

Application for a NWSL Stanton Drive: V&T McKeen Car

October 2017



Intro

One of my favorite models is the Precision Scale V&T McKeen Car:

- ▶ Long, sleek lines
- ▶ Unique 'porthole' windows
- ▶ Simple yet elegant as it glides along the layout
- ▶ Fascinating history

Intro

The best part:

- ▶ We have one to be admired and enjoyed for future generations!



Intro

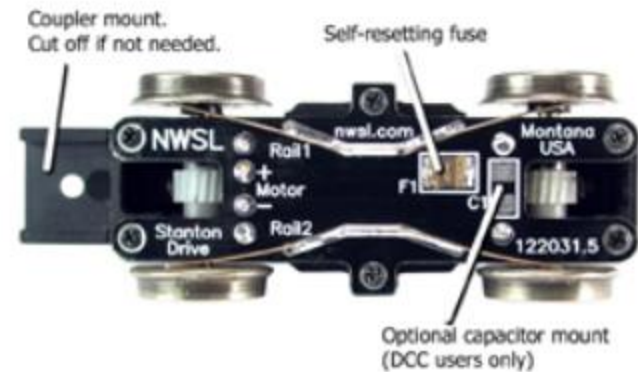
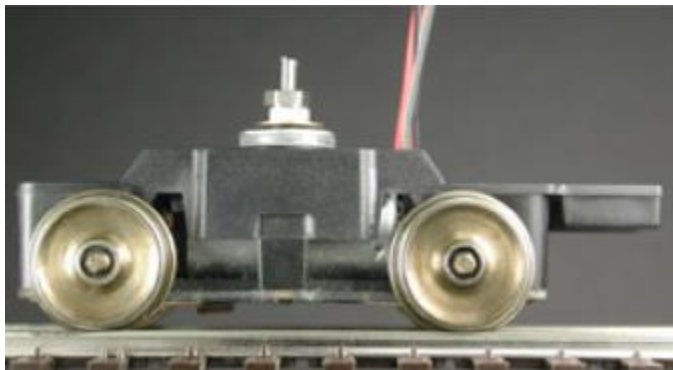
The Achilles heel with my model is the power truck:

- ▶ Fairly sophisticated power truck but inconsistent operation:
 - ▶ Noisy at times
 - ▶ Herky-jerky motion
 - ▶ No amount of tuning/coaxing has eliminated these issues

Intro

My Solution:

- ▶ Replace the existing power truck with a modern NWSL Stanton Drive power truck



Intro

We will use the following 4-step process to retrofit the Stanton drive:

- ▶ Remove the existing PSC power truck
- ▶ Retrofit the existing side frames to the Stanton drive
- ▶ Install the Stanton drive
- ▶ Level up frame and adjust rear coupler

Bill of Materials

Tools:

- ▶ Screw drivers, Xacto knife, Needle nose pliers, drills
- ▶ NWSL 3064-5, 1.4mm Metric Tap Set
- ▶ Medium viscosity ACC glue

Materials:

- ▶ NWSL Stanton Drive - 39278-4
- ▶ Styrene strip 0.040" x 0.125", 0.040" x 0.50"
- ▶ 1.4mm screws and matching thrust washers

Cost < \$100

Time:

- ▶ Couple of evenings

Bill of Materials

NWSL 39278-4
33"/110, 7'0" WB
1210 Stanton Drive
HO Scale
**Self-contained, DCC-
ready, fully functional
power truck**

NWSL 12×15 motor,
7'0" wheelbase,
33"/110 NS wheels
flush 2.0mm x .797" axle

Made in USA by *Designed by Neil Stanton*
North West Short Line
Box 1349 Hamilton, MT 59840 USA
www.NWSL.com

Remove the Existing PSC Drive

- ▶ Disconnect (cut) the drive wires for the headlight
- ▶ Remove the existing PSC drive
- ▶ Remove the existing drive support bracket



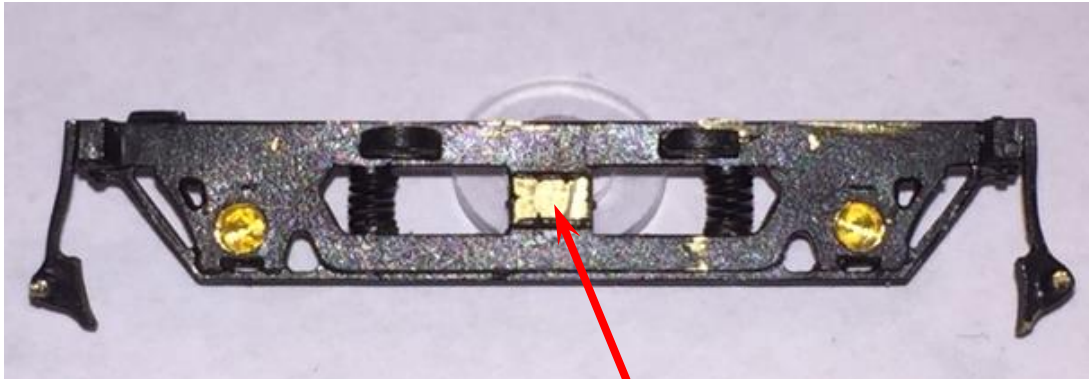
Remove existing side frames

- ▶ Remove the existing side frames from the PSC power truck for Retro-fit to the Stanton Drive

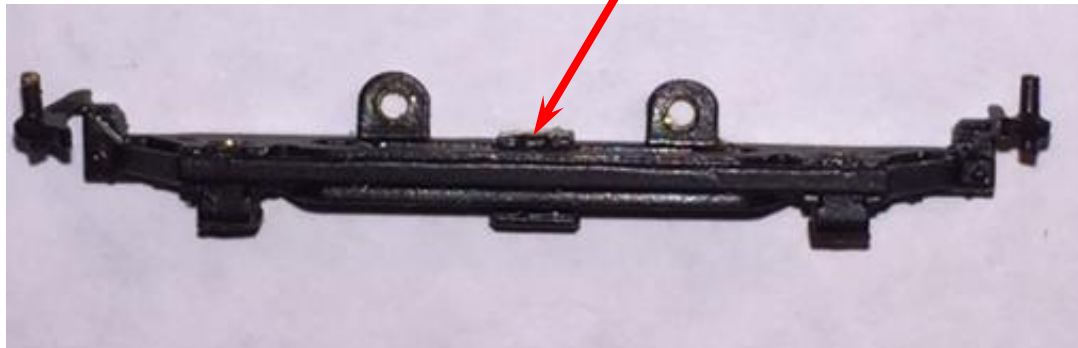


Retrofit the Side Frames

- ▶ Discard the cross rods
- ▶ Remove leaf spring inside of each side frame



Remove internal leaf spring



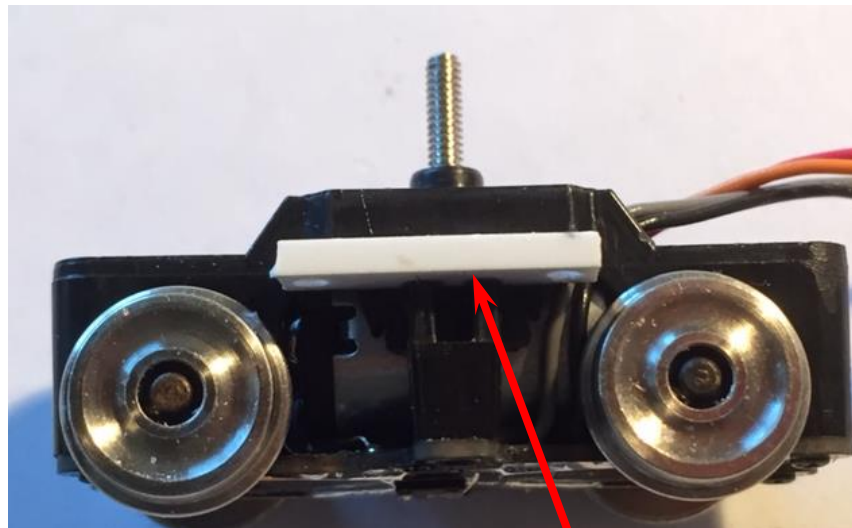
Retrofit the Side Frames (continued)

- ▶ Fab and install side frame brackets from 0.040" x 0.125" styrene
- ▶ Mark mounting holes and drill #53 clearance holes thru
- ▶ **Notes** - fit bracket to match *each* side frame separately. Side frame will hang from bottom of bracket.



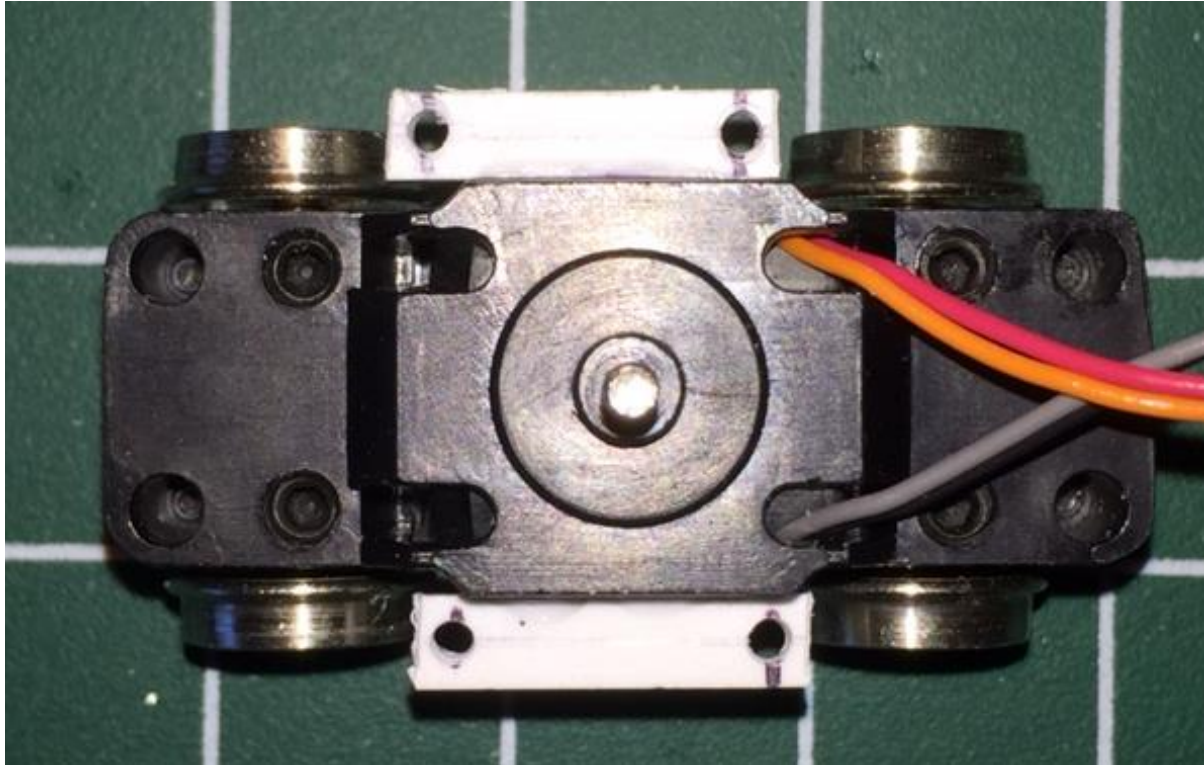
Retrofit the Side Frames (continued)

- ▶ Remove coupler tab from Stanton Drive
- ▶ Position and glue brackets to Stanton Drive:
 - ▶ Mount on top of side tabs, position fore/aft (with side frame attached) to align axle centerlines



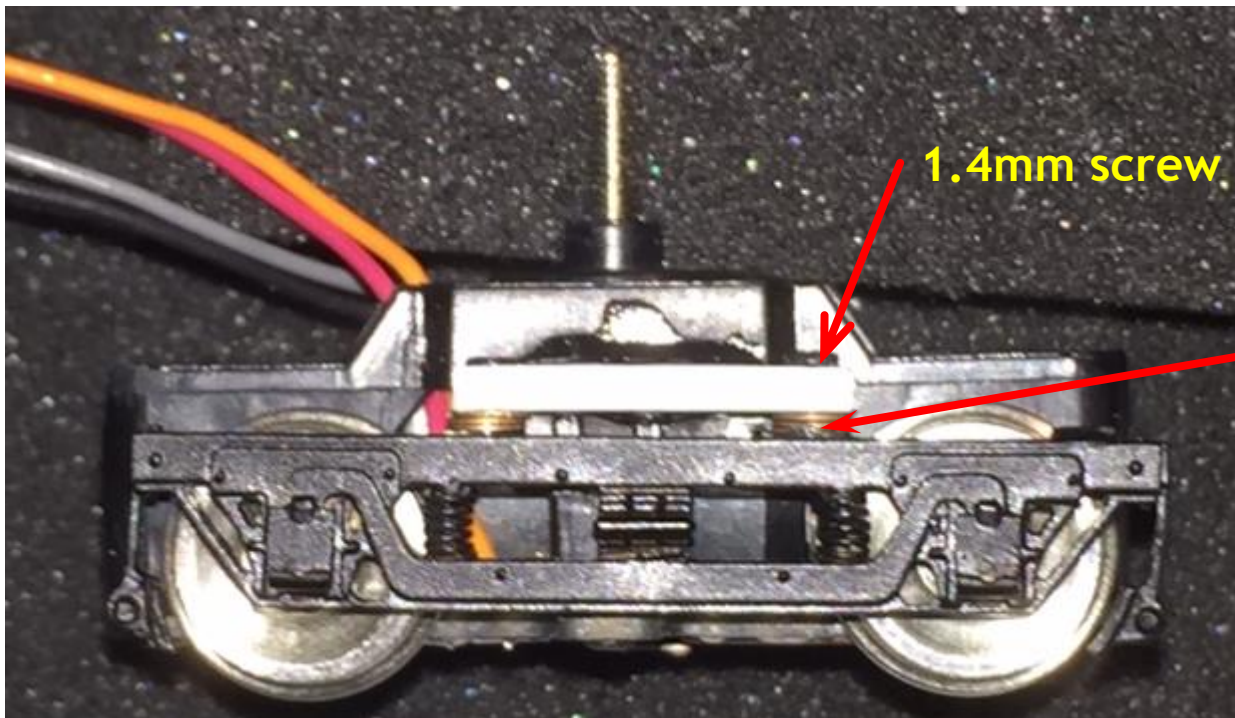
Side tabs

Retrofit the Side Frames (continued)



Retrofit the Side Frames (continued)

- ▶ Tap 1.4mm mounting ears on each side frame
- ▶ Mount from bottom of each bracket shimming with thrust washers to match axle centerlines

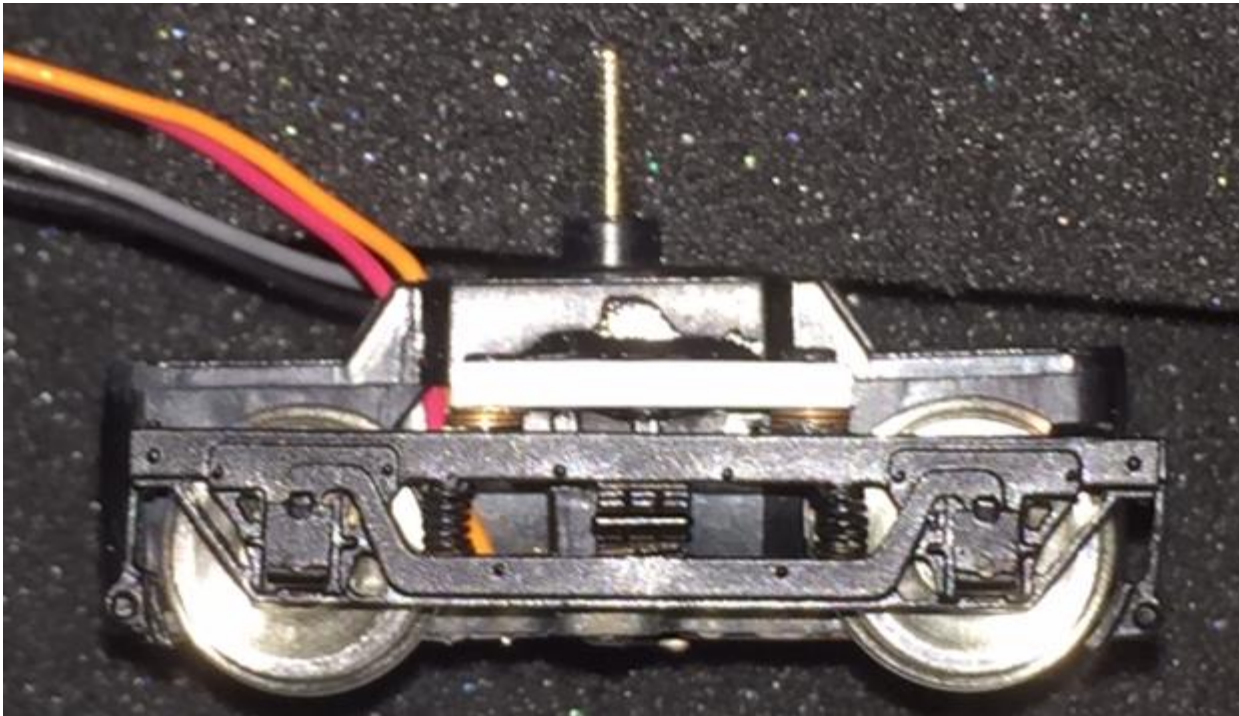


1.4mm screw

Thrust Washer Shims

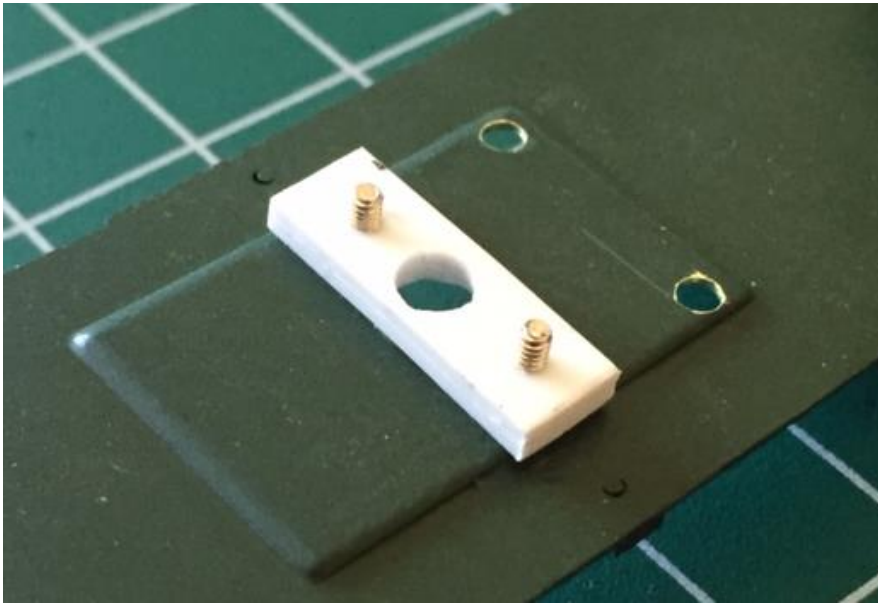
Retrofit the Side Frames (continued)

Celebrate- the most tedious part is behind you!!!

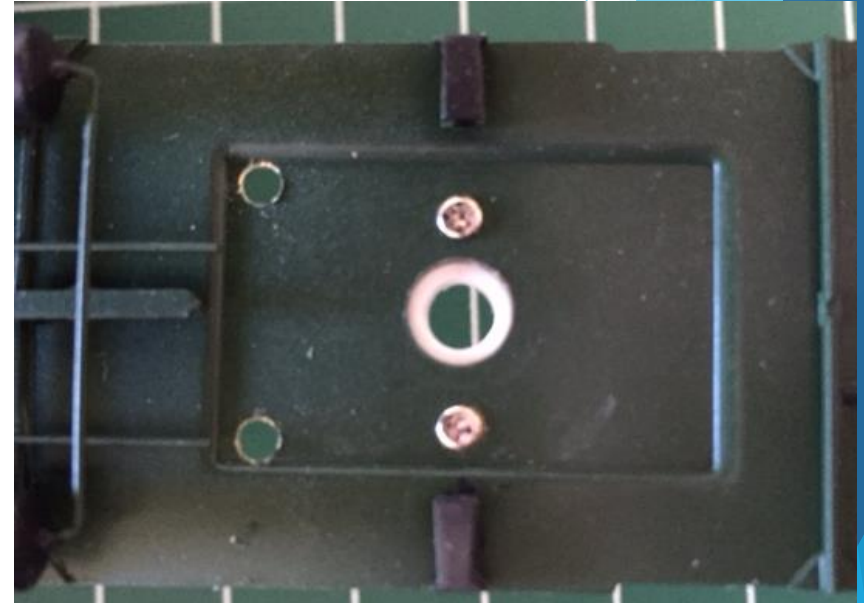


Install the Stanton Drive

- ▶ Fab new mounting bracket from 0.040" x 0.5" styrene - drill and tap for two 1.4mm mounting screws and mounting boss for Stanton Drive.



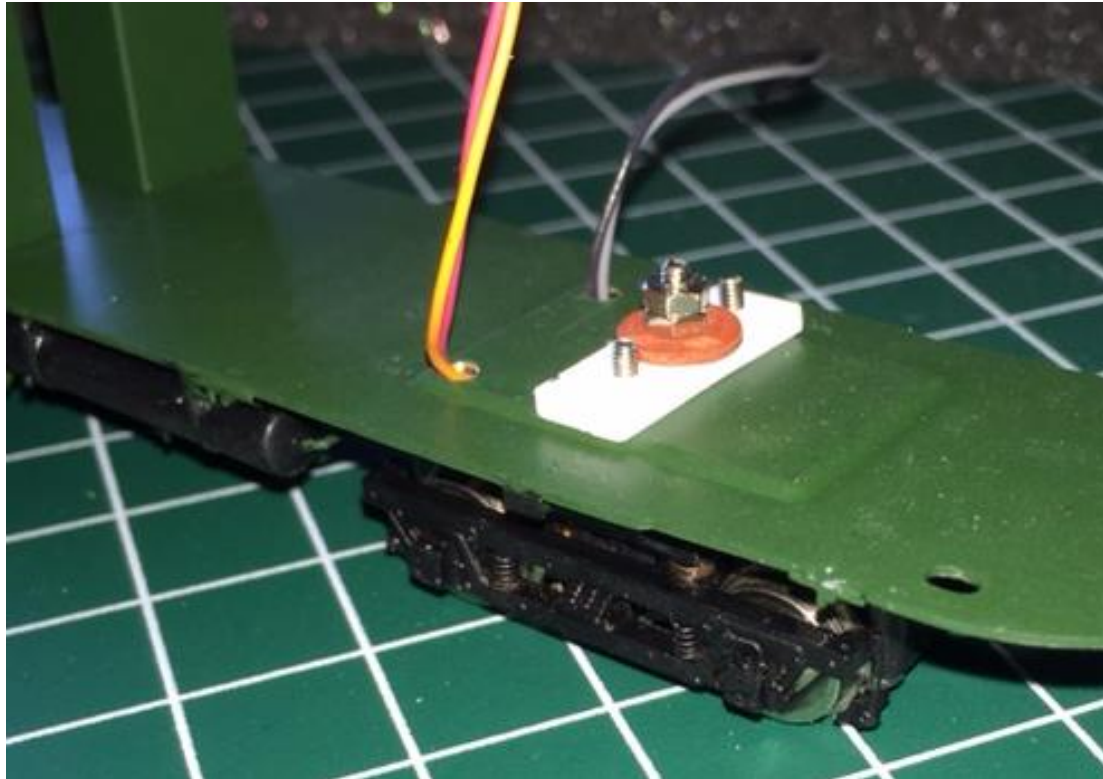
Top of Frame



Bottom of Frame

Install the Stanton Drive (continued)

- ▶ Install Stanton drive reusing fiber washer and jam nuts supplied with drive
- ▶ Feed the wires up through the existing holes in the frame.



Level Up the Frame

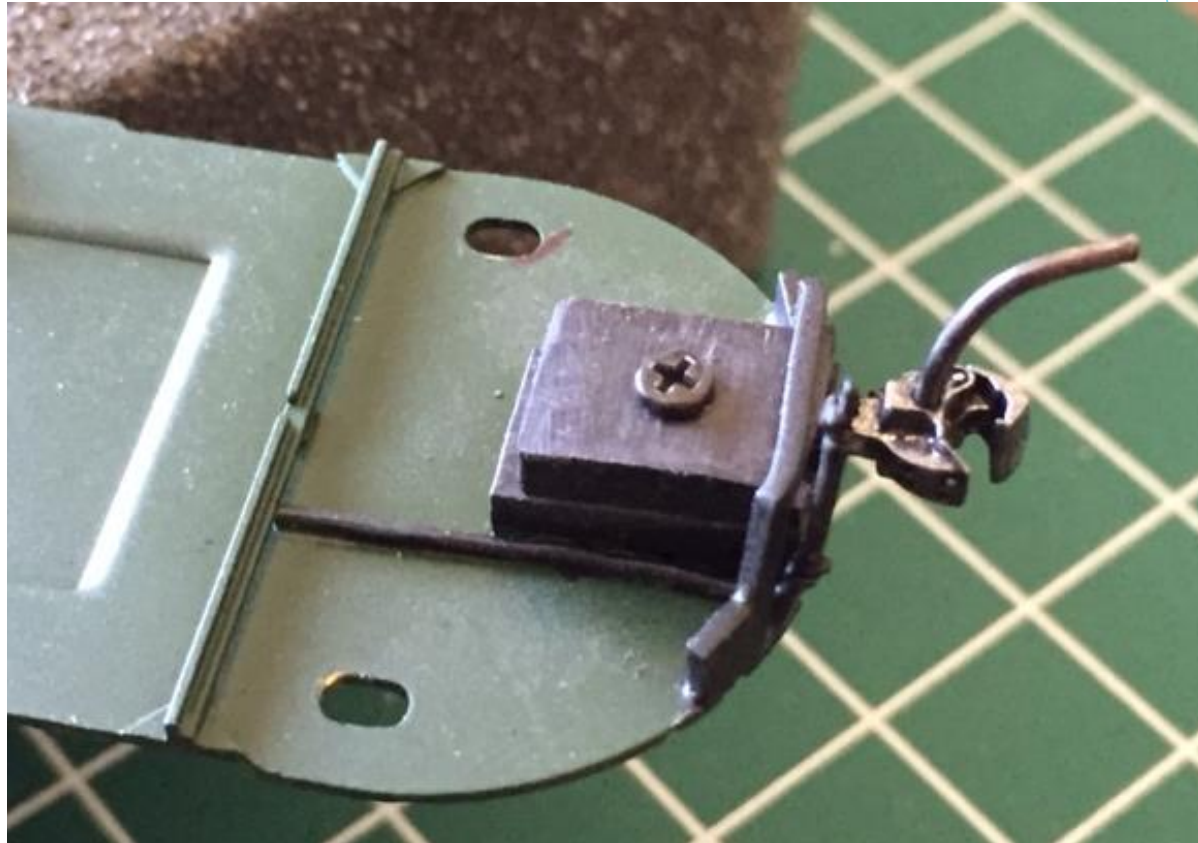
- ▶ The Stanton Drive sits slightly higher than the original. Shim the front truck with a washer(s) to level up the frame.



Shim front truck

Fit Up Rear Coupler

- ▶ Shim/Shave rear coupler. I used a Kadee No. 158 coupler box/scale coupler with a custom spacer block.



Finished Product



Closing Comments

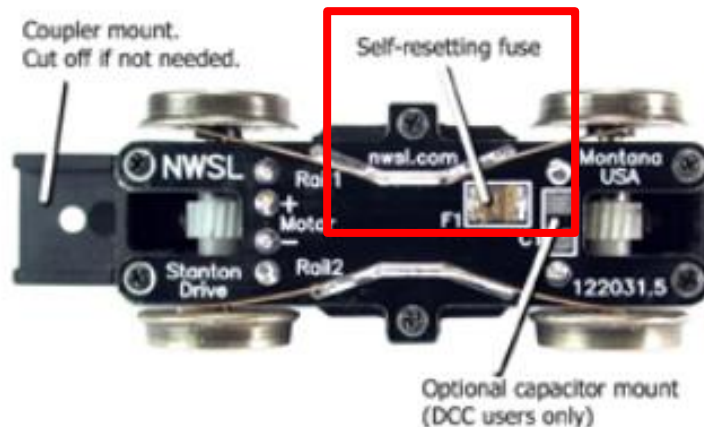
Finishing Tips:

- ▶ There are the 6 wires for a decoder with the Stanton Drive. You can use just two of these for the headlight, or install a decoder and speaker.
- ▶ Now it's ready to run!!

Closing Comments

Plusses and minuses of this installation:

- ▶ The model runs quietly and smoothly - much better than it originally did!
- ▶ It sits slightly higher than with the original drive.
- ▶ The Stanton Drive is a low rider - the fuse on the bottom of the unit can catch on switch arms and uncoupling magnets on the track (grrrrrrr)



Closing Comments

Questions/Comments???

Contact Information

For Further Info:

Ray Davis (details from this presentation, questions, free clinics/workshops for your group)

- ▶ E-mail: hillyard.shops@gmail.com
- ▶ Website: www.hillyardshops.com

Current Website Topics

- ▶ **Upgrading the Drive Train in Older Brass Locomotives**
- ▶ **Options if there is not room for a Torque Arm Drive**
- ▶ **Application for a NWSL Stanton Drive Power Truck**

In-The -Works Website Topics

- ▶ **Balancing your engine**
- ▶ **How to fix a driver that no longer has a press fit on the shaft**
- ▶ **Quartering splined driver shafts**
- ▶ **A tool to ensure your drivers are square on the shaft**