No. 812

Kadee® O-Scale Height Gauge Instructions

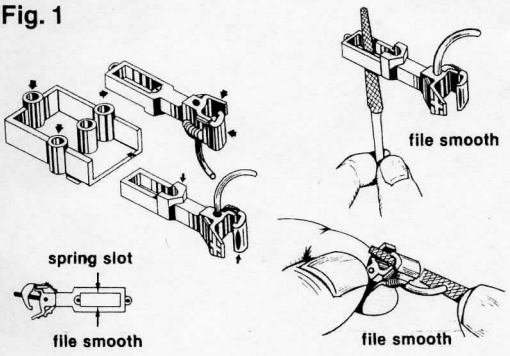
ASSEMBLING THE COUPLERS

1. IMPORTANT: Before assembling couplers, check arrow marked areas shown in Fig. 1 for burrs and rough spots. Remove these with a file.

2. Burnish the arrow marked surfaces shown in Fig. 1 with Kadee® Greas-em, (a fine dry lubricant specially suited for Kadee® couplers). Place coupler parts in a small plastic bag with Greas-em and shake contents to coat parts before assembling.

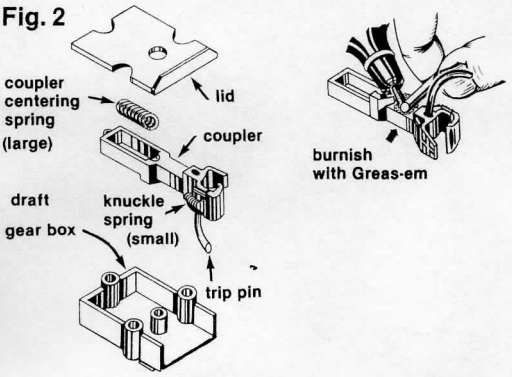
DO NOT skimp on steps 1 and 2, they are mandatory for smooth, trouble free coupler performance.

Fig. 1



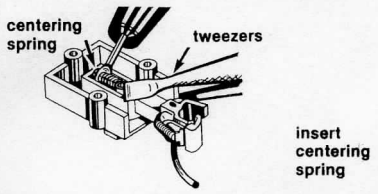
3. Place coupler into draft gear box as shown in Fig. 2. Add a little more Greas-em and "toggle" coupler back and forth in box to further burnish.

Fig. 2



4. Place coupler and draft gear box together, hold with tweezers and install centering spring into spring slot using a Kadee® Spring-Pic, or small jewelers screw driver wedged between last two coils, as shown in Fig. 3.

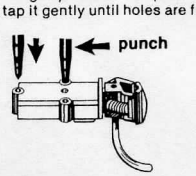
Fig. 3



5. Place draft gear box lid on box, being careful not to dislodge centering spring, then slip tweezers out. Hold lid on — test coupler centering action by freely toggling it back and forth. If it does not work freely and snap back to center position, take coupler and draft gear apart and start again, it is possible the spring isn't properly set in place.

6. OPTIONAL: If you wish to secure lid to draft gear box, (before mounting), to allow you to handle unit without it coming apart — a simple way is to insert a long tapered center punch into each mounting hole (from the top), and tap it gently until holes are flared, thus holding lid. See Fig. 4.

Fig. 4



7. Coupler knuckle springs are installed at the factory. If one should come out during mounting, replace as follows: Insert Spring-Pic or small jewelers screw driver blade between tight end coils of spring, place opposite end over either cone shaped projection in knuckle spring slot, then compress spring until end can be slipped over other cone, remove Spring-Pic or blade (see Fig 3). Do not substitute any other spring for knuckle. Use only 'O' gauge knuckle spring or couplers will not operate properly.

No. 813

Kadee® On3-Scale Height Gauge Instructions

IMPORTANT NOTE: When the On3 coupler is correctly assembled, the coupler knuckle will have .030" or approximately 1/32" of up and down movement. This is normal. The height gauge has compensated for this. The couplers will pull down to the correct centerline under operating conditions.

ASSEMBLING THE COUPLERS

1. To ready the coupler height gauge for use, prepare all parts by removing flash and burrs and then assemble the coupler supplied in the order described and as shown in Fig. 2. Areas designated with arrows indicate points where flash may be encountered in the draft gear box, on the coupler shank and draft gear cover plate. Burnish these places with the round end of a small twist drill to smooth away flashing and polish the surfaces, as shown in Fig. 1.

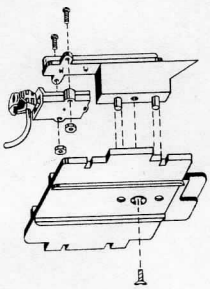
2. Before assembling coupler components it should be pointed out that since the trip pin of this coupler will not be required, it is suggested the trip pin be cut off to make the gauge more convenient to use. As well, it should be mentioned, coupler parts will move about in the package during shipment and at times it will be found necessary to separate the tiny springs when they have become coiled one with another. There are several methods of separating these without damage resulting. One way is to shake or roll the springs around the flat surface of a small container, usually this is sufficient to cause them to become uncoiled from each other. One can also lay the flat side of a steel rule lightly upon the entwined springs, cautiously rolling the springs back and forth to work them apart. A third approach is to enter a knife blade lengthwise between two coiled springs and gently work the blade down between to separate them. With any of these methods, avoid undue pressure that is liable to distort the delicate springs.

3. The insertion of the spring will be made easier with the Kadee® #235 Spring-Pic. Pick up the centering spring (large) and insert the free end into the spring slot behind the boss (post). Cover the spring with a free finger and pull the Spring-Pic free.

4. Next, place the draft box cover over the assembly as shown in Fig. 2. Test the centering action of the coupler by moving it to either side a number of times to be sure it snaps back to center consistently.

5. When the coupler is working satisfactorily it can be attached to the height gauge. See Fig. 9. Use the enclosed 0-80 screws and nuts to attach the coupler assembly to the gauge arm. Note that the box is on the bottom of the arm. The two pins will help to align the coupler box on the arm.

Fig. 9



ASSEMBLING THE On3-SCALE HEIGHT GAUGE

6. Using the 2-56 screw enclosed, the arm can now be attached to the base plate. Insert the screw from the bottom of the base plate up and into the bottom of the arm assembly. The pointed car height gauge of the arm should be on the same end with the base's trip pin height gauge. Tighten the 2-56 screw to complete the assembly of the On3-Scale height gauge. See Fig. 9.

USING THE On3-SCALE HEIGHT GAUGE

7. To gauge coupler mounted on rolling stock, simply place the gauge on the rails and roll the car up to it (Fig. 10). The coupler on the car should mate with the one on the gauge at exactly identical heights. If the coupler on the car is found to be high, remove the coupler and add spacers the same size as coupler box between the car body and Kadee's® coupler box. Reassemble coupler to car and test again. Add or subtract spacers as required to attain the correct coupler height when matched to the gauge. In the case of a low coupler, insert spacer washers (these are available from Kadee® in different thicknesses) between the truck and body bolster to gain correct coupler height. Tighten truck bolster screws so there is a minimum of wobble to the car. Next, check and adjust if necessary, the trip pin height.

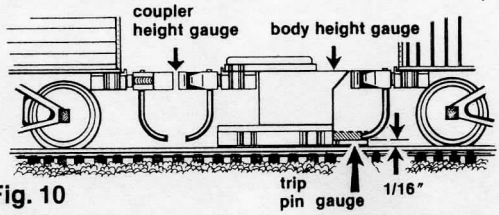


Fig. 10

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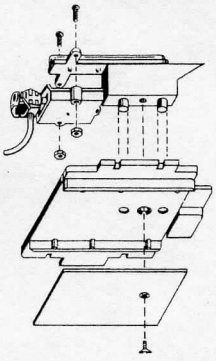
ASSEMBLING THE O-SCALE HEIGHT GAUGE

8. The coupler and arm assembly are now ready to be assembled. Note that the two alignment pins on the bottom of the arm projection will align with the holes in the coupler box. Place the box in position as per Fig. 5. Hold the box on with the 1-72 screws and nuts provided by inserting the screws through the arm and coupler box ears. Secure by tightening the 1-72 nuts. This completes the arm assembly.

9. Locate the metal plate and the cast base. The metal plate fits between the cast rails.

10. Insert the 2-56 screw through the metal plate and on through the base. The point of the body height gauge should be on the same end with the trip pin gauge of base. With the arm in the correct position, insert the screw into the hole in the bottom of the arm base. Tighten this screw to complete the assembly of the height gauge. See Fig. 5.

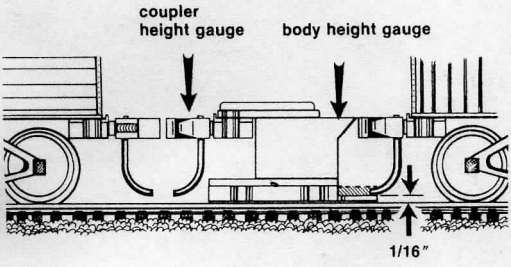
Fig. 5



USING THE O-SCALE HEIGHT GAUGE

To gauge coupler mounted on rolling stock, simply place the gauge on the rails and roll the car up to it (Fig. 6). The coupler on the car should mate with the one on the gauge at exactly identical heights. If the coupler on the car is found to be high, remove the coupler and add spacers the same size as coupler box between the car body and Kadee's® coupler box. Reassemble coupler to car and test again. Add or subtract spacers as required to attain the correct coupler height when matched to the gauge. In the case of a low coupler, insert spacer washers (these are available from Kadee® in different thicknesses) between the truck and body bolster to gain correct coupler height. Tighten truck bolster screws so there is a minimum of wobble to the car. Next, check and adjust if necessary, the trip pin height.

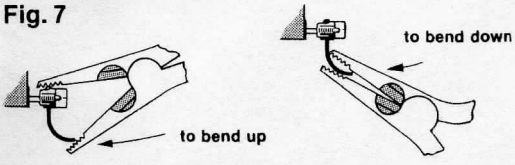
Fig. 6



DELAYED-ACTION COUPLERS

Delayed-Action Magnetic Couplers by Kadee® have curved trip pins that can be adjusted, if required, by carefully bending the curved arm up or down so it will just touch the lip at the back of the gauge as shown in Fig. 6. For how to reduce trip pin length see Fig. 7, be careful however, squeezing too hard could cause the pin to bend double. Fig. 7 shows the method of lengthening trip pin. Trip pins should now clear the railtop by 1/16" as shown by dimension in Fig. 6.

Fig. 7



TRACK AND WHEELS

The Kadee® O-Scale Height Gauge also has gauges for track and wheel standards (see Fig. 8).

MOUNTING THE #811 UNCOUPLER

1. The Kadee® O-Scale Height Gauge can also serve as a fixture for installing the #811 uncoupling magnet between the rails. The metal plate on the bottom of the gauge will hold the magnet centered and at the correct height for gluing between the rails. Lay the magnet on the metal plate and even with the ends of the gauge.

2. Next, trial fit the magnet. Place the gauge on the track and check to see if the magnet sets down on the ties or ballast. There should be **NO** gaps where the magnet meets the ties or where the gauge sets on the rais.

3. If there are no gaps in these two areas, pick up the gauge along with the magnet. Apply adhesive to the magnet and replace on the track. Leave until the adhesive has set. The gauge may then be lifted and used again.

4. The installation of the #811 can be done with A.C.C. or Super Glue. This will make the process much quicker so several magnets could be installed at one session.

On3 DELAYED-ACTION COUPLERS

8. Delayed-Action Magnetic Couplers by Kadee® have curved trip pins that can be adjusted, if required, by carefully bending the curved arm up or down so it will just touch the lip at the back of the gauge as shown in Fig. 10. To reduce trip pin length see Fig. 11a. Be careful however, squeezing too hard could cause the pin to bend double. Fig. 11b shows method of lengthening pin. Trip pins should now clear the railtop by 1/16" as shown in Fig. 12.

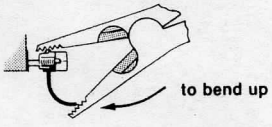


Fig. 11a

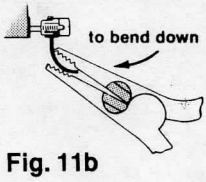
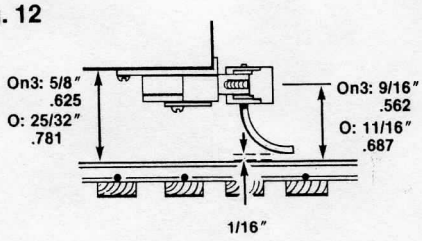


Fig. 11b

Fig. 12



9. The body height gauge at the back of the On3-Scale height gauge can be used to establish the height at which the coupler box should be mounted. Bring the end of the car up against the point of the gauge. Rub the car gently on the point and mark a line. This will be the height at which the car end should be cut up to for the coupler to mount at the correct height. It may also be necessary to shim the box behind the car end for support. See Fig. 10.

TRACK AND WHEEL GAUGE

10. The Kadee® On3-Scale Height Gauge also allows for the wheels to be checked for proper width and for the track gauge to be checked. See Fig. 13.

Fig. 13

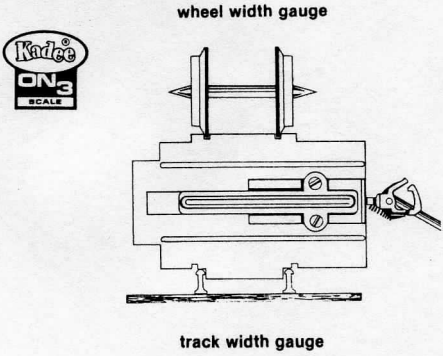
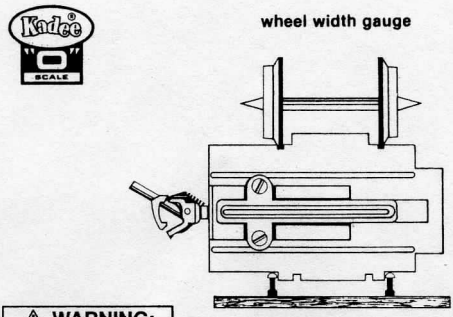


Fig. 8



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

Kadee