



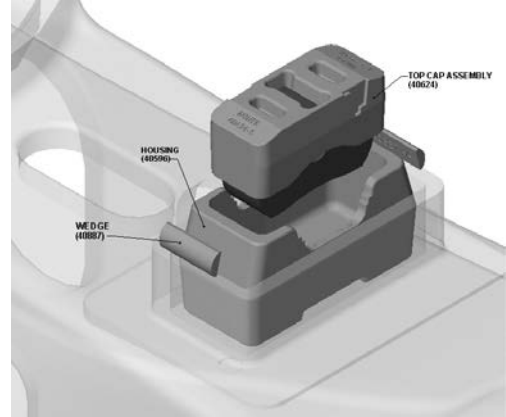
# INSTALLATION INSTRUCTIONS MINER TCC-45 LTRB

The **Long Travel Miner TCC-45 LTRB** constant contact side bearing is designed to retrofit into an existing cast-in block style side bearing tall pocket.

Included in the assembly are:

- TecsPak® top cap assembly
- A housing
- Two wedges.

The TCC-45 LTRB is designed to operate at a set up height of 5/8" and provide 4,500 lbs. of preload and 5/8" of travel.



## Step 1 - 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.
- Ensure 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 Body Wear Plate 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' to 94'	4"	16"
Greater than 94'	4"	18"

## Step 2 - Housing Securement

*.The wedges are designed to install the TCC-45 LTRB into the following pocket dimensions:*

*Pocket Height            3 1/8" – 4 1/4"*  
*Miner housing MUST extend above pocket wall.*

*Minimum Inside Width = 4-1/8 in.*  
*Install with housing shifted toward the outboard side.*

*Pocket Length            9 1/8" – 9 1/4"*  
*(When using one wedge)*  
*If length is between 9 1/4" and 9 1/2", shimming is required.*

*Pocket Length*  
*(When using two wedges)            9 1/2" - 9 5/8"*  
*If length exceeds 9 5/8", Shimming is required.*

### Pocket Adjustment Instructions

Some pockets may require shimming to properly secure the TCC-45 LTRB housing.

Shims to be of mild, weldable steel material.

- Inside Length - If the pocket length is between 9 1/4" and 9 1/2", or exceeds 9 5/8", shim application is required. Determine the shim thickness required to achieve the pocket lengths noted above. Fabricate the shim so that it is 1/4" shorter than the end pocket wall. Leave enough room on the shim width for welding. See Step 3 for Welding Instructions.

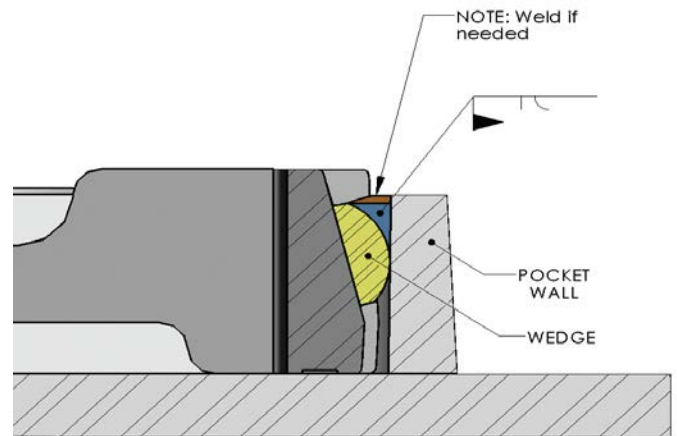
### Pocket Adjustment Instructions

1. Shift housing in the pocket to the outboard side of the bolster.
2. Insert wedge(s) to tighten the fit in the pocket.
3. Ensure that the flat side of the wedge is against the Miner housing and rounded side is against the pocket.
4. Ensure that the wedge(s) do/does not extend above the housing top surface.

### Step 3 – Welding Instructions

All surface preparation and welding must comply with AWS D15.1 Railroad Welding Specification – Cars and Locomotives, latest edition.

1. Grind, clean and prepare for welding
2. For cast pockets, AAR M-214 recommends preheating between 300 °F and 600 °F, not exceeding 600 °F.
3. Materials
  - Type of weld: Flare bevel groove
  - Wedge: Cast Steel ASTM-A-27 Grade 65-35
  - For cast in pockets determine Grade of Steel of the bolster casting: Reference AAR Standard S-312
    - ❖ Grade B bolsters use AWS electrode E7018, or equivalent
    - ❖ Grade B+ bolsters use AWS electrode E8018, or equivalent
    - ❖ Grade C bolsters use AWS electrode E9018, or equivalent
  - For fabricated pocket, identify material and choose appropriate electrode per AWS D15.1

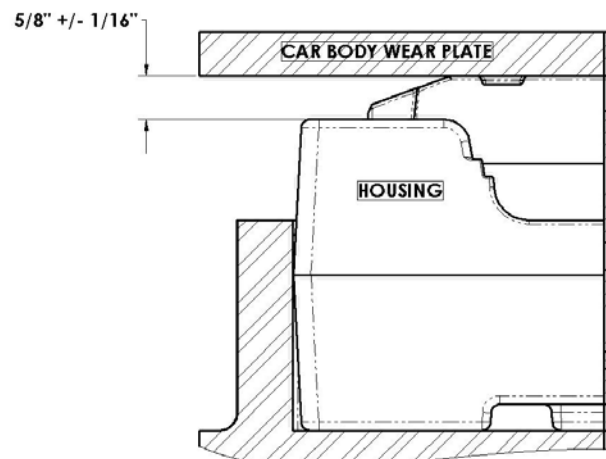


If the wedge is below the pocket wall, add reinforcement fillet weld on top. See Note above.

**DO NOT WELD DIRECTLY ON MINER HOUSING.**

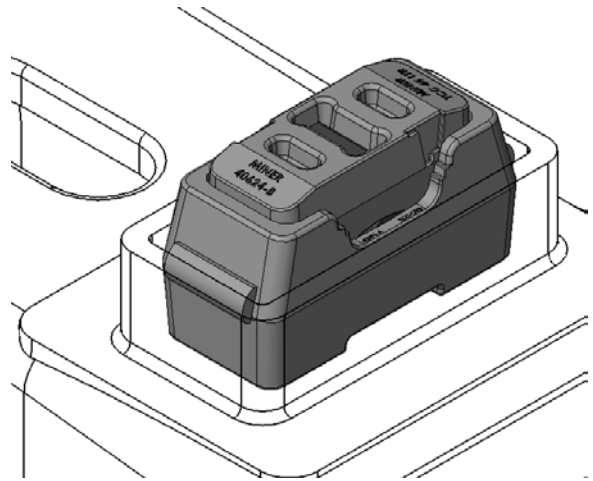
### Step 3 - Set-Up Height

1. The set-up height should be adjusted by measuring between the top corner 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.
2. Adjust shims as necessary to achieve 5/8" +/- 1/16".
3. With new non-metallic liner or lube disc, nominal set up is 11/16" +/- 1/16"



## **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 (93° C), or 175° F (79° C) 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 (4° C) or higher temperature for at least 24 hours before assembly on a car.
  - At temperatures lower than 40° F (4° C), this may require at least 24 hours.



1200 East State Street  
Geneva, IL 60134  
[www.minerent.com](http://www.minerent.com)  
(630) 232-3000