



Quality Products Co.

U.S.A. TRAINS EXTRUDED ALUMINUM PASSENGER CARS
#830 Coupler "G" Scale or #820 Coupler #1 Scale

The original coupler mounting platform is too low to mount a Kadee coupler onto and needs to be removed. Remove the entire mounting bracket and coupler assembly by removing the 4 screws at the base of the bracket and retain the screws, later the bracket will be used for a screw hole template, for the diaphragm end of the car.

#830 Coupler G-Scale

To achieve the correct coupler mounting height for the #830 coupler you need to make a .09375" to .120" thick platform (depending on your car thickness will vary) from styrene sheet stock or other suitable material (see the illustration on page 2). The platform needs to be 1.575" wide x 1.550 long. Measure from one end of the platform forward .120" and mark a line across the surface, set the bracket onto the platform and line up the back edge (where the holes are) of the bracket with the line on the platform, and line up the outside edges of the bracket to the sides of the platform. Make sure both sides are even with the line, hold the bracket to the platform securely, and mark the screw hole locations as carefully as possible. Use a 4-40 clearance drill (#33 or #34) and drill the holes through the platform, be as accurate and careful as possible because it is easy to get the holes misaligned. If you are doing all of the cars in the set this is the same platform pattern needed for all of the cars except the observation end.

On the cars with a vestibule end (side doors and fold down steps), flip the long end of the springs down to the floor. Take the platform and file a notch into the edge between the holes, as illustrated, and set the platform onto the mounting holes adjust the springs where they fit into the notches. Also note that the short end of the spring now sticks out. You can simply snip them off with a wire cutter but we slipped the ends into a piece of 3/32" (.093") styrene tube stock that is long enough to hold the ends parallel to the floor. This retains the originality and keeps the spring from dragging or catching on the track.

Place the platform onto the car and secure it with the original screws. Place the assembled #830 coupler along the centerline with the lip of the lid against the front edge of the platform. If the platform is not square then adjust the coupler so it is correctly aligned with the car. The coupler head should be under the diaphragm where the knuckle is just outside the edge (see the illustrations). Mark the platform through the two outside holes. Use a 4-40 tap drill (#43) and drill the hole through the platform then tap the holes for a 4-40 screw. Use 4-40 x 1/2" screws to secure the coupler. The #830 coupler comes with #4 self tapping screws and if you wish to use them then you will need to use a #46 drill and drill holes through the shim platform and the original platform of the car to mount the coupler.

For the observation end build a platform .175" thick platform (depending on your car thickness will vary) from styrene sheet stock or other suitable material. and mount the #830 coupler gearbox to the platform. You will have to open up the end of the car coupler pocket to accommodate the width and height of the #830 gearbox. Mount the gearbox flush to the end of the car. Mark the platform through the two outside holes. Use a 4-40 tap drill (#43) and drill the hole through the platform then tap the holes for a 4-40 screw. Use 4-40 screws to secure the coupler. The #830 coupler comes with #4 self tapping screws and if you wish to use them then you will need to use a #46 drill and drill holes through the shim platform and the original platform of the car to mount the coupler.

Check the coupler heights with a G-Scale coupler height gauge and make any adjustments necessary. There may be some inconsistencies between the different cars so adjust the coupler heights with thicker or thinner shim stock.

#820 Coupler #1-Scale

To mount the #1 scale #820 coupler follow the above G-Scale instructions for making the platform however you will need an additional .075" thick shim on the platform to lower the coupler to the correct #1 scale coupler height. You will also need to move the #820 coupler forward to achieve the same coupler distance to the end of the car. Be sure to allow enough room on the first platform for use of the original screws so the second .075" thick shim should be the same dimensions as the top of the #820 draft gear box. Use longer screws of appropriate length to compensate for the added shim thickness.

Check the coupler heights with a #1-Scale coupler height gauge and make any adjustments necessary. There may be some inconsistencies between the different cars so adjust the coupler heights with thicker or thinner shim stock.

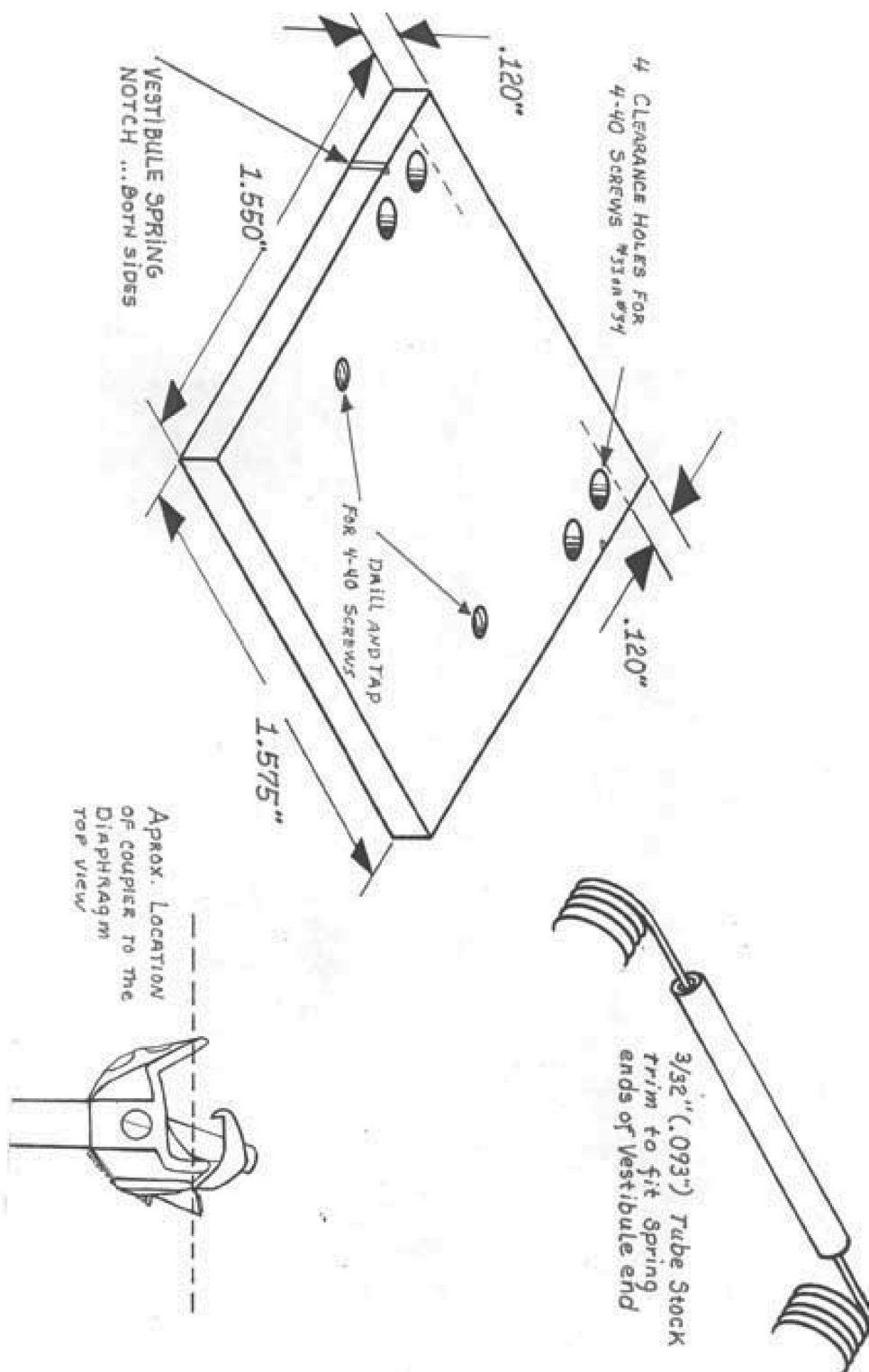
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