How to model a 1950s semi-tractor

A McLean Trucking Co. GMC Cannonball semi-tractor stands in the foreground of Mont Switzer's HO layout. Learn about the details Mont added to better match his 1950s prototype (inset). Prototype photo Fred Gruin Jr. Collection

Extra detailing enhances a Sylvan HO scale GMC Cannonball resin kit

By Mont Switzer • Photos by the author

When it came time to add vehicles to my 1950s-era HO scale Monon RR, acquiring models of General Motors Corp. cab-over-engine (COE) semi-tractors topped the list. Sylvan Scale Models sells an accurate cast-resin kit of a GMC COE "Cannonball" single-(drive) axle tractor. With a few extra details, paint, and custom decals, I built the Sylvan kit to match a common 1950s trucking company prototype.

Cannonball

The GMC snub-nose tractors proved popular with carriers across North America. The shorter tractors could pull long trailers and still meet overall truck length restrictions imposed in the 1950s.

Their nickname came from a 1950s TV show called "Cannonball" that followed the adventures of truck driver Mike Malone and his co-driver, Jerry, as they hauled cargo in their GMC semi.

The snub-nose trucks were also a common sight along U.S. Highway 40 in eastern Indiana. During the 1950s, the most prominent carrier along that route was the McLean Trucking Co., based in Winston-Salem, N.C.

McLean was known for its sleeper-team operation, where a lead driver would be paired with a junior co-driver. The trucks were equipped with sleeper cabs that had a bunk compartment where the off-duty driver could rest.

I didn't use the exhaust stack provided with the kit. McLean trucks in the 1950s had lower-mounted exhaust systems similar to those on automobiles. I also didn't use the included mud flaps. Tractors weren't required to use them when hauling a trailer.

Some notes on paint

After using a hobby knife and files to remove flash from the resin parts, I washed them in warm, soapy water to remove any leftover mold release. I also airbrushed the parts with gray primer.

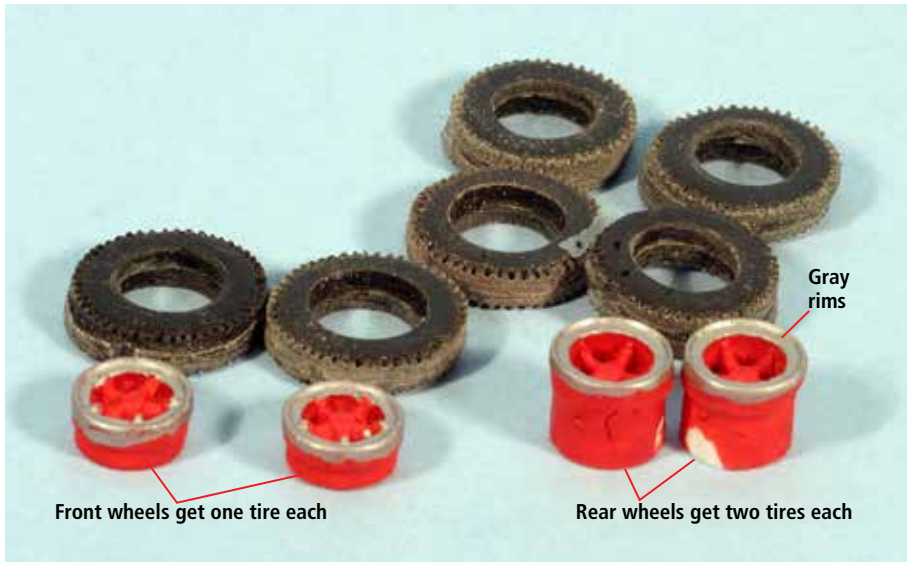
With constant exposure to the elements, paint colors could vary widely. Red paint could darken to an almost purple shade or lighten to an orangish hue. Although I used a Caboose Red, any similar shade would work for a McLean truck. Since I used now-discontinued Floquil paint, the online materials list includes currently available equivalent colors in Testor's Model Master line.

Readers will note from the photos that I painted all the parts prior to assembly. In hindsight I think it may be easier to do some of the painting and decaling after assembly.

From the tires up, I'll describe the key techniques that I used to build and detail this 1950s semi tractor.

The owner of an Indiana-based trucking company, Mont Switzer is a frequent contributor to Model Railroader.

Wheels, rims, and tires



Sylvan makes this kit with either disc or spoke wheels. I used the latter for this project, since the McLean tractors of my modeled era had cast-metal spoke wheels painted red. The tires were mounted on separate metal rims painted gray. These rims were then attached to the ends of the spokes.

On the Sylvan model, each rim and wheel is represented by a single casting. I first painted the castings red. After the paint dried completely, I painted the outer edges of the rims with a silver Sharpie permanent marker, which looks close enough to the prototype's gray rims.

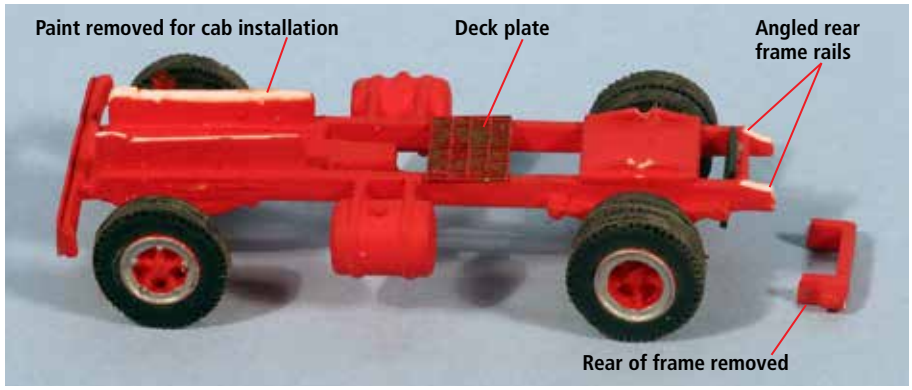
The tires provided with the kit are made of vinyl with realistic tread detail. However, these parts have a lot of flash that needs to be removed. The tires are also not uniform in size.

To deal with these issues, I followed the recommendation included with the kit instructions. I screwed all the tires onto a 2½" long ¼" bolt, then secured the bolt into the chuck of my electric drill. While using the drill to turn the bolt, I held a coarse fingernail file to the surface of the tires until all the flash was gone and the tires were uniform in diameter. After removing the tires from the bolt, I installed them onto the wheel/rim castings from the back. The tires were still somewhat inconsistent in appearance, so I placed the best-looking pair on the front steering wheel axles and the worst looking pair on the inside of the dual-wheel drive axles.

Following the kit's instructions, I attached the drive shaft to the rear end, then mounted the wheels to the axles. Sylvan has cleverly cast the steering axle ends so that the front wheels can be mounted at an angle to model the truck as if it were turning.

The drive (rear) axle ends are cast to resemble brake drums, which also provide mounting points for the wheels. The resin axle ends are a weak point, and can easily break off. I reinforced each rear axle end by first drilling a hole into the end of the axle using a no. 75 bit and a pin vise. Then I dipped one end of a short length of .015" wire into cyanoacrylate adhesive (CA) and inserted the wire into the hole. After test fitting the wheel, I trimmed any excess wire and mounted the wheel with CA. I then repeated the process for the other drive axle end.

Frame



The model has a one-piece frame that includes the fuel tanks, fifth wheel plate, and pedestals. Truck manufacturers and fleet owners in the era I model often angled the rear frame rails, which made it easier for a tractor to slide under a trailer. I modeled this detail by trimming the rear frame rails, leaving 2 scale feet behind the fifth-wheel plate. I then tapered the top of each rail to 4 scale inches tall at the ends.

Following the prototype, I painted the frame red. Note that I scraped the paint off of the front frame rails where the cab would be installed for a stronger adhesive bond.

Most prototype trucking companies installed a deck plate to the frame behind the tractor's cab, providing a safe place for the driver to stand while he connected air hoses. The deck plate on my model is a scale 3-foot section of see-through running board that I had leftover from a freight car project. I attached this etched-metal part to the tops of the resin frame rails with CA.

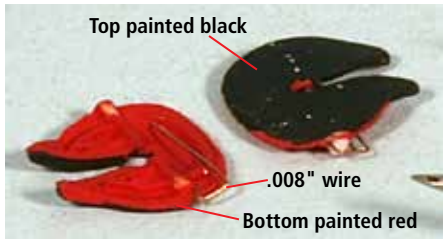
To better match the McLean trucks in my prototype photos. I made a larger bumper by laminating an 8 scale foot long and 12 scale inch wide strip of .010" styrene to the stock bumper molded as part of the frame.

After painting the bumper red, I applied several era-appropriate Micro Scale license plate decals to it. Back in the 1950s, several license plates were required for the semi-tractor and trailer to travel through all of the states where McLean operated.

I cut two scale 4" squares of black decal film to model openings for the towing adapters and two scale 4" x 6" rectangles to model the footholds. Both of these details are easily seen in prototype photos.

Once the decals dried, I applied Testor's Dullcote to seal them and add a more weathered appearance. These details are shown in the photo of the finished model on the previous page.

Fifth wheel



The fifth wheel is the flexible yet solid point of attachment for a semi-trailer on a semi-tractor. The trailer's fifth pin couples to the fifth wheel slot.

The fifth wheel is a separate part in the Sylvan kit. After painting the bottom of the fifth wheel red, I painted the top with Engine Black paint to simulate grease. I also added the fifth pin release handle that allows the tractor to uncouple from the trailer. The lever could be mounted on either side, but most operators installed the lever on the left (driver's) side.

To make the pin release handle, I bent a length of .008" wire into a "U" so the bottom of the U is 6 scale inches wide. Next I trimmed the legs of the U so one leg was 1 scale foot long and the other was 2 scale feet long.

I drilled a no. 78 hole in the side of the fifth-wheel casting just ahead of the pivot point. After applying a drop of CA to the shorter leg of the handle, I inserted it into the hole until the bottom of the handle was 6 scale inches away from the casting. I used CA to secure the longer leg of the handle to the underside of the fifth wheel.

When it's not coupled to a trailer, the V-shaped rear of the fifth wheel falls to frame level. Those modeling the tractor without a trailer should make sure to position the fifth wheel on the frame so that its rear is lower than its front. Those planning to add a trailer should make sure the fifth wheel is level so it will be flat against the trailer's upper coupler.

To install the fifth wheel, I added a drop of thick CA on each of the fifth wheel pedestals located on the truck frame. This slow-curing CA gave me enough working time to adjust the fifth wheel to the proper angle.

Cab interior

The Sylvan model includes two interior castings. The smaller casting is the bunk and the larger casting with seats is the cab interior. I carefully removed all flash and test fit both parts, making sure they slid into the cab without binding. If the parts are tight, sand or file as needed. It's important that the parts go all the way into the cab for a proper fit on the frame.

After washing the interior parts in warm soapy water and letting them dry thoroughly, I airbrushed them with Floquil gray primer. During the time period I model, the GMC cab interiors were painted a turquoise color. I airbrushed both the sleeper and cab interiors with Floquil New York Central Jade Green as a close-enough match.

Once the first coat of paint dried, I brush-painted the bottom of the casting and the floor black. I also painted the seats in a dark brown color.

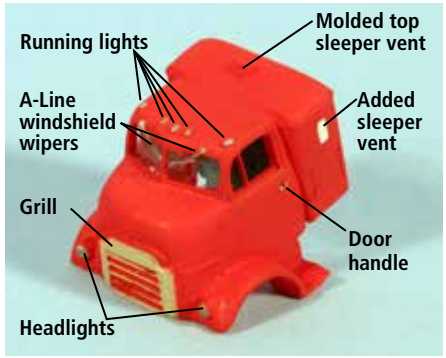
The driver casting included with the model doesn't have any legs, which makes him easy to position on the seat. This won't be noticeable in the finished model. I painted the driver using flesh tone and dark blue for his shirt and cap.

The kit also includes a steering wheel and a length of wire for the steering column. I drilled a no. 75 hole, added a drop of CA, and then inserted the steering column. After painting the steering wheel white, I slid it over the column. I made sure the top of the steering wheel would be visible through the cab windshield. After securing the steering wheel with CA, I trimmed off the excess wire.

I used this excess wire to model the gear-shift lever. On snub-nose tractors the gear shift should be mounted even with the driver in the center console between the seats.

Since I was modeling a McLean Trucking Co. sleeper team, I added a Bachmann seated figure to represent the co-driver.

Sleeper cab



The cab, sleeper berth, snub nose, and fenders are a single casting.

The McLean trucks had grills painted white. On the model I found it difficult to paint the grill neatly with a brush. Instead, I used a single-edge razor blade to scrape away the red paint from the grill, revealing the white resin underneath. Then I colored the headlights, clearance lights, and door handles with my silver Sharpie marker.

I used separate pieces of the included clear window glazing to fit each side of the windshield, rear window, passenger side and vent windows, and driver vent, but not the driver's side window. Before air conditioning, most drivers kept the window open when it wasn't cold. I used clear parts cement to attach the glazing.

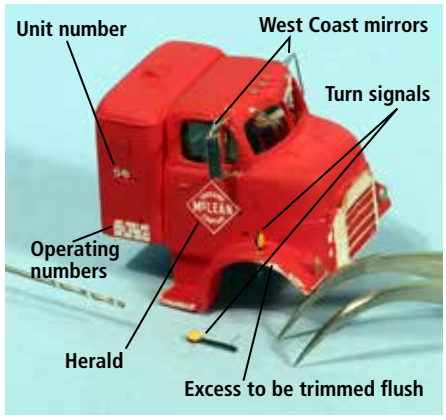
The kit includes etched-metal windshield wipers, but I didn't notice them until I'd already installed short windshield wipers from A-Line. After drilling no. 78 mounting holes above the windshield, I secured each wiper with a drop of CA.

The cab casting has an air vent molded on top of the sleeper and one on each side of the cab. McLean sleeper cabs had additional vents on each side of the sleeper compartment. I modeled each additional vent cover by cutting .070" x .150" rectangles from .010" styrene. I rounded the corners of each rectangle with a file, then attached them with CA. I made sure each vent was .050" from the drip strip around the top of the sleeper compartment. This left enough room for decaling the tractor's unit numbers.

Decals, turn signals, and mirrors

I purchased the McLean Trucking Co. HO scale decals from Ken Goudy Decals. [The firm is no longer in business, but decals for McLean Trucking Co. and other fallen flags are available online from Graphics on Demand at store.graphicsdemand.com. – *Ed.*] Decals are also provided for the large McLean diamond herald and lettering found on the firm's semi-trailers.

I followed prototype photos to position the decals on the cab. In addition to the red diamond herald on the doors and unit numbers under the sleeper vents, there are three lines of operating authority numbers applied to both sides below the sleeper side doors. After applying the decals, I sealed them with a light spray of Testor's Dullcote.



McLean was an early adopter of electric turn signals. Mounted at the top and outermost point of each tractor fender, these signals could be seen from the front and rear of the tractor.

I made the turn signals from Tichy Train Group HO scale eyebolts that I painted black. The turn signal lenses are made from Chartpak self-adhesive dots, no. 834 orange dots on the front and no. 853 red dots to the rear. [Chartpak no longer sells these dots, but an internet search for "map dots" will provide a list of similar products. – *Ed.*] I attached the dots with CA.

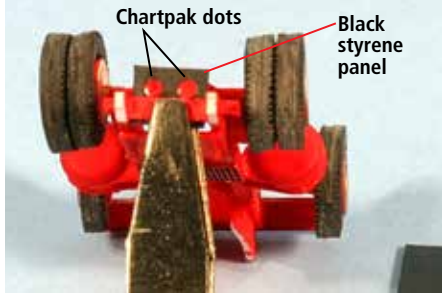
To install the turn signals, I drilled a no. 72 hole on the top of each fender and inserted the turn signals. Making sure that the orange and red lenses were oriented correctly, I applied CA from underneath the cab to each eyebolt shaft. Once the CA dried, I trimmed the excess material.

McLean was also one of the first trucking companies to use "West Coast" mirrors on its trucks. Legend has it that these large mirrors got their nickname after an eastbound driver commented that the mirrors were so big he could see the West Coast. Whether its true or not, the mirrors were a vast improvement over the small rearview mirrors common on semis at the time. After installing the mirrors on the cab, I matched the McLean prototype by painting the mirror fronts and supports white.

Taillights

I couldn't find prototype photos of the Cannonball's taillights, so I made an educated representation. Taillights were required when a tractor was "bobtailing," or running without a trailer, at night. Since my semi-tractor would be hauling a trailer, the taillights wouldn't be visible from most viewing angles on the layout.

I made the taillight panel by cutting a scale 18 x 20 inch rectangle from Evergreen .010" black styrene sheet. Then I cemented two red Chartpak dots on the panel to model the taillight lenses. Next I used CA to secure the taillight panel to the front of the rear frame crossmember.



Weathering

I weathered my Cannonball to have an in-service but well-maintained look. In addition to sealing the decals, the Testor's Dullcote applied in earlier steps helped tone down the shine of the fresh red paint. [Be sure to avoid getting Dullcote or any matte finish on clear window glazing to avoid frosting its surface. – *Ed.*]

I rubbed the tip of a sharp no. 2 pencil along the molded detail on the cab and fuel tanks. These are places where dirt would naturally accumulate. This step also adds definition to molded details such as the door, hood, and vent seams.

On the prototype, as the sun warmed the interiors of the fuel tanks, the fuel would expand and seep out of vented fuel caps. A careless trucker may also dribble fuel when removing a nozzle from the tank during refueling. I brushed a black paint wash down the sides of the tanks to simulate fuel spills. I also used a black paint wash to represent dribbles of gear lube on the rear-end differential.

By law, leaf springs weren't painted to make it easier to spot fatigue cracks. These parts should be dark brown to model old surface rust. Although I used Floquil Railroad Brown, any dark brown or rust shade would be appropriate. MR