



Barber 50-, 70- and 100-ton Roller Bearing Trucks Featuring Rotating End Caps and Brake Shoes/Beams (S Scale) • Smoky Mountain Model Works, Inc. www.smokymountainmodelworks.com • Asheville, NC, USA

Images are of 100-ton truck.
Assembly steps for 50- and
70-ton truck are same except
for screw size and quantity of
springs.



These instructions are available in COLOR on the SMMW freight car trucks web page.

100-ton trucks (shown above) are representative of 50- and 70-ton styles. Spring count, wheelbase, and wheel diameter vary with each design. Each truck consists of hi-resolution, resin-printed sideframes, bolster with center plate, and brake beam/shoes unit. Wheelsets are comprised of machined brass, bright Nickel-plated tires with cast urethane centers, (2) styles of ABS bearing caps (shown above) and telescoping brass tubing for axles.

50- and 70-ton trucks use a Kadee #0-48 x 3/8" screw is a self-tapping thread. A #54 drilled hole in the body bolster will provide sufficient material for the thread to securely hold the truck. 100-ton trucks use a #2-56 screw.

Step 1: Test-fit the bolster and sideframes to ensure the bolster slides smoothly. Remove the parts and paint using acrylic or solvent-based paints. Acrylic may require primer; lacquers do not. I recommend the latter because they dry flat, ready for weathering and tend to cover surfaces using less paint. Use thin strips of "painter's blue tape" to cover wheel treads. New wheelsets and axles would be rust-colored (by law, wheel faces cannot be painted to avoid hiding cracks). Well-used sideframes have traces of the original carbody color with a heavy accumulation of road dirt. Painting the truck sideframes and bolster to match the carbody followed by "Grimy Black", "Earth", and "Grime" to highlight details and sideframe text yields a typical appearance.

Step 2: Each sideframe and bolster contains alignment bosses that keep the springs in place without glue. Each truck design requires a different number of springs per sideframe (50-ton = 5, 70-ton = 6, 100-ton = 7) to limit the tendency for the sideframe's bottom to tilt outward due to offset spring loading. The 50-ton requires all (5) springs. Fill the outer (2) rows plus (1) on innermost row for the 70- and 100-ton. **THERE ARE NO SPARE SPRINGS** so if you lose one, replace with Kadee #637.

Insert both wheelsets thru a sideframe, insert the bolster, then slide the 2nd sideframe over the other end of the wheelsets and bolster. Note that there are (2) guide tabs (blackened in photo) on the INSIDE of each sideframe used to limit vertical bolster travel.

Step 3: Pick up a spring using VERY sharp tweezers with smooth jaws. Place over the middle boss in the 2nd row of the sideframe, compress it slightly, row then align over the matching center boss in the bolster. Repeat for all springs across the front (2 or 3). No glue is required to hold springs in place. Repeat for the other side of the truck.

Step 4: Axles are intentionally a little long to accommodate manufacturing tolerances and tapering required to align wheel on tube. Once the truck is assembled, you can remove some of the axle extension by pressing the wheelset against the sideframe and gently filing off a little at a time, testing often. Be sure the filed axle end is parallel to the sideframe "bearing" or the end cap will wobble.

New trucks have matched sets of roller bearings (Timken, in this case). Bearing designs changed over the years with the most visible changes being the end cap appearance. It is quite common today to see two end cap styles on the same truck because a wheelset was replaced. **Each wheelset** has the same end cap. There are (10) of each style included on the sprues, providing spares if you lose one or two along the way. Trim off the desired end cap from the sprue, add a drop of thick CA to the axle's end and attach, noting that each cap has a centering pin to aid assembly.

Step 5: Shoes and beams are a single, printed part to greatly reduce assembly time (see CAD image at right). From the bottom of the assembled truck, press this piece over the bolster until the upper tabs "snap" on top of the bolster. No glue is required to hold the part in place. Be sure that the part clears the spring plate area on the sideframe's bottom.

Lubrication is not required to achieve long life or good rolling qualities once installed on a car. If lubrication is desired, Marvel's "Mystery Oil" is a good choice. Pick up a tiny drop with a length of wire and place behind each end cap.

