

Modifying the Walthers Heavyweight Chair Car to a 1524 series Lounge car.
By Colin Kikawa

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After reading Steve Sandifer's online review of the Walther 3060-30series chair car it is mentioned that with some modifications, it can be modified to a 1524 -1531 Lounge Dorm car. The length, number of windows, window placement and steam ejection air conditioning (SEAC) details are basically correct. An excellent reference source on the history, dimensions and interior layout of the Lounge Dorm Cars is detailed in the Society publication, "Dining and Beverage Cars of the Santa Fe – Featuring Service by Fred Harvey". The chair cars were originally delivered in 1930 and most were equipped with SEAC in 1936 and configured as Chair Smokers. Conversions to Lounge Dorms were done in Topeka in 1948. Refer to the Society publication for details.



Getting Started.

There are a number of modifications the modeler has to make to yield a welcome addition to their passenger consists. Some are relatively simple, and others are a bit more involved.

Removing the roof is the first order of business as the paint needs to be stripped. Instructions are provided by Walthers on how to remove the roof. Proceed to remove the interior floor with attached seats, end vestibules and trucks. Gently "pop out" all windows. The sides and ends of the Walters cars can be also be separated from the inner shell. Don't worry if the retaining tabs are broken, the sides can be re-glued and there are pins and sockets to ensure proper alignment. Scribe roof and sides to reference alignment and set all parts aside as you'll need them for later. Paint stripping for Walthers cars can be done with 95% isopropyl alcohol. Soak for approximately 60 minutes and scrub with an old tooth brush. Strip the paint from the body, roof and vestibules. Wash the car off and let dry.

Window closure and shortening:

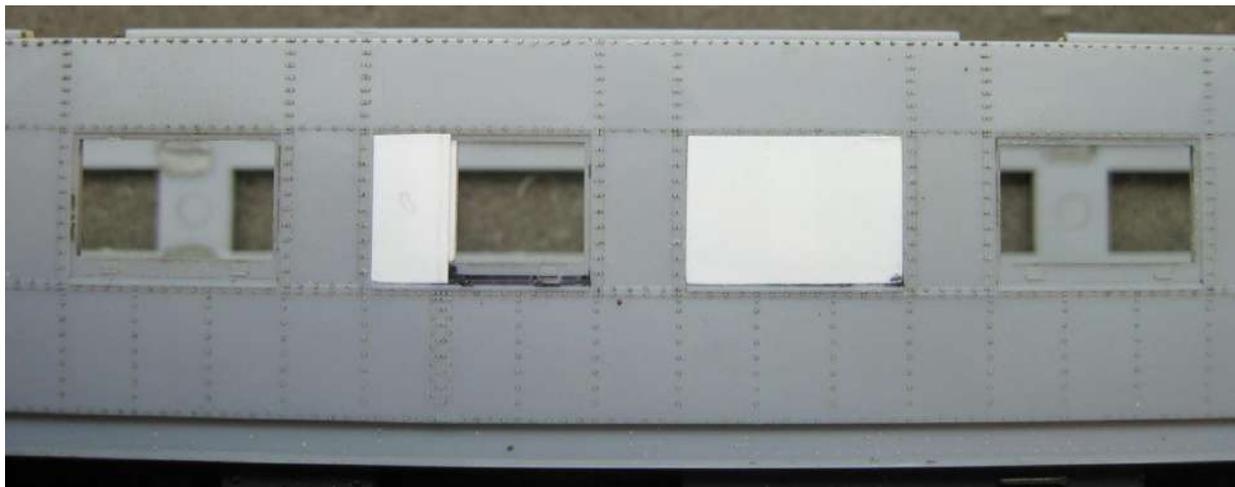
On the ducted side, the 4th window (not counting the lavatory) from the left will be shortened by 15 scale inches and the 5th window will be closed over. Using a new blade, carve off the single widow latch from the area to be plated over on the shortened window and both latches on the window being closed. Save the latches as one will be re-glued in the shortened window section, see below.

Frame the shortened window with 0.30" x 0.40" styrene and use 0.010" for the plating. The fifth window will be completed closed and plated over. Add a center brace (with 0.30" x 0.60" styrene) and carefully

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fit a plate over the window opening using 0.010" styrene. Fill and sand as necessary. Add a vertical rivet strip on the shortened window using Archer Transfer HO Scale 5/8 rivet decals.



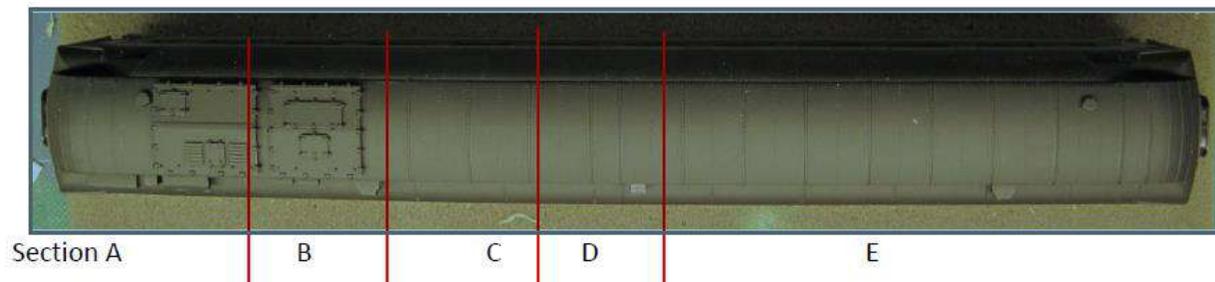
Note: The black line is a reference mark. The focal length of the digital camera resulted in curved images in a macro setting. No car sides or roofs were warped or harmed during this modification.

Modeler's admission: Despite and careful measurements, markings and alignment, the wrong side of the car was modified. The side modified was the non-duct side instead of ducted side. The car sides were switched to align the shortened/closed windows with the duct side.

Roof Modifications:

The biggest modification will be to re-position the A/C roof hatch in the "center" of the roof. No effort for this modification was made to re-position the refrigeration unit roof hatch towards the end of the car as modeler's license was applied. Remove the roof hatch, refrigeration hatch, garland vents and air vents. Save as they will be re-applied. The cutting and re-positioning of the roof sections can also be used to modify the car into a 3100 – 3109 chair-smoker.

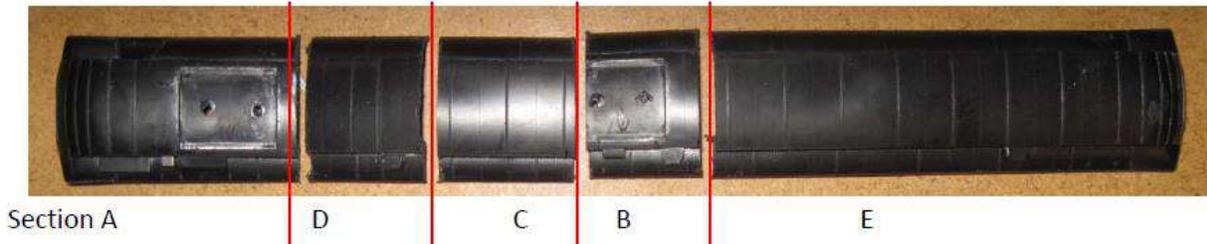
Deciding where to make the cuts involves givens and druthers. Ideally, the cuts would be made close to existing roof seams and alignment would be easy. However, with a number of different seams sections on the roof combined with the re-alignment of the roof sections resulted in comprises having to be made. Using a miter box make the saw cuts at the approximate locations.



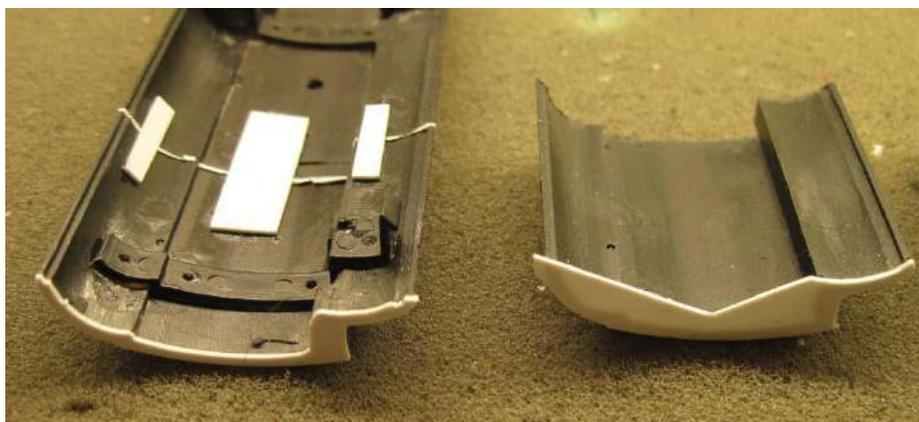
An alternative is to sand the entire roof smooth and apply new rivet strips using 0.005" styrene and apply Archer Transfer N-Scale Rivet decals along the entire roof.

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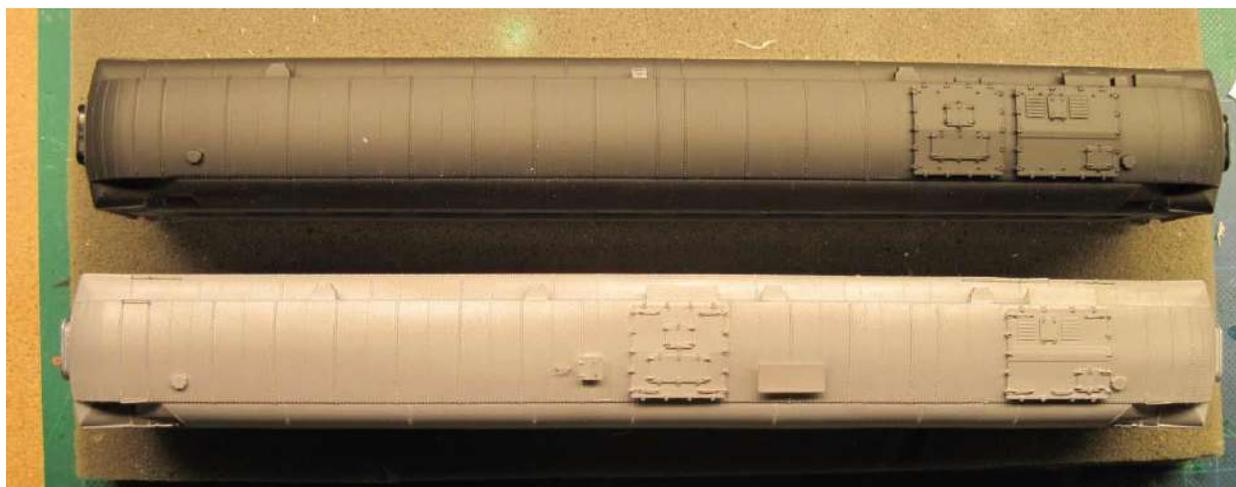
Re-assemble the roof in the following order:



The cuts made with the miter saw used were slightly narrower than 0.20". Final sanding allowed a 0.20" styrene filler strip to be used. Contour the insides of the filler strip so that bracing strips can be applied to further strengthen the joint (see below). Align and glue the filler strips to a section and let dry overnight before joining one section to another.



Carefully sand and fill as necessary – additional filling and sanding to 800 grit wet/dry may be necessary. If rivets are accidentally removed or if a seam is too hard to align, use the Arch Transfer N-Scale Scale Rivet decals as they are an excellent match to the existing rivets. Once a section is complete, repeat the process until all sections are joined together. Test fit the roof. Recesses for the roof tabs in the car body will most likely need to be adjusted due to rearranged roof.



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Scratch build an ice hatch using 1/8 square styrene topped by 0.010 styrene. Finish off with an 11" grab, hinges (0.005" x 0.005" x 0.010" styrene) and hatch prop (0.01 brass wire). Add a radio antenna (?) and use three 14" grab irons as supports. Re-glue the garland vents on the non-ducted side.

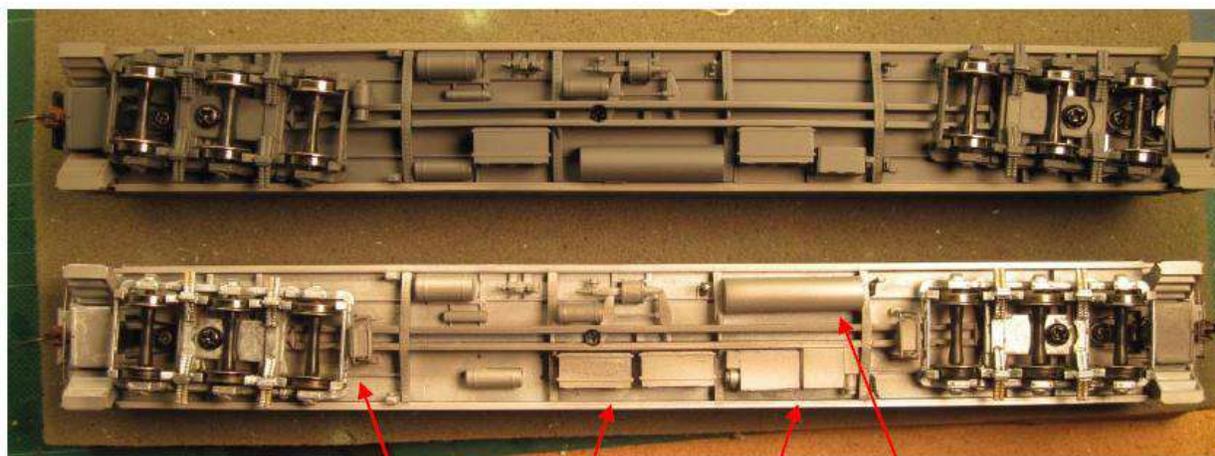
Drill all holes in the roof for the A/C dogs and roof grab. Inserting a #80 drill bit in micro-chuck that is then in turn chucked into a drill press makes this tedious process bearable. Patience, good light and magnifiers allows straight drilling though the guide dimples. Secure the dogs and grabs with CA glue.

Underbody Changes:

Scratch build new a new valve closet (left) and a new condenser water pump and valve box (right) using styrene. Approximate dimensions can be obtained from the Society page on [SEAC](#) and the accompanying link from [Santa Fe Modeler](#) (Basically, 0.375" x 0.375", 0.375" x 0.250" and 0.375" x 0.125" styrene was used along with 11" grab irons and 0.015 brass wire). The black line is a reference mark.



Remove the water tank, battery boxes, single generator and the single A/C box. Re-position the battery boxes and the water tank on the other side of the car. Add the coupler cut levers if desired. The original Chair car underbody is on the top and the modified underbody is below it.



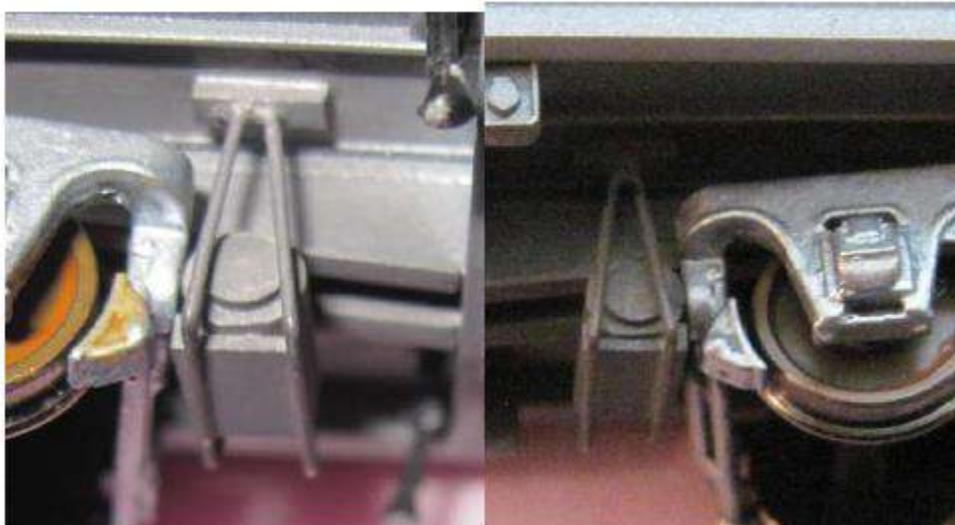
new generator Re-located battery boxes New A/C units re-located water tank

Scratch build two generators, one for the SEAC and another for remainder of the car's electrical systems. Cut a 3/16" tube x 0.350" and insert a 0.010" rod x .0375" to form the generator. Use a 3/16" channel x

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0.350" for the mounting cradle. Bend 0.020" wires in approximately a 0.4" x 0.4" x 0.4" channel to form the mounting rods. Drill two #75 holes in a slight "v" into a 0.030" x 0.040" x 0.10" mounting block. Test fit the entire assembly and glue as close as possible to the sill and to the trucks – be sure there is enough clearance for the trucks to swing freely.

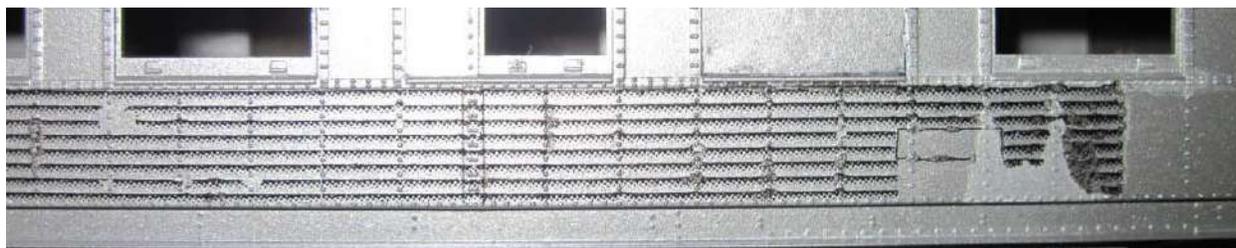


Painting and Decaling:

Depending on the era being modeled dictates the painting and decaling. This model represents the Lounge Dorm car with the shadow lined paint scheme as released from the Topeka shops in 1948. Car 1525 was shadow lined from July 1948 through December 1951. After 1951 most of the cars in the class were repainted two-tone gray. Refer to the Society publications, "[Dining and Beverage Cars of the Santa Fe – Featuring Service by Fred Harvey](#)" or "[Santa Fe Painting and Lettering Guide](#)" for exact dates and schemes.

Thoroughly wash the car with a mild soap and let dry overnight. Apply a gray primer coat of the gray, in this case Polly Scale paints. Santa Fe Aluminum was thinned with distilled water (~15%) and sprayed with a single action Paasche airbrush set to 22 lbs. After an overnight drying apply a couple of light coats of Polly Scale Gloss.

After another night of drying, the process of apply the Microscale shadow line decals began. Applying Shadow line decals are easier than it appears, and the results are stunning. Trim the width of the decals first and align splices along the vertical rivet lines. The decal film is fairly durable and can be easily re-positioned. The decals do require patience in getting them to lay flat over the rivet strips and seams. Be careful if Solvaset is applied at full strength. Over application caused these decals to dissolve, break up and required the car to be re-stripped. Dissolving did not occur with Micro-Sol but as always, test before usage. Multiple applications were required over a couple of nights. Seal the car with a couple of coats of satin finish.



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Weathering:

Photographs of shadow lined cars in service show the rooflines of heavyweight cars prevented the rotary brushes from cleaning the roofs. This resulted in a layer of soot accumulating on the roof and giving the cars a dingy look. This can be replicated by spraying diluted (50%) coats of weathered black on the roof.



Interior:

Separate all seating, bathroom fixtures and partitions from the floor and save. Using the Dining and Beverage Car book as a guide, construct interior walls using 0.020" styrene. The original floor was sanded smooth and a 0.010" overlay floor was fitted. Scratch build tables and table chairs. The lounge chairs are re-used.

Carpeting can be replicated by painting as appropriate or red construction paper can be used. Add windows shades (note they are pulled down in the dorm section on this model). Add a window safety bar in the passageway section.



Glue the windows, including one shortened window, back in. Brush paint the wheels with rust. Glue the interior assembly in and let dry. Add figures if desired. This model is not lighted. Once done, attach the roof.

Conclusion:

Since these cars will be runners details such as signal lines won't be added in case they interfere with operation. Flexible rubber brake hoses from Hi Tech Details will be added and they add a nice touch. The Walthers diaphragms might also be changed out for Hi Tech Details version. The plan for this car is be part of a Grand Canyon Limited consist. Along with a shadow lined HW diner and a shadow lined Valley series Pullman, this car adds variety to an already eclectic passenger train.

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