4<sup>th</sup> shelf to assemble the 5<sup>th</sup> and 6<sup>th</sup> rows of shelving.



h) Set assembled shelf over wheel well

- I. If assembled outside of van, move into van and set over wheel well.
- II. Provide yourself some room between side of van and shelf assembly. This will allow for adjustments when connecting adjacent shelf assemblies.
- III. Do not attach to side of van or floor.
- IV. Do not assemble top shelf.
- V. Make sure shelves look aligned and feet of unistrut are level to the floor.

## Step #2 – Assemble Any Adjacent Shelving

- a) Depending on the package you are installing, additional shelving will need to be installed. For most 148" extended wheelbase units, this will include shelving sections on both sides of the middle section. For 148" wheelbase units, this will include shelving attached to the front of the unit toward the bulkhead. Refer to the installation drawings and select the proper unistrut section to begin installation.



Single unistrut sections are used at the ends of the shelving packages. All pre-drilled holes at the bottom should be on the inside facing the wheel well.

- b) Follow similar instructions as Step #1.
- I. Measure 20" from bottom and mark.
  - II. Align and attach bottom row of shelving. Shelving should visibly align closely with 46" shelf.
  - III. Align 3" from rear and tighten into place.
  - IV. Use spacers to assemble shelves 2-6.
  - V. If necessary, repeat the above steps to complete the shelving installation of your package.

### Step #3 – Position Shelving For Mount



**\*\*For visual representation only. The picture may not represent the exact shelving package you are installing.\*\***

- Depending on your package, all shelving sections should now be attached.
- With at least 2 people, lift the shelving assembly and position against the side wall for mounting.
- Refer to the installation drawing and determine the distance from the rear corner post of the van near the rear doors to the unistrut foot. Measure and adjust shelving to match the required distance.



**\*\*For visual representation only. For this particular set, the distance was 6 ¾".\*\***

d) The shelving unistrut sections should measure 5" from the side of the van.



Rear Single Channel Unistrut 5" Off Side Wall



Front Single Channel Unistrut 5" Off Side Wall

e) It is important to make sure all unistrut sections are also 5" off side wall as this will accommodate top shelf installation. Do not attach to the floor at this point.

#### Step #4 – Install Top Shelf

- a) Be sure to reference the supplied drawings when attaching top shelves.
- b) The attachment brackets that connect the top shelf to the unistrut will have to be installed first.
- c) Place the attachment brackets near the top of each unistrut section and connect the bracket in the same way you would attach the shelves to the unistrut using the unistrut nut, screw and washer.



- d) Make sure the brackets are loose as they will need to be adjusted once the top shelf is in place.
- e) Place the top shelves on top of the unistrut for installation.
- f) Align pre-drilled top shelf holes with pre-drilled bracket slots.
- g) Using the supplied screw, nut and washer, loosely attach the top shelf to the bracket. Repeat until all brackets are loosely attached to the top shelves.





- h) The top shelf flanges on both top shelves can now be attached to the unistrut. Using the unistrut nut, washer and screw, attach the top shelves to the double unistrut in the same manner in attaching the shelves.



#### **Step #5 – Attach Shelving to Van Side Panels**

- a) Align the pre-drilled holes on the top shelf with the threaded mounting holes at the top of the vans side wall.
- b) Once all holes have been aligned, attach the top shelf to the side wall with the flat edge washer, lock washer and hex screw. Refer to installation drawing for the number of attachment points.

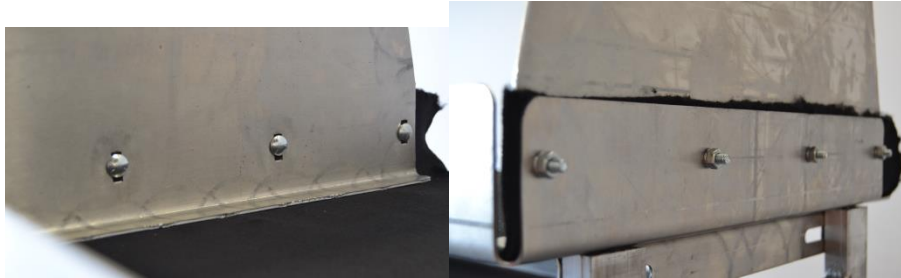


- c) Make sure that all unistrut feet are even with the floor.
- d) Adjust as needed and then tighten all top shelf brackets and attachment points.

#### **Step #6 – Attaching Top Shelf Pipe Stop Panels and Optional Top Shelf Felt**

- a) Depending on the section you are installing, the shelving may come equipped with pipe stop panels to be installed on both ends of the top shelf.
- b) If you purchased the felt kit, please refer to these instructions to install on the top shelf.
- c) To attach the pipe shelf stop sheet, align the pre-drilled holes with the top shelf pre-drilled holes. Make sure the stop sheet is on the inside of the shelf. If supplied with the top shelf felt, make sure felt is placed between pipe shelf stop sheet and the end of the unistrut.

- d) Insert the screw with the head on the inside of the shelf. Attach with the washer and nut with the nut and extra part of the screw on the outside of the shelf. The screw will be inserted through the felt.



- e) Repeat install process with the pipe shelf stop sheet on the opposite end. Trim any excess felt around the end panels.
- f) For top shelf felt installs that do not involve a pipe stop panel, follow the below instructions.
- g) Lay down the felt and stretch to each end. Using the felt kit end bracket, place the felt at one end between the bracket and top shelf end panel.
- h) Align the pre-drilled holes of the bracket with the pre-drilled holes on the top panel. Make sure the stop sheet is on the inside of the shelf.
- i) Insert the screw with the head on the inside of the shelf. Puncture through the felt and attach with the washer and nut with the nut and extra part of the screw on the outside of the shelf. Trim any excess felt.



### **Step #7 – Mount Shelving Assembly to Floor**

- a) Re-measure to make sure shelving is proper distance from rear corner post and unistrut (Step #3c) and 5" from side wall. Minor discrepancies are acceptable, but more than a half inch could be an issue when drilling through the floor.

- b) Only the rear and front unistrut sections are designed to be mounted to the floor. The middle sections near the wheel well are not suggested to be drilled due to clearance obstructions underneath.



- c) Beginning with the rear unistrut section, locate the (2) pre-drilled holes, verify underneath floor to insure there is no obstruction, then drill through the floor of the van.



- d) Once both holes have been drilled, place a washer over the hole and drop a screw through the hole.



- e) Go underneath the van using a creeper. You will need to take with you:
  - a. (1) Pre-drilled mounting bracket.
  - b. (2) washers.
  - c. (2) lock washers
  - d. (2) nuts.
  - e. Wrench or socket wrench for tightening.



- f) Attach the bracket through the bolt and fasten with the washer, lock washer, and nut.



- g) Repeat for the second screw/bracket attachment.
- h) Tighten both nuts, moving from one to the other, until both are tight. You will need someone above to hold the screw steady while tightening.
- i) At this stage, remember to go back and tighten/secure the top shelf to the unistrut and sidewall.
- j) Repeat steps c) – i) for the front unistrut floor mount.

**At this point, the shelving assembly and mount is complete.**