

Installation Guide

AML GP60 & CamPac Components

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AML GP60 equipped with CamPac Box™ and Pilot Plug
CamPac box fitted with
centerset coupler, springs
and lid from Kadee 907 kit



Example worst case USA Trains long Heavyweight Car



Operation capable down to 8 foot diameter track curve



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Installing 3-D Printed Components, including coupler boxes and pilot plugs

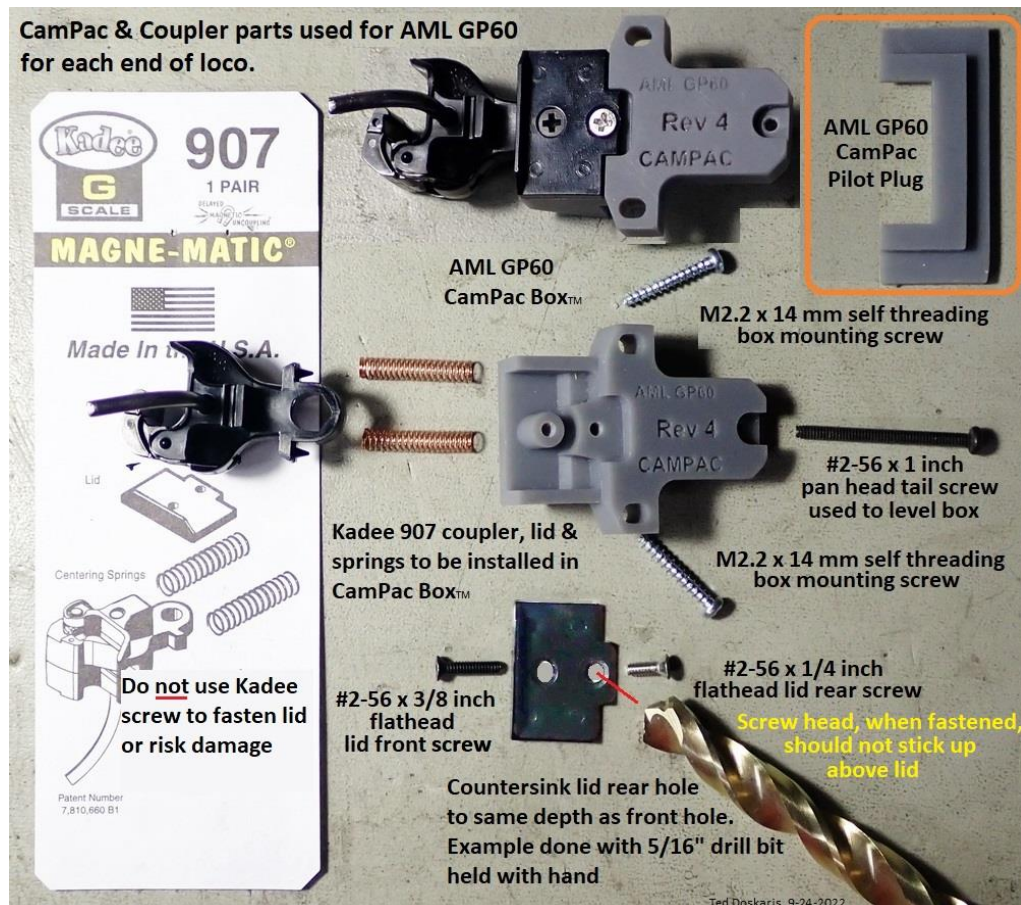
Overview

- Instructions are provided as a guide for the installer of 3-D printed CamPac boxes having integrated fairings & pilot plugs on the American Main Line (AML) brand GP60 “G” (1/29) scale Diesel locomotive¹.
- What’s done to the front of the loco is also to be done to the rear in the same way as described in this guide (The front is illustrated because it includes the factory snow plow - not relevant to the install).
- The installer is to have access to tools and have a modicum of skill to for the installation of parts.
- Tools needed include Phillips type P1 screwdriver (preferably with small diameter shank), drill bit (~5/16”) used to “countersink” small rear hole in coupler box lid.
- *CamPac* 3-D printed components include coupler boxes (2), pilot plugs (2). Other items are #2-56 long pan head screw (2); #2-56 flathead screw (4); M2.2 x 14mm self-threading screw (4) - illustrated below
- Not included: **The installer will need to supply a Kadее 907 kit (1)** of which all (but the plastic box and lid screw) will be fitted onto each *CamPac* Box.

Installation Steps:

Step 1 – Coupler Box Preparation

Install selected parts from a Kadее² 907 Kit in the *CamPac* Box. (Box to be mounted later)



¹ **Caution:** When operating the locomotive, abrupt excess force (e.g. collision/yanking) to the coupler may result in damage to coupler, coupler box, or other components.

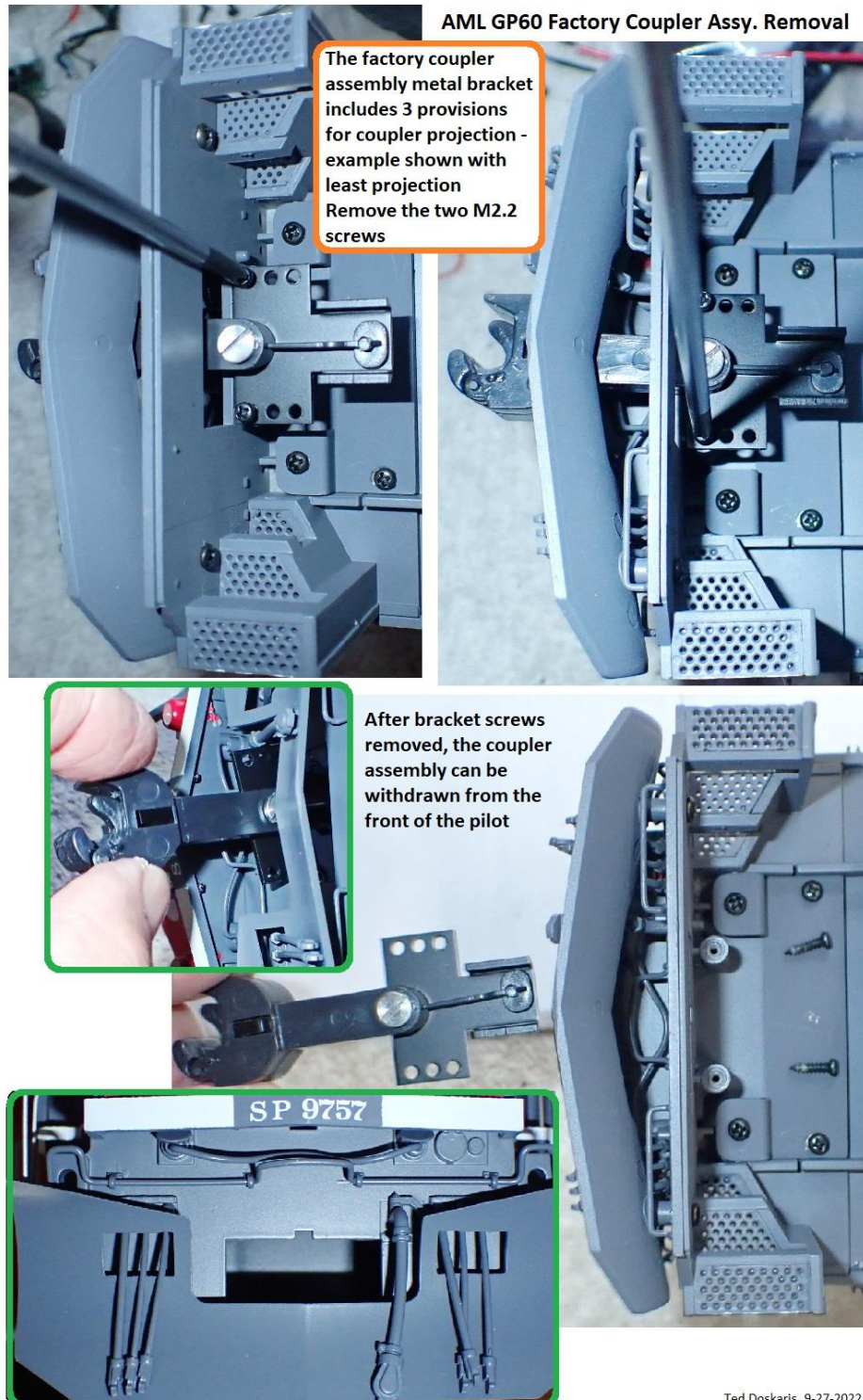
² Kadее is a registered trademark of Kadее Quality Products Co., White City, Oregon, USA.

Step 2 - Loco Placement

Carefully place the GP60 on its back (with underbody facing up) on a soft surface in such a way so that any delicate components (e.g. horns) are not at risk of damage. Ensure it's braced so not to fall over.

Step 3 - Parts to Remove

Remove the factory front and rear knuckle coupler assemblies from the chassis – example front shown .



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Step 4a - Coupler Box Installation

To aid in understanding, illustrated is how the pilot plug is oriented with respect to the CamPac box.

The CamPac box (with pre-installed Kadee centerset coupler, springs & lid from the Kadee 907 kit) is to be first inserted through the pilot opening.

Then (by manipulating the box as illustrated) the pilot plug is inserted and seated in the back side of the loco pilot.

The pilot plug, once seated, will mechanically “lock-in” the coupler box assembly.

Do **not** glue in the pilot plug as that will prevent removal of the box and its lid should the coupler need servicing. (Removing the box & plug is done in reverse order.)



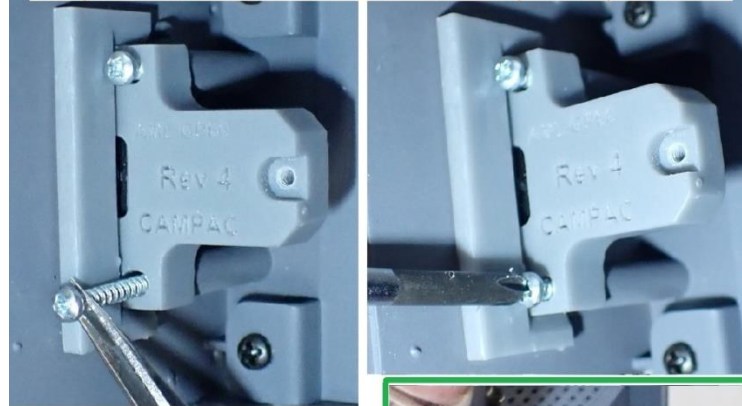
Step 4b - Coupler Box Mounting

First, the box assembly is loosely fastened using screws as illustrated.

The long tail screw is used to level the box - shown with method on next step, 4c.



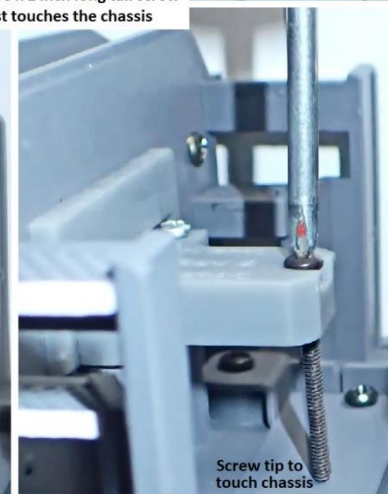
Insert M2.2 x 14mm mounting screws at ears of box, and thread into chassis posts until seated, and then back out screws about 1 turn. **Important Advisory:** When progressively threading in screws, rotate the screwdriver back & forth as the threads cut deeper into the posts holes.



With ear screws not completely seated, box tail should be able to wiggle a little up & down



Thread in #2-56 x 1 inch long tail screw until its tip just touches the chassis

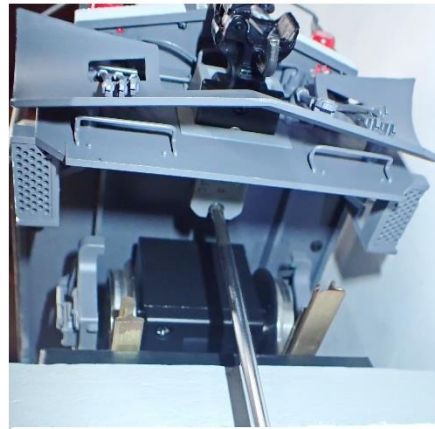


Screw tip to touch chassis

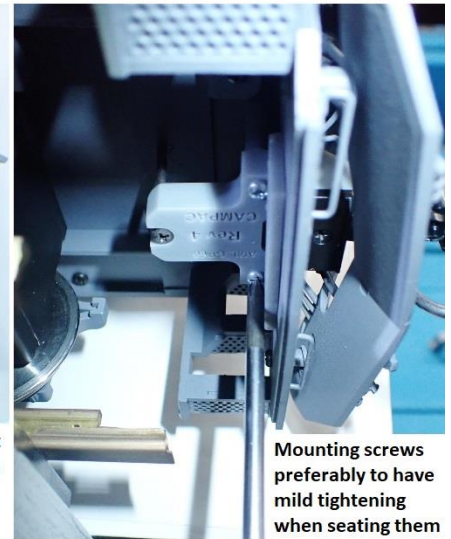
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Step 4c - Coupler Box Leveling

Finally, level the CamPac box assembly as illustrated



Check & align coupler with Kadee coupler height gauge by iteratively adjusting tail screw and then sliding loco back on track with gauge to check. Seating the mounting screws at the box ears also can affect the adjustment.



Illustrated is a variety of possible AML GP60 lash-ups given the projection of the CamPac coupler boxes fitted with Kadee centerset couplers to like kind Kadee equipped items.

Operation of the GP60 when equipped with CamPac boxes is intended to be down to 8 foot diameter curves.



Operational Advisory:

Layouts with "S" bends having tight curves (8 to 10 foot in diameter and possibly greater) are to have a straight track section the length of the longest car (e.g. USA Trains Heavyweight passenger car) or greater between opposite diverging paths, or risk the GP60 coupled car, and possibly the GP60 itself, to derail.

!!!Done!!!

Congratulations

The AML GP60 looks like the prototype with capability to perform on tight curves when coupled to other body mounted locos or rolling stock having *properly equipped* Kadee centerset type couplers.