

'G' Scale - Front #904 & #913 gear box, Rear #909 (#831)
#1 Scale - Front #1904 (#822) & #913 gear box, Rear #1909 (#1831)

The front coupler and overhang have always been problems with this locomotive.

New production has enough differences in the coupler mountings that you can not use the previous conversion information using the #796/#832/#831 couplers.

Rear: #909 (#831) Remove the original coupler and the bottom step plate. Retain the bottom step plate and screws. Invert the locomotive and secure it in a padded cradle, trim the original coupler mounting down to the level of the opening, file it smooth and level. Assemble the #909 coupler and set into the opening, note for this conversion the coupler box will be flush with the end of the end sill of the loco. The tail of the coupler box will extend past the arm that extends out from the gear housing, note the location and trim off the arm so the tail of the box set against the remaining arm. Drill and tap the original screw hole for a 4-40 screw and drill a 4-40 clearance hole through the lid of the coupler box. Secure the coupler with a 1/2" 4-40 screw and check the coupler height. Replace step plate.

Front: (custom made coupler using a #904 coupler and the tail from a #913 box) Remove original coupler, step plate, and bumper. Tap out hand bar pins. Rough up the tail of the #913 box and rough the surface of the spring cap, apply a CA primer, set the wire spring in place apply a small bit of CA glue to one surface, set the spring cap in position and secure with a clamp of some sort. Make sure the alignment is retained. When glue is set cut the tail off flush with the back of the box. Set the tail on the bottom of the #904 shank slide it against the coupler head and cut the #904 shank off to the length of the #913 tail. Rough up the surface of the bottom of the #904 shank and the back of the head and one side of the #913 tail. Apply CA primer to the rough surfaces and a small coating of CA glue set the #913 onto the #904 shank carefully align it where the shank is centered in the hole of the #913 tail and edges are as flush as possible secure with a clamp unit well set. Take the bumper and notch out a section between the screw posts up to the top surface and file the insides smooth. Drill a 4-40 clearance hole through the original coupler screw hole. Find two 1/4" longer screws that match the screws that hold the bumper in place. Make two bushings from tube stock that into the bumper screw holes. The length has to be test fitted (about 1/8") to raise the bumper enough to clear the coupler and allow it to pivot freely. Find or Make a bushing to fit into the #913 tail and be just a touch above the surface so the assembly can pivot when the screw is tightened. Drill 2-56 clearance hole through the shank of the #904 shank then drill and tap a hole through the shank of the #913 tail for a 2-56 screw and countersink it flush to the surface. Put the bushing into the hole in the tail and drill and tap a hole through the shank of the #904 for a 4-40 screw. Put the two bushing onto the post of the bumper and set it onto the platform and slide the coupler into the opening to make sure it pivots freely then secure the bumper with the longer screws. Slide the coupler with the bushing in the hole in place and tighten the 4-40 x 1/2" screw (?) until the coupler is too tight then back off until it pivots freely. Trim the extended bottom of the center post of the hand bar enough to clear the coupler shank and glue the post back in place. With the coupler in this position you can not use the bottom step board. The front coupler has not been tested enough, so if it does not center well it might be possible to move the couplers pivoting spot back farther requiring the tube hanging down to be trimmed shorter.

This conversion moves both the front and rear couplers as far back into the body of the loco as possible. The overhang of the loco from the pivoting point of the drive truck to the end of the body causes the couplers to swing way too far out on tight curves which is kind of stupid for a short switcher locomotive. This conversion might be simpler using smaller #1 scale couplers. #1909/1831 on the rear and the small box #917/#821 on the pilot.