

# S thru G-Scale MAGNE-MATIC® Body Mount Couplers

## ASSEMBLY:

1. Remove any flash and rough spots & burnish the "arrow" marked surfaces shown in Fig.2 with Kadee® '231 Greas-em to ensure trouble-free coupler performance.

2. Place coupler into Draft Gear Box, as shown in Fig.3. Add a little more '231 Greas-em and "toggle" coupler back and forth in box to burnish further.

3. Place coupler and Draft Gear Box together. While holding (optional Kadee® '1020 Tweezers), install Centering Spring into spring slot (behind post except the '806 Coupler the Centering Spring is placed in front of post) using a Kadee® '241 Spring Pic or small screwdriver wedged between the last two coils of the spring, see Fig.4 & 4B.

4. Place Draft Gear Box Lid on box, being careful not to dislodge Centering Spring, then slip tweezers out. While holding lid in place, test coupler centering action by toggling it back and forth. Coupler should move freely and automatically snap back into center position. If it does not, disassemble coupler, check for proper spring seating, then reassemble.

5. Coupler Knuckle Springs are pre-installed. If one should come out during mounting - replace as follows: Insert Kadee® '241 Spring Pic (or small screwdriver) between end coils of spring, see Fig.5. Place opposite spring end over cone shaped projection in Knuckle Spring slot, then compress spring until opposite end can be slipped over other cone. Remove Spring Pic, do not substitute any other spring for Knuckle Spring. To assure proper coupler operation, use only Kadee® appropriate Knuckle Springs.

Remove burrs and rough spots on areas indicated

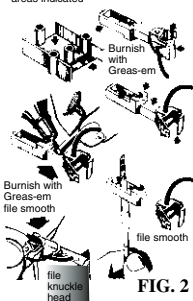


FIG. 2

holding lid in place, test coupler centering action by toggling it back and forth. Coupler

## Standard Size Gear Box

Insert Centering Spring behind post



FIG. 4

## 806 Short O-Scale Coupler

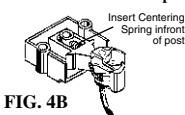


FIG. 4B

For mounting on equipment with limited space, Draft Gear Box can be altered. Fig.6 shows possible alterations.

## MOUNTING:

Use appropriate Kadee® Coupler Height Gauge to check for the correct coupler mounting height. Always mount couplers on the



FIG. 5

centerline of the model and mounted as level as possible on a flat surface avoiding any drooping or slanting of the coupler and draft gear box. It is recommended to mount couplers using screws so you can access the coupler at anytime. You should only use glue to attach couplers as the absolute "last" resort. You should never to have a metal to metal coupler mounting. This helps avoid any chance of electrical shorting through the coupler. Make sure that "all" of your couplers are mounted at the "same height" using the Kadee® Coupler Height Gauge. You may need to trim gear box and lid for wheel clearance, see Fig.7

## COUPLER SWING:

Place two cars with body mounted couplers on an S-curve or your tightest turn out, as shown in Fig.8, so the couplers are as far apart as possible. Keep the cars in position and swing the couplers together with your fingers, they should move enough to engage in the delayed position as in Fig.9. If not, remove coupler gear box and disassemble it, cut out the gear box sides to allow a little more coupler swing as shown in Fig.10, file smooth any rough spots that remain.

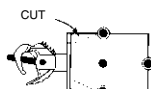


Fig. 7

CUT OFF SHADED AREAS FOR SPECIAL ALTERATIONS

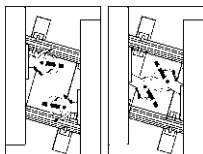


Fig. 8

Fig. 9

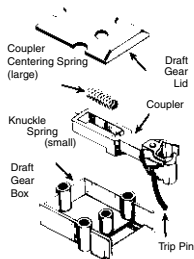


FIG. 1

using a Kadee® '241 Spring Pic or small screwdriver wedged between the last two coils of the spring, see Fig.4 & 4B.

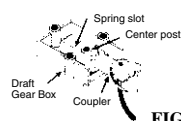


FIG. 3

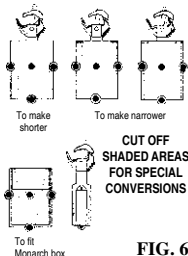


FIG. 6

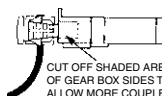


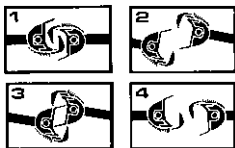
Fig. 10

## TO COUPLE -

Simply push cars together until knuckles bypass each other and lock into position.

## FOR DELAYED UNCOUPLING -

1) Stop with the couplers over an uncoupler and back up slightly with the couplers still over the uncoupler, allowing slack to occur between couplers. 2) Pull forward slightly. Couplers are now in the delayed position. 3) Back up, pushing the car(s) to the desired location. Do not permit slack to develop between couplers. 4) Pull forward, leaving the car(s) where desired. Couplers automatically return to normal coupling position.



Use Kadee® 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.

We recommend making up test track with an uncoupler mounted about center for testing each coupler and adjusting each Trip Pin before putting equipment to work on your layout.

Use our appropriate Kadee® Coupler Height Gauge to check for the correct coupler height and trip pin clearance. The N.M.R.A. standard for coupler height is the centerline of coupler, see Fig.11. #814(S-Scale), #812(O-Scale), #813(On3-Scale), #829(#1-Scale), & #880(G-Scale).

Note: We include extra knuckle springs. Replacement Knuckle Springs used on: Kadee® S & On3-Scale couplers are sold as the #847 Knuckle Spring. Kadee® O-Scale couplers are sold as the #845 Knuckle Spring. Kadee® #1-Scale couplers are sold as the #875 (#819-828 couplers) or #1875 (1700 & 1800 series couplers) Knuckle Spring. Kadee® G-Scale couplers are sold as the #860 Knuckle Spring.

## For Delayed Action Uncoupling:

For S & On3-Scale use our #308 Under-the-track Uncoupler. For O-Scale use our #308 Under-the-track Uncoupler, #810 Electric Uncoupler, or #811 between-the-rails Uncoupler For O-Scale 3 Rail use our #809 Uncoupler For Large Scale (#1 & G) use our #842 between-the-rails Uncoupler, #844 Portable Uncoupler, or our #840 Uncoupler mounted in LGB track.

Kadee® coupler conversion list & coupler conversions are on the Kadee® web site for your connivance.

[www.kadee.com/conv/convpl.htm](http://www.kadee.com/conv/convpl.htm)

## MODIFICATION OF STANDARD GAUGE COUPLERS FOR USE WITH NARROW GAUGE EQUIPMENT

such as was the practice by the Denver and Rio Grande Railroad.

The Standard Gauge Draft Gear Box may be altered in a similar fashion as shown in Fig.12 and Fig.13.

FIG. 11

### A Top of rail to center of coupler

S-Scale 17/32" or .531"

O-Scale 11/16" or .687"

On3-Scale 9/16" or .562"

#1-Scale 1 1/16" or 1.062"

G-Scale 1 1/16" or 1.125"

### B Top of rail to bottom of Trip Pin

S-Scale, O-Scale, & On3-Scale 1/16" or .062"

#1-Scale 1/8" or .125"

G-Scale 1/8" or .125"

### C Top of rail to mounting platform

S-Scale 19/32" or .604"

O-Scale 25/32" or .781"

On3-Scale 5/8" or .635"

#1-Scale 1 13/64" or 1.203"

G-Scale 1 19/64" or 1.300"

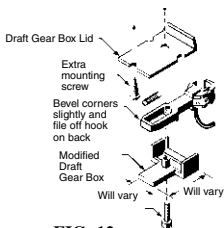


FIG. 12

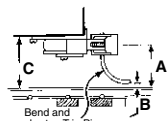
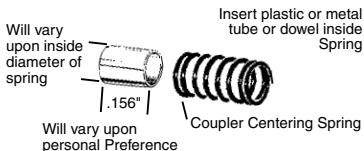


FIG. 13

**OPTIONAL:** If you wish to decrease slack/runout of Coupler in Draft Gear Box use this modification:



**Kadee®**  
Quality Products Co.  
022509

**WARNING:**  
CHOKING HAZARD - Small Parts  
Not for children under 14 years.

673 Avenue C,  
White City, OR 97503-1078



DELAYED  
MAGNETIC  
UNCOUPLING

Made in the U.S.A.

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