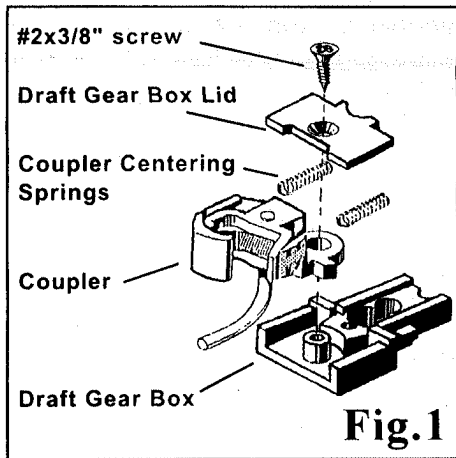


## COUPLER CONVERSION FOR U.S.A. Trains® EMD GP7, GP9

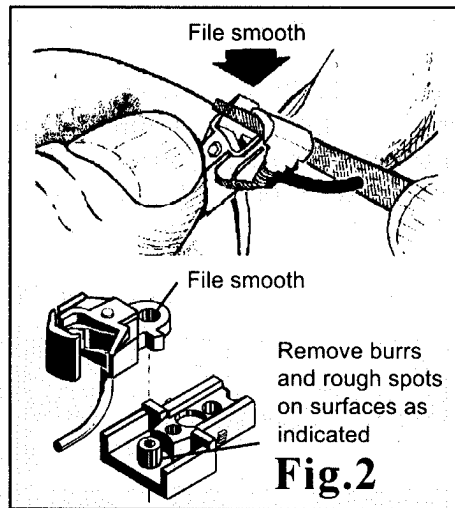
Check packet, it should contain: 2ea. Couplers, 2ea. Draft Gear Boxes, 2ea. Gear Box Lids, 5ea. Coupler Centering Springs, 1ea. Knuckle Spring, 2ea. Bushings, 4ea. plastic stops, 2ea. Flat Angle Springs and 2ea. #2 x 3/8" Screws. Extra springs are provided should any become damaged or lost. All springs are made of stainless steel so they will not be affected by outdoor use.



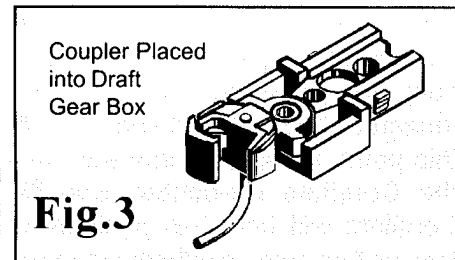
### ASSEMBLY

**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.



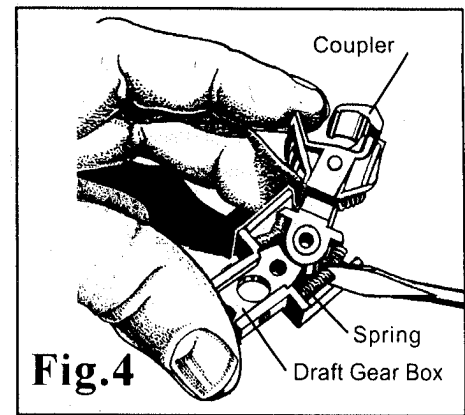
**3.** Place Coupler into Draft Gear Box as shown in Fig. 3. Add a little more **Greas-em** and work Coupler back and forth within gear box to polish.



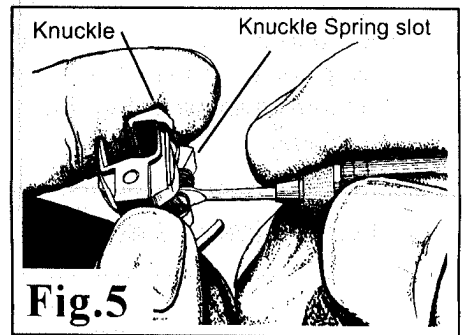
**4.** Swing Coupler to either side and install the first Centering Spring with a small screwdriver or tweezers as shown in Fig. 4. Now swing the Coupler to compress the installed spring and hold in place with your thumb. This will give you room to fit the second Centering Spring in place. After installing both springs, allow the Coupler to center itself. Then, assured the springs are properly seated, carefully place Draft Gear Box Lid on Gear Box and secure with a #2 x 3/8" screw in place.

**5.** 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.

**6.** 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.



**7.** 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

#### U.S.A. TRAINS® EMD GP7, GP9

**1.** Invert the loco and place it on a padded surface to avoid scratching the finish or damaging detail parts.

**2.** Remove the screw holding the coupler and lift off of the wire spring. Retain the original screw.

**3.** Place the new coupler gear box on loco mounting bracket as shown in fig. 6. After installing the bushing in the hole of the gear box shank,

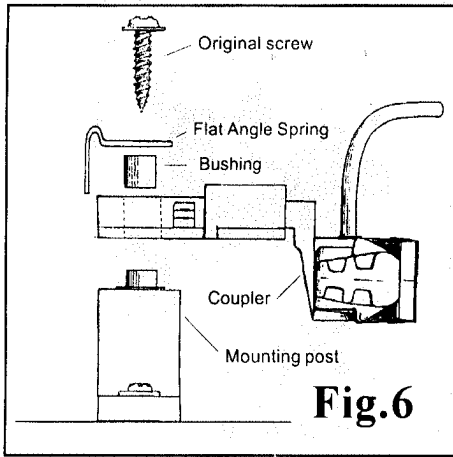
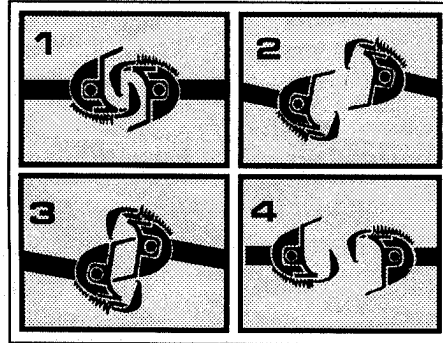


Fig. 6

position the flat angle spring as shown and secure with the original screw making sure gear box is straight. Test centering action of gear box. If more spring tension is needed you can push forward on the spring while tightening the screw. The spring can also be bent slightly if required.

4. The plastic stops which are included must be installed or the gear box may pivot too far to the side. Position them as shown in Fig. 7 and glue into place.

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 Kadее® 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. Kadее® Magne-Matic® "delayed action" uncoupling has unlimited possibilities for realistic operation of your railroad. Kadее® Couplers work even better than the prototype because they work automatically, with nothing touching them.

other lubricants will.

Use Kadее® #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 Kadее® Magnetic Uncouplers.

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

### Front View of Loco

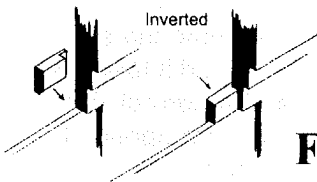
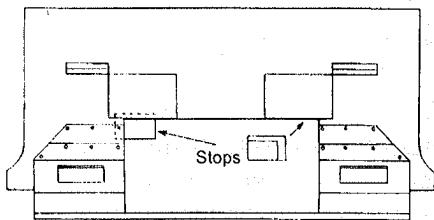


Fig. 7

### OPERATION

One of the many desirable features of Kadее® 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 Kadее® Magne-Matic® Couplers

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

**MAGNE-MATIC®**

Kadее®  
Quality

products co.

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Made in the U.S.A.