



HO Structure Kit DIESEL SANDING TOWER 933-4160

Thanks for purchasing this Cornerstone kit. Please take a few minutes to read these instructions and study the drawings before starting construction - if you're not sure how parts go together, test fit before gluing! All parts are styrene plastic so use compatible glue and paint to assemble and finish your model. You may find it easier to assemble larger parts and paint them as subassemblies, while smaller parts can be painted on the sprues and touched up after installation. If you wish to paint your model, wash all parts in warm water and plain dish soap, rinse thoroughly and allow to dry before painting.

Since there's very little rolling resistance and almost no friction, steel wheels roll easily against steel rails, making it easy for trains to move very large and heavy loads. From the earliest days of railroading however this same lack of friction could sometimes create problems for locomotives when starting or stopping, climbing grades, or when the rails became slippery due to rain, oil, ice or leaves. While the weight of the engine on the wheels was usually enough to overcome potential problems, the right conditions could cause a sudden and complete loss of traction. When this happened, wheels would slip and spin, and left unchecked, could quickly result in severe damage. A solution was found in the 1830s, when engines began carrying a supply of sand that could be applied to the rails as needed. This was carried in a special sandbox, later a rounded sand dome, mounted on top of the boiler. Refilling the sand supply became a regular part of engine servicing and specialized facilities handling sand were added to existing engine terminals. To speed the work, elevated sand towers were built, which used compressed air to fill a storage tank. These were fitted with small versions of pull-down spouts similar to those found on water towers, mounted about 15' (4.5m) above the engine, and gravity allowed sand to flow downward. When the first diesels arrived with sandboxes inside the body and filler hatches mounted low on each side, existing facilities were no longer adequate. This required the work be done by hand, increasing down time and costs. Some roads opted to modify existing towers to serve both steam and diesel by adding hose extensions to the ends of the spouts, which proved less than ideal for steam, and created potential hazards for passing locomotives. As diesels took over, a new generation of sanding towers also appeared designed to install between tracks. These used a Y-shaped arrangement of supply pipes feeding multiple discharge hoses on both sides of the tower, arranged to provide safe clearance for equipment below. While these used the traditional tank filled using compressed air, railroads began buying pre-dried sand and shipping it in covered hoppers equipped with special discharge fittings, eliminating sand bins and drying sheds. Your new model is typical of this style of tower, and fits engine terminals large or small from the 1950s to the present day. For additional rolling stock, figures, vehicles, structures and scenery materials to complete your scene, see your participating dealer, check out the current Walthers Model Railroad Reference Book or visit us online at walthers.com.

1) Align pins and mounting points on inside of Rear (6) and Front (7) Tank Halves and glue where parts meet. Align slots on Tank Bottom (5) with tabs on inside bottom of tank and glue in place. Be sure inlet is at right rear as shown: align slots on Tank Top (8) with tabs on inside top of tank and glue where parts meet.

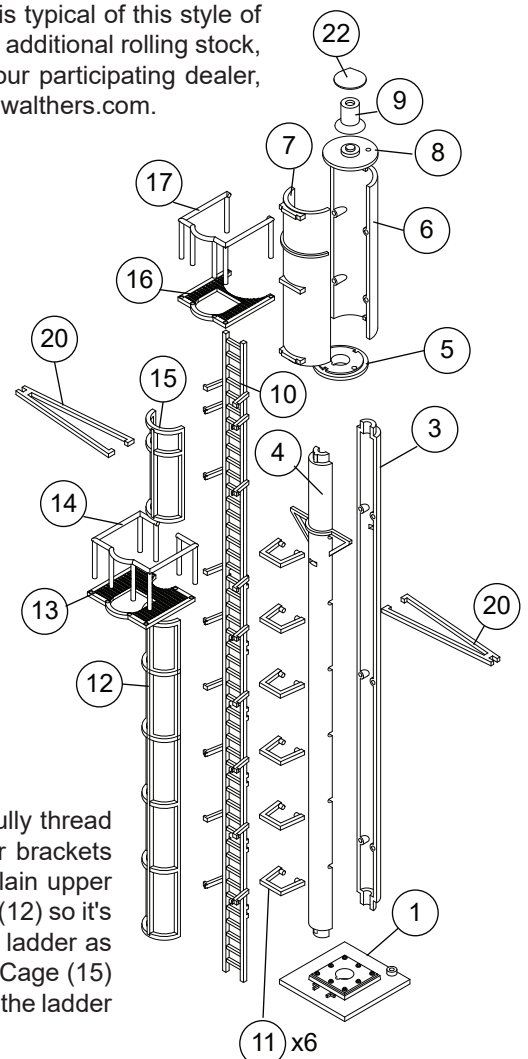
2) PLEASE NOTE: Before assembling the Support Column, be sure the Front (4) and Rear (3) Column Halves are aligned as shown. Align pins and mounting points and glue Column Halves together. Be sure filler pipe connection on Tower Base (1) is at the rear as shown: align tab on lower front of column assembly with slot in Base and glue where parts meet.

3) Glue Upper Handrail (17) to Upper Platform (16) and allow to dry. Note the raised half-circle ridge on the Tank front: set the lower edge of the Platform on top of this ridge and glue where parts meet.

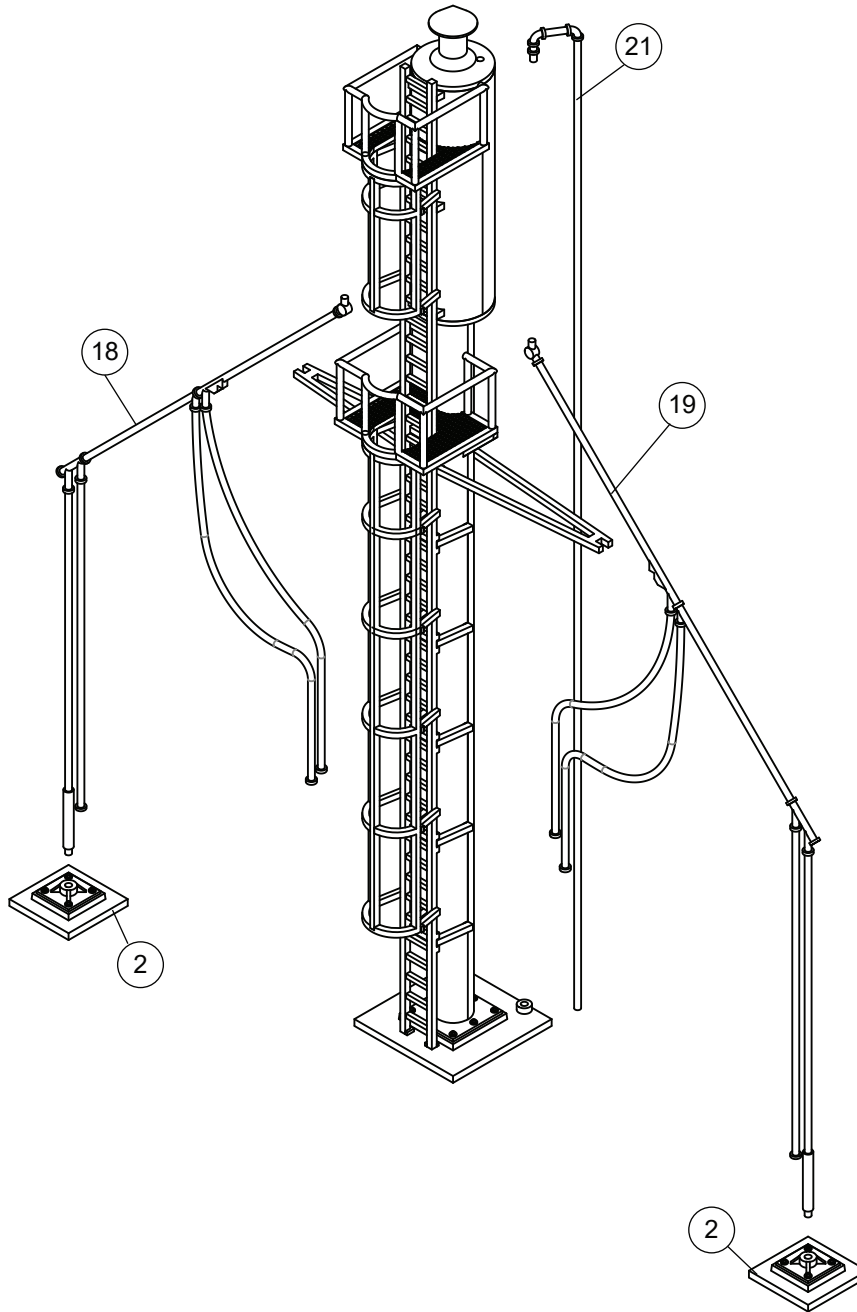
4) Glue Lower Handrail (14) to Lower Platform (13) and allow to dry. Align platform on top of molded cross brace on column front and glue in place.

5) Insert and glue tabs on edges of V-shaped Supports (2x 20) into horizontal openings on front and rear of column assembly. Align outside edges of Ladder Brackets (6x 11) with notches in Front Support and glue in place.

6) PLEASE NOTE: The plain end with no notches of Ladder (10) is the top. Carefully thread Ladder through front openings in each Platform. Note that there are three ladder brackets molded on the tank front in addition to the Brackets. Align notches on back and plain upper rungs of Ladder with Brackets and glue where parts meet. Align Lower Safety Cage (12) so it's flush with the bottom of the lower platform and the molded mounting points on the ladder as shown; carefully glue Lower Cage to Ladder where parts meet. Align Upper Safety Cage (15) so it's flush with the bottom of the upper platform and the molded mounting points on the ladder as shown; carefully glue Upper Cage to Ladder where parts meet.



7) Be sure parts are straight and glue lower ends of Left (18) and Right (19) Supply Pipes to Base (2x 2). Insert pins on molded unions at top into mounting points on underside of tank, and molded notches to inside ends of Supports; carefully glue in place. Align Filler Pipe (21) with top of tank and molded union on Base, and glue together.



For assistance with missing or damaged parts, please visit trains.walthers.com/parts-warranty, call 1-800-4-TRAINS M-F from 8:00 AM to 4:30 PM CT, or write to us at Wm. K. Walthers, Inc. 5601 W. Florist Ave, Milwaukee, WI 532 be aware all inquiries are handled in the order received.