



MULTI-PURPOSE GAUGE KIT 205

HO Scale Coupler Height Gauge

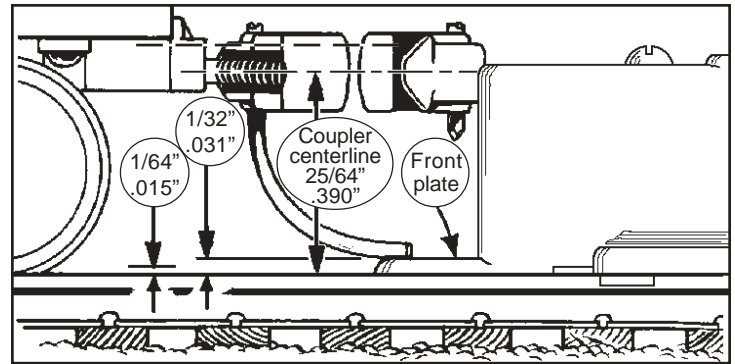
Package Contains: one HO scale multi-purpose gauge body, one NO.5® coupler, one #58 Scale Metal Coupler, one 2-56 x 5/16" self-tapping screw, 2 extra #625 knuckle springs, 1 extra #622 knuckle springs, and ten #208 (.015") red washers.

Note: The "Black" #625 knuckle spring is for the #58 coupler & the "Gold" #622 knuckle spring is for the NO.5® coupler.

The multi-purpose gauge is used for checking for the correct coupler height, trip pin height, between the rails uncoupler height, and track width.

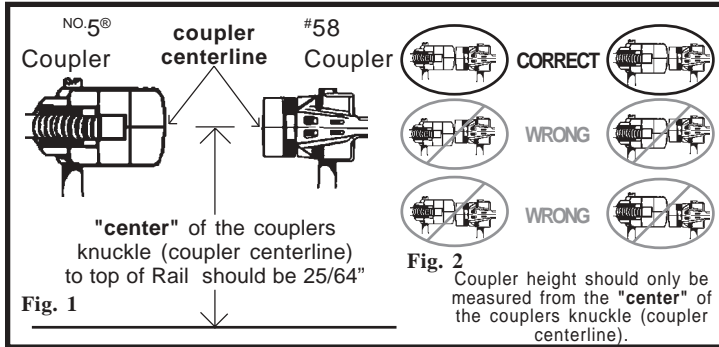
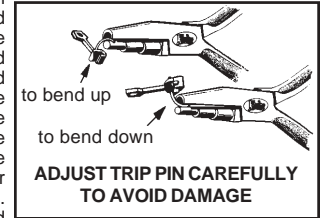
The #58 coupler may be used in the #205 height gauge instead of a NO.5® coupler. This will be only a cosmetic change and not change the function of the coupler height gauge. All HO scale couplers should be "only" measured off the centerline of the couplers knuckle and should "never" be measured off the top or the bottom of the couplers knuckle. (See Fig. 1 & 2)

The N.M.R.A. Standard S-1 for HO scale coupler heights is 25/64". This is measured from the top of the rail to the "center" of the couplers knuckle (coupler centerline). This gauge is designed to meet this standard.



Also important is the trip pin height which should just skim, barely touching, the top of the front plate of the gauge. If the pin is too high or too low you can adjust it to the correct height (.015" to .020" above the top of the uncoupler) with our #237 Trip Pin Pliers. Please also note, do not bend the tip of the pin upwards. This affects the magnetic pull that may cause coupler operation problems.

To check the height of our #312 and #321 between the rails uncouplers slide the gauge dowel end first along the rails toward the uncoupler. As the gauge passes over the uncoupler the lower end of the dowel will slide up over the uncoupler and rest on the top. The top of the dowel will indicate if the uncoupler is too high or too low. If the uncoupler is at the correct height the top of the dowel will be flush and even with the top of the gauge. The entire top of the magnetic uncoupler should be 1/64" (.015") above the top of the rail. It is essential that the uncoupler is centered between the rails and that no edge or corner is higher or lower than the others. This ensures consistent dependable uncoupler performance. Our #334 uncoupler gluing jig is designed for proper installation of the #312 and #321 magnetic uncouplers.



To Assemble:

First remove any flash or burrs from the gauge body, check the inside of the coupler slot and along the bottom edges. Place the shank end of the coupler into the slot in the top of the gauge (with the trip pin pointing down). Secure with the 2-56 screw and tighten just snug but not too tight. The shank of the coupler should be flush and level with the upper surface of the gauge.

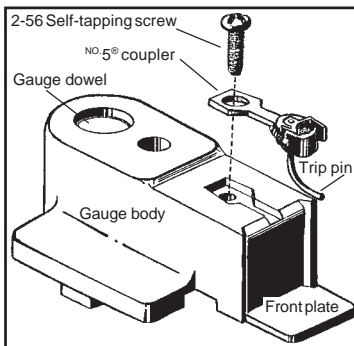
Trip Pin: The trip pin on the gauge has limited uses and may not be required. You can "snip" it off with a pair of wire cutters, this will make the gauge a little more convenient to use. However, if you choose to keep the trip pin intact you can use it to check the clearance of the opposing coupled car or locomotive. This is especially important on close coupled cars, the "cow catcher" pilots of steam locos, the sloping pilots of "E" and "F" type of diesel locomotives, and snow plows or any item that protrudes enough to interfere with the trip pins.

Using the Gauge:

A note of **CAUTION**, the gauge is not insulated and "only" should be used on a nonpowered track or track with the electrical power completely switched off.

The hole in front of the dowel can be used to permanently mount the gauge on a nonpowered track.

Place the gauge on the track making sure the slots on the bottom are down over the rails and the gauge is level. Roll a car or locomotive up to the gauge, the coupler centerline heights should match exactly. For the most consistent and dependable performance the couplers should be at the same height.



Installing Couplers at the Correct Height: The type and style of your coupler mounting and the particular manufacturer of your model will determine what steps to take if you need to adjust the coupler height. There are several basic methods of raising or lowering the coupler height. These are only suggestions and do not cover all aspects of adjusting coupler heights.

Kadee has a very large selection of HO couplers that have short, medium and long "overset", "centerset", and "underset" shanks to help achieve correct coupler height and clearance. The underset shanked couplers raises the coupler about .050" higher than a centerset coupler and the overset shanked couplers lowers the coupler about .050" less than a centerset coupler.

If you are using a "centerset" coupler such as the NO.5® and you need to raise or lower the coupler a significant amount, again depending on the type of mount, rather than shimming or altering (cutting or filing) the mounting it would be best to choose the next "offset" coupler.

Most freight cars have a small mounting post for the trucks and if the body mounted coupler is a little too low then you can put a thin washer between the truck and car floor. The red washers that are included with the gauge are for this purpose. Do not use too many washers or the car will tilt and wobble too much while running.

Placing a thin shim between the draft gear box and mounting surface will lower a bottom mounted coupler and raise a top mounted coupler.

Cutting or filing the coupler mounting surface "usually" is the last alternative to achieving the correct coupler height. If you need to cut or file any mounting surface be sure to keep it as straight and level as possible.

The instructions in most of the individual coupler packages also cover coupler mounting and height adjustments.

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