#6,7,8 and 16
COUPLER ASSEMBLY INSTRUCTIONS

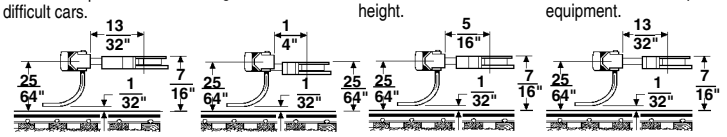
CONTENTS: Four Draft Gear Boxes and Lids, four Kadee® Magne-Matic® Couplers, four 2-56 screws, two Knuckle Springs, six Centering Springs and instruction sheet.

#6 Longest coupler and Draft Gear Box for locomotive pilots and difficult cars.

#7 Underset coupler for low mounting platforms and tight clearances.

#8 Second shortest coupler without under-set for normal height.

#16 Longest shank with shortest Draft Gear Box, use on European equipment.



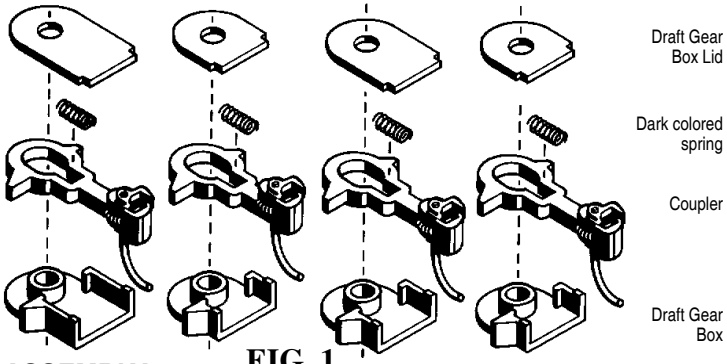


FIG. 1

ASSEMBLY:

IMPORTANT: Remove flash and burrs on Kadee® Couplers and Draft Gear Box and Lid with a fine file.

Burnish knuckle and shank surfaces with smooth end of a twist drill or a needle file as shown in **Fig. 2**. Applying **Kadee's® #231** ***Greas-em*** (a fine dry graphite lubricant especially suited for Kadee® Couplers) with a burnishing action, provides a polished surface for smoother coupler action.

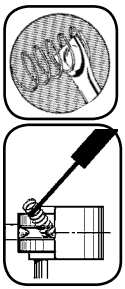
Carefully remove Draft Gear Boxes from sprue and smooth rough edges at break away points with a fine file. Burnish the inside of the Draft Gear Box. With the Kadee® Coupler and Draft Gear Box properly prepared, refer to assembly diagrams shown in **Fig. 1 and 4** relating each kit part to the drawing. First lay coupler shank over round center post of Draft Gear Box. Next, using **Kadee's® #235 Spring Pic** or pen knife point, wedge between last coils of spring and compress it between slot of coupler shank and center post of draft gear. Notice coupler shank side projections are behind side wall projections of Draft Gear Box. These projections are what gives the 6, 7, 8 and 16 Kadee® Couplers their spring action centering feature.

NOTE: the **Kadee® #703 Assembly Fixture** for #6, #7, #8 and #16 Couplers is very helpful in the assembly of these couplers.

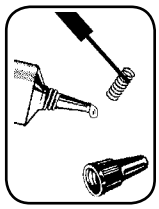
With spring carefully fitted in, put Draft Gear Box Lid in place. Clamp the assembly together with a 2-56 screw and nut. Test to make certain coupler pivots freely and springs back to center. Now check to see if assembled coupler and draft gear can be slipped through pilot beam opening without taking assembly apart. If this is the case, use a very small brush to place a tiny drop of glue or solvent along side and top joints where Draft Gear Box Lid meets Draft Gear Box, as indicated by hash marks in **Fig.3.** Use very sparingly. *Too much will soften gear box or glue moving parts so they can't move.*

If coupler assembly will not readily slip through pilot beam opening, assemble Kadee® Magne-Matic® Coupler and Draft Gear Box directly on pilot beam. Also, if absolutely necessary for clearance, long projecting arm on coupler shank and draft gear can be filed down ***not more than*** halfway without drastically affecting coupler centering, see **Fig. 6**.

After coupler and draft gear are mounted to pilot beam, place engine or car on track and check Trip Pin height. **Kadee's® #205 Multi-Purpose Gauge** is a helpful tool in assuring proper coupler height and Trip Pin clearance. Trip Pin should clear top of rails by 1/32". If too high or too low, adjust as shown in **Fig. 5** by using **Kadee's® #237 Coupler Trip Pin Pliers** for best results. If you chose to use needlenose pliers to adjust Trip Pin be *careful* when squeezing pin so as not to bend it over double.



To replace a Knuckle Spring use a Kadee® #241 Dual Tool and insert the tip between the last two coils of one end of the Knuckle Spring then carefully dip the last two coils of the other end into a drop of DUCO or Testors type of cement before installing on the coupler. Slip the end with the cement over the small spring post of the knuckle, compressing the spring until it can be slipped over the spring post of the shank releasing the compression until the pick can be withdrawn. Too much cement can wick into the other coils or knuckle hinge rendering the coupler inoperative. Due to the extreme wicking (capillary) action of the CA glues they are not recommended for this procedure.



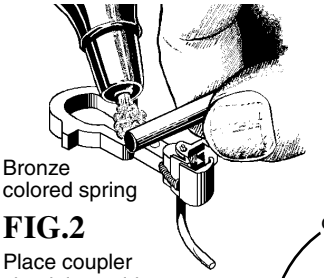


FIG.2

Place coupler shank long side projection *behind* long side projection of Draft Gear Box.

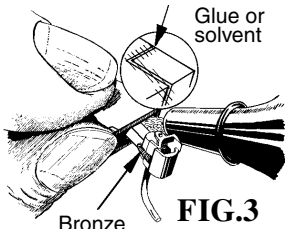


FIG.3

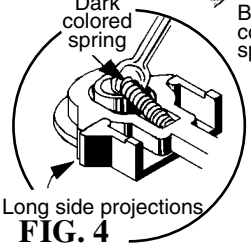


FIG. 4

For extra clearance, long side projection may be filed down *not more than halfway.*

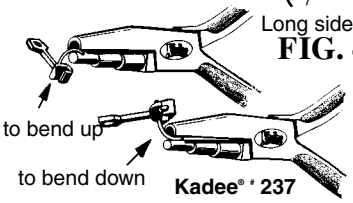


FIG. 5

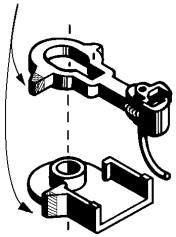


FIG. 6

A SPECIAL NOTE FOR MOUNTING #6, #7, #8 and #16 KADEE® COUPLERS TO YOUR EQUIPMENT

These couplers were designed *primarily for locomotive pilot mounting and other difficult mounting situations.* Because of the varied and many different pieces of equipment and, in many cases, their lack of a standard coupler mounting platform, the best we can do is to make general suggestions on mounting. Model railroaders may have to resort to their own ingenuity in some cases in order to get the best results.

PREPARING LOCOMOTIVE OR CAR FOR MOUNTING:

First, an opening must be made centered in the pilot beam 5/16" wide by 3/32" high so the top of this opening is 7/16" (for #6, #8 & #16) or 25/64" (for #7) above the rail top when loco is resting on the track.

If the area behind the pilot beam is hollow, fill it in with brass or plastic block. Make sure that this block is even with the top of the opening in the pilot beam. Cement or solder block in place.

Assemble coupler as described in **"ASSEMBLY"** and as shown in **Fig.1 through 4**. Test fit assembled coupler and draft gear through pilot beam opening to a point where the Trip Pin of the coupler will just clear any part of the pilot when pushed in and swung from side to side. When satisfied with coupler placement, use the Draft Gear Box center post as a guide to mark position for mounting hole in pilot beam. Make sure mounting hole position is centered before drilling with No. 50 drill. Tap hole with 2-56 tap and attach coupler assembly with a 2-56 screw. **Kadee®** offers the **#246 Tap and Drill Set** to assist in this task.

Made in the U.S.A.

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