

# LGB 50 foot Modern Boxcar CamPac Box™ Install Guide

Ted Doskaris, 1/23/2021

LGB 50 foot Boxcar comes from factory extremely high from railhead

Shown is LGB 50 foot Modern Boxcar with factory truck mount hook & loop coupler & draft gear box

LGB 50 foot Boxcar realistically lowered via replacement trucks now with body mount 3-D printed CamPac Box™ with Kadee centerset coupler

## Preface

LGB trucks with their oversize wheels do not appear to accurately replicate prototypes that this 1/29 scale model modern external post 50 foot boxcar represents. Moreover, the LGB trucks (shared with other American LGB cars, including 40 footers) have an intrinsic design that raises the car high off the railhead. Accordingly, these trucks are to be replaced with more realistic trucks serving to lower the car about 0.200 inch for a more realistic height from the railhead that's, also, behooving to do when employing body mount centerset couplers. In this regard, the factory truck mount hook & loop couplers along with the trucks are done away with - being replaced by direct fit body mount 3-D printed CamPac coupler boxes which accept more realistic Kadee\* centerset (no offset) "G" scale AAR E type knuckle couplers. (Though car operation on curves is intended for 8 foot diameter or greater, it's possible the car could go a little tighter.)

## Replacement Trucks

**The installer can choose from, and is to obtain, one of the following replacement brands of trucks:**

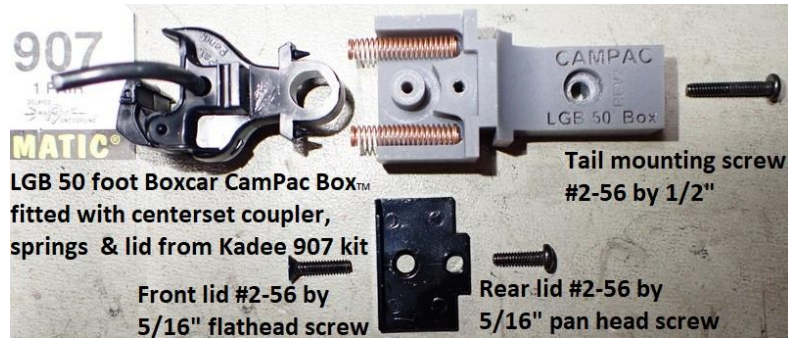
- Kadee 70 ton #973 all metal roller bearing truck pair; **or**
- Aristo-Craft 100 ton plastic roller bearing truck #ART-29100 - *may not be available*; **or**
- USA Trains Intermodal car plastic roller bearing truck #R2034 – *pair needed - wheels #R2093 not included & sold separately.* (**Note:** The LGB metal clad wheels, *though undesirably larger & light weight*, that come with the car can be fitted in the Intermodal truck to save some cost but at lesser reduction in car height.)

## CamPac Kit Parts

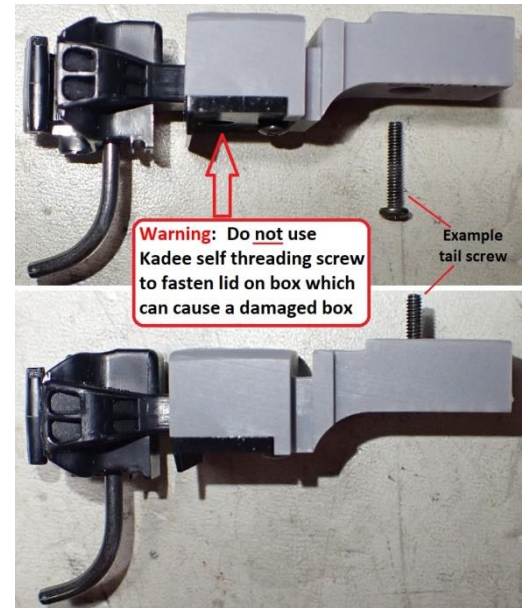
When choosing USA Trains Intermodal truck, the CamPac kit is to add two (2) 3 mm (0.118 inch) thick truck spacers along with two (2) #4 hole size, 0.047 inch thick washers to extend the height of the chassis truck mounting posts. Also, wheels to be used in this truck are to be specified. If LGB wheels are used, the CamPac kit is to further add eight (8) axle tip spacer washers, #4 size, 0.047 inch thick. (same size as used on the chassis truck mounting posts stated above) The kit includes two (2) 3-D resin printed direct fit (no spacers needed) CamPac coupler boxes regardless of truck brand.

\*Kadee is a registered trademark of Kadee Quality Products Co., White City, Oregon, USA.

The installer is to obtain a **Kadee 907 kit**, and install selected parts into the **CamPac Box™** as illustrated below.

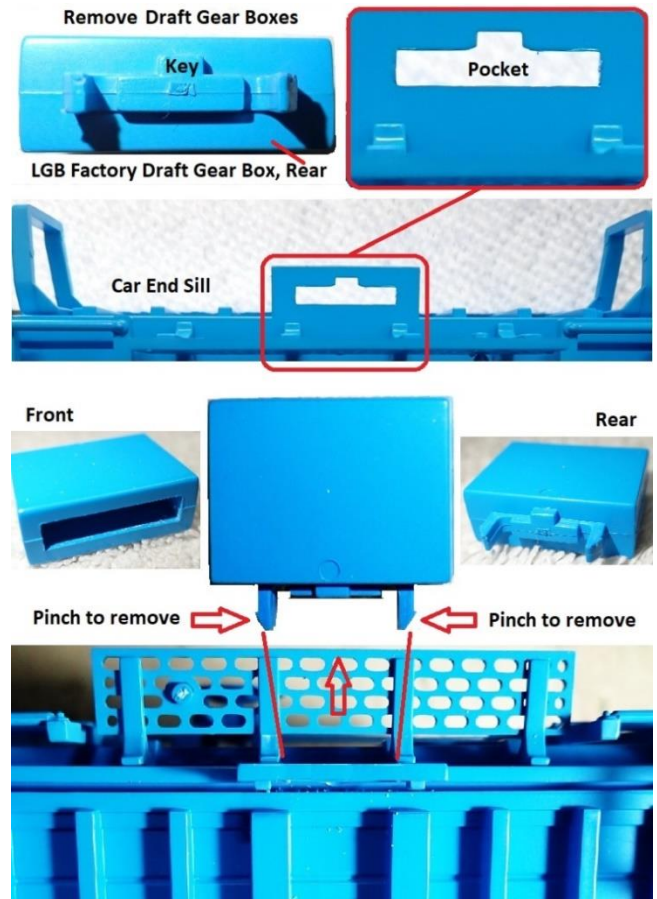
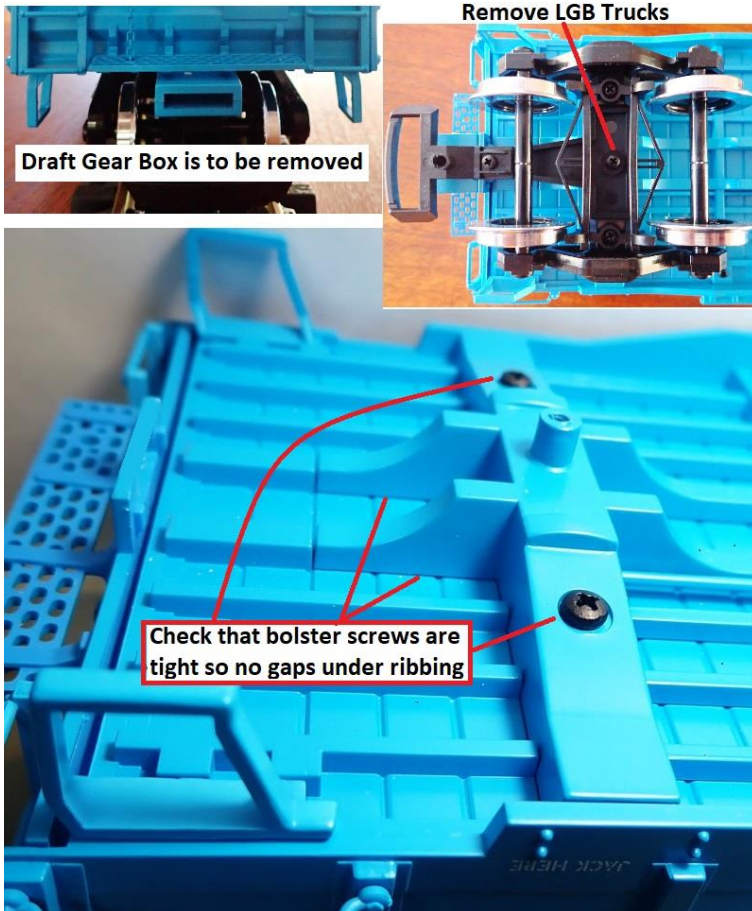


The CamPac kit includes screws to fasten lid and mount boxes on the car along with hardware specific to installer's chosen trucks at time of order. Assembled boxes can be pre-painted to desired color.



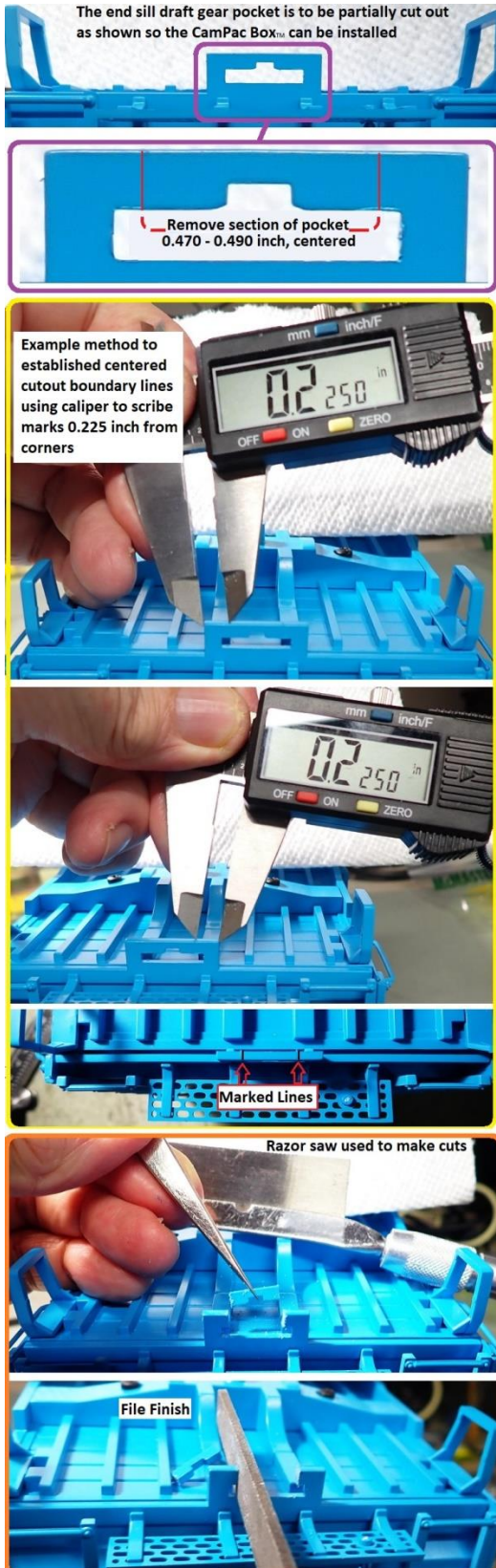
### Car Preparation

Remove the LGB trucks (but save screws & washers), and remove the vestigial draft gear box from the car chassis.





**Modifications to car:** First the draft gear, and then drill hole to mount CamPac Box™ - *using it as template*



A #2-56 by ½ inch screw is used to fasten box to chassis. The box can be installed now, but it will likely need shimming for coupler alignment (described in sheet 7) after trucks mounted – described next.



## Truck Mounting

Each of the three replacement brand choices of trucks useable to lower the car will be described.

See illustrated descriptions below when **Choosing the Kadee 973** all metal roller bearing truck.

There are two methods to mount this truck. **Method 1** is shown below.



**Method 2, shown below**, optimally lowers the car, but it may result in greater wear of the car's plastic bolster during operation.

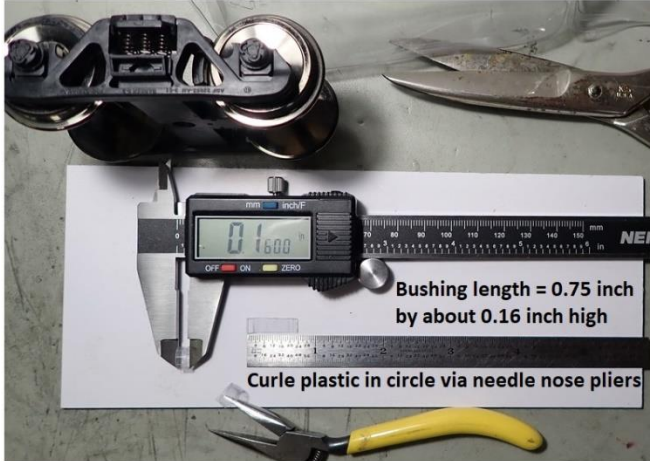


With trucks installed, car coupler alignment with the Kadee 980 gauge will likely require shimming the CamPac Box – described in sheet 7.

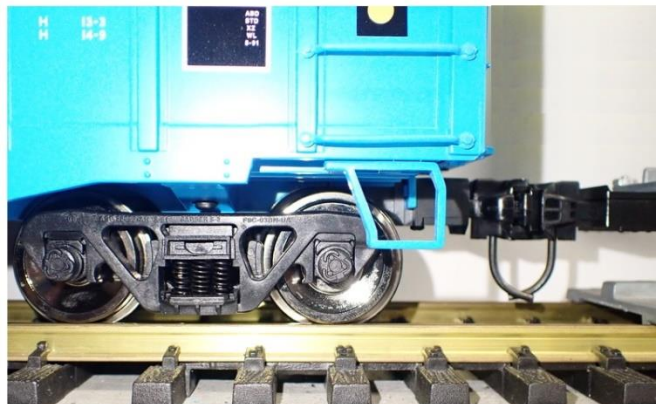
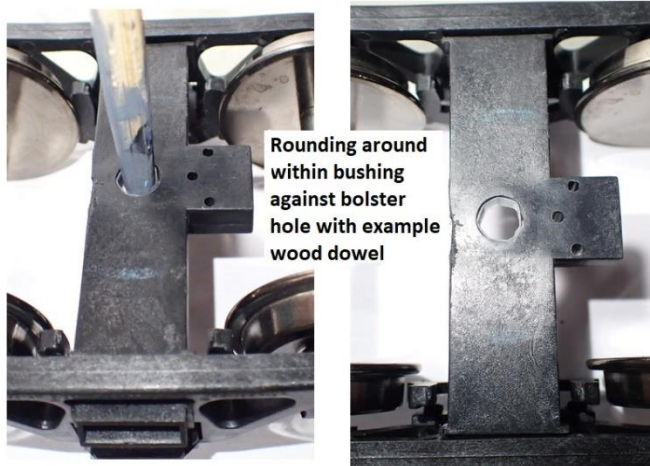
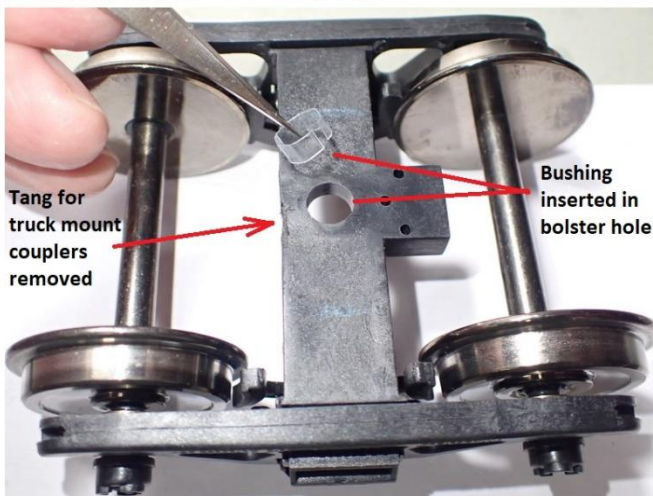


See illustrated descriptions below when **Choosing the Aristo-Craft Barber ART-29100** roller bearing truck.

Installation of Aristo-Craft 100 ton roller bearing truck on LGB 50 foot boxcar needs a thin bushing inserted into its relatively large bolster hole to prevent excessive lateral movement when mounting over / on the car's chassis post. The bushing can be made using a Kadee plastic box package by cutting it to the dimensions as illustrated below.



The LGB screw & washer to mount the LGB truck is used to fasten the Aristo Truck to the chassis post



With trucks installed, coupler alignment with Kadee 980 gauge likely needs CamPac Box™ shimming - described in sheet 7



See illustrated descriptions below when **Choosing the USA Trains Intermodal R2034** roller bearing truck.

There are two possible wheel configurations for the USA Trains Intermodal trucks shown here.

Both configurations utilize two (2) round 3mm (0.118 inch) thick truck spacers per car (*one to be placed over each chassis post*). These are provided in the CamPac kit for this truck choice- *to be requested at time of order*.

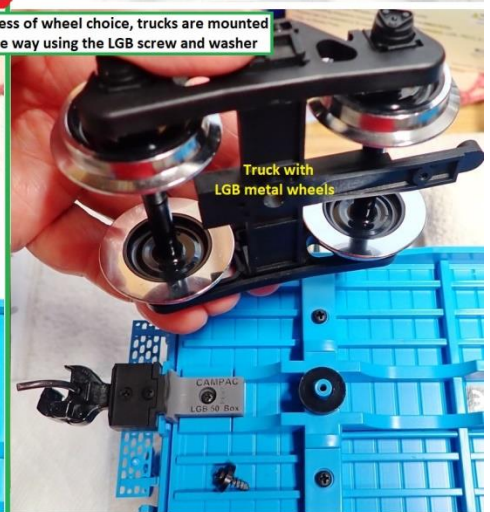
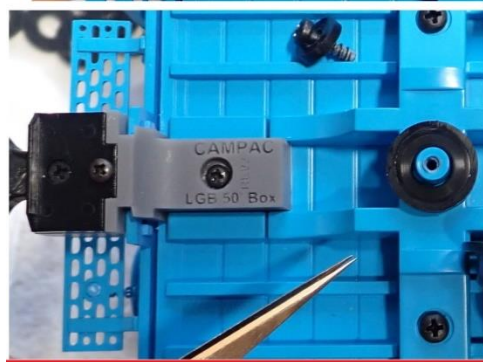
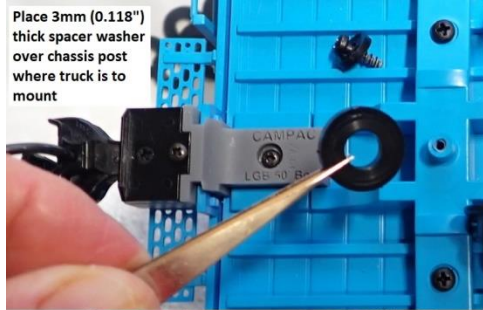
The desired configuration is with the Intermodal trucks fitted with USA Trains R2093 metal wheels

To save costs, the Intermodal trucks can be fitted with the larger metal clad wheels taken from the LGB trucks. This choice needs to include eight (8) #4, 0.047 inch thick, axle tip washers per car in the CamPac kit - *to be requested at time of order*. These washers prevent excessive lateral axle displacement which would increase operational drag on curve track and side to side car "walking".

To mount trucks, a #4 washer (0.047 inch thick) is first to be inserted within the truck's bolster hole to be seated on post. Then fasten truck to post using LGB screw with bigger LGB washer. The #4 washer allows the truck to rotate with screw tightened.



With trucks installed, car coupler alignment with Kadee 980 gauge may need shimming the CamPac Box - described next in sheet 7.



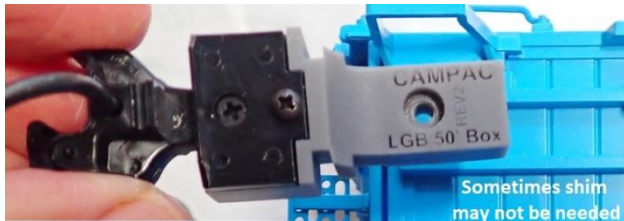
Regardless of wheel choice, trucks are mounted the same way using the LGB screw and washer

For coupler alignment with Kadee 980 gauge, CamPac Box™ shimming will differ for the different brand wheels

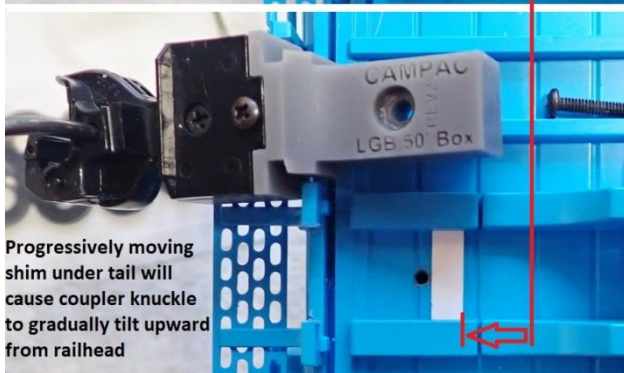
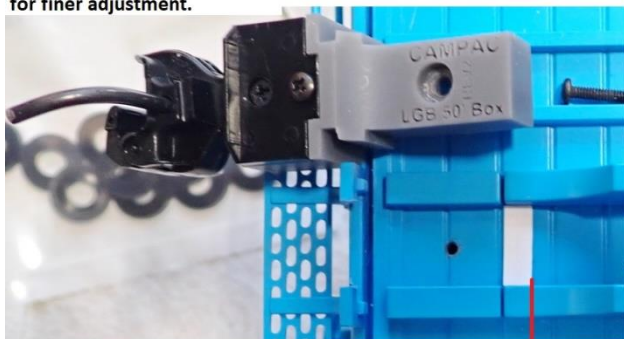


## Shimming CamPac Coupler Box

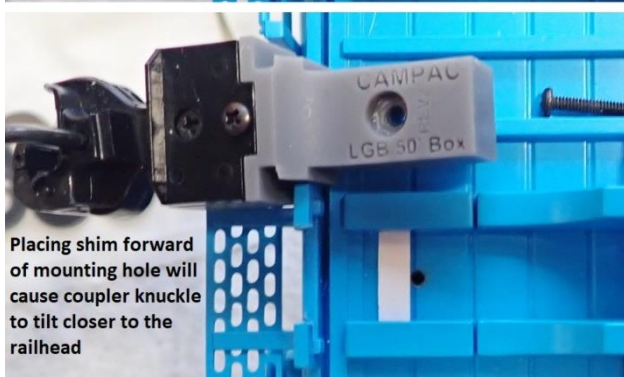
Choices of replacement truck, wheels and mounting methods affects coupler box shimming to align coupler. Shim thickness / positioning will serve to align the coupler with the Kadee 980 gauge.



Coupler box shim location possibilities for different truck & wheel configurations to align coupler with Kadee 980 gauge  
Example 0.010 inch thick shim shown from Kadee 907 kit capsule. Thinner Vinyl or painter's tape can be used for finer adjustment.



Progressively moving shim under tail will cause coupler knuckle to gradually tilt upward from railhead



Placing shim forward of mounting hole will cause coupler knuckle to tilt closer to the railhead

