



EASY FREIGHT CAR WEATHERING

1 - 2 - 3

Please...



...silence your cell phones.

Disclaimers:

- **just the basics.**
(not about extreme weathering, acrylic vs. solvent paints, weathering passenger cars or locomotives, how to operate an airbrush, etc.)
- **results may vary.**
(lighting, paint intensity and mixes, artistic license, etc.)
- **not *Done in a Day*.**
(though the *process* may be easy, it is not inherently fast.)

Why take our time?

- **Planning: think it through.**
- **Chemistry: finishes need adequate time to cure.**
- **Judgement: time is the greatest editor.**
- **Mistakes: “too swift arrives as tardy as too slow.”**

Our subject...

Pullman Standard PS-1



Over 100,000 built between 1947-1963

500 ATSF Bx-57 class built in 1950

2 Kadee PS-1 Boxcars



- **Bx-57 Santa Fe prototype**
- **needing little modification**
- **a common freight car color**
- **appropriate for my time frame**
- **manufactured entirely in the U.S.A.**

3 Simple Steps

to weather freight cars

1. the matte finish

2. the contrasts

3. the highlights

Step 1

The Matte Finish

- **eliminates the toy-like look.**
- **denotes a working freight car.**
- **establishes the car in its environment.**
- **a natural reaction to sunlight, abrasion, rain, atmosphere, and other elements.**
- **protects factory paint and lettering.**
- **prepares a surface for any additional weathering, giving it some “tooth.”**

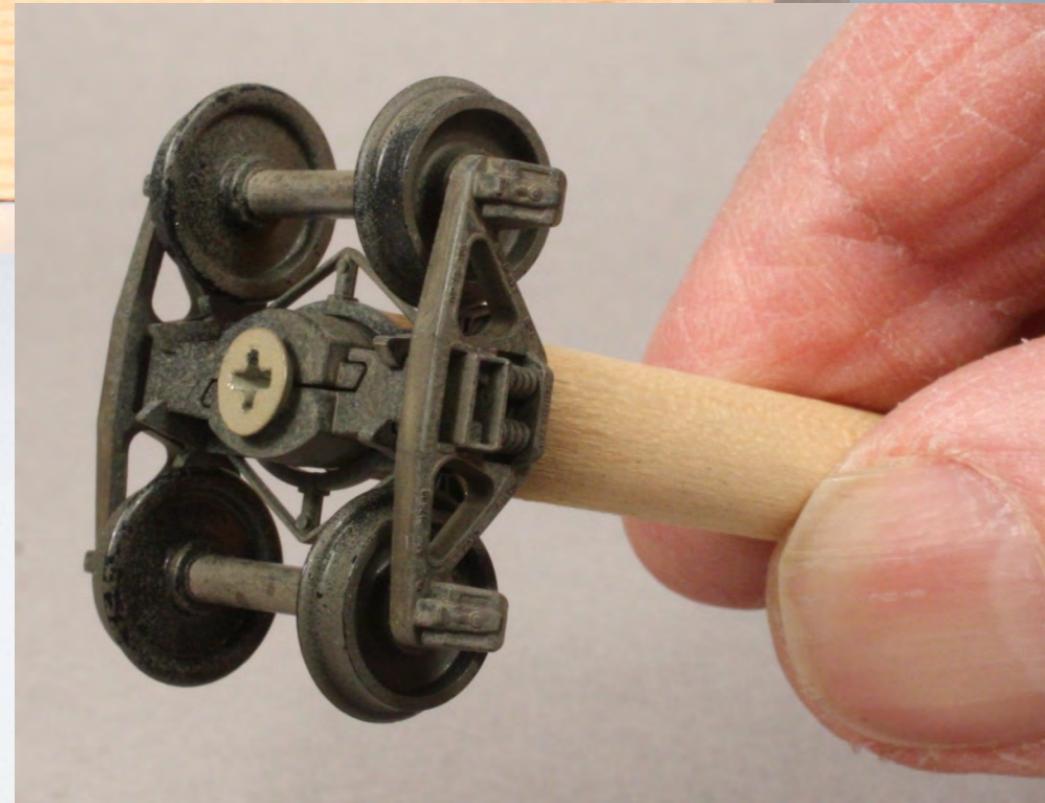
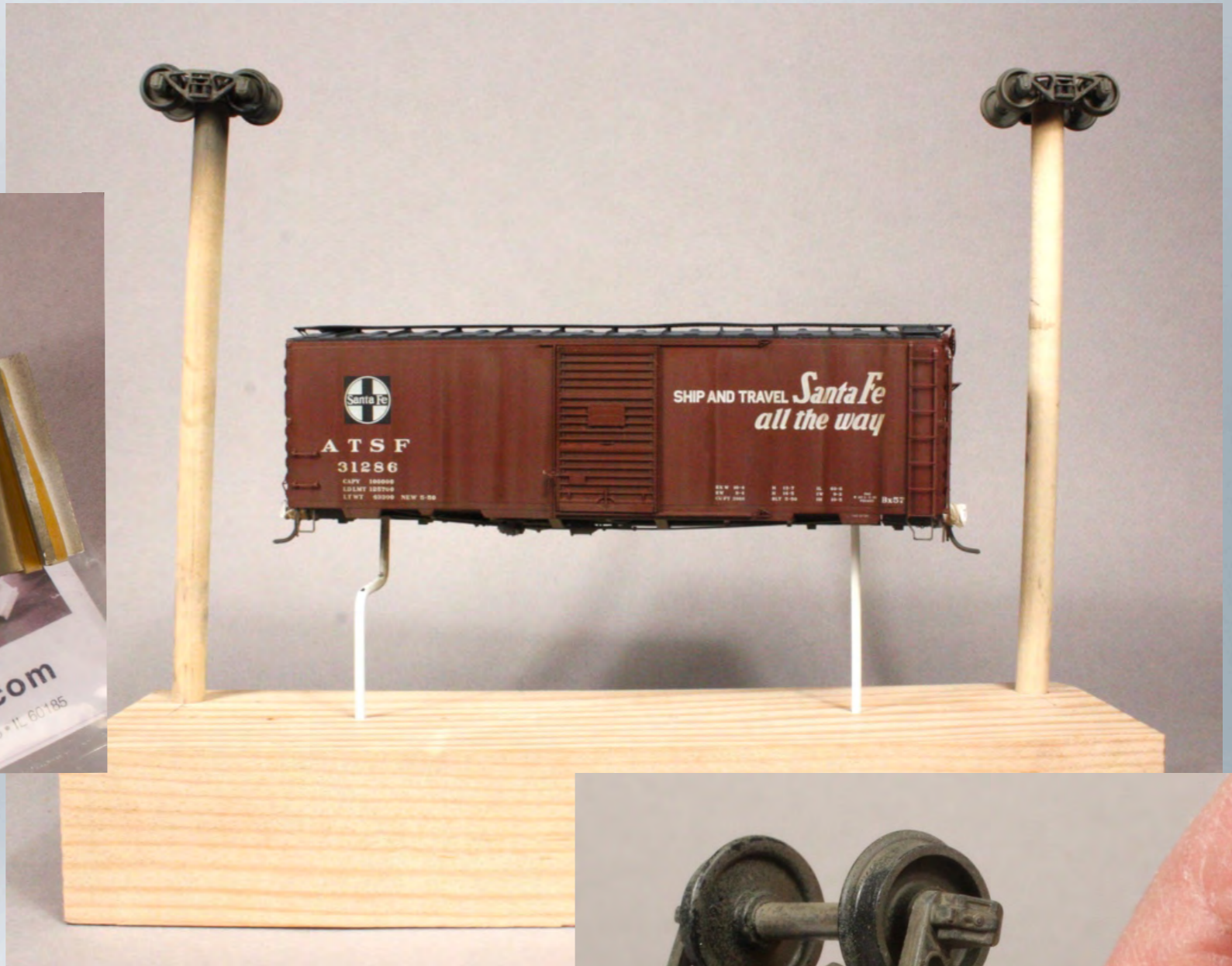
Painting Prep...



- **Remove or mask couplers.**
- **Remove trucks and wheel sets.**
- **Wash & rinse body and trucks**

After washing...

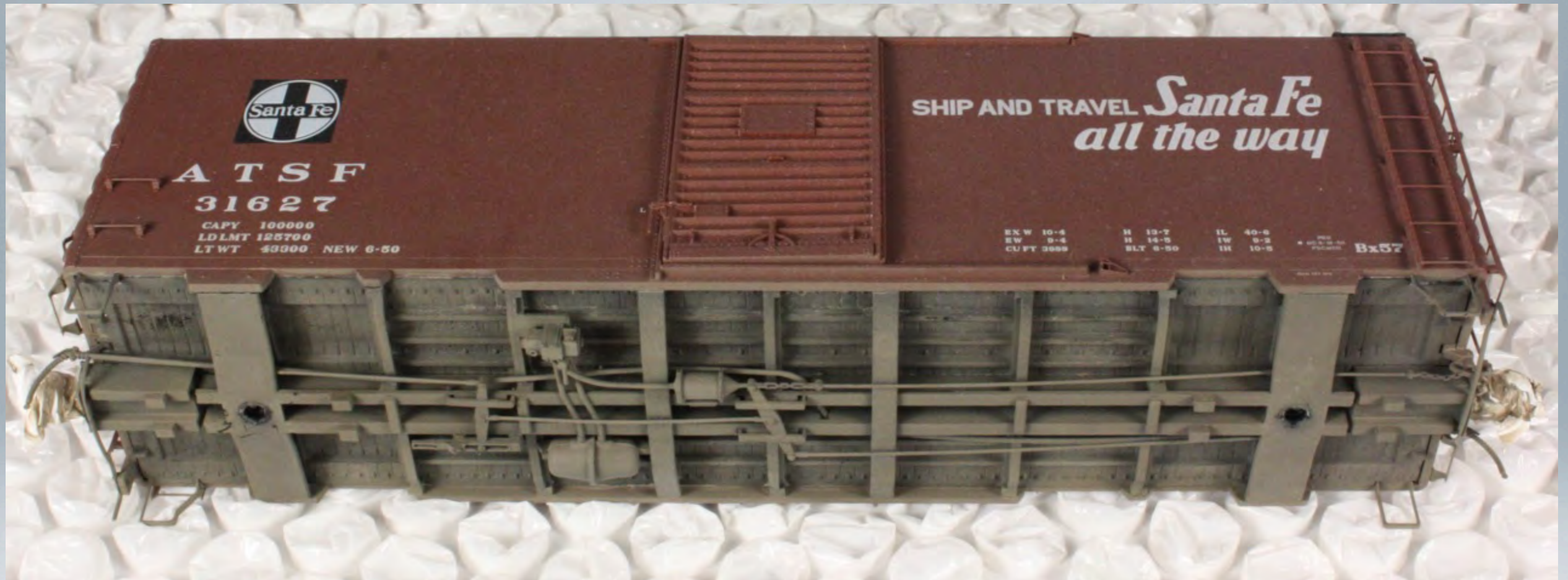
- **air dry, and handle only with thin, powder-free gloves.**
- **examine under bright light for grease, dirt or fingerprints.**
- **remove remaining impurities with 70% isopropyl alcohol and cotton swabs.**
- **place in handles or painting jigs, and mask appropriately.**



Painting Aids

Paint underframe & trucks

...your favorite flavor of grime.



- **a realistic matte finish.**
- **requires simple masking.**

(I use 3:1 Rail Tie Brown to Lt. Gray.)

Matte Finish - Clear



For the airbrush.

Matte Finish - Fade



Clear Flat



Sand



Clear Flat



Lt. Tan

For the airbrush.



**DID YOU
SAY...**

Airbrush???

**“You needn’t
suffer from A.A.S.”**



(Airbrush Avoidance Syndrome)

Science has a cure...

Clear sprays...



Or...



Pigmented sprays



The Matte Finish



(Notice, as well, the grimy trucks.)

Step 1 takes you from this...



Factory Paint



The Matte Finish

Congratulations!!!

You could stop at Step 1.



Or proceed to Step 2...

Step 2

Contrasts

- **add depth, eliminating the sterility of a monochromatic paint scheme.**
- **think “shadows” rather than highlights.**
- **a greater proportion of thinner to paint, more like a tinted thinner.**
- **typically darker sympathetic shades of the base color.**

Sympathetic colors...?

Sympathetic colors...

- **harmonious to a model's basic color.**
- **do not call attention to themselves.**

Warm colors:

- **gold, bronze, copper, brown, tan, yellow, red, orange, maroon, off-whites.**

Cool colors:

- **black, pure white, silver, blues, greens, grays and some purples.**

Contrast used often by military modelers — usually as 'washes.'

British Infantry Tank Mk II "Matilda"



1/35 scale
Tamiya kit
model by Robert Tecau

Dark wash on light background

USN Vought OS2U Kingfisher



1/48 scale Monogram kit
model by Robert Tecau

Dark wash on dark background

Red Army T-20 Komsomolets armored artillery tractor

1/35 scale
Zvezda kit

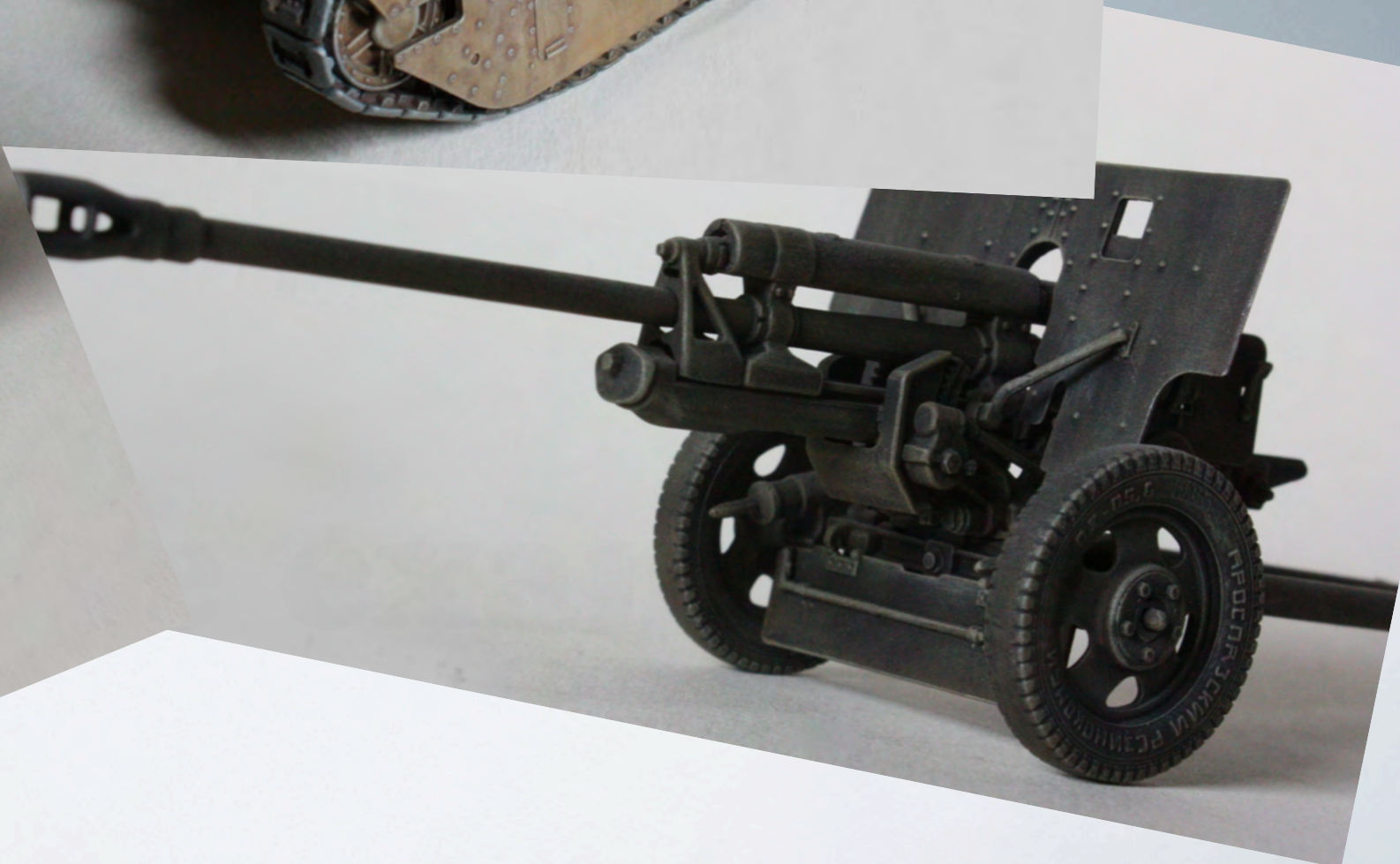
pulling 120mm
heavy mortar



model by Robert Tecau

Light wash on dark background

Enough planes, tanks and guns!



The Contrast Wash

The Sequence

- **mix color and thinner**
- **apply it to the model**
- **remove, or “relieve”**
the wash with a brush,
cotton swab or sponge.

Wash Mediums

- **oils with turpentine**
- **oils with water**
- **Testors with thinner**
- **gouache with water**
- **pastels with alcohol**
- **pastels with turpentine**
- **acrylics with Windex**

Bear in mind...

The matte medium should determine the wash medium.

- ☞ If your matte finish is acrylic, you must use a solvent wash.**
- ☞ If your matte finish is a solvent, you must use an acrylic wash.**

**The risk: *dissolving*
the matte finish!!!**

(I prefer acrylic matte with solvent wash.)

Oil With Turpentine: Tools

**Tube oil paints,
thinner, brushes,
mixing container,
vinyl gloves, cotton
swabs, cotton rags or
paper towels.**



**Pros: vibrant colors, good working
time, long tube life, easy availability.**

Cons: slow drying, solvent hazard.

Useful Tube Oil Colors





Apply the wash to sides, ends, etc., pushing the solution into corners, crevices, and along rivet lines.

(I used raw umber with trace of burnt sienna.)



Relieve the wash with a cotton swab or sponge, allowing residue to remain in and around details.



Use vertical strokes, avoid burnishing the surface, and moisten the swab with additional thinner as necessary. (Note the fine-tipped Tamiya swab.)

Compare...

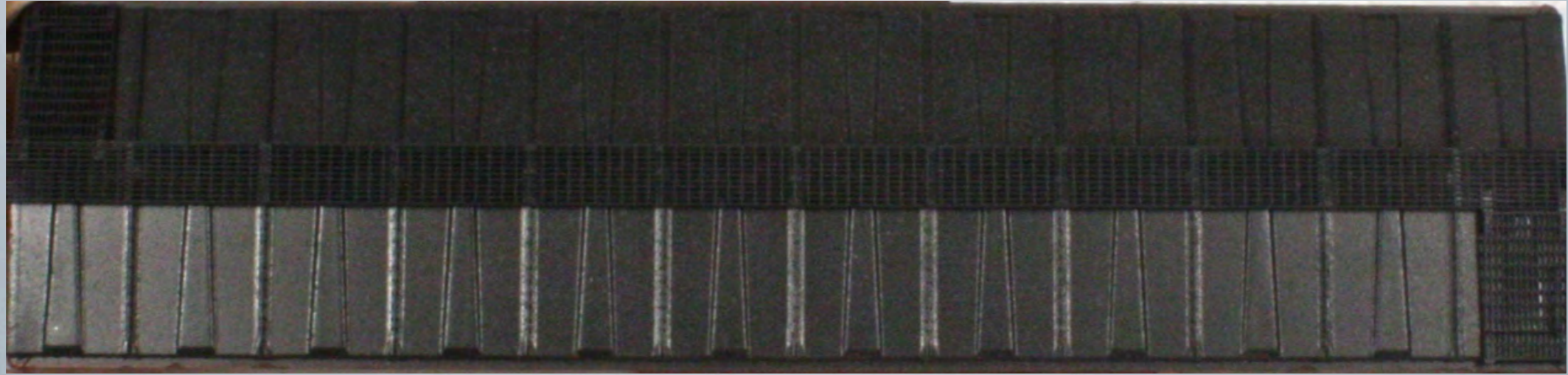


The matte finished model...



to the oil-washed car.

Compare...



the roof with matte alone...



...with matte and the wash.

Congratulations!!!

You could end at Step 2.



Or proceed to Step 3...

Step 3

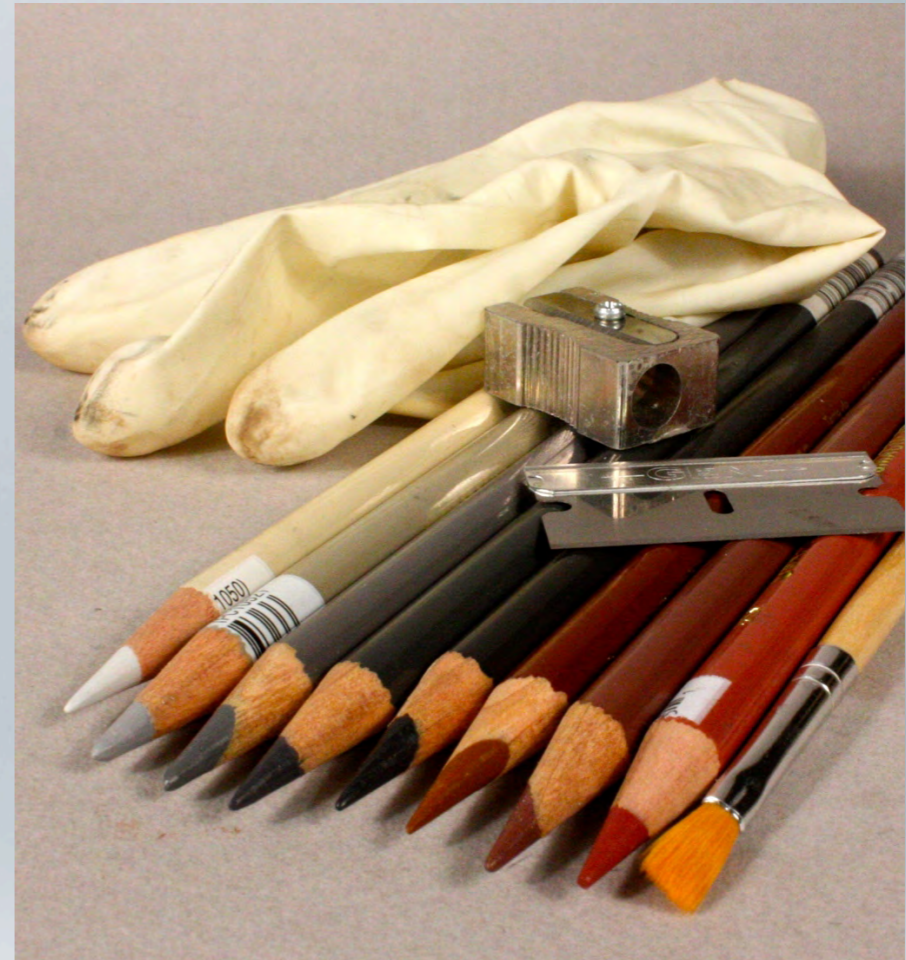
The Highlights

- **duplicates a light source: i.e., the sun.**
- **while a wash makes things recede, highlights will pop them forward.**
- **typically, a lighter sympathetic shade of the base color, and in harmony with that color — warm/warm, cool/cool.**
- **think “light” rather than “shadow.”**
- **typically applied by “drybrushing.”**

‘Drybrush’ highlights with pencils...

Prismacolor* art pencils, sandpaper, pencil sharpener or razor blade, gloves.

*** reds and grays most useful**



Pros: variety of colors, including 12 colors of gray, inexpensive, readily available, easy clean-up, no solvent.

Cons: colors can't be customized.

about this product

color palettes

EXPLORE YOUR SOFT SIDE

Thick cores of color last long to bring bold statements to life, while soft leads make them the best tool to blend in or shade away. They're vivid and intense in one stroke and subtle and soft in the next, making them perfect for any project, big or small. Smooth coverage and a wide array of colors to choose from make it easy to find a soft spot for these premium pencils.

[Soft cores are ideal for blending]



[High quality pigments for a rich color saturation]



Prismacolor Premiere Soft Core

Another useful tool...



CAUTION: do not wear...

- **while operating any vehicle**
- **near pets and small children**
- **when asking to be taken seriously**



Drag side of pencil across raised details, avoiding surrounding areas.
(This is Prismacolor 30% warm grey.)



Relieve the excess with a sharp, slightly moistened toothpick.



Completed highlights.

(Door ribs highlighted with Prismacolor henna.)

Compare...



the oil-washed finish alone...



...to the oil wash with highlights.

The Four Steps

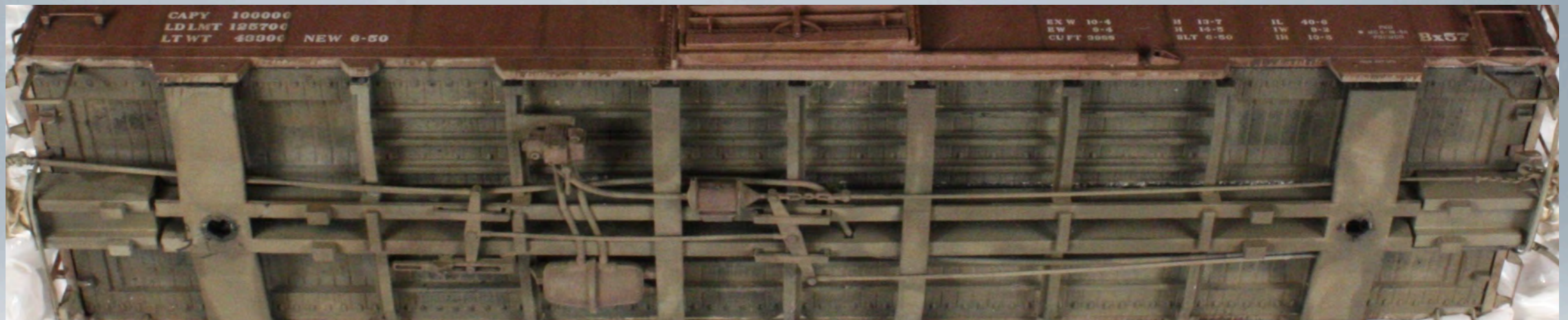


Compare Underframes

1



2



3



Finished Trucks



The final step:

***Protect your work
with a final coat of...***

MATTE

BX-57 #31286



- **matte finish: clear**
- **highlights: pencil**
- **contrasts: liquid**

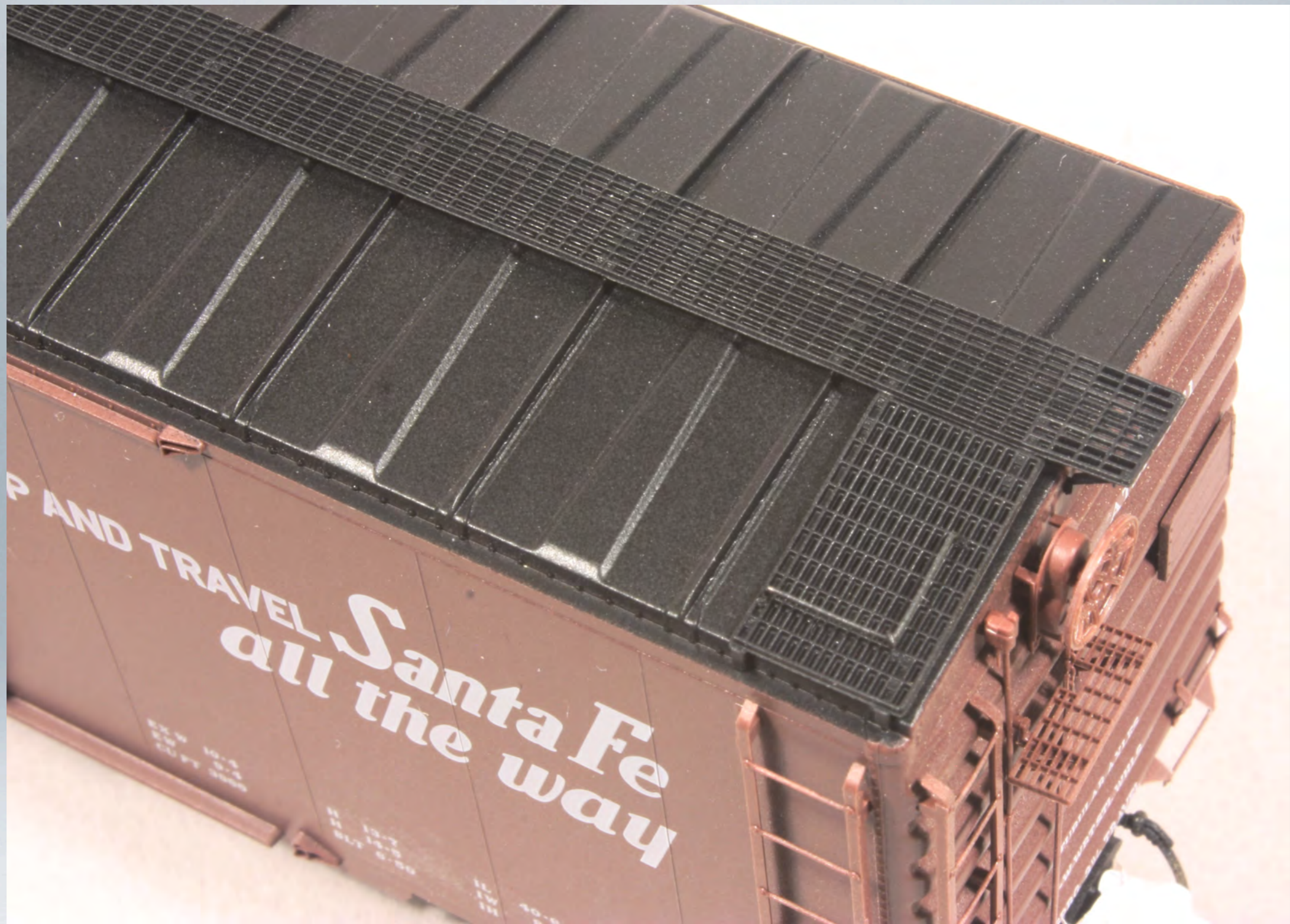
An alternative...



- **matte finish: clear**
- **highlights: pencil**
- **contrasts: pencil**



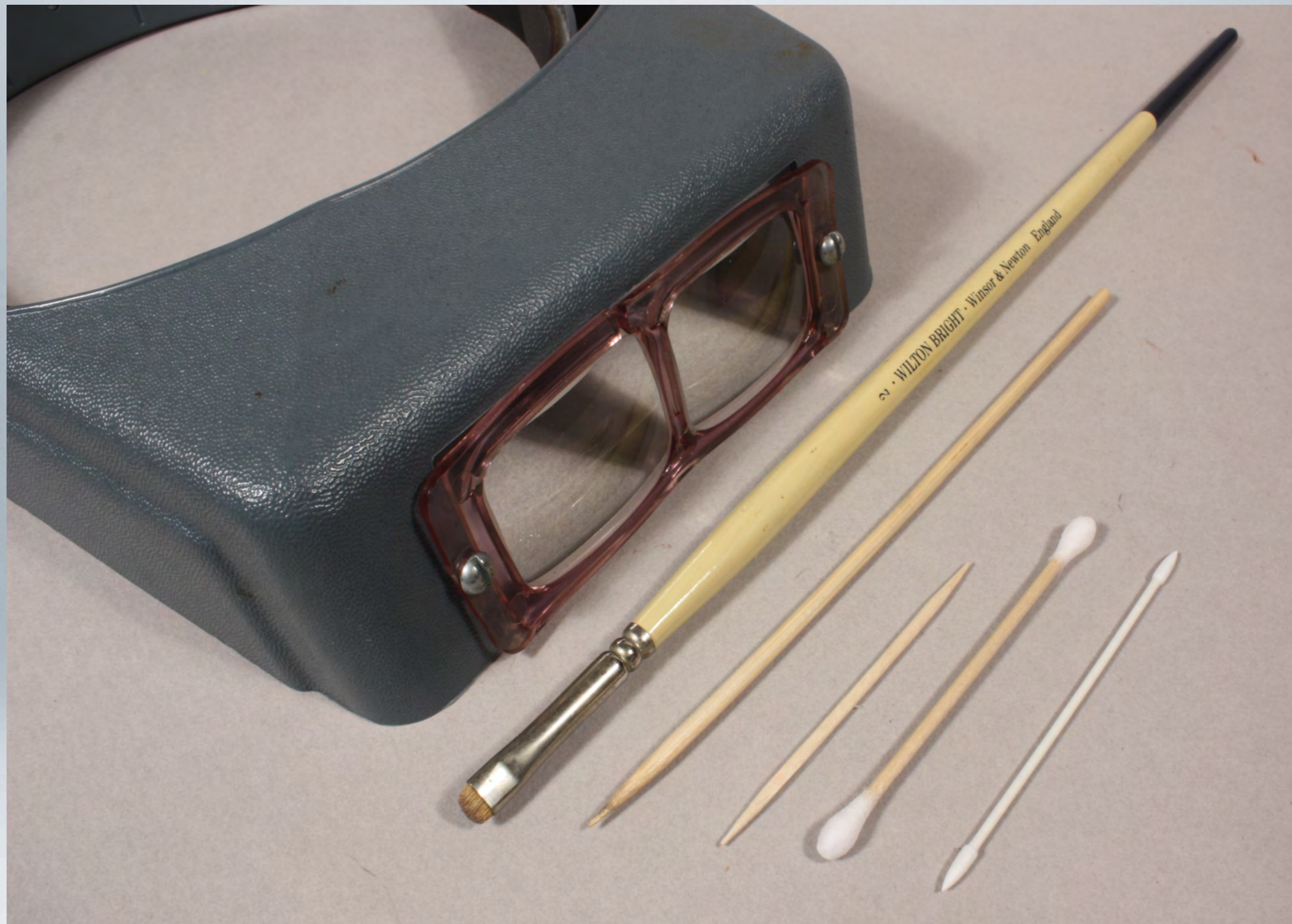
**Matte, wheels, trucks
and underframe painted**



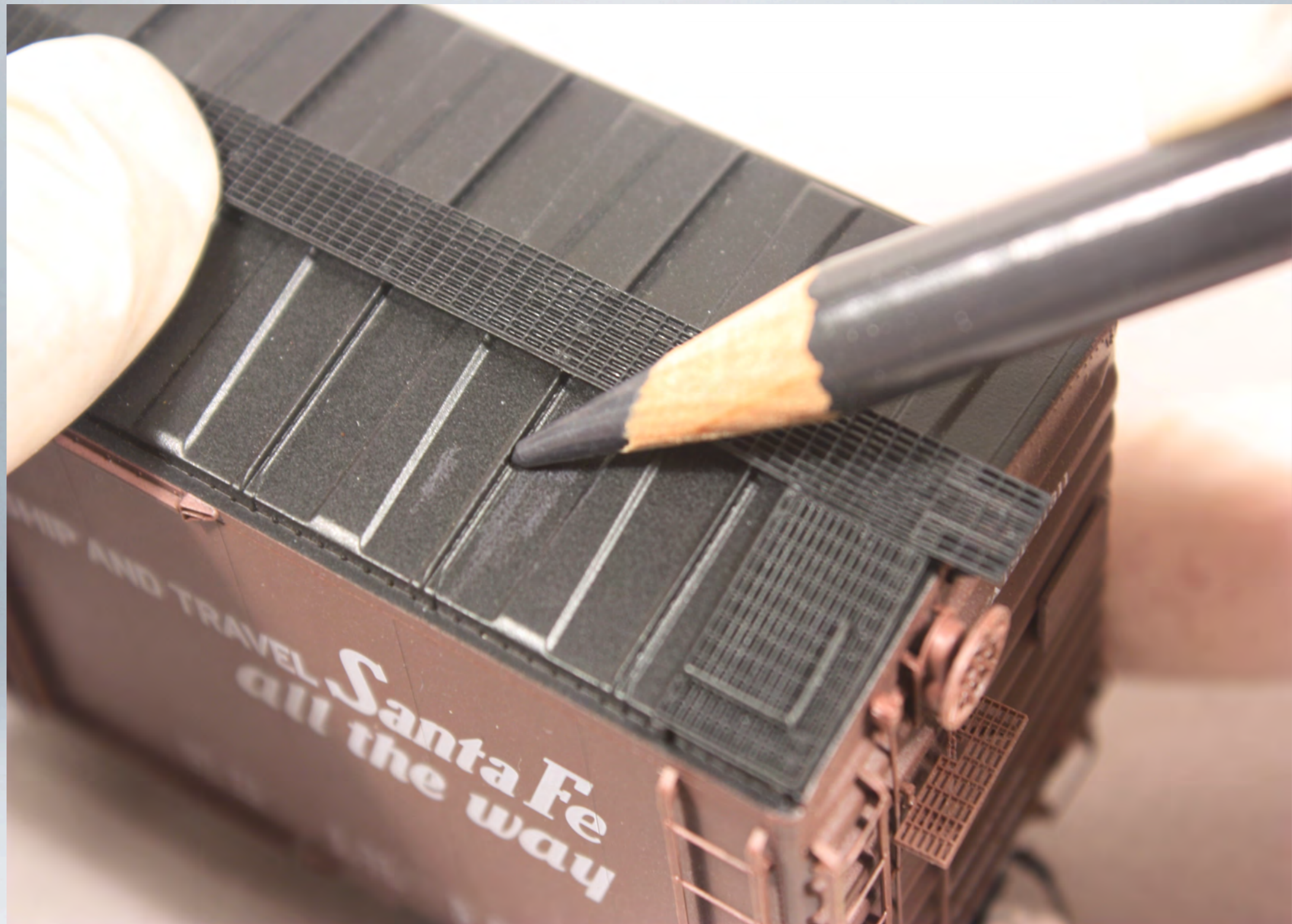
Roof with matte finish alone



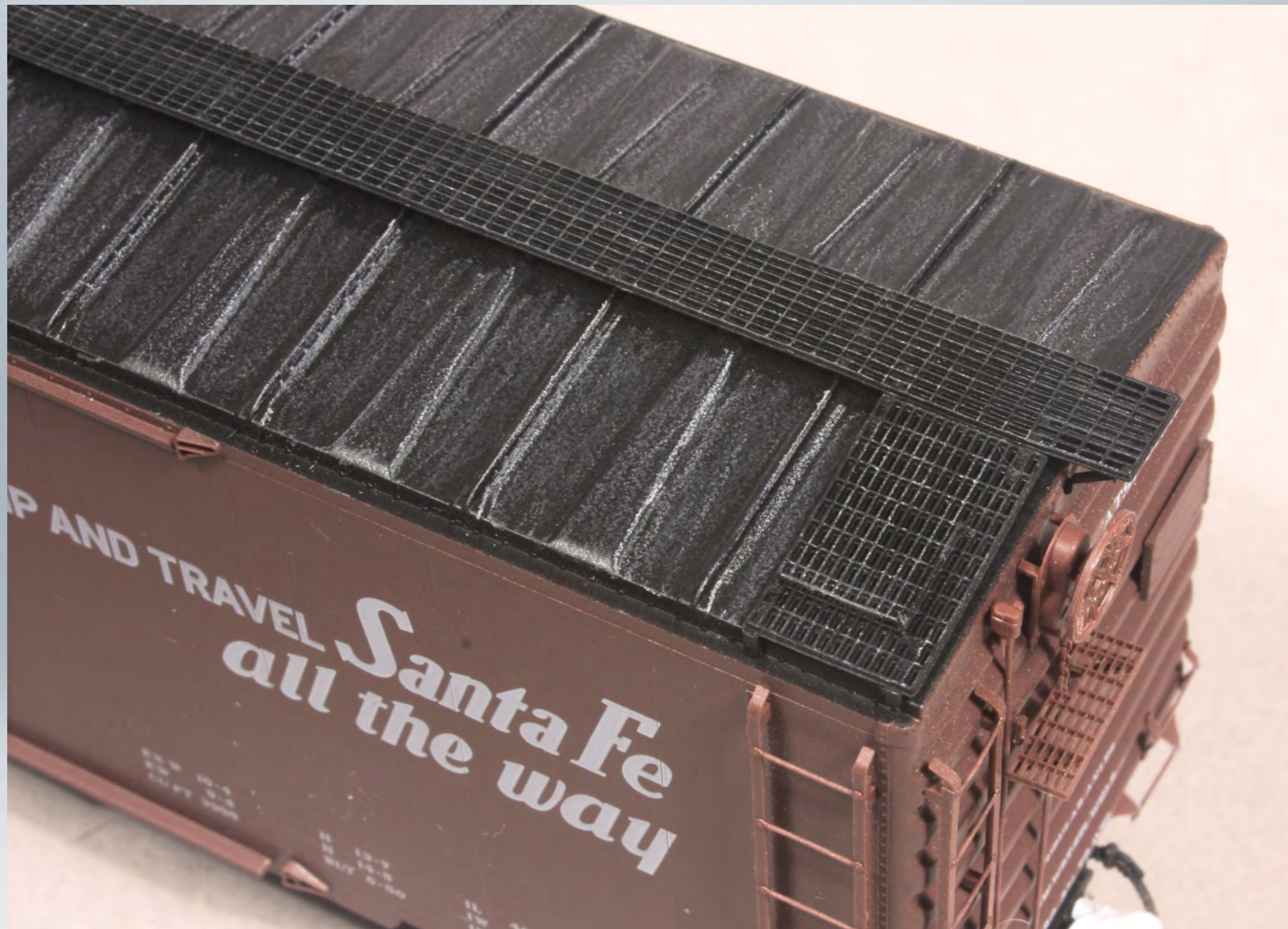
Warm gray Prismacolor pencils



Pencil blending tools

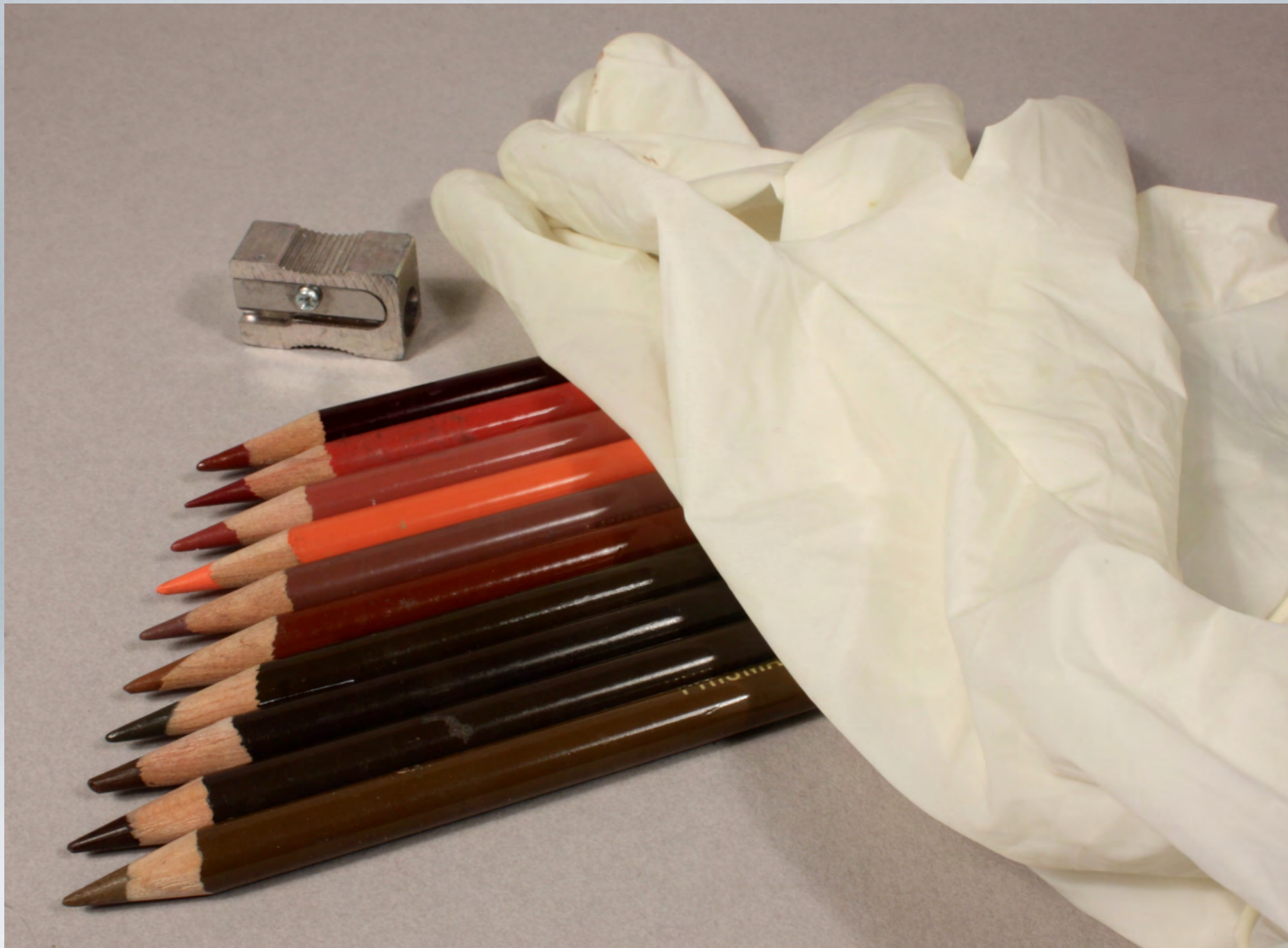


Apply 90% warm gray to roof

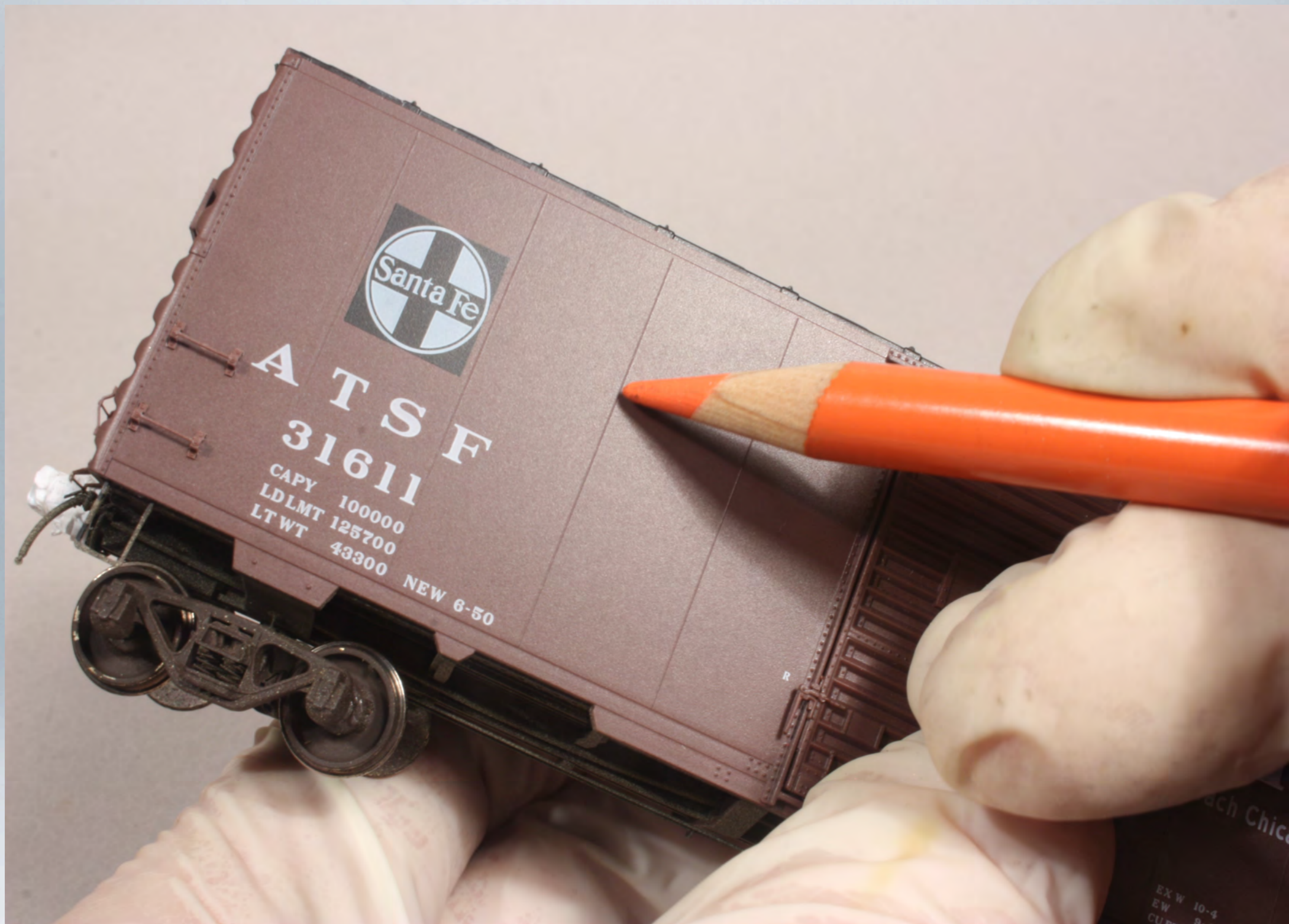


After 90% warm gray.

Pencil contrast to sides...



Red/brown Prismacolor pencils



**Apply pale vermillion to
'sun' side of weld line**

← ← ← **direction of sun**



**Pale vermillion and light umber
on 'sun' side of weld, with
dark umber on 'shade' side**



**Feather pale vermilion
toward center of panel**



**Feather dark umber
toward center of panel**



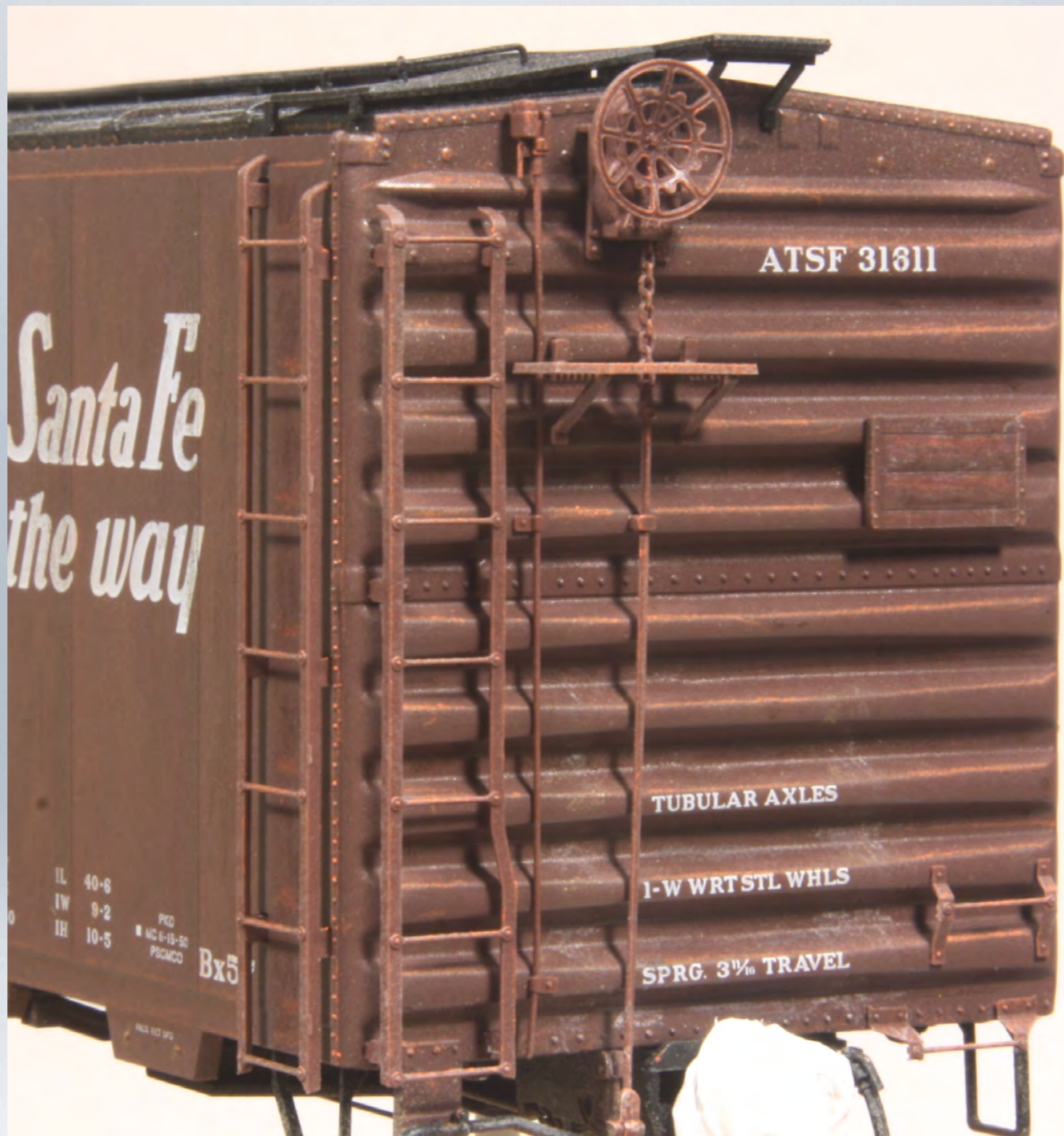
Brush and blend on the surface along with a bit of light umber



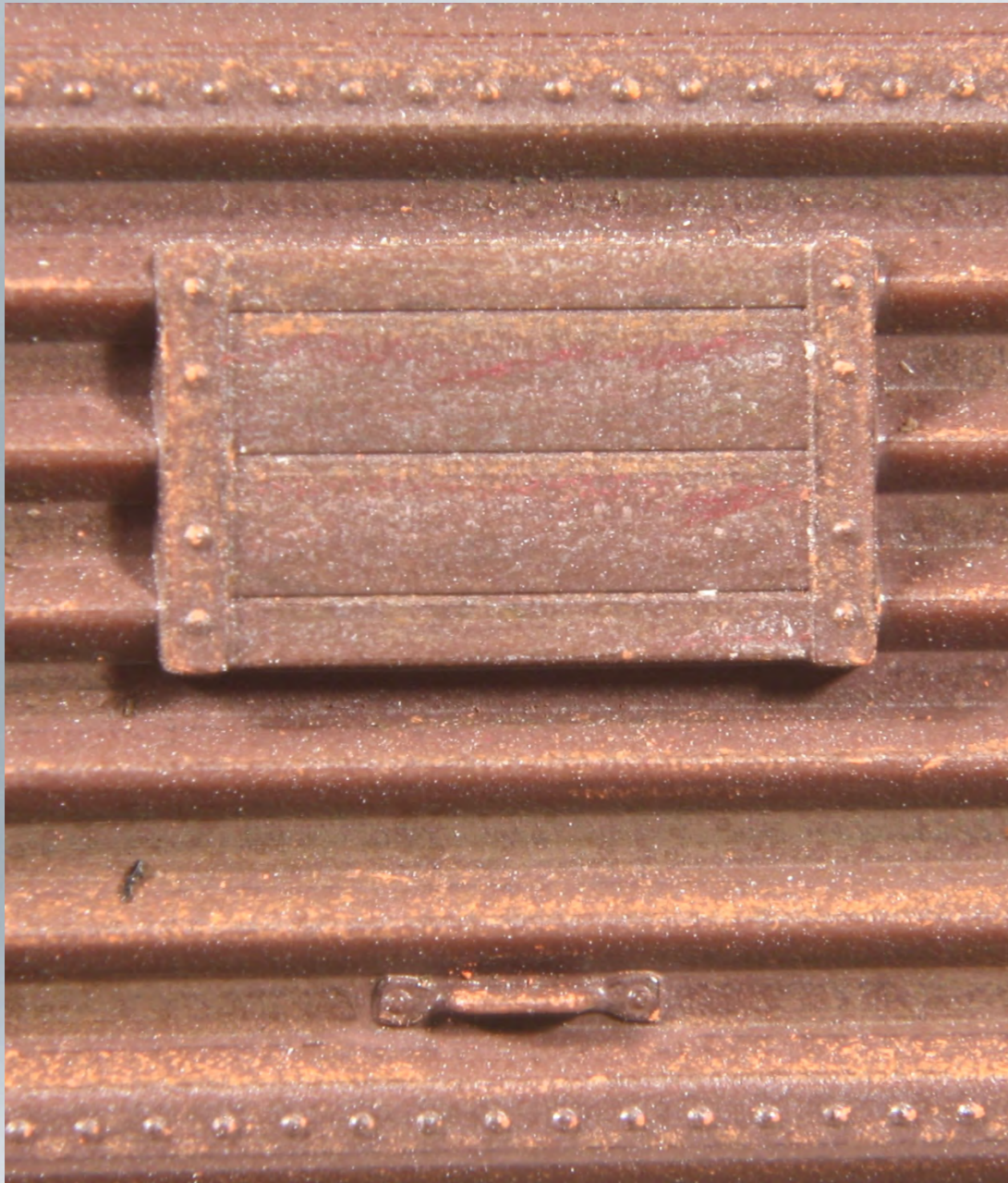
Colors brushed and blended



**Pale vermilion and dark
umber applied to ends**



Completed end



doors

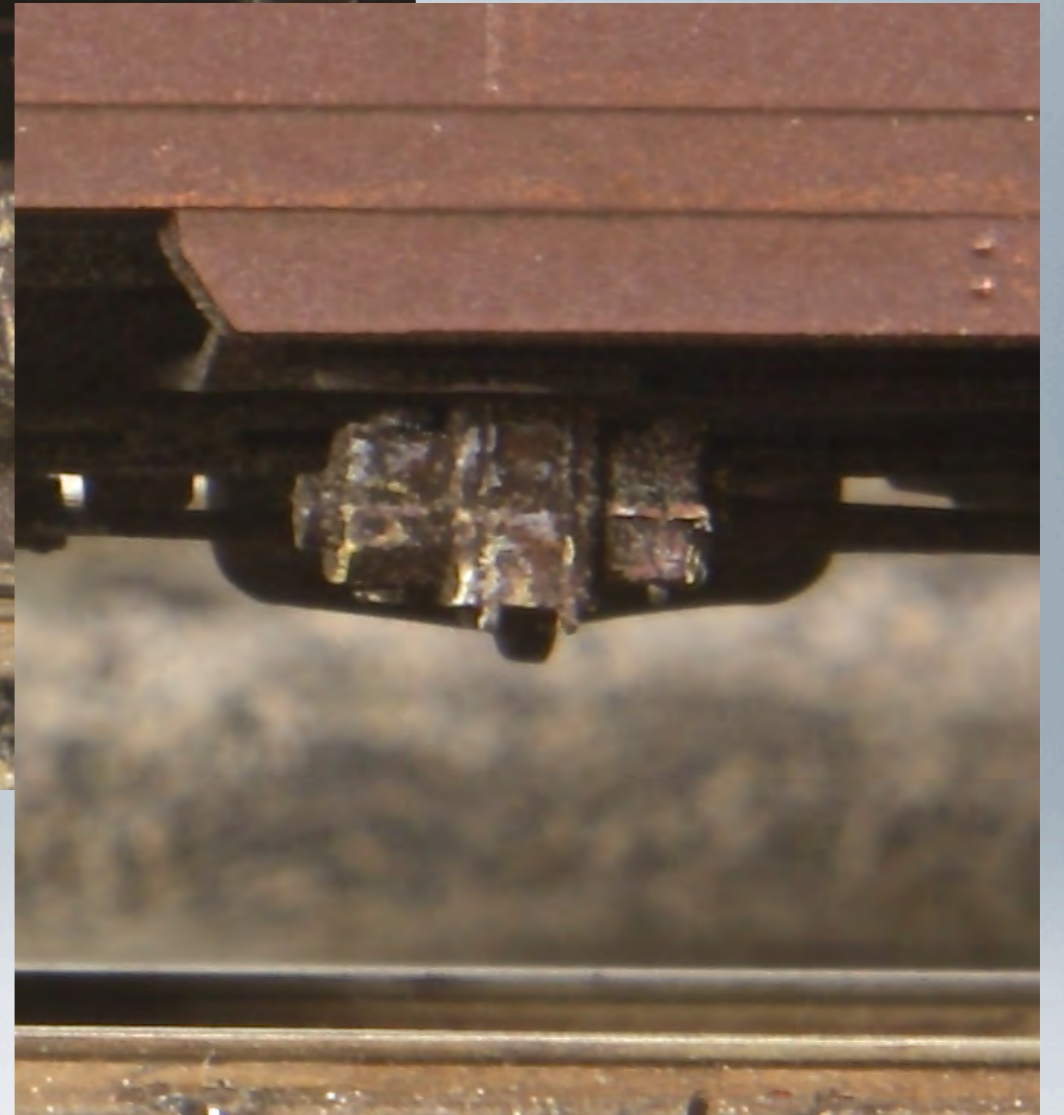


ends

Completed tack boards



'Harmonize' the roof with brown



**Truck and brake highlights
(chestnut, yellow ochre, dark brown)**

Bx-57 #31611





Contrasts: Oil (above) Pencil (below)



What's next...

...is up to you.

Atmospheric:

wind, storm, sun, rain, frost, etc.

Terrestrial:

dirt, dust, soot, wheel splash, etc.

Man-made:

dings, scrapes, spills, chalk, placards, etc.

Examples...



Model and Photo © 2012 Michael Gross

**Testors wash, Model Master color,
goache boards, control coat**



Walther's GRCX 5016

Modelmaster flat, Testors contrast wash, PanPastels and Prismacolor



Intermountain GA-5

**Testors contrast, PanPastels,
Prismacolor shading and highlights**



IMWX C&O 4118

Testors contrast wash with minimal relief and highlights



Kadee PS-2

Testors contrast wash, Polly Scale grime, gouache streaks, baking soda



Kadee PS-1

Acryl matte with fade, Testors reverse contrast wash, tube acrylic 'rust'



Intermountain RR-32

**Testor contrast wash, tube oil 'rust,'
Prismacolor pencil, gouache streaks**



Kadee PS-1

**Oil wash, pencil highlights, Pan
Pastel, gouache**

True-Line 'minibox' (1951)



Work-in-progress...

**Faded matte, 'dusted' side
sill and underframe, pencil
shadows and highlights**



Work from photographs.



Read weathering articles.

**Experiment.
Make Mistakes.**

But make them *here* first.



A final thought...

“Perfection is finally achieved not when there is nothing more to add, but when there is nothing left to take away”

- Antoine de Saint-Exupéry



EASY FREIGHT CAR WEATHERING



Model Photo

**HAVE YOU
FORGOTTEN ANY
PERSONAL
PROPERTY ?**



Thank You

Bob Tecau & the Garage Gang

**And the many other
fine scale modelers from
whom I take advice and inspiration.**

ActorMichaelGross@gmail.com