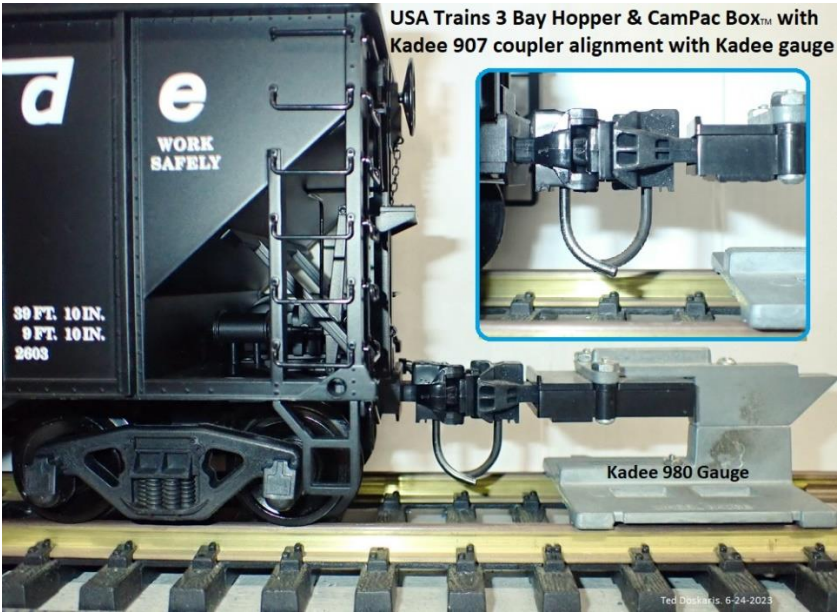


# USA Trains 3 Bay Hopper Car CamPac Box™ Install Guide

Ted Doskaris, 7/12/2023

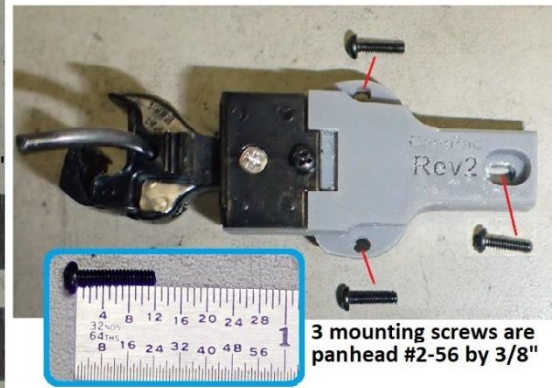


For improved performance whilst providing more prototypical appearance, body mount 3-D printed CamPac Boxes™ fitted with Kadee\* centerset (no offset) "G" scale AAR E type couplers from the 907 kit are employed. Intended operation in a train is on 8 foot or grater diameter curves.

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

**CamPac Kit Parts Include:**

- Two (2) 3-D resin printed direct fit (no spacers needed) CamPac coupler boxes
  - Screws to fasten coupler box lid - shown in illustration below
  - Screws, six (6) pan head #2-56 by 3/8 inch long to mount boxes on the car (3 screws per box)
- (The CamPac Box™ includes a hook to anchor an otherwise flexing chassis to the car's end sill.)*



Ted Doskaris, 6-25-2023

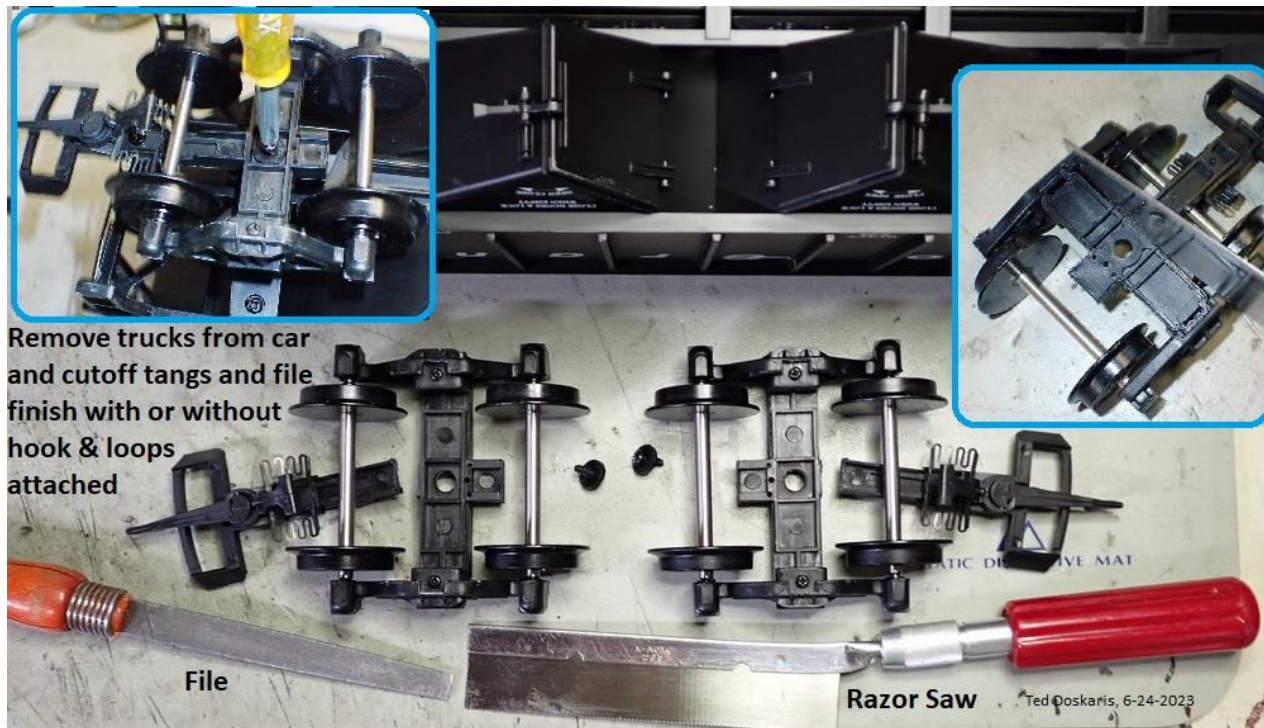
**Not included**, the installer is to obtain the Kadee 907 kit , and assemble the CamPac Boxes™ as illustrated above.

The assembly can be painted to a desired color – example shown below. *Be sure to not let wet paint get into mouth of coupler box & mechanism or coupler may not freely swing.*



## Car Preparation

Remove trucks from car (save screws & washers). Remove from trucks and discard hook & loop couplers and cut off coupler tang – illustrated below.



Remove coupler lift bars (cut levers) typically on cars factory equipped with truck mount couplers – illustrated below

USA Trains 70 ton 3 Bay Hopper Car Coupler Lift Bars (aka Cut Levers)

This straight version is factory default installed with car having truck mounted couplers. This version is to be removed from both ends of the car.

This factory optional bent version included with new car to be used with body mounted couplers. It is to be installed after mounting CamPac boxes.

Shown below with car upside down is example cut lever removal method

Factory cut lever on car, face view

If prying requires too much force (which can damage the chassis) cut the bar

Underside view

Swivel and lift out the cut end adjacent to the "air hose"

With flat blade screwdriver using minimal force, attempt to pry up bar adjacent to plastic "air hose"

Swivel up & down the cut lever corner end going through the plastic eyelet so it can be withdrawn without excessively bending the eyelet so it won't break

Ted Doskaris, 7-11-2023

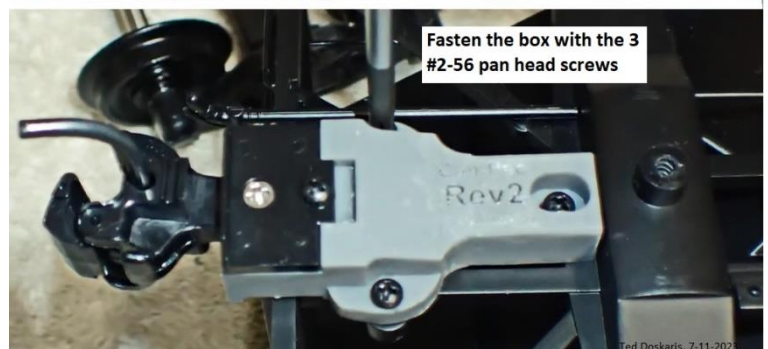
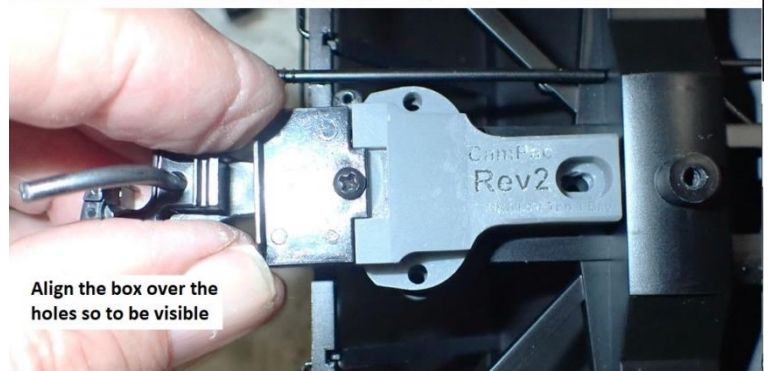
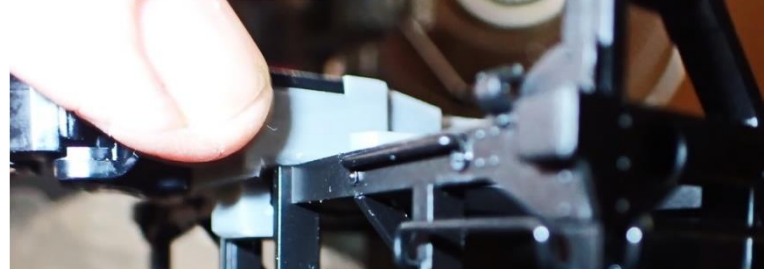
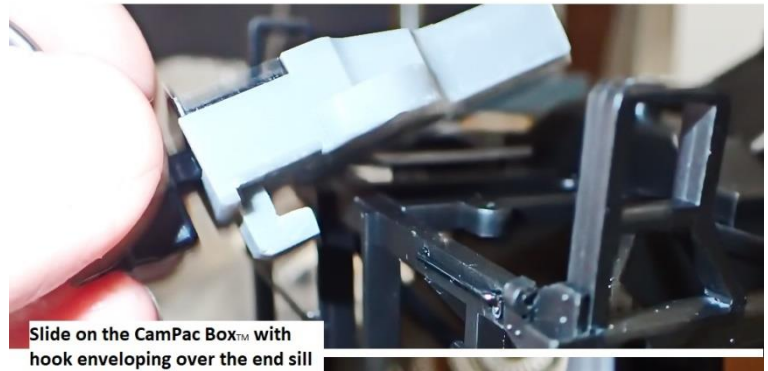
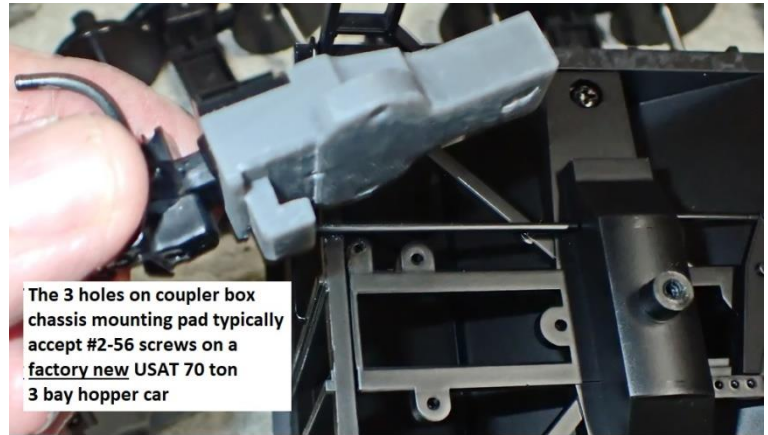
## CamPac Box™ Installation

Install the CamBox™ on both ends of the car as shown in the illustration.

The kit for the CamPac box includes 3 #2-56 screws. The chassis pad holes could be “chased” with a #50 tap drill bit (0.070” diameter) and then tapped. Alternatively, carefully thread in the #2-56 screws by progressively turning them back & forth until seating the CamPac box.

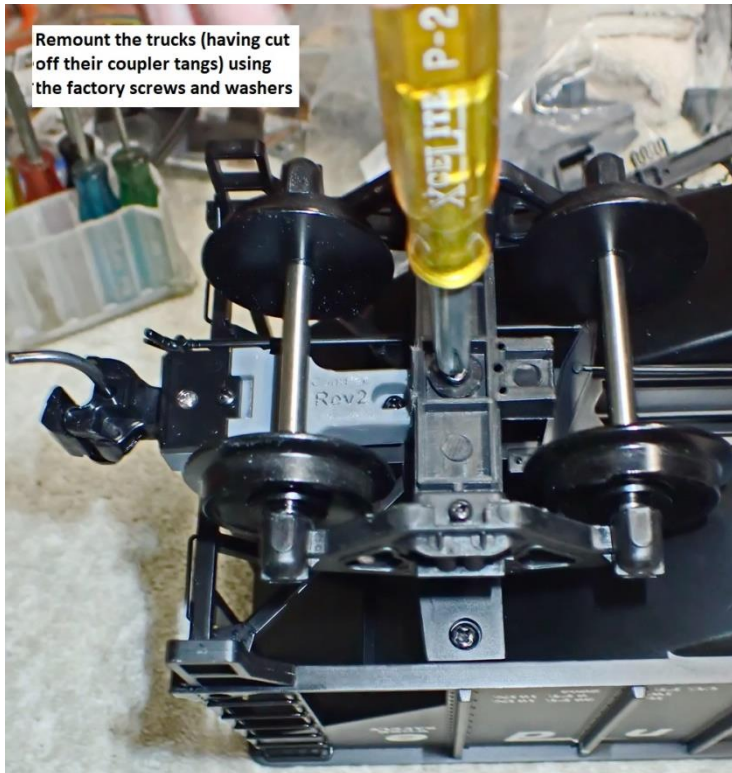
**Advisory:** The chassis coupler box mounting pad holes are factory intended to facilitate accepting the relatively large USA Trains R2011 body mount coupler box assembly which resembles the Kadee 830 or 906 coupler box assemblies. The Kadee kits may include #4 self-threading screws that appear to have a larger diameter than the USAT screws. Using this large size screw may do damage (split) the pad holes. The 3 holes appear to be sized to accept #2 screws.

Because the CamPac box is notably smaller than the USAT and Kadee boxes, the trucks have more room to rotate for car operation tighter curves.

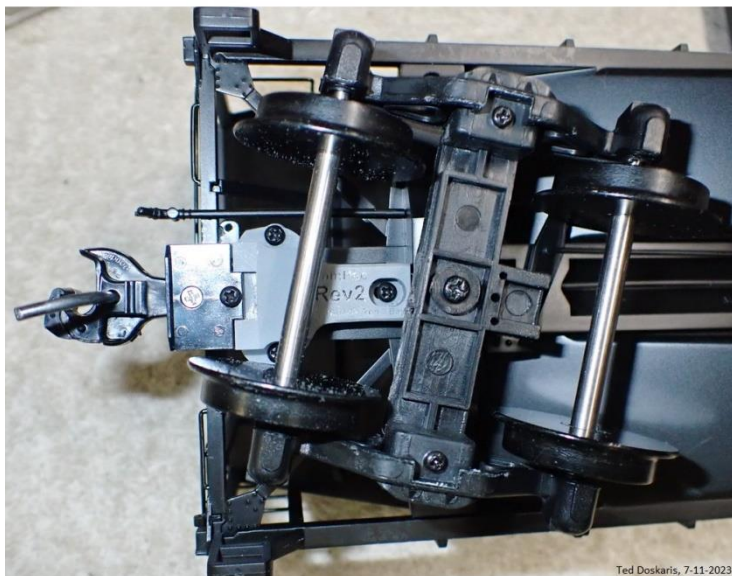


Install the USA Trains optional coupler lift bars (cut levers) intended for body mounted boxes. Also, remount the trucks after having removed the coupler tang.

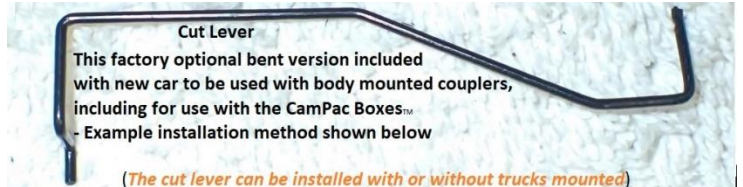
When installing the cut levers, it does not matter if trucks are mounted first.



Remount the trucks (having cut off their coupler tangs) using the factory screws and washers

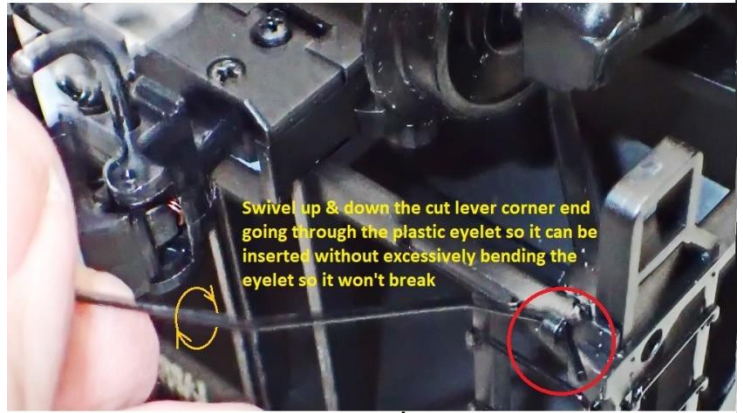


Ted Doskaris, 7-11-2023

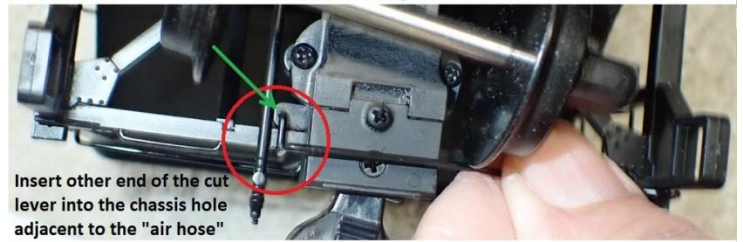


**Cut Lever**  
This factory optional bent version included with new car to be used with body mounted couplers, including for use with the CamPac Boxes™ - Example installation method shown below

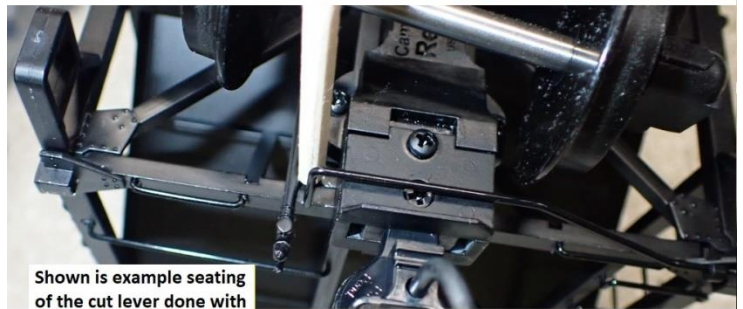
*(The cut lever can be installed with or without trucks mounted)*



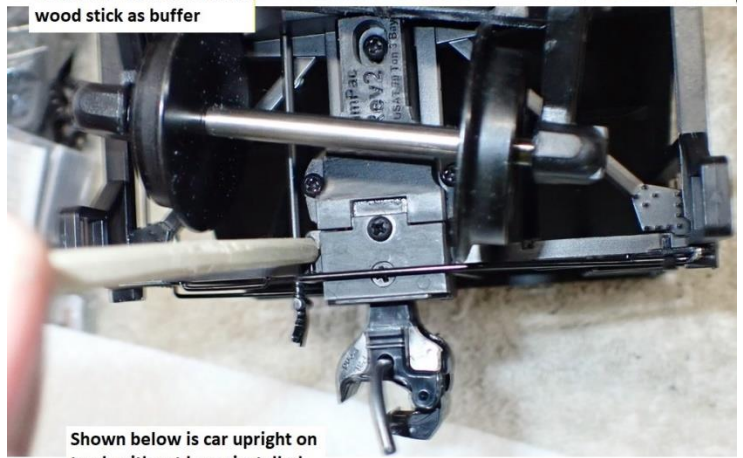
Swivel up & down the cut lever corner end going through the plastic eyelet so it can be inserted without excessively bending the eyelet so it won't break



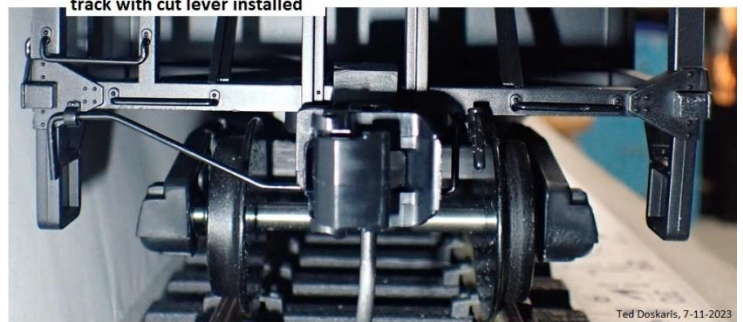
Insert other end of the cut lever into the chassis hole adjacent to the "air hose"



Shown is example seating of the cut lever done with wood stick as buffer



Shown below is car upright on track with cut lever installed



Ted Doskaris, 7-11-2023