

COUPLER CONVERSION FOR Aristo-Craft™ Trains Lil' Critter Diesel Locomotive & RS-3 (4' radius)(8' diameter)

Check packet, it should contain: 2ea. Couplers, 2ea. Draft Gear Boxes, 4ea. Gear Box Lids, 2ea. Plastic Washers, 2ea. Flat Angle Springs, 5ea. Coupler Centering Springs, 1ea. Knuckle Spring, 2ea. #2x5/16" screws and 2ea. #2x1/8" screws. 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.

Please read through instructions carefully and completely before proceeding.

ASSEMBLY

1. 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.

2. 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



steps 1 and 2, they are mandatory for smooth, trouble-free, Coupler performance.

3. Assemble the coupler by first placing one of the lids on the bottom of the draft gear box (used as a spacer) and secure it with a #2x1/8" screw (see fig. #1). If you have a 2-56 tap to start a few threads in the hole the screw will start easier. Make sure the screw head is flush with the lid surface, file it down if necessary.



4. Place Coupler into Draft Gear Box as shown in **Fig. 3**. Add a little more **Greas-em** and work Coupler back and forth within box to polish.



5. Swing Coupler to either side and install the first Centering Spring with a small screwdriver or tweezers as shown in **Fig. 4**. Now swing the Coupler to compress the installed spring and hold in place with your thumb. This will give you room to fit the second Centering Spring in place. After installing both springs, allow the Coupler to center itself. Then, assured the springs are properly seated, carefully place Draft Gear Box Lid on Box and secure with a #2 x 5/16" screw. If the screw "bottoms out" against the opposing 1/8" screw remove it and nip the tip off of it. Be careful not to trim off too much.

6. Test Coupler centering action by working it back and forth. If it doesn't work freely and snap back to the center position, take Coupler and Draft Gear apart and start over again. It is possible that the springs aren't properly set in place or a burr is preventing proper movement.



7. 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.5. 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.

8. Coupler Assembly is now ready for mounting. **NOTE:** If after extended use, the Coupler does not snap back to center as when new, it is because the uncoupling action tends to collapse one centering spring more than the other and it takes a slightly shorter set. To correct this, simply remove and switch springs from one side to the other.



MOUNTING

1. Invert the locomotive and place it on a covered or padded surface to avoid scratching the finish.

2. Remove the wire centering spring by removing the screw holding the loop end inside of the underbody. Carefully pull the wire spring through the hole slightly bending it over the edge of the truck. To ease the removal, move the coupler back and forth while pulling on the spring.

3. Remove the screw and washer holding the coupler to the post. Retain the original screw. Tip the coupler down (with the locomotive inverted) and work it off of the post.

4. Remove ridges off the gear box shank making sure they don't interfere with operation when placed on the mounting post, see **FIG. 6.**



NOTE: Make sure there are no burrs on mounting post that will interfere with the couplers operation.

5. Place the coupler (draft gear box) over the mounting post, see **Fig. 7**. Place the spring onto the shank end of the draft gear box. Press the spring forward to line up the holes and secure with the plastic washer and the original screw. Press the spring toward the coupler head while tightening the screw to increase the tension, also you can carefully bend the back of the spring inward to increase the tension if necessary. Test the centering action of the coupler and gear box. It should return to center when released.



6. Check for correct coupler height and clearance. If the coupler is excessively high you can remove the bottom lid and allow the coupler to droop slightly. You can also fabricate a slightly thinner shim to replace the bottom lid but be sure the screw head does not interfere with the coupler swing.

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 offcenter, 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 mismate 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. Greasem 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^{TM #}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.



Made in the U.S.A.