

PROTOTYPE HISTORY

The CHICAGO BRIDGE AND IRON WORKS began building fabricated steel water and fuel oil tanks in 1892. They found a ready market as replacements for the aging high maintenance wood water tanks; by 1942 many thousands had been sold to railroad and industrial users nationwide, with many still in use. These tanks were usually located adjacent to the service facility, but not necessarily trackside, and served one or more standpipes.

This kit includes parts to build almost every prototypical variation possible — the most difficult part is choosing which design option is most appropriate!

If you are modeling a favorite prototype the decision is easy; "just do it". If not, here are some guidelines . . .

As a general rule, the design you choose should be in proportion to the size of your locomotives, as well as the type of service required.

For example, a small lineside or branchline facility may require only the basic "two-course" 100,000 gallon capacity, with two riser sections to provide the minimal head pressure to gravity feed the water or oil to the standpipe. Perhaps the most common design, they usually incorporated the conical base and spherical top.

Additional capacity, often required for larger locomotives or more frequent service, was obtained by simply adding an extra course, increasing the volume to approximately 125,000 gallons.

A point worth noting is that many railroads operating in temperate climates, such as the South, opted for *no* top.

Larger facilities serving two or more standpipes, such as major engine facilities or large stations on express routes, especially those serving rosters of large locomotives, often opted for the "three-course" 125,000 gallon tank mounted high on three riser pipes. This provided considerable head pressure to gravity feed multiple standpipes and allow rapid flow into large tenders.

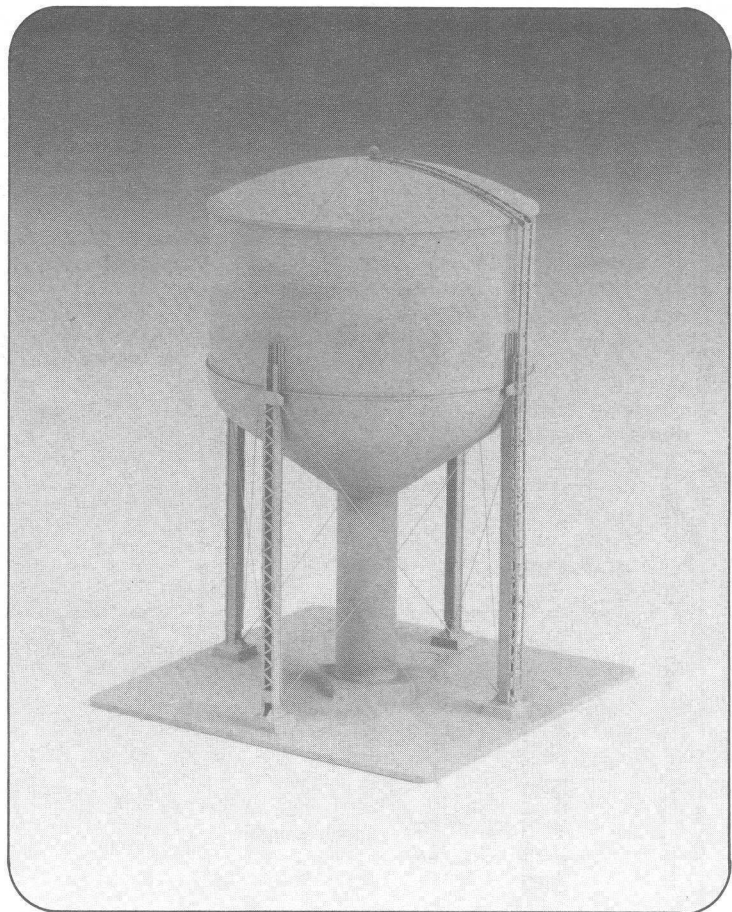
The most common version of the larger tank was the elliptical base with spherical top, mounted on three riser tubes, with long girder legs. It should be noted that some large service facilities used two water tanks to allow for added capacity and maintenance without interruption of service.

Unless you are modeling a specific prototype, we suggest that you "mock-up" the tank and riser parts in various configurations to decide which "looks" best for your application and roster. Should you decide on a two course version, use the extra parts for a city water supply tank mounted on a hill above town. Use the extra girder legs for a flat car load or "yard clutter".

KIT

100,000 to 125,000

STEEL WATER OIL WATER COLU



• CONICAL BASE • SPHERICAL ROOF •

• 100,000 GALLON •

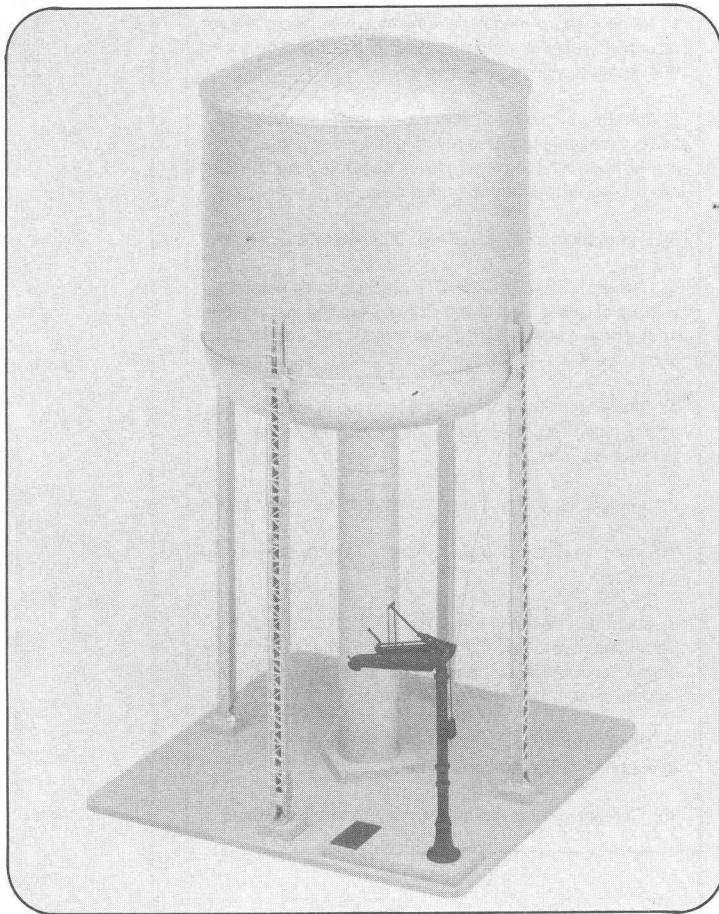
KIT WILL BUILD INTO ALMOST E

#7012

GALLON CAPACITY

R FUEL OIL TANK

MN INCLUDED



• ELLIPTICAL BASE • SPHERICAL ROOF •

• 125,000 GALLON •

EVERY PROTOTYPICAL VARIATION

FOUNDATION & SCENIC BASE

A base is provided as a sub-structure for assembly. We find it easier to assemble the entire tank on the base, airbrush the model, and then brush paint the piers and foundation 'concrete', followed by scenic texture prior to installation on the layout. The scenic texture can then be blended into the layout. You may choose to trim off the corners of the base prior to assembly.

For textures we recommend a fine gravel finish, painted with a profusion of "weeds", always present under water tanks. If for oil service, spray and drip gloss black in the area to represent oil spills and minimal leakage.

PAINTING

As a rule, steel water tanks were painted in two basic colors, silver or black, although some railroads used an oxide red. We have had good success with Floquil® OLD SILVER, and a greyed version of ENGINE BLACK, as well as GRIMY BLACK. Tanks were usually well maintained, so exhibit only minimal natural weathering, such as dirt, soot and rain streaking, with little rust showing. Of course, add your railroad's logo to the tank!

Oil service tanks were usually quite grimy, with overflow streaks, drips and the like. As always, it's your choice.

1 TANK & RISER ASSEMBLY

1) Test fit each TANK COURSE and RISER segment for fit, and remove any flash that may be present. Carefully remove the gate marks on TANK TOP and TANK BOTTOM.

2) Cement RISER TUBE segments together making sure joints are tight.

3) The vertical seams on the TANK COURSE segments should be staggered when assembled; see illustration. For reference, there are four small 'pin-gate' marks visible inside the segment — these are exactly centered between the seams.

Place segments together, stagger the seams, and apply liquid cement *inside* the segments, allowing capillary action to draw solvent into joint. Be careful not allow cement to attach the outside surface, and watch out for finger marks!

4) Cement choice of TANK BOTTOM to assembled tank, with leg notches centered between the seams of the lower tank course.

5) Cement choice of TANK TOP in place, aligning the rivet lines visually to the tank seams.

6) Cement assembled RISER TUBE to TANK BOTTOM.
NOTE: Do not cement assembled tank to foundation base until leg assemblies are completed.

2 GIRDER LEG ASSEMBLY

We suggest you assemble both the long and short legs at this time; use the short legs for a 'two-riser' version, or the long for a 'three riser'. Use the extras for a flat car load.

- 1) Carefully remove LEG GIRDERS and GIRDER FLANGE PLATES from runner. Remove gate marks.
- 2) Cement FLANGE PLATE to LEG, even with top edge of upper notch on leg. Note: If leg should be slightly warped toward flange, cement flange to leg and immediately place assembly on a flat surface and weight down until solvent is set.
- 3) Ream hole in BASE CASTING with a #50 drill or a sharp pointed modeler's knife, to allow bracket to fit molded posts on foundation pier.
- 4) Cement BASE CASTING to LEG GIRDER assembly.
- 5) Gently bend upper ROD ATTACHMENT GUSSET on each leg as shown.
- 6) Drill #80 hole into each side of BASE BRACKET for diagonal tie rods.

3 PRELIMINARY ASSEMBLY

- 1) Cement assembled tank to foundation base — use a square or drafting triangle to exactly center the four notches in tank bottom over the leg piers. Before cement sets, place one leg girder assembled in place to check that leg is square and centered in notch, and that tank is square to base.
- 2) Cement four legs in place on piers, and against tank, making sure legs are square.
- 3) Cement LEG INNER CHANNEL inside leg, and against tank, with half above the top of the leg and half below.
- 4) Cement LEG ANGLES (two per leg) in place on each side of the leg, and against tank.

4 LADDER ASSEMBLY

The prototype used a revolving upper ladder section extending from the girder leg to the finial, rotating around the tank as one unit, with the ball finial acting as the pivot point. Initial access is from the ladder mounted on one leg. This feature (?) allowed access to the roof hatches as well as the sides of the tank for painting and maintenance.

The ladders provided with this kit include "safety cages",

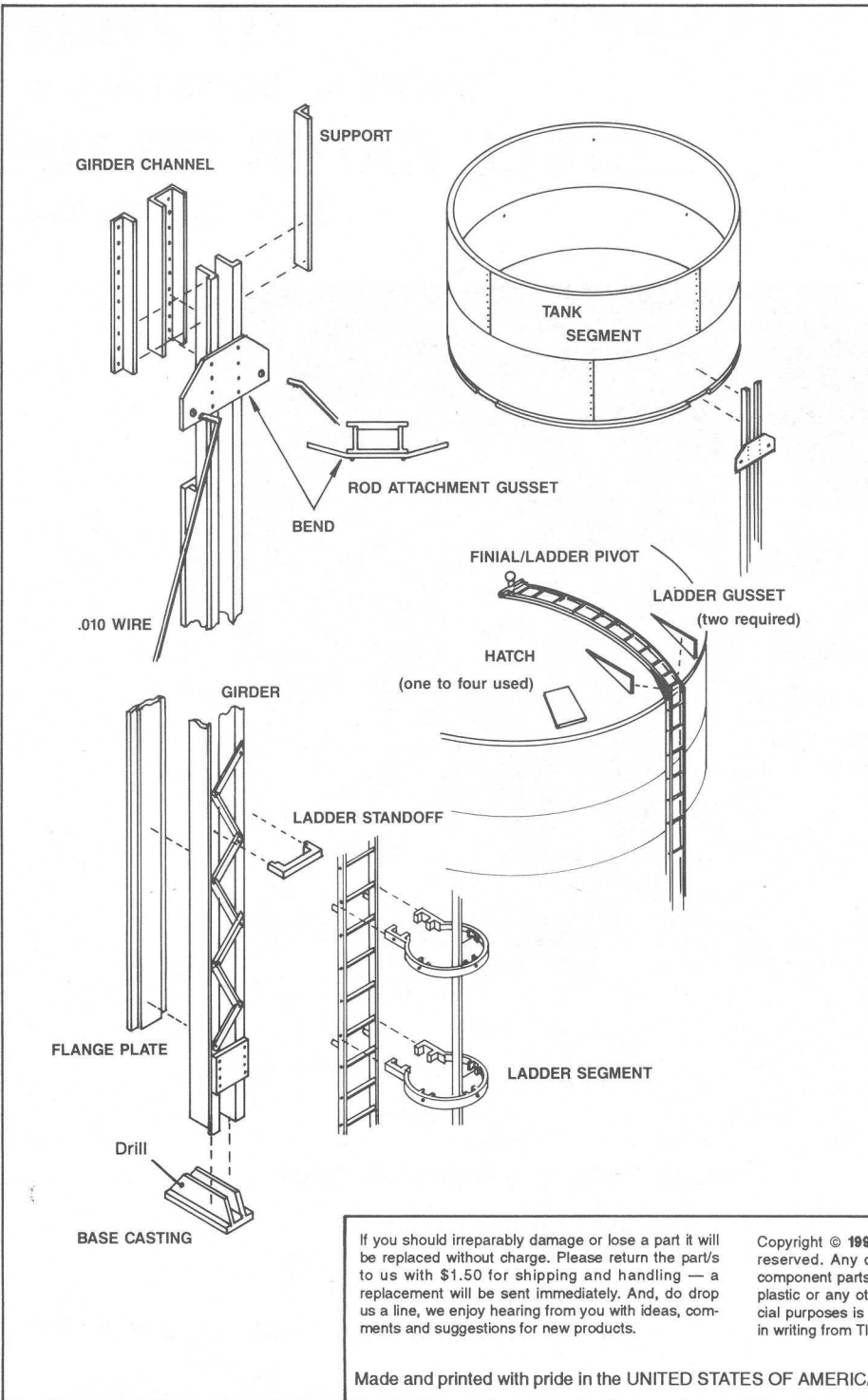
which can be installed at your option. Safety cages came into use about 1940, and were mandated by federal law soon after. If you are modelling the pre-1940 era, you may omit the cages, but if after 1940, they should be included — check your prototype for guidance. Safety cages are used only on the vertical run on ladder.

NOTE: A certain amount of "nibble-and-fit" is required for the ladder installation. Read this section, study the photos and illustrations, and follow your own judgement as to the best procedure to follow.

- 1) Using a *sharp* modeler's knife or a new single edged razor blade, carefully remove ladder (and safety cage rings) from runner systems; trim gates.
- 2) Trim one segment of ladder to fit short (if modelling a two-course tank) leg. Use full length if modelling a three-course tank with long legs. It is not necessary that the ladder extend to the ground in this case.
- 3) Remove four LADDER STANDOFF brackets, trim gates.
- 4) Cement LADDER STANDOFF brackets to leg assembly, with top of ladder even with top of leg, locating them where appropriate to align with posts molded on ladder. One should be at the top of the leg.
- 5) Trim ladder segment to extend from top of leg to slightly above tank. Trim to exact length after roof ladder and gussets are in place.
- 6) If modelling safety cages, do so now. See illustration.
- 7) Cement ladder (and safety cage if used) to leg and standoffs.
- 8) Insert, but do not cement, BALL FINIAL into roof. Trim ladder segment to extend from crossbar on ball to overhang edge of roof. Align ball and ladder to be in line with leg ladder; cement ladder and ball to roof.
- 9) Cement LADDER GUSSET to each side of roof ladder to support vertical ladder segment.
- 10) Cement vertical ladder segment to ladder gussets.

5 FINAL ASSEMBLY

- 1) Cement one to four HATCHES (number varied on prototype) to roof, equally spaced, and close to the edge.
- 2) Trim and bend .010 wire to reach between BASE BRACKETS and TIEROD ATTACHMENT GUSSETS. Cement in place with ACC.

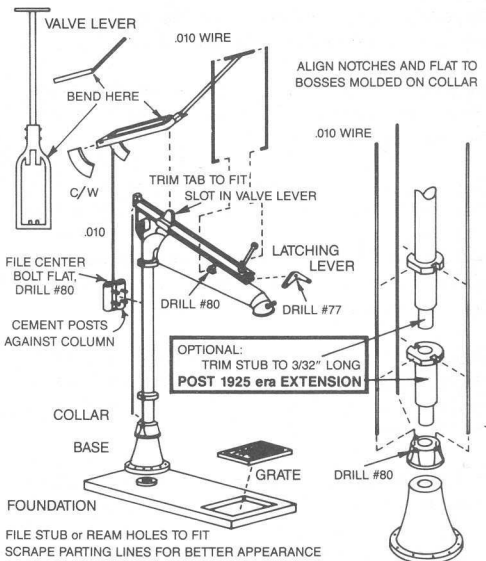


WATER COLUMN

The water column, or standpipe, included with this kit is an exact replica of the commonly used 'Flexible Spout' manufactured in great numbers by the FAIRBANKS, MORSE and COMPANY®. It is also available from your dealer as TICHY TRAIN GROUP Kit #8006.

Assembly is straightforward, just follow the directions...

Note that two height options are offered. Use the extension if modelling post-1925, or if your roster included larger locomotives.



If you should irreparably damage or lose a part it will be replaced without charge. Please return the part/s to us with \$1.50 for shipping and handling — a replacement will be sent immediately. And, do drop us a line, we enjoy hearing from you with ideas, comments and suggestions for new products.

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