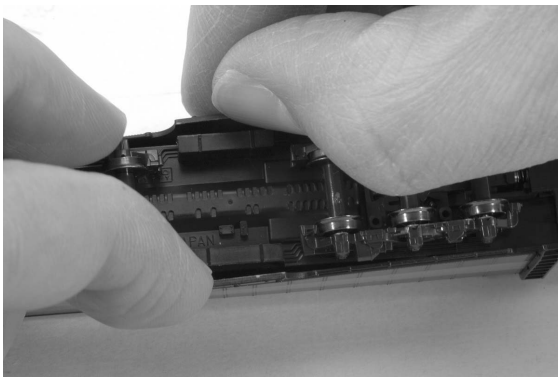


■ **INSTALLATION:**

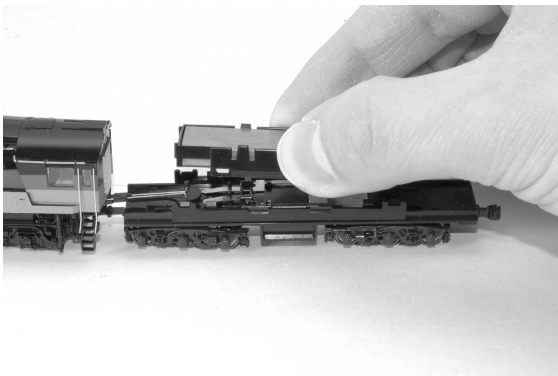
• **DCC: Installation**

The EM13 decoder is installed in the tender. It comes with a default address of "03" but it can accept any programmed address code (such as the locomotive number) and will control motor functions only. Light functions are controlled by a separate board in the front half of the locomotive and are not controllable with the EM13 decoder.

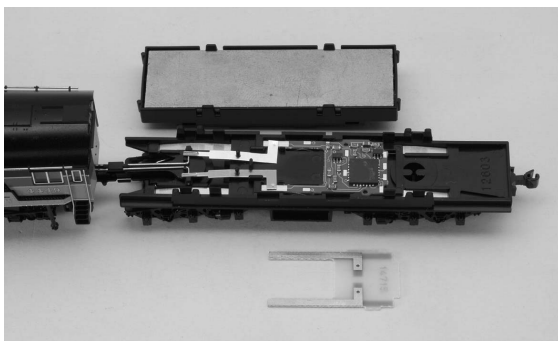
Both locomotive and tender are required for locomotive operation and must not be separated. Please be careful with the installation of the EM13 Decoder.



- (1) Remove tender shell by carefully placing fingernails between tender chassis and shell, and then separate. Shell should then come loose.
- (2) Remove the weight. The weight is attached to a black plastic shelf and snap-locks into place above the decoder area. Gently lift up on the shelf with a sideways rocking motion to disconnect it.

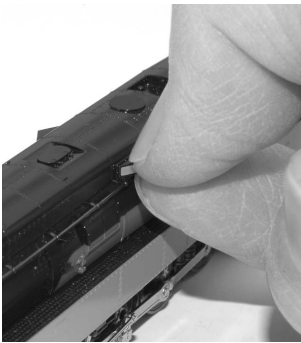


- (3) Place the locomotive facing to your left, and tender to your right.
- (4) Gently place a finger on the top of the drawbar pivot, and hold in place. Carefully slip the existing analog board out from under the contacts.



- (5) With the large transistor on the EM13 decoder facing upwards, place the board flat on the tender frame and slip the two "arms" from the decoder under the contact springs, sliding the board towards the locomotive until it stops.
- (6) With the EM13 decoder in place, replace the weight and make sure it is correctly locked down. The tender shell can now be snapped back onto the frame.

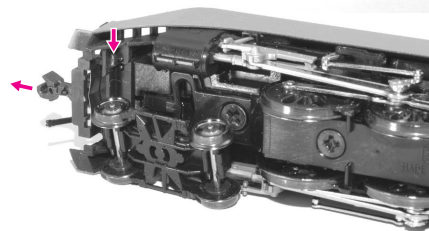
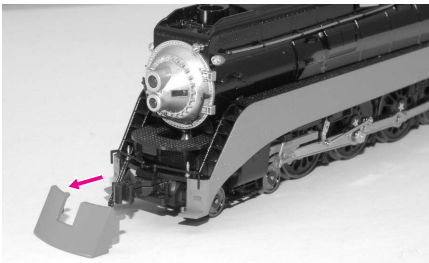
• **Train number board installation on side of locomotive.**



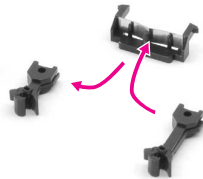
Please carefully follow the instructions to change the train number board.

- (1) Remove the train number board frame by gently gripping it on the top and bottom and pulling away from the shell.
- (2) Using a safety pin or any other pointy object, push the installed train number board out of its socket from the inside.
- (3) To remove the train number boards from the parts sprue, use a precise cutting tool like sprue cutters to remove them from their sprue; be sure to clean any residual plastic from the cut with fine sandpaper or a hobby knife before attempting to install.
- (4) Carefully place the replacement board into the number board frame, making sure that it is oriented right-side-up before reattaching the train number board and frame to the side of the locomotive.

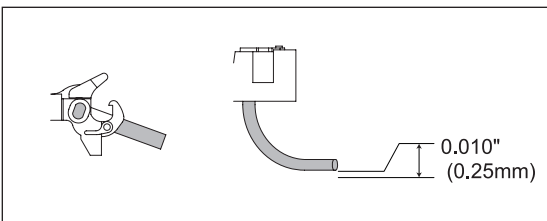
• **Front (Pilot) Coupler Replacement.**



- (1) Remove coupler clip from rear of pilot. To do so, insert the blade of a hobby knife between the clip side and pilot side and gently twist - just enough to release the clip. Do the same on the other side; the clip will now come out. Remove the coupler by pulling it straight out from the front. Insert new coupler and re-insert the coupler clip. Press the clip in until it snap locks in place. The clip uses a flat brass spring to support the coupler, be sure this is in place in the clip when re-installing the coupler.



• **Trip Pin Installation.**



- (1) Burnish the top end of the trip pin to remove burrs. Press into the coupler Knuckle from the bottom and push up to the top.
- (2) Adjust the bottom of the trip pin to clear the railhead, and any other obstruction between the rails.

• **Locomotive Track Requirements**

- (1) Minimum Curve Radius - Ground Level Curves: R282; 11"Radius.
- (2) Minimum Curve Radius - Viaduct Curves: R315; 12-3/8" Radius.
- (3) Minimum Curve for Reverse or "S" Curves: R315; 12-3/8" Radius.