

# SMALL STEEL WATER TANK KIT #7019

## PROTOTYPE HISTORY

The prototype for this model was built around 1900 by the Chicago Bridge and Iron Works for the textile mill at Glencoe Village in North Carolina. It still stands to this day although it is no longer in use as the mill has ceased operations. It is typical of the many small tanks built in the first half of the 1900's to serve industries and small villages. The 10' diameter tank could be shipped as a load on a standard flat car and the 48' support angles would fit in a 50' car. As a result these tanks could be largely prefabricated and shipped to be quickly assembled where needed. They would be prototypical at any industry that used water in their operations as well as at any town or village.

## PLEASE READ BEFORE ASSEMBLY

Each part is attached to the runner (sprue) by one or more small "gates". When removing a part, cut close to the sprue, then carefully trim and file the gate to the part. Don't let the part "snap" off into the carpet! DO NOT remove parts until called for in the instructions, and do not twist them off as they will be damaged.

Most plastic parts have a sharp witness line, usually on an edge, where the mold halves come together. This line should not be confused with "flash" which is a very thin area of plastic extending from this line. We try not to ship parts that have "flashed" as this indicates the mold was not properly clamped, the part is thicker than intended and may not fit. For a neater appearance this sharp line may be removed by scraping with a knife.

We recommend using only "liquid cement for plastic". Use ACC (superglue) for plastic to metal joints. Test fit each part to see where cement should be applied. Apply sparingly with a sharp pointed brush, allowing cement to "draw" into the joint by capillary action. For larger surfaces, several "paint" passes may be required to soften the plastic.

Yes - the parts DO FIT. If you think a part does not, STOP - you may be making a mistake. Check the photos and instructions before proceeding. Read each section of the instructions completely before proceeding.

## PLATFORM ASSEMBLY

Join both railing sections overlapping straps 1/16". Let dry. Remove horizontal rails on the outside of the last posts. Remove platform and trim gates flush on the outside diameter. Sand inside spacers for a smooth fit on the tank. Position walkway with the two raised rings facing down. Glue railing around the perimeter with the verticals facing out. See photo showing how we use a glass plate and metal blocks to square and hold the railing while we glue it. Set assembly aside until called for.

## UPPER LADDER ASSEMBLY

Remove the side rails for the top ladder assembly from the detail parts sprue (these are fragile but you have two sets of spares so don't worry too much). Trim the angle strips from the runner at the end of the vertical on the angles. Take the .008 wire (8" long piece) and cut it into pieces a 1/2" long. You need 11 but cut a few extra. Note that there are holes molded into the side rails. Insert the top and bottom rungs (the angles go on the outside of the ladder) and space the rails about .2" apart (you can use the straight ladder section as a guide). See photo and note the piece of runner under the rails to raise them off the work surface. Use a toothpick or pin to apply a drop of superglue to each joint. Allow to set and then install the rest of the rungs. Trim the excess wire with sprue nippers or flat back cutters. Put this assembly aside.

## A FRAME ASSEMBLY

Trim the gate on the base. On each of the four concrete footings you will notice a small raised circle. Use a razor blade to square off the outside of these circles parallel to the outside of the base. See photo on photo page.

Remove both A-frames and trim gates. Remove two sets of cross angles (3rd set is a spare) from the detail sprues. Note the angles on the end gusset plates, they match the angle of the side frames. Glue one A-frame to the base. Use the second A-frame as a guide to set the correct tilt in angle. Hold until the glue sets. Glue the second A-frame to the base at the same inward angle. Lay the assembly on its side (see photo and note metal block used to level the top side) and install the top (shortest) angle making sure both sides have the same degree of tilt. You can soften the bottom joints with more solvent if necessary to adjust. The outside of the gusset plates lines up with the outside of the angles, not the other gusset plates. Install the other two tie angles. Flip over and install the last three angle ties.

Remove two sets of bottom gusset plates (they match the ones already molded on the bottom of the A-frames). Install connecting the angles to the concrete piers. Note there are left and right versions. Remove four post tops (flat plate with a right angle on the bottom). Glue one to the top of each angle. These need to be level. I find it easier to place the tops upside down on the work surface and apply glue to the A-frame angle and place it against the inside of the angle on the post cap. Leave the frame assembly standing upside down while the glue sets.

## GUY WIRE INSTALLATION

You have a bag containing 24 pieces of .010 wire and a bag containing 24 turnbuckles. The wires go six to a side angled between the gusset plates on each level. You have two choices, you can drill a #80 hole in each gusset plate and make a right angle bend at the end of each wire (slide a turnbuckle over each wire before bending) placing it in the holes and gluing in place or you can cut the wires to length and put a dot of superglue on each gusset plate and just lay the wire on the gusset plate. In either case the turnbuckles go on the wire near the center on the lower section of each wire. After the wire is glued in place the turnbuckle can be slid into position and held in place with a dab of superglue.

## TANK ASSEMBLY

Remove lower (smaller) cone from sprue and trim gates. Test fit into the bottom of the tank, it should seat against the stop ring about 1/8" up. Glue in place.

Remove 12 of the 1/4" long angle brackets (there is a step between the runner and the part on one side). Glue eight of them to the bottom of the tank spaced evenly. They should angle about 1/8" toward the top of the tank (see photo). Let dry. Slide walkway assembly over the tank and glue to supports. The ladder opening should be centered between supports. Spot glue the walkway to the tank at the spacer tabs.

## FINAL ASSEMBLY

Remove the three flanges from the detail sprues along with one of the small cones. Place the flanges on the white styrene tube, one about a 1/2" from the bottom end, one about 1" from the top end, and one in the middle. Remember that about 1/2" of tube will stick into the tank. Insert the bottom end of the tube into the hole in the center of the base. Place the small cone on the top of the tube so the angle matches the bottom of the tank. Place the tank assembly over the tube and glue the tank to the post caps. The tank should be centered on the post caps with the ladder opening in the railing lined up with one of the corner angles. Turn the tank over and slide the cone against the tank bottom and glue in place.

Remove the ladders and six ladder brackets from the sprues. Glue 4 ladder brackets to one ladder section as per photo. The brackets go on the outside of the ladder with the stop bumps on the brackets resting on the ladder rails. Glue ladder assembly to the corner angle under the ladder opening starting just below the walkway. Cut the second ladder to length (1/4" off ground), add two brackets near the ends and install on the corner angle.

Remove the top cone from the sprue. Trim gates including under the edge. Cut off a finial close to the main runner, insert it into the top and glue in place from the back. Apply glue to the top of the tank and install top being sure it is centered. Glue the top ladder assembly to the tank. See photo. The top rails center on a roof panel. The ladder goes slightly to the right of the lower ladder. Depending on your walkway position it may be necessary to trim the bottom of the top ladder assembly before gluing it in place. Remove a hatch from the detail parts sprue and glue it in place on the roof just up from the ladder. Hinges go on the finial side. Paint the tank (usually black, sometimes silver gray) and add your factory name or RR logo.

If you lose or damage a part it will be replaced for a \$2 shipping and handling charge. Just send us a note and we'll get it out immediately. And do drop us a line or email, we enjoy hearing from you with ideas, comments and suggestions for new products.

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