



# MULTI-PURPOSE GAUGE KIT 815

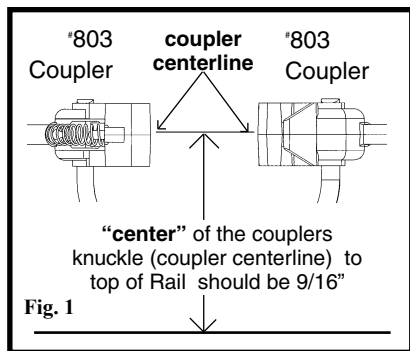
## On30 Coupler Height Gauge with On3 Coupler

**Package contains:** (1) gauge base, (1) spacer block, (1) On3 coupler only (#803), (1) 2-56 x 1/2" screw, (1) extra knuckle spring (#847).

This On30 coupler height gauge is designed to be used when the modeler wishes to use the On3 size couplers on HO gauge track and usually on On30 models, such as our #803 black and #807 brown On3 couplers. This gauge also is used as a track gauge and between the rails uncoupler height gauge. If you are using HO couplers on your On30 models then simply use our #205 HO coupler height gauge.

N.M.R.A. Standard S-1 coupler height for HO scale is 25/64" (9.9 mm) measured from the top of the rail to the center of the coupler and for On3 is 9/16" (14 mm).

Most factory built On30 models, such as Bachmann's, use the standard HO size of couplers mounted at the HO coupler height, which is 25/64" measured from the top of the rail to the center of the coupler (use the #205 HO coupler height gauge). However, many modelers wish to use the larger On3 couplers on their On30 models. To accommodate this we have modified our #205 HO coupler height gauge by adding a spacer block and our #803 On3 coupler to make our #815 On30 coupler height gauge. The block raises the coupler to the correct On3 coupler height of 9/16" (14 mm). You now have an On30 coupler height gauge when using On3 couplers.



**Assembly:** Trim any flash or gate marks from the spacer block and gauge base. Set the base on a firm surface, fit the coupler into the block and slide it back until the lug on the bottom of the shank is snug into the indentation on the front of the block. Set the block onto the base aligning the screw holes. Drop the screw through the hole into the base and tighten just snug where the block does not move, do not over tighten. The screw will self tap into the base so it will feel tight while turning. Make sure the screw head is flush against the shank of the coupler but not too tight.

Mounting On3 couplers on On30 models usually requires custom fitting so please refer to the mounting instructions included with our #803 and #807 On3 couplers.

**Magne-Matic Delayed Uncoupling:** Since the On3 couplers are larger than the HO couplers they need to open farther and swing wider on HO gauge track. The common #321 between the rails HO uncoupler can only be used as a "non-delayed" uncoupler with the On3 #803 and #807 couplers because it will not open these couplers enough for the "delayed" position. This also applies to the #307 electric uncoupler.

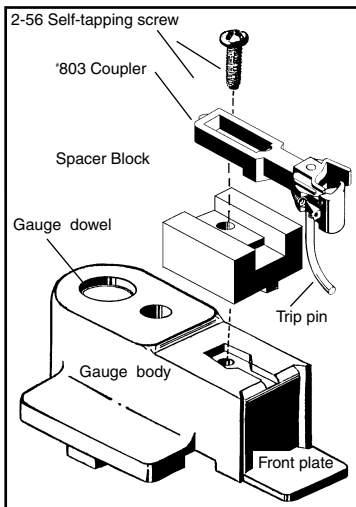
The #308 under the ties uncoupler is the only uncoupler that opens On3 couplers enough to put them into the delayed position.

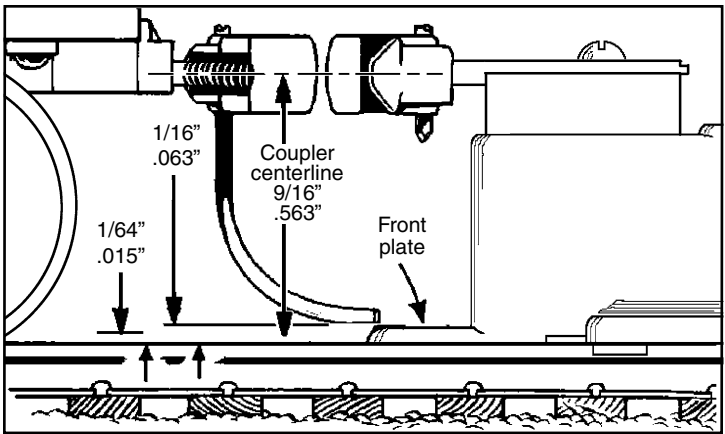
Our #241 Dual Tool will work just fine for a manual uncoupling tool for HO as well as S, On3 and O scale couplers.

### 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

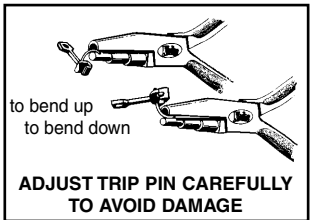




used to permanently mount the gauge on a nonpowered track.

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.

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.

**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.

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. 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.