

EMD SW1500

Background & Modeling



Kerry Cochran
2022 Western Pacific Historical Convention
"Celebrating the Western Pacific Family"
Reno, Nevada
May 2022

EMD SW1500

- Built by General Motors' Electro-Motive Division (EMD)
- 808 units built June 1966 - January 1974
- Used new EMD 645 1,500 horsepower engine diesel-electric locomotive
- Intended for switching service
- Related to the less-powerful EMD SW1000
- Replaced the SW1200

Recognizing the SW1500

- Key Characteristics of the SW1500
 - high-mounted walkways
 - tall low-radius arched roof cab
 - dual-exhaust stacks
 - long-hood headlight
- Trucks, EMD offered two options:
 - standard AAR type-A trucks
 - optional Flexicoil designed trucks

More than half of the railroads chose the Flexicoil trucks.

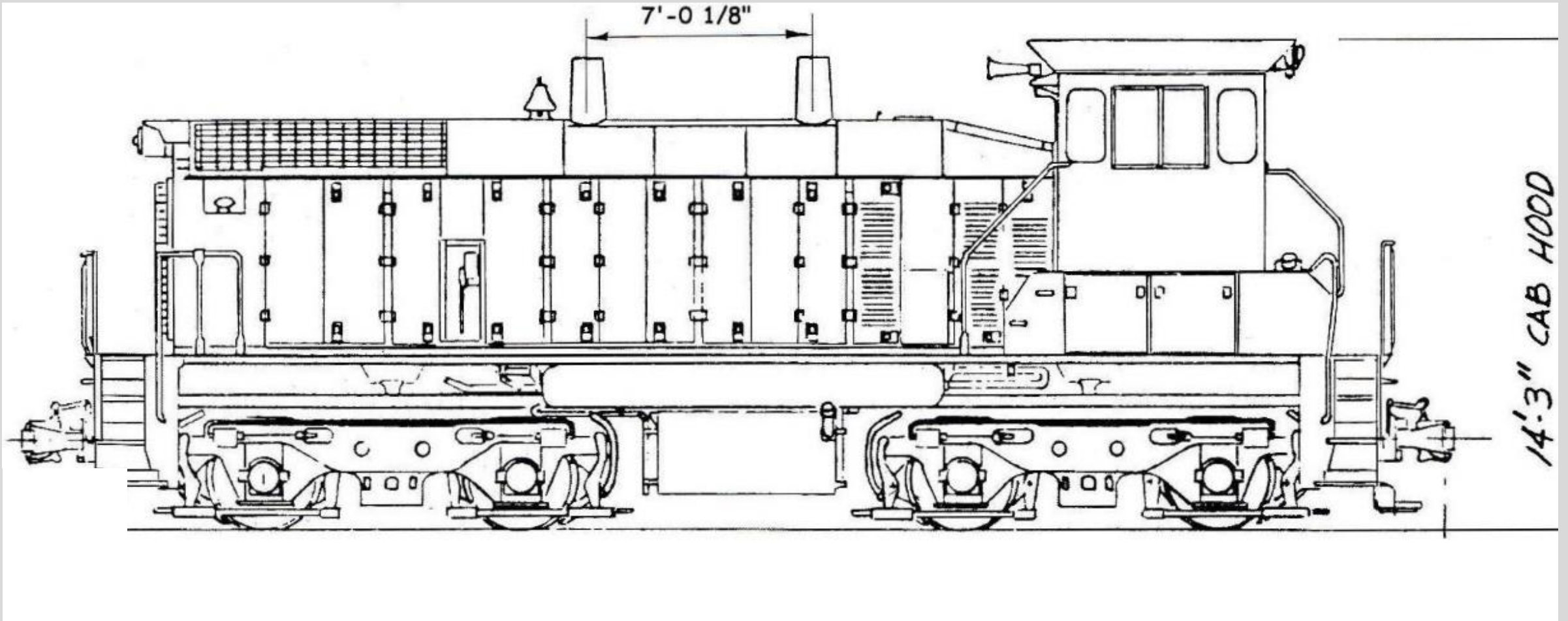
EMD Catalog

- 1,500-horsepower SW1500 introduced in 1966
- A switcher as powerful as its road locomotives of the 1950s
- SW1500 and SW1000 were the first switchers equipped with the 645 series diesel engines
- Production ended in 1974 with the introduction of the MP15DC

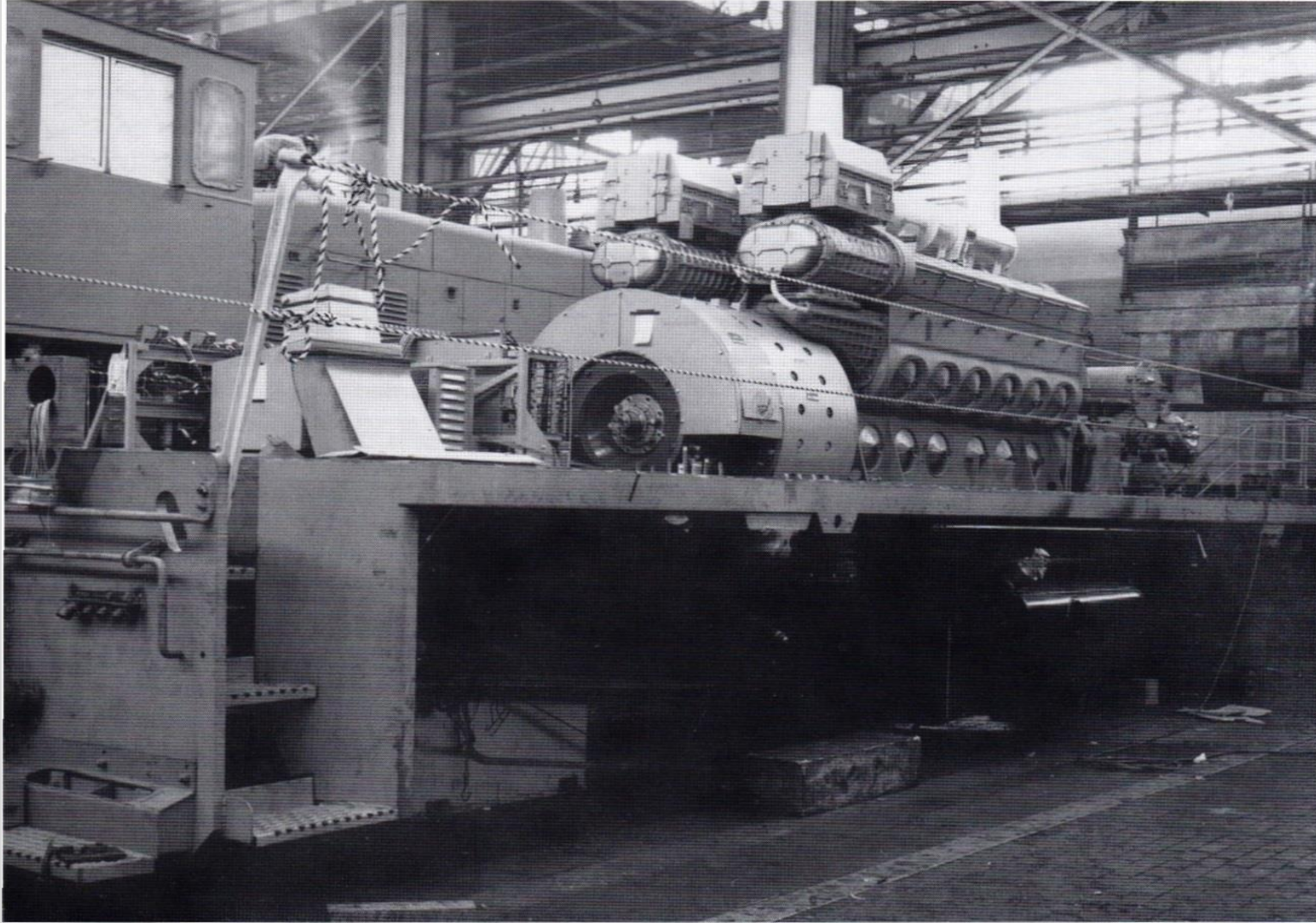
SW Model Evolution

- Biggest difference between SW1500 earlier SW models is the cab:
 - flatter roof arch
 - created more headroom
 - allowed the floor to be raised to provide better visibility
- Cab featured four windows on the sides instead of the two sliding windows on earlier units SW models.

SW1500 Side View



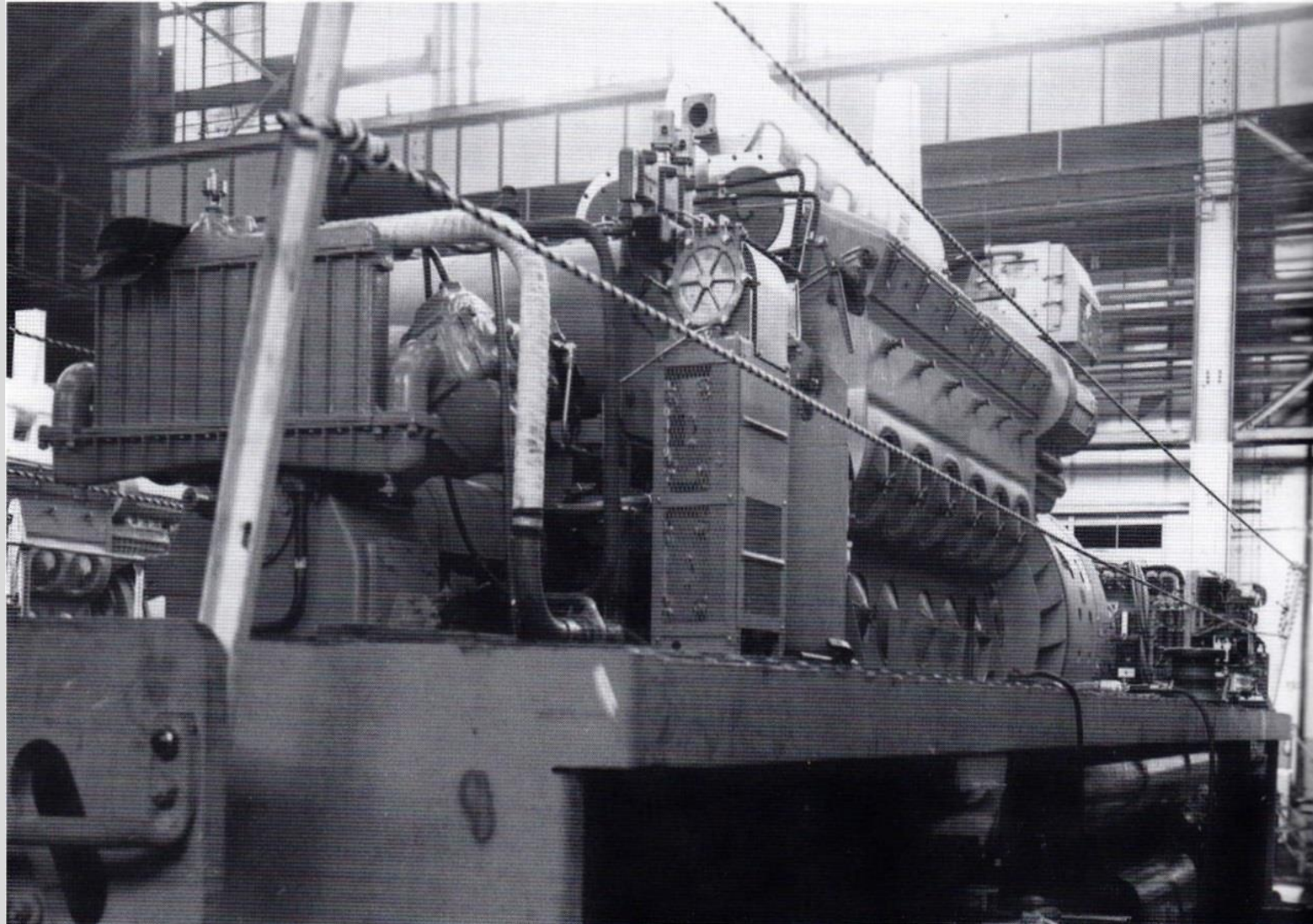
SW1500 Under the Hood - Generator



Generator is seen from the engineer's side. The cab has not been set in place at the end nearest the camera.

EMD Photos; John Signor Collection

SW1500 Under the Hood – Colling System



Front of SW 1500 showing the cooling system

WP's SW1500s

- WP had 3 SW1500s:
 - units numbered: 1501, 1502 and 1503
 - all with build date of May 1973
- Delivered painted in the WP Dark Green with WP Orange lettering
- WP configuration:
 - 1100 gallon fuel tanks
 - Flexicoil trucks
 - full-length handrails
 - EMD's 645E 12 cylinder prime mover
 - Westinghouse model 24L air brakes
 - GM D77 traction motors
 - weighed in at 248,000 lbs.

WP SW1500 Assignments

- All were assigned to the San Francisco Bay Area where they remained for their entire careers on the WP.
 - one unit worked the industrial areas of San Francisco
 - two units were assigned to Oakland
- The car ferry "*Las Plumas*" connected the isolated trackage to the WP system, moving railcars across the San Francisco Bay between Oakland and "*The City*".
- The SW1500 WP units could be found working the industrial areas of San Francisco and the car ferry "*Las Plumas*" connecting the isolated trackage to the WP system, moving railcars across the San Francisco Bay between Oakland and "*The City*".
- December 1982 WP - UP Merger
 - The SW1500s remained in Oakland until April and May 1984.
 - The units were repainted into the UP Armour Yellow and Harbor Mist gray.

WP Units Life in the UP and Coming Home

- In 1987 and 1988, they were renumbered UP 1315, 1316 and 1317.
- Later UP 1317 became UPY 1042.
- WP 1503 came home:
 - last switcher built for the WP
 - FRRS President Rod McClure appealed to the Union Pacific to donate the locomotive for preservation at the Western Pacific Railroad Museum at Portola.
 - It was the first locomotive Rod worked on for the WP.
 - It was the last engine his father, Jack McClure, worked on before his retirement.
- In October 2011, the UP graciously agreed. The unit was moved to Portola and work started to restore the WP 1503 back to its original green and orange color scheme.

WP 1503 as UPY 1042 Came Home



UPY 1042 (WP 1503 in disguise) at WPRM January 2012 *Ed Wagner photo*

WP 1503 Back Home



Today you can find the unit in full working order with its new paint job at the FRRS/WPRM in Portola.

Greg Elems photo 10-3-2019



WP 1501 Switching at the San Francisco 25th Street car ferry dock *Jack Palmer photo*



WP 1502 in the Oakland Yard *Jack Palmer photo*



WP 1503 Oakland *Jack Palmer photo*

Modeling the EMD SW1500

Finding a Model

- Several models of an EMD SW1500 have been made over the years.
- Most are out of current production, some good examples are on eBay.



Athearn Standard Blue Box WP 1501 (without modifications)



Athearn Ready to Roll # 95854 WP 1503 (right out of the box - lots of new detail)



Broadway Limited Paragon 2 # 3329 WP 1503 (right out of the box, great detail and DCC with Sound)

Athearn SW1500 model (blue box)

- Can be used without major modifications
- Get one that has a standard shell and Flexicoil trucks (a good stand in is a Southern Pacific model)
- Some of the parts that you can use to detail the WP unit are:
 - Cannon Walkway kit
 - Cannon Drop Steps
 - New pilots
 - Photo etched fan grills
 - Change out the brake handle
 - MU boxes
 - MU hoses (3 MU hoses on each side)
 - MU cables
 - New bell and change the location
 - Adding grab irons
 - Add lift rings
 - Firecracker antenna
 - Air horn

Choices...

- Model the unit with or without the footboards
- Add new handrail stanchions and handrails
- When adding the air horn, add a small piece of brass wire bent in a 90° degree angle going from the horn bottom into the cab.
- Detail the fuel tanks
- Tune up the Athearn unit following the instructions in the book *Tuning and Upgrading Athearn locomotives*, edited by Robert Schleicher.

Painting

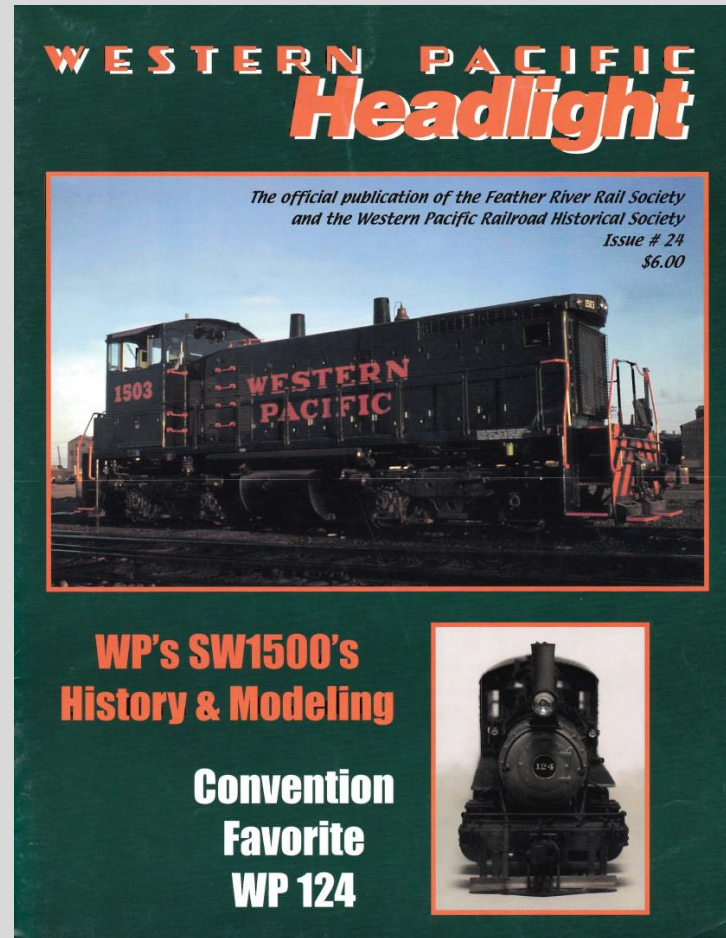
- WP Green and WP Orange in the correct color are no longer available.
 - Experiment with mixing your own
 - Accept the Badger WP Green and WP Orange paints
- When painting is completed, you can start to add the details.
- If you detail the interior of the cab, add the cab windows prior to reinstalling the cab to the body and frame.

Final Touches

- Decal and weather the unit to your desired look
- Add window shades
- Microscale Decals:
 - 87-187 WP Hood Diesels
 - 87-527 Engine Data Plates
 - 87-211 WP Switchers
- Install your favorite couplers (Kadee are mostly used)
- Use the internet to view various SW1500s photos

THE WESTERN PACIFIC *Headlight* #24

- Published Summer 2004
- Available from the WPRM Store at the museum and online



Reference Materials

- *Western Pacific Headlight* Issue # 24 has an excellent article by Frank Brehm and Thom Anderson that covers the history and modeling
- *Diesel Locomotives Modeling Techniques* by Tony Sissons
- *EMD's SW1500: Second-Generation Workhorse Diesel Era* Published by Withers Publishing (2006)