

# No. 5

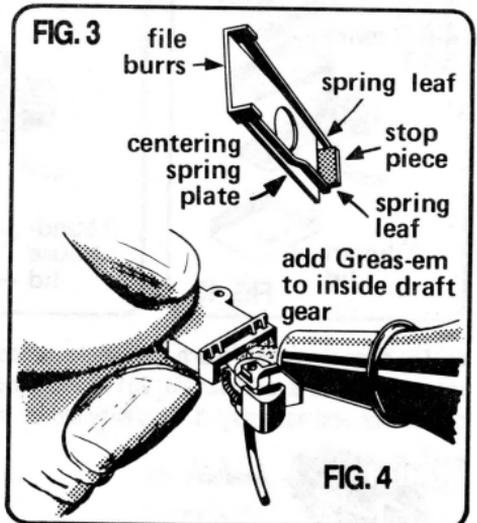
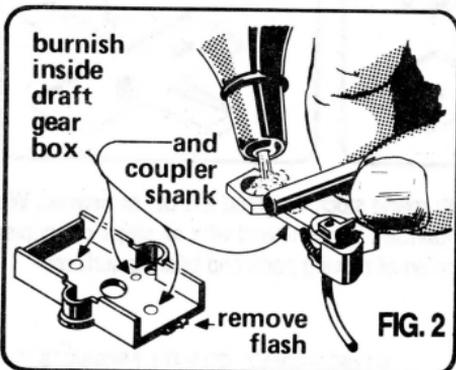
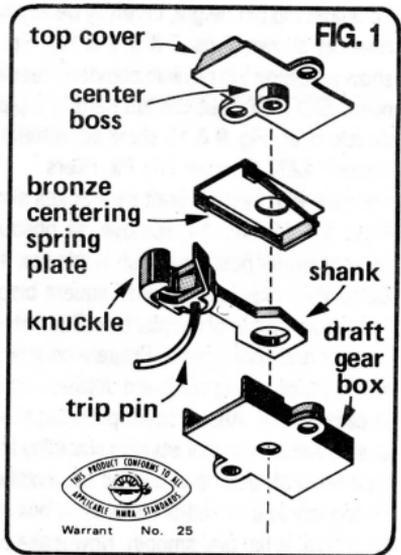
## KADEE® DELAYED-ACTION MAGNE-MATIC® COUPLER

# INSTRUCTIONS

Carefully study each figure and notice relationship of one piece to another. Examine parts and match them to the drawings. For ultimate performance the modeler should pay particular attention to certain areas of the coupler castings and remove any flash and burrs as pointed out in the illustrations. Failing to do this can create sluggish coupler action due to friction within the working parts of the coupler.

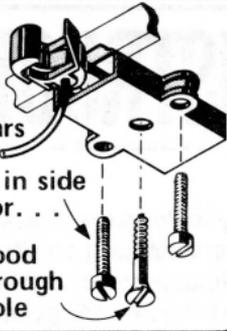
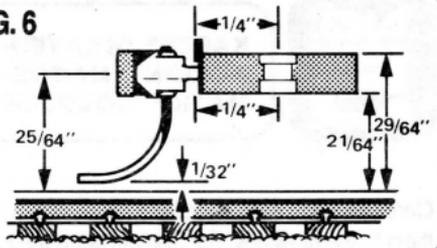
### FOLLOW CAREFULLY FOR ASSURED RESULTS:

Fig. 1 is an exploded assembly illustration of a No. 5 coupler with draft gear box and cover as supplied. These are for use on cars where the draft gear boxes are not cast on the body. Carefully remove draft gear box and cover from sprue and smooth raw edges at the break-away point, shown in Fig. 2. Next, polish coupler jaw opening and knuckle face. Also polish flat surfaces of coupler shank by burnishing with round end of a small twist drill as shown in Fig. 2. An application of Kadee® No. 231 *Greas-em*, a dry lubricant especially prepared for this purpose, along with this burnishing action will provide a polished surface to considerably reduce friction of moving parts. This same burnishing operation should be applied as well to the draft gear box areas indicated in Fig. 2. Now study Fig. 3 and note the two spring leaves of the bronze spring plate should be outside and bearing against bent-up stop piece at rear of plate. If they are not, carefully lift them up and out so they are in position shown. File any burrs from front inside lip of bronze spring plate as designated (Fig. 3). Place coupler shank with top side against bronze spring plate and between the two spring leaves which create the centering action for the coupler shank. Place these as an assembly over center boss on the draft gear top plate. Attach these three parts as a unit to the draft gear box by pressing together, making certain they are assembled in order shown (Fig. 1). Now add a puff of our No. 231 *Greas-em* to inside of coupler assembly as shown in Fig. 4. Move coupler back and forth within the box a number of times until coupler, of its own accord, consistently snaps back to center from centering spring tension. This action of moving the coupler toggle fashion is quite necessary to help polish all working surfaces inside the assembly, to aid in reducing friction. Attach coupler assembly exactly on the centerline of car bottom. On wood cars, drill and tap, using No. 56 clearance drill and No. 62 tap for insertion of 00-90 screws (2) through side mounting lugs or use a No. 1 wood screw through the center hole of draft gear box (Fig. 5). On metal cars, make a mark on the centerline of the car that lines up with the center hole of the draft gear box. Make sure the lip of the coupler box is firm against the end of the car. On your mark, make a hole with a No. 50 drill and 2-56 tap. Attach coupler trip pin height from rail top. Couplers should be even with each other while the trip pins just touch the gauge tip. Use spacer washers between truck and body bolster to raise couplers. To lower, carefully file the correct amount from either bolster. Trip pin should now clear the Magne-Matic® uncoupler by not more than 1/64" and rails by about 1/32" as shown (Fig. 6).



**FIG. 5**

On wood cars  
use 00-90  
screws in side  
holes or . . .  
No. 1 wood  
screw through  
center hole

**FIG. 6**

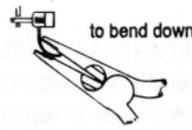
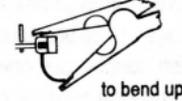
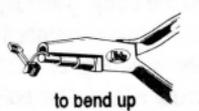
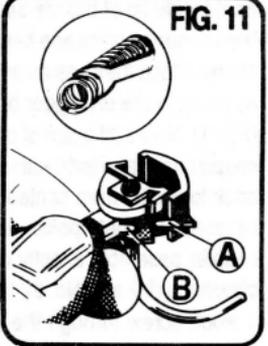
To adjust trip pin height, carefully bend pin up or down as shown (Figs. 7 & 8, 9 & 10). Fig. 7 & 8 show adjusting trip pin with standard needle-nose pliers. DO NOT squeeze too hard or trip pin will double over. Fig. 9 & 10 show adjustment using Kadee® #237 Coupler Trip Pin Pliers.

For cars with cast-on draft gear boxes similar to Figs. 12, 13 and 14, remove all obstructions (except center post) and flash within box. NOTE: Some cars may have a small square block cast in one rear corner of coupler box.

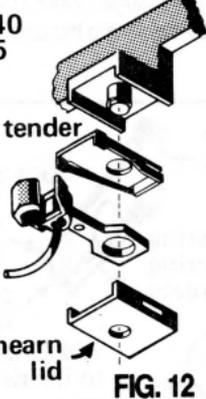
Carefully remove this by cutting away to provide clearance for mounting coupler and spring plate. Prepare coupler parts as explained on other side. Lay coupler shank with top side against spring plate and between leaves of spring plate. Place coupler and spring over center post in cast-on box. Attach cover plate supplied with car as shown in Figs. 12, 13 or 14. Move coupler side to side within box until working smoothly and adjust for height as described previously. If, for any reason, cast-on draft gear box cannot be modified to accommodate a No. 5 coupler and spring, it may be necessary to trim and/or file coupler box completely off. Be sure to remove entire box so that underside floor level is flat and smooth. Now make a hole on car centerline 7/32" back from car end with a No. 50 drill and 2-56 tap. Assemble No. 5 as shown in Fig. 1 and mount with a 2-56 screw.

NOTE: If Knuckle Spring should snap out of place, replace as follows: Using a Kadee® No. 235 Spring Pic or a small knife blade, grasp spring near one end (see Fig. 11). While holding coupler in your free hand, slip top end of spring (end furthest from Spring Pic) over hook on knuckle (A). See Fig. 11. Now, place bottom end of spring over the hook on coupler shank (B).

For Non-Delayed Uncoupling use our No. 312 Between-the-Rails Permanent Magnet Uncoupler. For Delayed-Action Uncoupling, use our No. 321 Between-the-Rails Permanent Magnet Uncoupler, No. 308 Under-the-Track Permanent Magnet or our Magne-Electric® (electro-magnet) Through-the-Track Uncoupler.

**FIG. 7****FIG. 8****FIG. 9****FIG. 10****FIG. 11**

F-7  
SDP-40  
SD-45  
0-4-0  
0-6-0  
4-6-2 tender  
S-12

**Athearn**

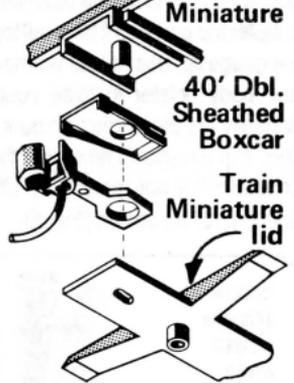
Athearn  
lid

**FIG. 12**

Roundhouse  
36' Boxcar  
**FIG. 13**



Round-  
house  
lid

**FIG. 14****Train  
Miniature**

40' Dbl.  
Sheathed  
Boxcar

Train  
Miniature  
lid

NOTE: Kadee® couplers reach peak performance with rolling stock weighted 2 1/2 oz. or heavier. We recommend you to use our No. 231 Greas-em dry lubricant hand-in-hand with all steps of coupler preparation and assembly. It will greatly reduce friction on all moving parts and bearing surfaces.

**Kadee**  
Quality

products co.

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