

# KALMAR CONTAINER LOADER #21 KIT INSTRUCTIONS

Before beginning the assembly of your kit clean off all the castings with soap and water. Next, trim all flash and spurs from the parts. You are now ready to begin the assembly stages. If you are not familiar with the Kalmar Full size prototype I suggest that you assemble the model dry (no paint or glue) so that you can become familiar with the components and their respective fitting relationships.

## STEP 1. Assembling the wheels and axles

Glue the triple tire and wheel assemblies (part #1) to the narrow ½ inch axle (part #2) one on each side. Glue the single tire and wheel assemblies (part #3) to the long 9/16 inch axle (part #4). Paint and detail the tires and wheels.

## STEP 2. Detailing interior of drivers cab

Cut a piece of the white plastic rod (part #7) to be used as a steering column. Glue the column in front of the operators seat of the Kalmar body (part #5). Glue the steering wheel (part #8) on top of the column. Paint and detail the Kalmar body and engine hood with the parts you have just added (usually all the same color).

## STEP 3. Assembling drivers cab (packaged in the bottom of the box under the protective foam)

Remove the etched brass cab (part #9) from its frame, this can be done with a hobby knife. Press the blade down on the very small connecting retainers until it pops loose. (It does not take very much pressure to pop the retainer loose.) Next fold the cab on the crease lines about 90 degrees. The etched door line and door latches should be visible on the outside of the cab. Next bend the 4 small tabs 90 degrees inward, this will give you an area to glue on the front and back part of the cab. (Refer to figure C for illustration.) When assembly is complete, paint.

## STEP 4. Installing air cleaner

Using a pin vice, drill a hole with a #75 (.021) drill bit about 1/16th inch deep in the dimple right behind the cab. Next glue the painted air cleaner in position. Refer to main illustration for visual location.

## STEP 5. Installing exhaust stack

Using a pin vice, drill a hole with a #67 (.032) drill bit. Drill this hole about 1/16th inch deep. The dimple for this hole is located in front of the single tire wheel well. Refer to main illustration for visual location. Glue the exhaust (part #11) in place.

## STEP 6. Installing overhead brace hydraulic cylinder mount

While straddling the overhead brace (part #12) over the engine hood (part #5) glue in place vertically. (Refer to figure A.) Next glue the supporting triangular supports in place.

NOTE: Build the lift complete as a sub assembly before permanently attaching it to the Kalmar body.

## STEP 7. Fitting sliding lift into lift stanchions

Insert Sliding lift (part #14) into fixed lift frame stanchions (part #15). Review the visual relationship shown in the exploded view. The height or extension of part #15 is determined by how long you cut the horizontal hydraulic rod (part #7). Part #7 is the hydraulic cylinder of the prototype that moves the lift up and down. This hydraulic rod is to be located directly on top of the hydraulic cylinder on part # 15 and mounted right underneath the top ladder of part # 14.

## STEP 8. Gluing lift face to sliding lift assembly

Glue the lift face (part #16) onto the sliding lift (part #14). Use the photo of the finished model as reference.

## STEP 9.

Glue the container caliper (part #17) to the lift face.

## STEP 10. Setting up your Kalmar for the container

Glue the end retainers (part #18) in place. (note: you may have to cut off part of each end of the container calipers depending on what size container you want it to lift. I.e. A 20 ft container you would cut off 10 feet at each end). Our model was designed to fit up to a 40ft. container. If you would like to fit longer containers you will need to add length to the calipers on each side respectively.

## STEP 11. To roll or not to roll?

Now that you have fully assembled the lift it is ready to be painted. At this point your model is near completion and it is time to make a decision. When we first made the Kalmar we designed it to be a static model. That is it was made to be a non-moving part of a scene. However, it became very easy to make it a rolling model by just adding axle retainers (part #16). Both ways have their advantage. A rolling chassis is just that, it rolls which is kind of neat. When the Kalmar is fully assembled it is a heavy model for its size. It can obtain quite a bit of momentum with just the slightest movement of your layout. The disadvantage is it can roll right off onto the floor. If you want your model to remain static then glue the axle end wheel assemblies in their respective journals. If you want to create a rolling chassis install the wheel assemblies in their respective locations. Next install the wheel retainer over the top of the axle. Glue in place making sure the glue does not get in the axle journal.

## STEP 12. Installing the lift sub assembly

If you decided to make your model a rolling chassis you will need to make a small modification to the lift assembly before gluing. (Refer to figure B.) In this figure you see two tabs (the parts with rounded ends) These ends will need to be filed until they fit into their mounting pocket which is in between the two triple tire and wheel assemblies. Once this is complete you are ready to glue the lift and horizontal cylinders (part #19) in place. Your model is complete. You may want to detail with decals, weathering, etc.

Please let me know what your thoughts are of this kit. Your suggestions and encouragement are highly valued and will ultimately be used to improve and develop our models in the future.