

INSTALLATION INSTRUCTIONS

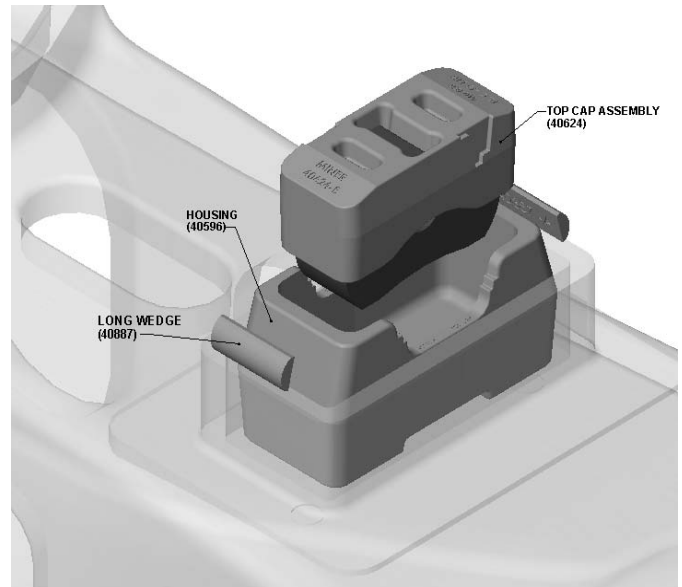
MINER TCC-45 LTRB

The **Long Travel Miner TCC-45 LTRB** (patent pending) constant contact side bearing is designed to retrofit into existing cast-in "standard height" block style side bearing pockets.

Included in the assembly are:

- A metal top cap attached to a TecsPak® spring
- A housing
- Two small wedges.

The TCC-45 LTRB is designed to operate at an installed height of 5-1/16" and provide 4,500 lbs. of preload and 5/8" of travel.



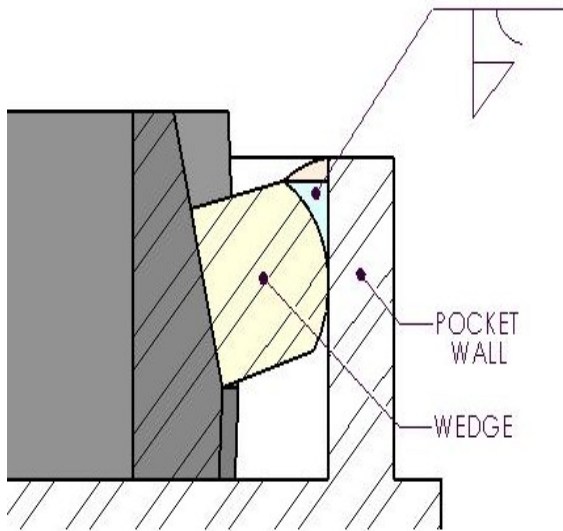
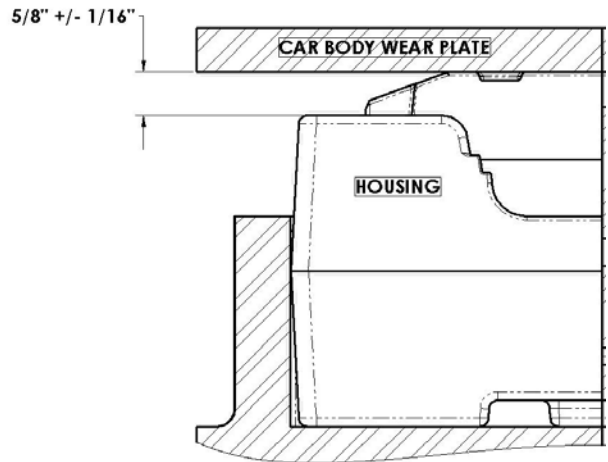
Preparation

- Remove the metal block and clean the pocket of any foreign material.
- Inspect the pocket for cracks or any other damage, and repair if necessary.
- Insure that the pocket bottom and end walls are relatively smooth and free of any weld spatter, bumps, etc.
- The car body wear plate size must be large enough based upon the car truck centers reference table, and the car body side bearing wear plate surface must be smooth.
- Any weld spatter, heavy rust or surface projections must be removed by grinding.
- Fastener heads must be smooth and not protruding below wear plate surface, and the fasteners securely tightened.
- Plates with surface variations between fastener holes greater than 1/8", or greater than 1/16" over any 4" space between the fastener holes, must be replaced.
- Surface must be reasonably parallel to side bearing mounting surface.
- Variations should not exceed 1/16" across width or 1/8" end to end.

Car Body Wear Plate		
Truck Centers	Min. Width	Min. Length
70' or Less	4"	12"
70+' to 82'	4"	14"
82'-94'	4"	16"

Set-Up Height

1. The TCC-45 LTRB housing is 4-7/16" tall and acts as the solid stop. Therefore, the housing must extend a minimum of 1/16" beyond the top of the pocket wall around the entire perimeter.
2. If the pocket wall is taller than the housing, either
 - a. add shims under the bottom of the housing covering the entire pocket floor
 - b. or remove enough material from the top of wall to insure the 1/16" minimum extension.
3. The set-up height should be adjusted by measuring between the top of the housing and the underside of the car-body wear plate with an empty car positioned on level track before installing the top cap assembly or applying solid center plate lube.
4. Adjust shims as necessary to achieve 5/8" +/- 1/16".



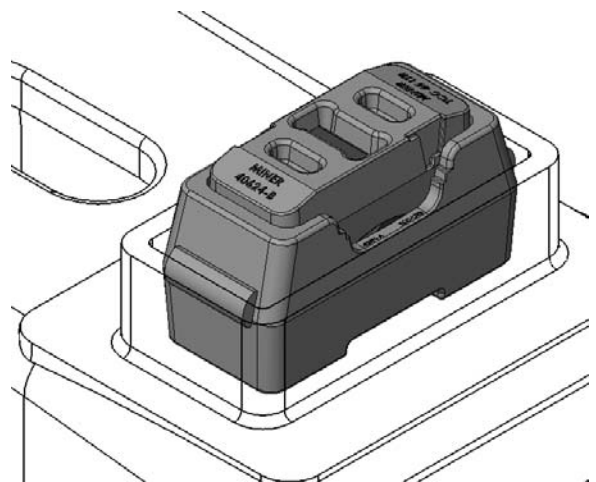
Housing Securement

1. The assembly only requires one set of wedges. Center housing in pocket and insert proper wedges in both ends.
2. Make sure that the flat side of the wedge is against the Miner housing and rounded side is against the pocket.
3. Insure that both wedges are approximately at the same height and that they do not extend beyond the housing top surface.
4. Flare bevel groove weld Wedge to Pocket Wall (1-1/2" minimum length) with 70-ksi minimum tensile strength weld material. If the wedge is below the pocket wall, add reinforcement fillet weld on top. Insure that weld and pocket wall are at least 1/16" below housing wall. All surface preparation and welding must comply with ANSI/AWS D15.1 Railroad Welding Specification – Cars and Locomotives, latest edition, including preheat when required.

Final Assembly

1. After the weld has cooled, place top cap assembly into housing and lower car.
2. The TecsPak® pad must not be exposed to temperature environments higher than 200° F., or 175° F for extended periods of time (2-3 hours).
3. After the side bearings have been installed, and the car body lowered onto the trucks, the set up height will probably be greater than the original set up.
4. Initial set needs to take place and this height will gradually reach the design set-up height.
 - The TecsPak® pads should be maintained at a 40° F. or higher temperature for at least 24 hours before assembly on a car.
 - At temperatures lower than 40° F., this may require at least 24 hours.

DO NOT WELD DIRECTLY ON MINER HOUSING!



1200 East State Street
Geneva, IL 60134
www.minerent.com
(630) 232-3000