



**#835**



**#836**

**#837**

**#1835**

**#1836**

**#1837**

#### BODY MOUNTED COUPLER WITH SHORTENED GEAR BOX ASSEMBLY INSTRUCTIONS

2 ea. Couplers, 2 ea. Draft Gear Boxes, 2 ea. Draft Gear Box Lids, 5 ea. Centering Springs, 1 ea. Knuckle Spring, 4 ea. 2-56 screws and 4 ea. 2-56 nuts.

Kadee® body mounted Couplers with shortened Draft Gear Boxes are used in special applications where there is not ample room for the Kadee® #830 or #820 body mounted Coupler with standard Draft Gear Box. The G-scale & #1-scale couplers are available in three variations as shown in Fig.1

Use the #837 or #1837 Coupler for installation when the mounting surface is very low and requires using the coupler having the greatest offset. If alterations to the car are required, they should be done as carefully and accurately as possible. For maximum performance, it is important that the Coupler be mounted at the correct height, & directly on the cars centerline. #835, #836 & #837 G-scale & #1835, #1836 & #1837 #1-scale Couplers do not swing as far as the #830 or #820 body mounted Coupler, so they are most effectively operated on a track with a larger radius.

Please read through instructions carefully and completely before proceeding.

**#835  
#1835**

Railtop to underbody  
height 1-5/16"

**#836  
#1836**

Railtop to underbody  
height 1-1/8"

**#837  
#1837**

Railtop to underbody  
height 29/32"

**Fig.1**

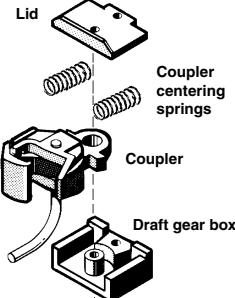
G-Scale Couplers shown

**Centerset Coupler**

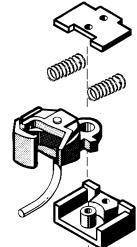


**ASSEMBLY**

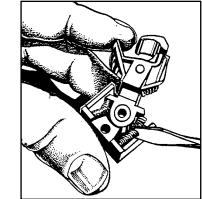
**IMPORTANT:** Before assembling remove burrs or flash (if any) from all parts. Burnish (polish) all friction bearing surfaces with #231 Greas-em dry graphite lubricant.



**Medium Offset Coupler**



**Large Offset Coupler**



To assemble the coupler follow the illustrations in these instructions. The gear box lid is not secured with the screw until it is mounted. Add a "puff" of our #231 Greas-em into the draft gear box. Make sure the coupler flexes back and forth freely.

**MOUNTING**

Use the #829 #1-Scale or #880 G-Scale coupler height gauge to determine the coupler mounting height.

**G-Scale**

**#835**

A: Railtop to Coupler centerline = 1.125"

B: Railtop to car underbody = 1.310" (1 5/16")

C: Trip Pin clearance = .125" (1/8")

**#836**

A: Railtop to Coupler centerline = 1.125"

B: Railtop to car underbody = 1.125 (1 1/8")

C: Trip Pin clearance = .125" (1/8")

**#837**

A: Railtop to Coupler centerline = 1.125"

B: Railtop to car underbody = .900" (29/32")

C: Trip Pin clearance = .125" (1/8")

## #1-Scale

#1835

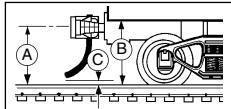
- A: Railtop to Coupler centerline = 1.062" (1 1/16")
- B: Railtop to car underbody = 1.310" (1 5/16")
- C: Trip Pin clearance = .125" (1/8")

#1836

- A: Railtop to Coupler centerline = 1.062" (1 1/16")
- B: Railtop to car underbody = 1.125 (1 1/8")
- C: Trip Pin clearance = .125" (1/8")

#1837

- A: Railtop to Coupler centerline = 1.062" (1 1/16")
- B: Railtop to car underbody = .900" (29/32")
- C: Trip Pin clearance = .125" (1/8")



Having selected the Kadee® Coupler best suited for your application, turn car over and place Coupler with Draft Gear Box in position, directly on the car centerline. Look for obstacles which might prevent Gear Box from laying flat in position. (NOTE: The protruding European style bumper cushion which some LGB™ cars have, must be removed for proper clearance. Pulling straight out and removing half may be enough or it should be cut off as close to the car as possible). It might be helpful to hold the Coupler Assembly in place & check distance from center of Coupler to top of rail using the appropriate coupler height gauge. Once you have established this measurement, you can determine if you must shim Gear Box down or cut the underbody to raise the Coupler Draft Gear Box.

If Coupler mounting surface is uneven, or too high from the track, make one or more plastic shims to support the Coupler Assembly. In many cases, you can place shims on, or between, the center sills and end sills of the car underframe to provide a solid base for the Gear Box. Temporarily mount shims, then set Draft Gear Box assembly in place and mark location of mounting holes on shims. Remove shims and drill and tap for 2-56 screws in the marked locations. Remount shims in their original position, this time using screws to hold them solid.

**NOTE:** When using metal screws in plastic, tapping of the hole is not required. After drilling a 5/64" hole, the screw will self-tap.

If Coupler mounting surface is too low, the underframe must be cut to raise the Coupler to the proper height. Carefully lay out the area to be cut so the Gear Box will be level, centered and at the correct height. It may be best to remove most of the material with a chisel or small saw, leaving finish material which can be carefully removed with a fine file until desired fit and depth is achieved. Placing shims between the truck bolster and the car body bolster to raise the car is an alternative to cutting the car body underframe for some cars.

The Coupler Assembly can now be screwed into place. An alternative to tapping the mounting holes is to drill 3/32" holes through and use 2-56 screws and nuts to secure the Draft Gear Box. The metal screws can be cut to the required length with a fine saw. Before cutting, screw on a supplied nut, so that by removing it after the cutting, the nut will serve to clean up the thread ends.

### COUPLER OPERATION

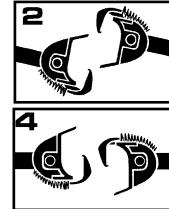
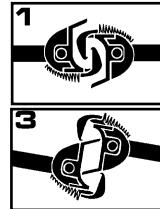
#### TO COUPLE -

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. Grease-em will not attract the dirt and dust that gums up the inside of couplers like oil, grease or other lubricants will. Use our #829 #1-Scale or #880 G-Scale 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 is 1 1/16" (1.0625") for #1-Scale & 1 1/8" (1.125") G-Scale.



NOTE: If couplers swing open too far when uncoupling, lower magnet slightly to correct.

Note: We include extra knuckle springs. The Replacement Knuckle Spring used on Kadee® #1-Scale couplers are sold as the #875 (#820-828 couplers) or #1875 (1700 & 1800 series couplers) Knuckle Spring. The Knuckle Spring used on Kadee® G-Scale couplers are sold as the #860 Knuckle Spring.

For Delayed Action Uncoupling use our #842 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 convivance.  
[www.kadee.com/conv/convpl.htm](http://www.kadee.com/conv/convpl.htm)

# MAGNE-MATIC®

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



Made & Assembled Entirely  
in the U.S.A.

# Kadee®

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