



□ #779

□ #1779

SILL MOUNTED POCKET INSTRUCTIONS

Check packet, it should contain:

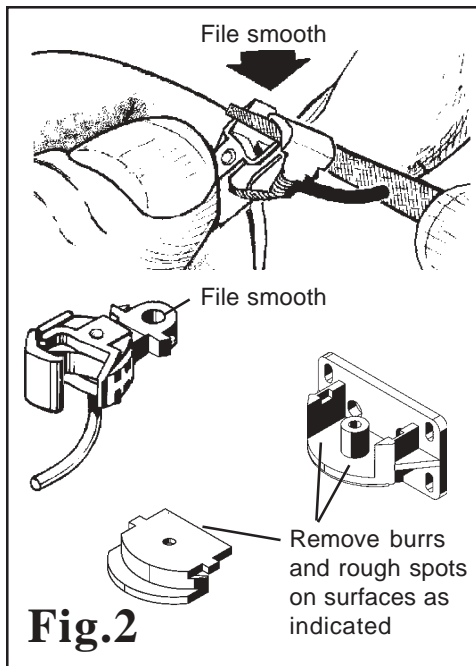
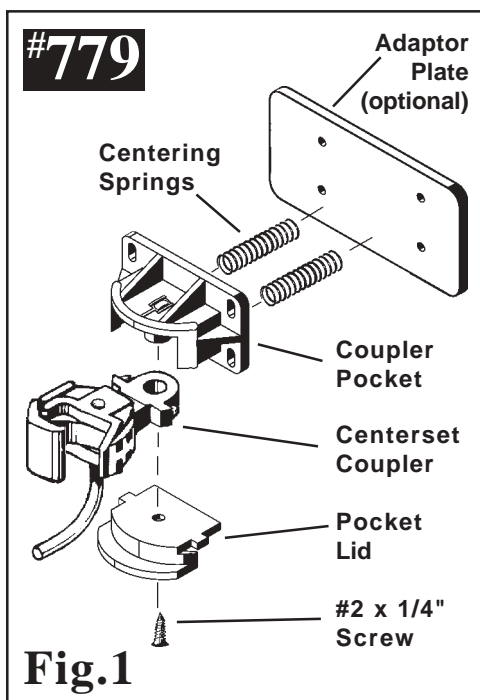
2 ea. Centerset Couplers, 2 ea. Coupler Pockets, 2 ea. Pocket Lids, 5 ea. Centering Springs, 1 ea. Knuckle Spring, 2 ea. #2 x 1/4" screws, 8 ea. 1-72 x 1/2" screws, 8 ea. 1-72 Nuts and 2 ea. Adaptor Plates. Extra springs are provided should any become damaged or lost. All springs are made of stainless steel so they will not be affected by outdoor use.

This coupler is designed to be mounted against a flat vertical surface or end sill such as that found on switcher locomotives. It may also be adapted to some locomotives with road pilots and some rolling stock with a flat end sill low enough for the correct coupler height. An adaptor plate is provided to be used where necessary, such as spanning an opening too large for the pocket, sandwiching the end sill between the pocket and plate for added strength, etc. This pocket comes with a centerset coupler like the prototype. If required, a small offset coupler can be used but the appearance will be less prototypical.

Study the illustrations and read the following instructions completely before you begin. Note the orientation of each part and sequence of assembly.

ASSEMBLY

IMPORTANT: Before assembling Couplers, check arrow-marked areas shown in **Fig. 2** for burrs and rough spots. Remove all flash and burrs with fine file or a hobby knife to assure freedom of movement after the Coupler is assembled.



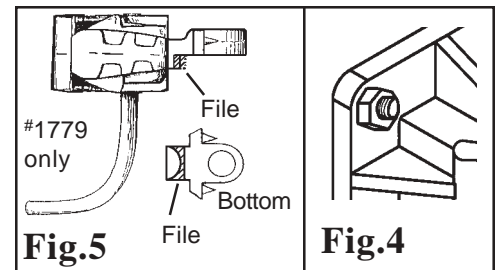
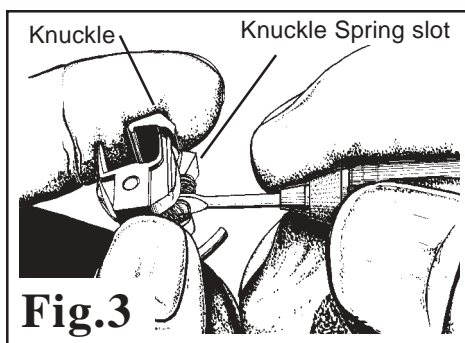
Burnish the surfaces indicated by arrows in **Fig. 2** with **Kadee® #231 Greas-em**, a fine, dry lubricant specially suited for Kadee® Couplers. **DO NOT** skimp on these steps, they are mandatory for smooth, trouble-free, Coupler performance.

Place coupler over the pivot post. Add a little more **Greas-em** and work Coupler back and forth within box to polish carefully. Set the lid into position and fit it into place. Make sure that the tabs on the lid are indexed properly. Insert the #2 x 1/4" flathead screw into the hole and tighten until the head of the screw is even with the lid surface and the lid is secure. Hold the assembly where the coupler is hanging down and slip the two coil centering springs into the holes. Hold the coupler and pocket and press the back of the pocket against a flat surface compressing the springs into the holes. Only holding the pocket, flex the coupler back and forth to make sure the springs are properly positioned on the coupler spring cones. Remove the springs until you are ready to mount the coupler then repeat the process.

Coupler Knuckle Springs are factory installed. If one should come out during mounting, replace as follows: Insert small screwdriver blade between coils at one end of spring, then place other end of spring over either of the cone-shaped projections in the knuckle spring slot. Compress spring until the end can be slipped over opposite cone, **see Fig. 3**. Use only #860 Kadee® G Scale Knuckle Springs or #1875 Kadee® #1 Scale Knuckle Springs designed for this purpose. Any substitutions will not allow the coupler to work properly.

MOUNTING

On the prototype pockets the mounting bolt tips and hex nuts were exposed on the "outside" against the pocket. Where possible, we



recommend inserting the mounting screws from the inside of the sill to the outside so the hex nuts can be exposed like the prototype. If necessary, to match the illustration (**Fig. 4**), measure the needed depth of the screw with the hex nut and use a pair of nippers or wire cutters to trim the screws (always wear proper eye protection) and file or grind any rough edges. Using the screws from the inside, of course, may not be possible on every model, so it will depend on the access you have to the back or inside of the mounting sill. If the locomotive has a road pilot (cow catcher or grated type) you need to check for proper trip pin clearance for both the mounted and opposing couplers. Also note that the mounting holes of the pocket are slotted, so if needed, the pocket (coupler) height can be adjusted slightly. Remember that the back of the pocket needs to be against a flat surface to keep the centering springs in the correct position.

There are a number of optional mounting procedures and the one you choose may depend on the tools you have available and the particular model involved. Achieving the correct coupler height is most important when mounting the sill pocket, and all Kadee® couplers. Also, make sure the couplers are mounted along the centerline of the car or locomotive. Use our #880 "G" scale or #829 #1 scale coupler height gauge (you can use the height of a Kadee® coupler that's correctly mounted on another car or locomotive). If you do not have a coupler height gauge you can measure from the top of the rail to the "center" of the coupler (head). "G" scale is 1 1/8" (1.125") and #1 scale is 1 1/16" (1.0625"). Note: for complete coupler swing of the smaller #1 scale #1779 coupler you need to file the "step" on the underside of the shank as illustrated in **Fig. 5**. Assemble the pocket, coupler, and lid to check for the proper coupler swing.

OPTION ONE

Note **fig. 7** pocket mounting template, this is designed to be used for switcher type pilots (with the steps removed) that have an unobstructed flat area from the rail head up the front surface of the sill. Cut along the lines of the box, carefully fold the template along the line indicated at the bottom (a nice sharp crease), and open the fold to a 90° angle. Mark the centerline on the locomotive end sill and place the locomotive on a straight level piece of track, set the template on the track against the sill of the loco, and adjust the centerline of the template to the centerline of the loco. Carefully hold or tape the template in position, making sure the template is setting on the rails without bends or creases that may affect the coupler height. When it is secured on the centerline at the correct height use a center punch and carefully punch through the center of each hole to mark the screw hole locations on the sill. You also can drill one hole through the template and sill and just mark the other three.

OPTION TWO

Place the height gauge and the locomotive on a straight piece of track, take the assembled sill pocket, without the centering springs, and set the coupler into the coupler of the height gauge. Hold

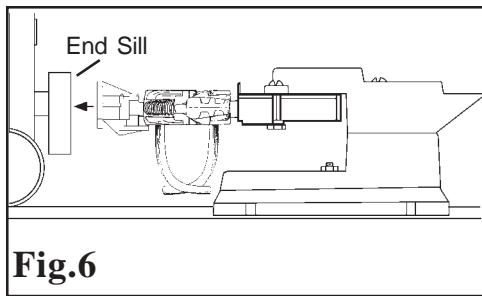


Fig. 6

them together where both couplers are even on the top and bottom. Slide them against the mounting surface of the locomotive, making sure the back plate is centered and level with the top of the sill and, through the holes, carefully mark the center of each slot location onto the surface **see Fig. 6.**

OPTION THREE

Place the locomotive on the track and measure from the top of each rail up to the front of the sill $27/32"$ (.844") and mark a line across the sill to each point. Use a piece of double sided tape on the back of the pocket and position it on the sill where the bottom of the rear plate is on the line and centered. Make sure it is level and check the coupler height then mark the center of each slot onto the sill surface. You also can use the adaptor plate as a screw hole location template by measuring .800" from the top of the rail then check that the marks are level. Hold the pocket against the sill, lining up the marks, and check the coupler height.

Do not drill more than one hole until after you mount the pocket (with one screw) and check the coupler height. If you can put the screws through the back of the end sill (on some locos you can remove the pilot or end sill to work on it) use a #48 1-72 clearance drill and carefully drill "only one" hole through. If you can not use the hex nuts from the front or back of the sill and need to thread the screws directly into the sill then use a #53 1-72 tap drill then tap the holes for a 1-72 screw. This may depend on the actual material that the sill is made of. If the sill is made of wood then you may need to use a #1 self-tapping wood or sheet metal screw, preferably a round head screw, through the front.

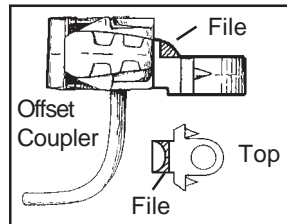
After the desired hole is drilled position the pocket and secure it with one screw and check the coupler height then, if needed, adjust the other screw locations. Remove the pocket and drill the other three screw holes. Place the centering springs into the holes in the back of the pocket assembly as before then carefully compress the springs against the sill and line up the screw holes. Hold the pocket in place and secure it with the appropriate screws (and hex nuts). The slotted mounting holes in the pocket allows for some coupler height adjustment. Check the coupler height and make sure it is level with the top of the sill then tighten the screws.

If the end sill has an opening that prevents the pocket from being mounted directly to it, use the adaptor plate to span the opening. The plate has holes to mount the pocket directly to it (trim the original screws to an appropriate length). The plate can be used on the front of the sill to span the opening or on the inside either to span the opening or "sandwich" the end sill between the plate and the pocket. We suggest that if the opening is large enough for the pocket to fit into, or for the centering springs to be properly compressed, that you use a spacer (shim) between the adaptor plate and pocket so the pocket will appear to be the same level as the front of the sill. The plate does not have its' own mounting holes so you need to drill

your own to meet various mounting situations. Because of the many possible uses of the adaptor plate screws are "not" provided for attaching it. This is left to the individual modeler to acquire and will depend on the needs of the particular model. Adapt the above mounting procedures to use the plate and pocket to achieve the correct coupler height.

HELPFUL HINTS

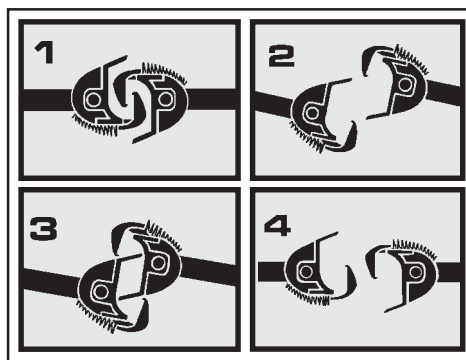
If the end sill is not high enough on the loco to allow the use of all four mounting holes you can make a piece of thick shim stock to set on top of the sill to attach the two top screws into. This may depend on how you want it to look. If you can shape the piece to match the sill and glue it to the top and paint it the same as the sill it may look OK. Also, you can use our #1838 small offset #1 scale coupler in the pocket to raise the coupler height, thus lowering the pocket mounting height. Use "option two" for mounting offset couplers. You will need to file the back of the coupler for proper clearance in the pocket. For G Scale the #836 or #787 medium offset coupler can be used but it will require quite



a bit of trimming to the back of the coupler. We do not recommend using a large offset coupler because it will take away the prototypical looks of the pocket.

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 a 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®

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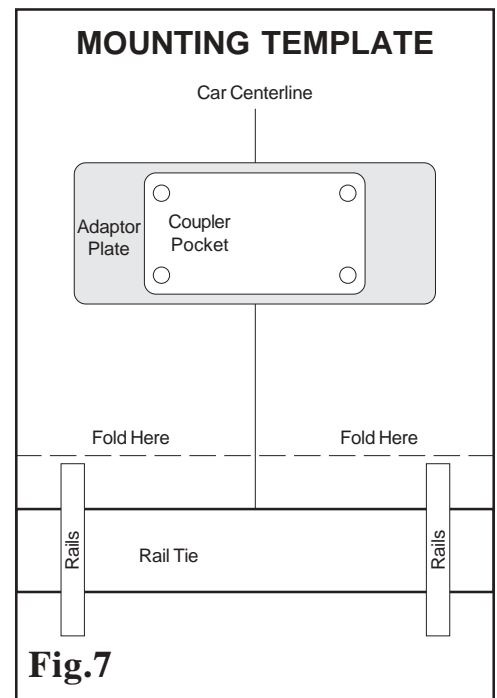


Fig. 7