



No.882 PACKET

FLEX-BRACKET

When properly mounted on cars, the flex-brackets that are included in this packet will allow operation on shorter radius track. They are to be used with Kadee® No.820 couplers and gear boxes. Please read instructions thoroughly before proceeding. The flex-bracket with coupler assembly must be centered on the car center line.

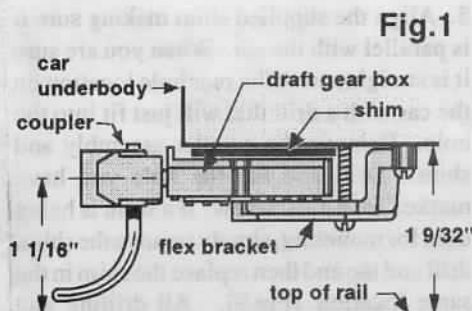
This packet should include:

- 2 ea. flex brackets
- 2 ea. brass pivot pins
- 2 ea. shims
- 6ea. 4-40 screws
- 6ea. 4-40 nuts

Assemble couplers as described in the general instructions: After assembling the coupler in the gear box and you are assured that it moves freely, you may wish to use a soldering iron on the sides of gear box and lid to fuse them together. This will make handling easier. Be sure to smooth any burrs. If you should need to cut the sides of the gear box as discussed in No.11 below, the lid and gear box can be re-heated to separate them. When working on cars, they must often be turned upside down or on their sides. Always lay down a protective mat and look for protruding parts which could be damaged.

MOUNTING

1. It is important to mount the flex bracket so that the coupler is at the correct height directly on the car centerline. The supplied shim is used between the gear box and the mounting surface which requires the mounting surface height to be 1.281" (1 9/32") from the top of the rail (Fig.1).



2. Place the car on a section of track and check the mounting surface height. If Kadee's #1-scale height gauge (No.829) is used, hold the shim supplied in this packet on the gauge for the proper mounting surface height (Fig.2). Once you have established this height you can determine if an additional shim is required to achieve the proper mounting surface height. If the height is too low, washer shims can be placed between the car body bolster and the truck bolster. This will raise the car body. An alternative is to cut a pocket in the underbody.

Fig.2

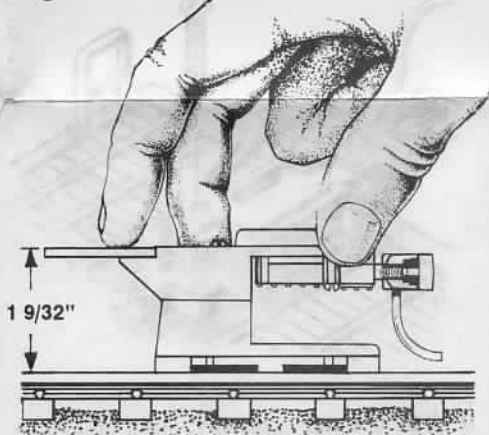
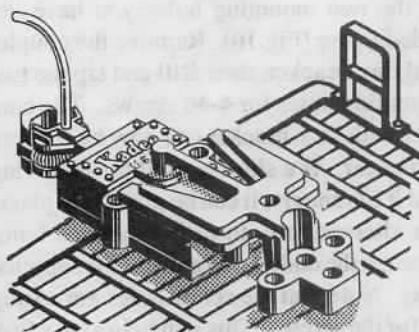
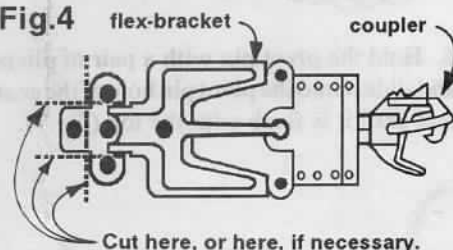


Fig.3



3. Turn the car over and position the coupler gear box assembly (coupler assembly) with the flex bracket where it will be located (Fig.3). There will be a small space between the gear box and the flex bracket. Check for clearances and decide which two of the four mounting holes on the flex bracket are best suited for your application. You may need to cut off the two side tabs or the rear tab for added clearance (Fig.4).

Fig.4



4. A flat mounting surface is required for the coupler gear box to pivot freely. If a plastic shim is needed it can be cut and filed to the proper size so that it will fit snugly between the center sills and end sills. It must be long enough for the flex-bracket to be mounted to it.

5. After you have established that your mounting surface is at the proper height, place the coupler assembly with the flex-bracket back in position, exactly where it will be mounted and on the car centerline. Hold the coupler assembly in position and remove the flex-bracket. Using a drill that will just fit into the pivot hole (Fig.5), mark the hole location. Remove the coupler assembly and drill a 1/8" hole (Fig.6). If a shim is being used, simply remove the shim, drill the hole through and then replace the shim in the same location. If the hole is being drilled in the underbody it should be 1/8" deep minimum. If it is not possible to drill this deep, the pivot pin must be shortened (see No.7 below).

Fig.5

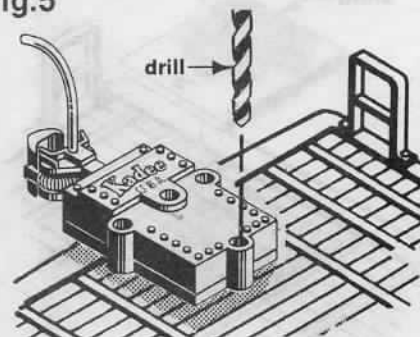
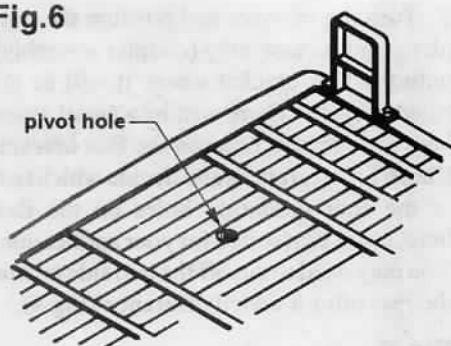
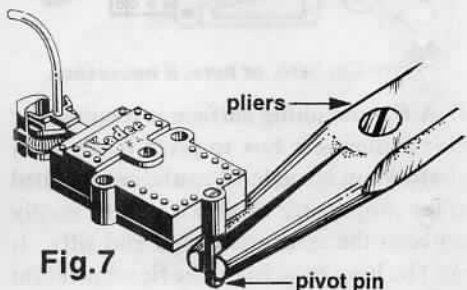
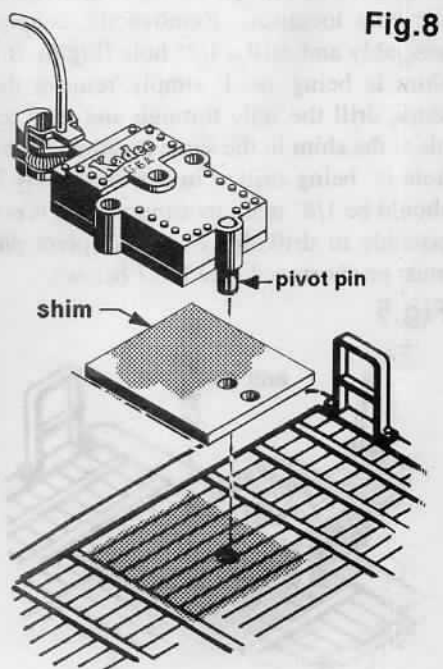


Fig.6

6. Hold the pivot pin with a pair of pliers and slide it into the pivot pin hole of the gear box until it is flush with the top (Fig.7).

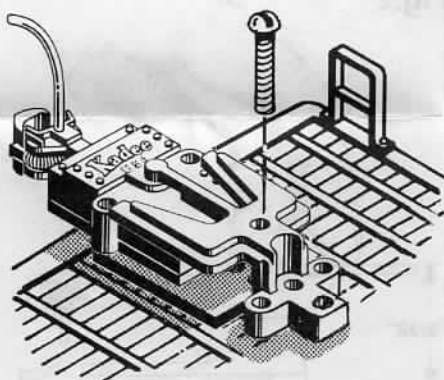
**Fig.7**

7. Place the coupler assembly on the car with the supplied shim between the gear box and car. The pivot pin should be inserted through the shim and into the hole you have drilled (Fig. 8). If your drilled hole is not deep enough, shorten the pin slightly.

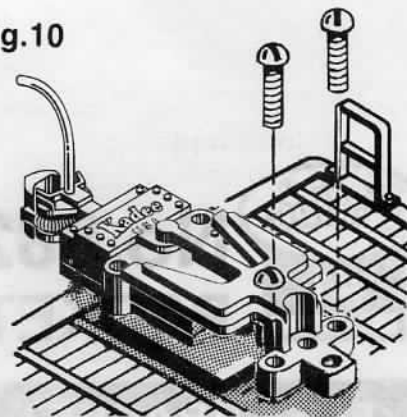
**Fig.8**

8. Align the supplied shim making sure it is parallel with the car. When you are sure it is straight, mark the rear hole location on the car with a drill that will just fit into the hole. Remove the coupler assembly and shim. Drill and tap the hole you have marked for a 4-40 screw. If a shim is being used for mounting, simply remove the shim, drill and tap and then replace the shim in the same location (Fig.9). All drilling and tapping should be as straight as possible.

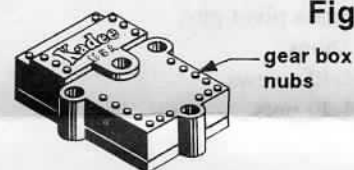
NOTE: When using metal screws in plastic, tapping of the hole is not required. After carefully drilling a $\frac{3}{32}$ " hole, the screw will self tap. The metal screws can be cut to the required length with a fine saw. Before cutting, screw on a supplied nut. The nut will clean up the thread ends when removed. An uncut screw will give better tapping results.

**Fig.9**

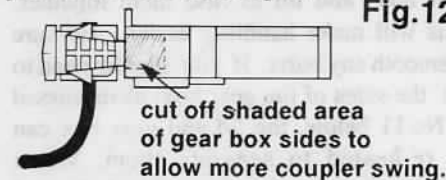
9. The coupler assembly, shim and flex-bracket can now be secured to the car using a 4-40 screw cut to the proper length. After making sure that the coupler assembly and flex-bracket are straight, mark the location of the two mounting holes you have decided to use (Fig.10). Remove the coupler and flex-bracket, then drill and tap the two mounting holes for 4-40 screws. The coupler with flex-bracket can now be secured to the car. If a shim is used for mounting and it fits snugly, it can be glued into place. An alternative is to drill clearance holes through the underbody and use the supplied nuts. Note that the screw holes are a snug fit for the screws. This will help give a firm base when tightened.

Fig.10

10. The front screw should be tightened until it just starts to interfere with the springs side to side centering action and then backed off slightly. If it is left too loose the coupler may pull down over the magnet. Should you notice interference between the flex-bracket and gear box, disassemble and cut the nubs off of the gear box with an X-acto® knife (Fig.11). File smooth before reassembling. If the front screw should loosen during operation, place a drop of glue on the threads and re-install when dry.

Fig.11

11. The flange on the gear box may have to be cut off if it interferes with the coupler. If more side swing is needed the gear box may be cut as shown in Fig.12. Avoid removing too much material as this could impair the performance of the coupler.

Fig.12

NOTE: When properly installed, the flex-bracket spring action will re-center the gear box after being placed in the side position. Avoid leaving the flex-bracket at the extended side position for a prolonged period of time or it may not immediately return to center. If this should occur, simply slide to the opposite side and hold briefly.

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