

Modeling WI&M #30 in HO Scale

In the fall of 1950, the Washington, Idaho & Montana Ry. took delivery of a new diesel locomotive at their Potlatch, Idaho headquarters. Four Alco steam locomotives had served the WI&M faithfully for many years, so the railroad returned to Alco for this, their first diesel purchase. The WI&M chose a 660 Hp model S-3, which was one of the smaller offerings in the Alco catalog, but suitable for the WI&M's needs. Painted black with a red stripe and yellow lettering (almost identical to the nearby Spokane International's fleet of RS-1's), this locomotive was delivered as the WI&M's number 30.



I built my HO Scale version of WI&M #30 using an undecorated Atlas S-4 and a Smokey Valley conversion shell (SV-94) to more closely match the look of #30. The prototype S-3's were almost identical in appearance to the S-4's, except they were built without a turbocharger, so their radiator was smaller and the cylindrical exhaust stack was centered on the hood.

Using the S-3 conversion shell allowed me to model these detail differences without a great deal of kit bashing. With a small amount of cleanup with a flat file, the Smokey Valley shell slips easily onto the mechanism in place of the S-4 shell. The Atlas cab is retained since the same design was used on all Alco switchers. Atlas now produces its own S-3, which would also make a logical starting point for this project, although some of the detail on the Atlas hood seems a bit too "clunky".

Before adding details or paint, I performed some minor surgery on the Smokey Valley shell. First, by



carefully drilling, cutting and filing, I removed the shutters from within the frame of the radiator section. The shutters on the Smokey Valley shell are cast in the closed position, and I wanted to model a hard-working Alco with its shutters wide open during the hot Idaho summer.

To fill the rectangular holes left in the sides of the S-3 shell, I removed two sections of "open" shutters from an Atlas RS-1 shell. Then I cut two squares of .010 styrene and cemented them to the inside of the S-3 shell to completely cover the two holes. Next I sanded down the back of each new shutter section until the edges of the shutters stuck out about 1/16" from the radiator frame. When they were the correct thickness, I cemented them to the styrene backing panels.

The conversion shell includes an exhaust stack casting which matches the stacks on most S-3's, with a conical fairing where the stack exits the hood. However, #30's fairing was removed at some point shortly after its delivery, so I had to improvise. Using scrap styrene and putty, I filled in the exhaust stack hole. When the putty had hardened, I carefully shaved and wet sanded the plug to match the curvature of the hood. After marking its center with a needle, I drilled a new hole with increasingly larger drills (to ensure that the putty wouldn't flake away at the edge of the hole) before finishing with a 3/16" bit. I inserted a short length of 3/16" diameter aluminum tubing until it barely protruded above the hood and se-

cured it with a drop of CA applied to the inside of the shell. When this was dry, I slipped a ½” length of 1/8” diameter aluminum tubing into the 3/16” tube, and adjusted its height to about 3/8” above the hood to match my reference photos. Satisfied with the “look” of this new stack, I set it aside until #30 was painted.

Next, I drilled out the divots that are cast into the shell to locate the grab irons with a #80 bit. I inserted standard Detail Associates drop style grab irons (DA-2202) on the side of the hood and on the end. For the two curved grabs located about waist high on the corners of the hood, I used modified DA caboose corner grabs (DA-6503). I also located and drilled holes for the U-shaped lift rings (DA-1107) on the top of the hood. I glued the lift rings and most of the grab irons in place with CA except for those that would later interfere with masking and painting the red stripe.

Missing from the Smokey Valley hood casting (but present on the Atlas S-3) are the sanding valves and pipes located against both sides of the hood just ahead of the cab. Referring to photos, I found two small valve castings in my scrap box that “looked right” and drilled a slight depression in them to accept a piece of .030 dia. brass rod. I carefully bent two lengths of the rod 90 degrees around a drill bit to match the curved, L-shaped pipe used on the prototype. After gluing each valve to the short leg of an L, I located the valves in position against the hood. I drilled two #80 holes on either side of the rod at the point where it enters the casting and along the bottom edge of the hood. Then, using short strands of thin copper wire looped around the rod and through the holes, I secured the valves and pipes to the sides of the hood.

I replaced the Atlas horn with a brass Details West casting (DW-173) soldered to a bracket and legs fabricated from DA .015 x .042 brass bar (DA-2528). I also modified a DW bell casting (DW-151) by cutting both its legs to even lengths and gluing it to the top of



the hood, centered just behind the radiator vent. Finally, I fabricated the “mystery box” out of styrene. This unit (probably containing cab heater equipment) was added just ahead of the cab on the engineer’s side, sometime in the fifties.

One advantage of using an undecorated model was that the underframe and running gear of the engine were already painted black. Many decorated models have frames and sideframes painted another color, which would require removal of the motor and trucks in order to paint the frame. As it was, I could set the mechanism aside and focus on painting the cab and hood.

I painted my model of #30 with Poly-Scale acrylic paints, using Steam Power Black, Caboose Red, Refer White and Refer Yellow. I mixed a few drops of white into the red and black to give the colors a slightly weathered appearance, but looking at my finished model, I could have added more white.

I began by painting both the body and the cab red, concentrating on the areas where the red stripe would be. I applied three light coats (although when using acrylic paint, a light coat looks awfully heavy at first) to ensure that the color would appear opaque against the translucent plastic hood casting. The last coat was completely dry in a few hours, but to be sure, I waited several days before proceeding.

Referring to my photos of #30, I carefully masked the top and bottom edges of the red stripe with narrow

strips of tape. I then filled in the area between them with a wider piece of tape. Where the stripe dips down to the deck at the front of the hood, I sketched a template to help me cut a mask out of the tape, which I centered on the hood. When the masking was properly located, I burnished the edges of the tape with the round end of a paintbrush to form a tight seal against the black paint.

I then applied two coats of black to the castings and to the “mystery box”. I removed the masking and let the paint set for a couple hours before touching up the few areas where the black had bled under the mask. I also carefully painted the leading face of each shutter black with a small brush so that the stripe appears to have only been painted on the outside face of each shutter.

When the paint was completely dry, I used the Microscale yellow block alphabet and 2” striping sets (87-123-6 and 87-124-6) to letter the model. The alphabet set provides the large “W. I. & M. RY.” initials for the long hood (I made periods by cutting the letter “I” into small squares), the number “30” in a smaller font centered on the lower side of the cab, and a small letter “F” at the front corner of the frame. I also used a set of decals from my scrap box for the white numerals in the number boards on the sides of the hood. A liberal dose of Solvaset helped the decals conform tightly to the details of the model.

Applying the lettering and most of the striping was a straightforward operation, but some details required a few tricks. First, for the curves on the hood end, I applied a short segment of striping, then by adding a tiny amount of Solvaset to soften the decal and carefully manipulating the stripe with a small brush, I was able to force the straight stripes to fit the curves.

Second, I applied straight stripes across the radiator shutter ends and allowed them to dry without using any Solvaset. After the stripes had dried, I ran the tip of a sharp hobby knife along the leading face of each shutter to cut the stripe, leaving a short “flag” attached

to the edge of each shutter. Then, with the shell lying on its side, I applied Solvaset to each stripe and allowed gravity to pull each “flag” down to adhere to the trailing face of each shutter. This gives the appearance that the stripe continues along only the striped side of the shutters. I used Testor’s Dullcoat to seal the completed paint, decals and lettering.

For finishing touches, I installed and brush painted the few missing grab irons. I also re-installed the aluminum exhaust stack and glued it in place with CA. I brush painted the railings (but not the stanchions) yellow, and I glued the “mystery box” in place on the deck with a dot of white glue. Under the frame, I hung a set of re-railing frogs (DA-7103) just ahead of the battery box. I also fabricated a towing cable from items in my scrap box and laced it in among the hand-rail stanchions as was commonly done on the WI&M. I cut individual clear styrene windowpanes for the cab, installing them with white glue. Finally, I added a constant lighting unit to the mechanism, with MV Products lenses (MV-21) in the headlight housings.

All my #30 needs now is a good weathering job to give it the “presence” of an actual logging locomotive, and some canvas and wire awnings to shade my hard-working HO crewmen from the hot Idaho sun. Guess I’ll have to get busy and scratchbuild a long string of logging flats to keep that crew busy!

T. Hillebrant

