

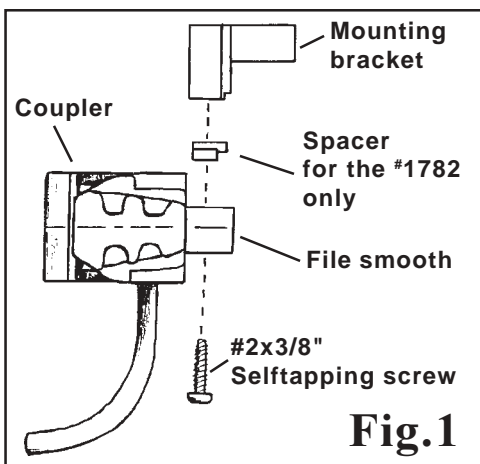
#782
#1782

**COUPLER CONVERSION FOR
Bachmann Spectrum
"CLIMAX"**

Check packet, it should contain: 2 ea. couplers, 2 ea. coupler mounting brackets, 2 ea. reinforcing brackets, 2 ea. spacers (for #1782 '1'scale only), 2 ea. flat centering springs, 2 ea. #2 x 3/8" pan head screws.

The following tools are required for this installation: 1/8", 7/64", and 3/32" drill bits, hand drill, small flat screwdriver, small phillips screwdriver, a pair of needle nose pliers, and a center punch (optional).

This packet will allow the use of the existing pocket to mount the couplers on the locomotive. Suggested minimum radius is 4' although if the couplers are not in the delayed position a radius down to 2' may be used depending on the type of car it is coupled with.



ASSEMBLY

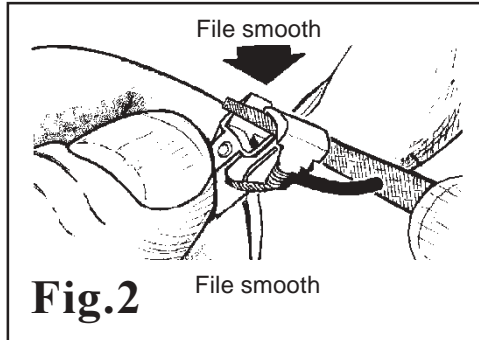
Remove all flash or burrs on the coupler (fig. 1 & 2). Secure the mounting bracket to the coupler as illustrated using the #2x3/8" pan head screw (fig.1). Be sure the coupler is tight.

For the #1782 '1'scale only, place the supplied spacer between the coupler and the mounting bracket (Fig.1).

MOUNTING

Before you begin, review the operators manual and study the drawings on pages 23 and 28, then read these instructions carefully.

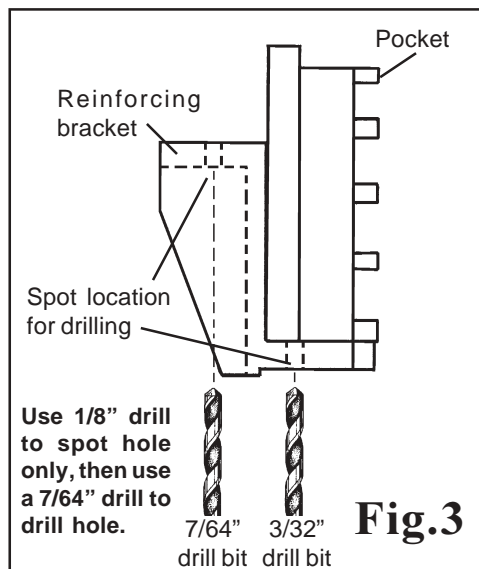
If the step boards are attached to the beams they need to be removed temporarily (see page 23 of the operators manual). Remove the two screws in the bottom plate of the beam, the plate holds the step boards and coupler pocket in the beam. Carefully pry the bottom plate out of the beam, it will be rather snug (fig. 4). You can gently pull on the coupler pocket and the brackets of the step near the plate.



Remove the original coupler and the bracket which attaches it to the truck. See the exploded view of the side frame, brake shoe and coupler assembly in the operator's manual on page 28. Remove the coupler first. Now remove the bracket being careful with the little plate in front of the screw. Save the 2 screws as they will be used later.

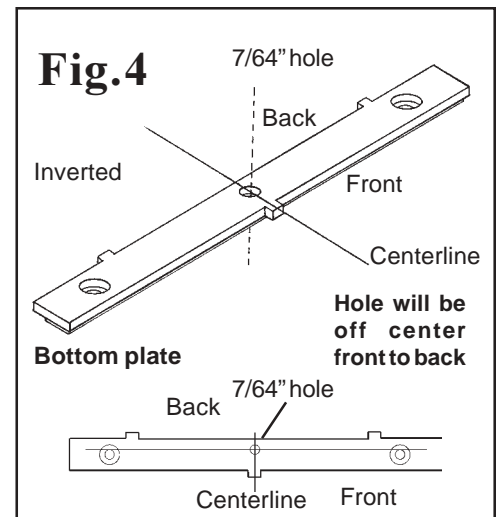
Remove the coupler pocket from the beam, use the same procedure as used for the above step boards.

Use a pair of pliers and carefully remove the long coupler pin from the pocket. You

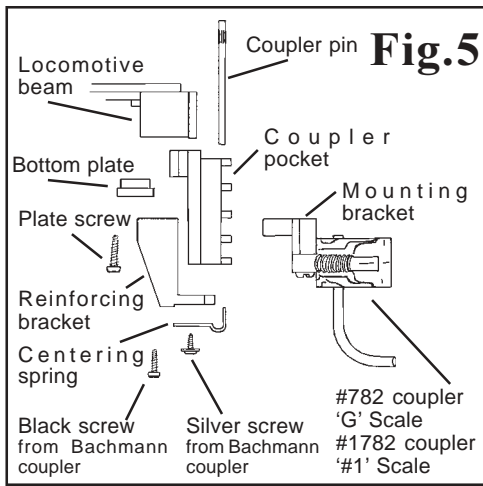


will need to spot the location for drilling the hole used to mount the reinforcing bracket to the pocket. Hold the coupler pocket with the reinforcing bracket

positioned behind and under it as shown in the illustration (fig. 3). Make sure that the bottoms are lined up as straight as possible and the back of the pocket is flush against the bracket. Use the 3/32" drill bit and hand twist it into the hole to spot the location of the hole to be drilled in the bottom of the pocket and, if you wish, you can use a center punch to mark the hole. Remove the bracket and before drilling check to be sure the spot is on the centerline with the pin hole. Then again use the 3/32" drill bit and carefully drill the hole through the bottom of the pocket and into the bottom section of the pocket. Slide the coupler pocket back into the beam of the locomotive followed by the bottom plate. Press the plate in so it is flush in the proper position. Place the reinforcing bracket on the back and under the pocket and secure it to the pocket with the silver screw from the original coupler. Make sure it is as straight as possible and that the bracket is against the back of the pocket. **Use the 1/8" drill bit and spot a hole only**, as before, through the hole in the bracket into the bottom plate (**don't go too deep, just enough to mark the location.**) (fig. 3). Remove the bracket from the pocket then remove the plate (gently pull on the pocket and use a screwdriver blade in the slots for the step boards). Make sure the spotted location is on the centerline with the small tab at the middle of the plate. Use the 7/64" drill bit and drill the hole through the plate (fig. 4).

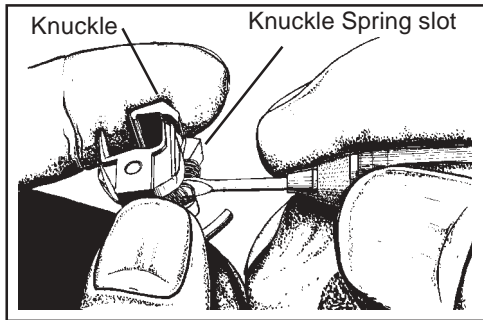


Make sure the pocket is in its slot (and also the step boards, if you are using them) then place the bottom plate back into the beam and secure it with the 2 screws. Reposition the reinforcing bracket and mount the flat centering spring to the bottom of the bracket using the silver colored screw you removed from the original coupler (fig. 5). This will go through the hole in the bracket and into the hole in the bottom of the pocket. Be sure the flat spring is positioned in front of the lip on the bottom of the bracket. This will keep the spring from rotating.



Use the black screw you removed from the original coupler to secure the bracket to the beam plate, tighten it just snug.

The assembled coupler and bracket can now be installed in the pocket. Insert the coupler assembly into the second opening from the bottom of the pocket and line up the hole with the hole for the pin (Fig. 5). Carefully slide the pin back through the holes to the bottom. The coupler should pivot on the pin and the spring should bring it back to center when flexed. If the



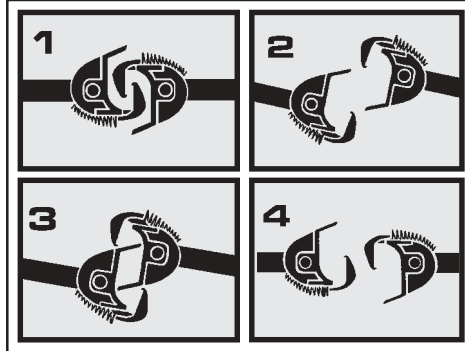
spring doesn't have enough tension you will need to pull the coupler back out so that you can bend the spring out slightly to increase the tension.

Check for the correct coupler height, clearance, and function and make any necessary adjustments (use our #829 '1' scale or #880 'G' scale coupler height gauges). If the coupler is too low first check that the coupler pocket is assembled into the beam correctly and that the reinforcing bracket is not pushing (tilting) it to one side or the other. If the coupler is still too low you can remove it from the pocket and disassemble the mounting bracket and file a small amount off the top of the short shank on the coupler. Do not file off too much for if you do the coupler may be too high to set properly against the centering spring. Also, you will need to shorten the screw so it does not bottom out when you reassemble the coupler.

OPERATION

One of the many desirable features of Kadee® Magne-Matic® Couplers is their

ability to perform "delayed uncoupling". **TO COUPLE:** Simply push cars together. Upon touching, the operating knuckles move to opposite sides then couple in a closed position. Only a "feather touch" is required to couple. **TO UNCOUPLE:** Stop over a Magnetic Uncoupler so your Kadee® Magne-Matic® Couplers are approximately half way over the Uncoupler. You must create slack between the Couplers which will allow them to be drawn open by the



magnetic force acting on the two Trip Pins. Each Coupler has a wire or "Trip Pin" extending down from its knuckle, towards the track, that looks like an unhooked air hose. **See #1. Note:** You may find it best to pull the train past the magnet, then back the cars over it. Now, when you pull forward, the Couplers disengage. At this point, magnetic force will draw the Couplers off-center, **see #2**. Couplers will hold this position as long as they remain over the magnet. When you back up, bringing Couplers together again over the magnet, they will not recouple, but will mismatch in the "delayed" position, **see #3**. With a single Kadee® Uncoupling Ramp, you can set the Couplers on one car, or a string of cars, in the "delayed" position for spotting cars at several points beyond the Uncoupler. Just push the car or cars to the desired location and drop off. As you pull forward again, the two Couplers in the "delayed" position separate and snap back to their normal centered position, ready for recoupling, **see #4**. Kadee® Magne-Matic® "delayed action" uncoupling has unlimited possibilities for realistic operation of your railroad. Kadee® Couplers work even better than the prototype because they work automatically, with nothing touching them.

Use Kadee® #231 Greas-em, the dry lubricant recommended for use with all Kadee® Magne-Matic® Couplers. Greas-em will not attract the dirt and dust that gums up the inside of couplers like oil, grease or other lubricants will.

Use Kadee® #840, #841, #842, and #844 Magnetic Uncouplers with our G and #1 scale Couplers. The #840 and #841 Uncouplers are mounted in the track section of your choice, either LGB™ #840, or Kalamazoo #841. #842 Uncouplers

come without track and are for mounting in LGB™ or other similar tracks. It will be necessary to cut the track, complete instructions are included. #844 Uncouplers also come without track and are for use with LGB™ or other similar types of track. No cutting of the track is necessary. We cannot guarantee the satisfactory operation of our Couplers if other kinds of magnets are substituted for the Kadee® Magnetic Uncouplers.

NOTE: To prevent damage to couplers: If you plan to store your equipment in the original box, the box may need to be modified to properly allow clearance for your new Kadee® Couplers. Simply cut openings in the box ends to give extra clearance for Kadee® Couplers.

MAGNE-MATIC®

Kadee
Quality products co.

673 Avenue C
White City, OR 97503
(541) 826-3883

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