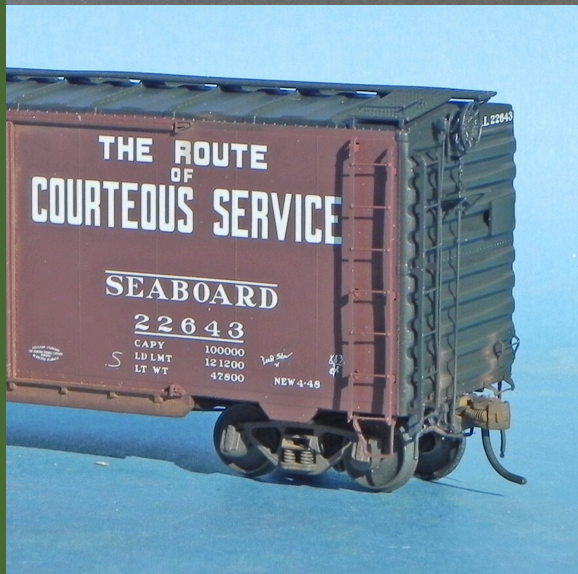


The Seaboard - Coast Line Modeler

Volume 9, Number 3

Issue 32



In this Issue:

Modeling Seaboard Air Line E7As

Modeling Seaboard Air Line Pullman Standard AF-4 Double Door Boxcars

Review: Seaboard Air Line Fuel Oil tank cars

Modeling with a Master: Bill Welch



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Editorial

Welcome to the *Seaboard-Coast Line Modeler Issue 32*. We have brought you another issue focusing on several eras of the Atlantic Coast Line and Seaboard Air Line. This edition will include a full build by Robert Harpe of Seaboard Air Line 3038, an Electro-Motive Division E7A passenger unit, Robert Chapman's excellent Seaboard Air Line Pullman-Standard AF-4 Double Door Boxcar, a sample of noted modeler Bill Welch's Clinchfield hoppers and equipment, and lastly a review of the recently released Rapido Trains UTLX X-3 tank car.

I recently attended Prototype Rails in Cocoa Beach, Florida, where I got together with many friends and thoroughly enjoyed seeing hundreds of excellent prototype models. I was also able to spend several hundred dollars to acquire many new modeling projects and photographs. If you have a prototype modelers meet near you, I encourage you to make a point to attend even if for a day. The motivation a meet instills in one certainly hastens a desire to get back to the work bench after a long day at work, or if the weather isn't suited to outdoor hobbies, it can certainly pass the hours. Traveling to a local meet also allows for the creation of friendships far and wide, and that is truly what this hobby is about - sharing a central interest with others.

It is also with a saddened heart, that we recently lost a friend, a true historian, and a visionary to the cause of the ACL & SAL Historical Society, Mr. Joseph Oates. His passing is a true loss for us, but the memories of, 'Uncle Joe', will forever remain. I first met Joe at the Happy Hobo train meets wherein modelers would showcase their recently completed models at a swap meet and discuss the details of construction. I was always in awe of Joe's knowledge of all things Seaboard Air Line, and the true knowledge he possessed of passenger equipment. As I was

learning the varied details, I would often ask questions about what builder, detail, and model could be utilized to craft a scale model, and he was always eager to share his knowledge. Joe was a true friend and source of endless entertainment. Joe's countless recollections, tales of his days as a Seaboard Air Line employee, and his willingness to share and document the railroads we love will forever remain his legacy to his many friends.

Joe Oates will always have a special place in my life as he was one of the best sources of information, he was always full of jokes and stories that would keep you entertained for hours, and above all, a true visionary of the ACL & SAL Historical Society. Thank you seems trivial in the scheme of considering his accomplishments and actions, but Joe has made his mark and accomplished the task at hand. My sincere condolences to his family and he will be missed for decades to come.



Seaboard Air Line

Pullman-Standard AF-4 Double Door Boxcars

By Justin May
Model and photos by Bob Chapman
Prototype photographs as noted



SAL 22667 was photographed in San Diego, California on February 28, 1957 by Chet McCoid. The car was a member of the Pullman-Standard built AF-4 series which was based upon the successful PS-1 design. (Bob's Photo)

Seaboard Air Line was an early proponent of the 40' double door boxcar which included many examples railroad-built cars as well as hundreds of production cars. While Seaboard rostered both forty and fifty-foot boxcars, the forty-foot was superior in design iterations and numbers. The double door boxcar was utilized for bulky, large lading such as automobiles, lumber, and furniture, however, the cars were found in all types of service due to the wide door opening.

Prototype Evolution

The first forty-foot double door boxcar series were constructed by Seaboard Air Line in

1934 and identified as the "A" and "A-1" series. This forty-foot all steel automobile boxcar was constructed using components of the G-6 gondola series. SAL 9011-9035 were constructed in 1936, while SAL 9036-9060 were constructed in 1937. The conversions were completed by the Seaboard Air Line Jacksonville, Florida shops. The A class was comprised of SAL 9001-9010 which were dimensionally smaller and constructed in 1934. Both series featured a 10'2" interior height with auto rack, a Hutchins roof, wooden running boards and brake step. They

also utilized steel corrugated doors which covered a 12'6" door opening and were fitted with AB brake components. Additionally, the cars were fitted with an Ajax handbrake and utilized Andrews trucks.

Following several orders of fifty-foot double door boxcars, Seaboard returned to the forty-foot design with a distinct "Turtleback" roof. The AF-1 series consisted of 700 cars constructed by Pullman at their Bessemer, Alabama plant in 1940. The cars were constructed in Lot 5617 and were numbered SAL 11000-11699. The AF-1 series utilized a 10'6" interior height, a rounded "Turtleback" roof denoted for its semi-circular roof line, and included a 12'6" wide door opening which was covered by two Youngstown steel doors. The AF-1 series were AB brake equipped, utilized Apex running boards and brake step, and included unique Pullman corrugated ends specific to the early builds. The AF-1 also utilized an Ajax handbrake and housing, and rode on AAR spring plank 50-ton trucks. In Seaboard's car classification system, "A" denoted automobile cars while "AF" indicated automobile and furniture loading.

In 1942, Seaboard again ordered 500 additional cars placing these examples into the AF-2 series. The cars were numbered SAL 11700-11999 and 22000-22199. The cars were constructed to the same specifications as the AF-1 design, however, the later series (22000-22199) utilized Blaw-Knox running boards and brake steps. The two series marked the end of the Turtleback roof designs, however, were the largest series of forty-foot boxcars on the Seaboard Air Line roster.

In 1945, Seaboard returned to Pullman-Standard and ordered an additional 250 cars which were placed into the AF-3 series and numbered SAL 22200-22449. These cars used a lower interior height of 10'0" based upon a pre-war design, were equipped with Apex running boards and brake steps, Youngstown steel corrugated doors which covered a 12'6" door opening, and featured 4/5 Dreadnaught ends. The series was also equipped with Ajax brake components and were AB brake equipped. The AF-3 series rode on AAR spring

plank 50-ton trucks constructed by ASF. The AF-3 series was the first series of double door boxcars to be painted using the slogan "The Route of Courteous Service", for which Seaboard was well known.

In 1948, Seaboard Air Line ordered an additional 400 cars from Pullman-Standard which were constructed based upon the noted PS-1 design. These cars were one of four series of double door PS-1s constructed for U.S. railroads during this time and were built in Lot 5888. The AF-4 series featured an increased interior height of 10'6", a 14' door opening, and were rated at 50 tons. The AF-4 series is unique in that it marks the first production example of a 10'6" interior height boxcar equipped with two 7' Superior doors, and common Pullman Standard ends, roof and underframe applied to their design.

The AF-4 also featured a deeper door sill with offset door openings giving this car a truly classic boxcar appearance. The AF-4 designation was given to cars numbered SAL 22450-22949; however, they would not be the last examples of these 40' double door boxcars. That same year, Seaboard also ordered 500 cars from Pressed Steel Car Company which utilized Youngstown Steel doors and 4/4 dreadnaught ends. The AF-5 series was numbered SAL 23000-23499 and was typically utilized in paper and general service.

Due to their role in paper service, many of the cars received gusset reinforcements adjacent to the door openings to strengthen the car. Along with other boxcars, the running boards were removed and ladders shortened due to a 1966 change in AAR rules. The A/AF series of cars were painted using boxcar red paint and white stenciling upon delivery, colors which were retained when repainted in part or fully repainted by successor Seaboard Coast Line. Seaboard applied varying passenger train names when delivered,



Above: SAL 22734 was photographed in Calexico, California, on January 15, 1955. The variation in car body color and the black ends can be discerned when looking at the B end of the car. The Route of Courteous Service was a standard slogan applied to these cars. SAL 22734 was last reweighed in Portsmouth, Virginia in November 1952. The enlarged door opening best suited these cars to high cubic capacity loads such as automobiles, furniture, and paper. (**Chet McCoid photograph, Bob's Photo**) **Below:** SAL 22595 was photographed in Acca Yard, Virginia in a much later scheme applied in 1965. The six panel Superior doors are replacement equipment and the car now features a solid boxcar red scheme on the ends and sides. The application of the ACI label and the 50-ton ASF A-3 trucks with exposed roller bearings places this car firmly in the mid-1960s. (**Bob's Photo**)



3 1/2"

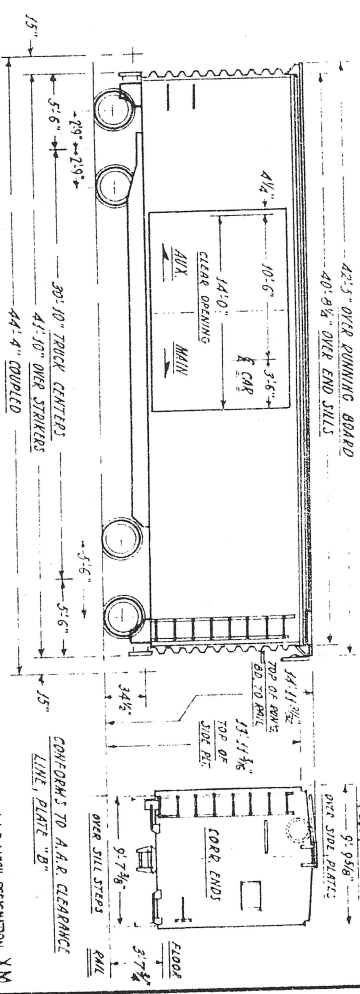
300K IN²
FLEIGHT

500 GBS BUILT 1940 BY WILLIAM STANBRO BUCKNER,
DIA. TRIP 101 5898 - BUILT GENERALLY TO S.A.L. & K.
SPEC 1947 E. C.M.O. FILE NO 35919-23, M.E. FILE 1794

DOUBLE DOOR BOX CAR ~ SCL NOS 822450-822949
14-0" DOOR OPENING
RIGID UNDERFRAME

148

INSIDE LENGTH 40'-6 1/4"
INSIDE WIDTH 9'-2 1/8"
INSIDE HEIGHT 10'-8"
WHEELS - 44 R. 33" DIA., 1 1/4" ROLLED STEEL.
INTERIOR: SIDE & END LINING, 2592" x 5 3/16" T & G, LONG
LAF YELLOW PAINT & OAK GRAIN STRIPS.



GEN. ANNOT. PULLMAN-STD. DRWG. NO. 514-F-92-G		
1 - GENERAL		
2	CAPACITY	3898 CU. FT. (50-TON)
3	LIGHTWEIGHT	110,000 LBS
4	LOAD LIMIT	48,000 LBS
5	MAX. LOAD ON RAIL	129,000 LBS
6	6 - BODY	
7	UNDERFRAME	WELDED CONSTRUCTION, Q.H. STEEL
8	CENTER SILL	2 A.A.R. Z-26 SECTION @ 36" Z-26; WELDED FULL LENGTH OF CAR
9	STRIKERS & FRONT DRAFT LUGS	WELDED DESIGN; PULLMAN-STANDARD
10	BODY BOLSTER	1/2" PLATE W/RT WELDED TO 2 1/2" x 1/2" TOP & BOT. COVER PLATES
11	SIDE SILL	6" x 3/8" x 1/2" ROLLED STEEL ANGLE; END TO END OF CAR
12	SIDE SILL REINFORCEMENT	15" @ 41" @ ROLLED CHANNEL, 20'-5" LONG; BELOW DOORWAYS
13	CROSS BEAMS (3 PER CAR)	1/2" R. W/RT WELDED TO 6" x 1/2" TOP & BOT. COVER PLATES & CTR. SILL
14	FLOOR BEAMS (3 PER CAR)	3/8" PLATE PRESSED PAN; INVERTED TO CENTER & SIDE SILLS
15	FLOOR STRINGERS (2 PER SIDE CTR. SILL)	3 @ 6" x 7" ZIE BETWEEN BOLSTERS & REGISTER TO END SILLS
16	BODY CENTER PLATE	A.A.R. TOP FLOOR 1/4" W/RTS
17	INTER. SIDE POSTS (12 PER CAR)	5 @ 5.1" # 7-Z-27 SECTION
18	CORNER POSTS (4 PER CAR)	4 x 5.1" x 1/2" ROLLED ANGLE; PRESSED INTO CHANNEL FORM
19	THRESHOLD PLATE	3/8" STEEL PLATE; FORMED BOX SECTION
20	FLOOR	3/8" STEEL PLATE; 1/8" THICK; UP OUTSIDE WITH 1/4" x 1/4" x 1/2" ANGLE SHIP
21	SIDE PLATES	1/4" THICK x 5 1/8" T & G LONG LEAF YELLOW PAINT; 1/2" WATER TIGHT FLOOR BOLTS
22	ENDS	3/8" "W" SECTION, 5' 2 1/8" @ 9.83" # - REINFORCED OVER DOORWAY
23	SIDE SHEETS	"REINFORCING" CORRUGATED STEEL; 3/8" TOP & 1/2" BOT. SECTIONS
24	ROOF	10" CR. STEEL PLATES
25	RUNNING BOARD	.0747" CR. GALV. ROOF SHEETS & NO. 11 GA. CR. GALV. SANDWICH
26	BRAKE STEP	APR. TR. LOCK TYPE; H. GALV. ANGLE; DRWG. NO. 1592-D
27	DOORS	APR. TRI-LOCK GALV. SANDWICH; DRWG. NO. 1605
28	DOOR FITTINGS	"SUPERIOR" PARTS; CG. HT. STEEL; DRWG. NOS. MAIN. TITUM & AUY. 1700
29	DOOR OPENING, CLEAR	SUPERIOR CAR DOOR CO.; DRWG. NO. 16769-E
30	DOOR OPENING, CLEAR	14'-0" WIDE x 9'-10 7/8" HIGH
31 - DRAFT GEAR		
32	TYPE	CADWELL-WESTINGHOUSE TYPE NY-11-E
33	COUPLER Yoke	VERTICAL PLATE, HORIZONTAL KEY, CAST STEEL, GRADE "B"; CAT. NO. B-Y-40
34	COUPLER	CAST STEEL, A.A.R. TYPE "E"; 6 1/2" x 6" SHANK; CAT. NO. B-E-04-HT
35	COUPLER RELEASE RIGGING	PULLMAN-STANDARD DESIGN
36 - BRAKES		
37	BRAKE SCHEDULE	WESTINGHOUSE TYPE AB-1612
38	FITTINGS	E.H. PIPE COUPLINGS & UNIONS, 1/2" & 3/8" E.H. PIPE
39	BRAKE POWER	18.7% OF GROSS RAIL LOAD AT 50 # CYLINDER PRESSURE
40	BRAKE REGULATOR	MANUAL, MULTIPLE HOLE; PULL-STD
41	TRAINLINE FITTINGS	"WRIGHT" BRANCH PIPE TEE; ANCHOR & PIPE CLAMPS 112 E. CO
42	HAND BRAKES	POWER TYPE "AT" VERTICAL WHEEL "W" 2000-1
43		UNIVERSAL PIV. DEVICES CO. DRWG. NO. G-ES-4
44 - TRUCKS		
45	TYPE	5 1/2" x 10" A.S.E. RIDE CONTROL A-3, 3/8" SHOCK TIGHT, A.S.T. DRWG. NO. 69444-A
46	SIDE BEARINGS	MONORCAST TYPE "N" 20 STD. CAR TRUCK CO.'S DRWG. NO. 2212-B
47	SHOCKERS	TYPE A-3, 3/8" TANGLED
48	BRAKE SHIMS	A.A.R., REINFORCED BRK
49	BRAKE SHIRT KEY	"LOCKEY" TABBY
50	PEDESTAL ADAPTERS	NONE
51	AXLES	5 1/2" x 10" FRICTION TYE, STD. A.A.R.
52	BRAKE BEAMS	UNIT TRUCK CORP., DRWG. NO. B-D-126
53	JOURNAL BEARINGS	5 1/2" x 10" A.A.R. SOLID TYPE; NATIONAL BEARING METAL CORP
54	TRUCK SPRINGS	20 OUTER, 20 INNER & 8 WIRE CONTROL; UNION SPRING CO. & A.S.E.
55	TRUCK BOTTOM ROD CONN.	35" - 3 HOLE TYPE "Y", M. 75 SECTION, SCHAFFER DRWG. 789-C
56	TRUCK BRAKE LEVERS	7" x 14" - 8, 5/8" x 11" O.H. STEEL; SCHAFFER DRWG. 999-A & 990-A
57	MISCELLANEOUS	"CHIEF" WESTERN DRY COUR CO
58	DEFECT CARD HOLDER	"AZEE", I.D.E. CO.
59	DRAFT KEY RETAINER	
60	ANGLE COCK HOLDER	U-BOIT ~ PULLMAN-STANDARD



SCL 822749 sits at unknown location, following the SCL merger. This example was repainted in Hamlet, North Carolina in November 1967. The addition of doorway gussets and new 6 panel seven-foot Superior doors marks this car found in general or paper service. The running boards remain intact as well as the as-built ASF A-3 ride control trucks. **(Photographer unknown, Justin May collection)**



SCL 763119 MW is a former SAL AF-4 which has been converted to a roadway service laborers' car. The 14' door opening has been plated over and jalousie-style windows have been installed to permit some ventilation. The silver roof was applied to aid in heat deflection, and the ends have been cut to permit entry between cars. **(Warren Calloway photograph)**

however, many cars received a variety of updated paint schemes when SAL repainted them.

The A/AF series cars were some of the most distinctive examples on Seaboard Air Line's roster and while the early examples were not entirely conveyed to successor Seaboard Coast Line in 1967, many served in varying new roles to include maintenance-of-way service as camp and stores cars. The doors were typically removed and plated over so as to provide a solid wall for sleeping and storage. Many of the earliest examples were relegated to this type of service, however, many of the later AF-4 and AF-5 series were renumbered and repainted into SCL lettering.

Prototype Details



The B end of SAL 22643 showcases the 10 panel sides and straight side ladders. The sill tabs are reinforced and the depth of the side sill can be seen along with the trust plate, Pullman-Standard builder's information and a NEW date of April 1948. **SAL 22643 circa 1948. George Sisk photograph, Charles Winters collection**



The B end image of SAL 22595 demonstrates the pre-1950-built end grab iron arrangement, the extended door track, and the brake gear arrangement. The Apex running board and brake step support and a high mount tack board can be seen in this view. In this post-1960 view, the addition of doorway gussets and a defect card holder can be viewed. The April 1974 Savannah, Georgia repack data is also clearly seen. **(Bob's Photo)**



The doors of SAL 22667 and SAL 22595 demonstrate the variety seen in appliances. The replacement doors of SAL 22595 feature six panels whereas the cars were delivered with 7' seven panel doors. **(Bob's Photo)**

Modeling the AF-4

Modeling early PS-1 boxcars has drawbacks, as the design was undergoing changes throughout production to arrive at a true “standard.” One could easily say that a post-1950 PS-1 is not the same as a 1948-built PS-1, and there are several details that need to be addressed for an accurate early PS-1.

Kadee has released the best example of a 40’ PS-1 in the past twenty years, and it is the true gold standard PS-1 boxcar in several iterations ranging from 1950, 1952, and 1954. The changes in details will yield a more accurate model and thankfully, Kadee has released a lone example of the pre-1948 PS-1 design with a 7’ door which could be used to produce an extremely accurate model. First let us examine what design changes make a pre-1948 PS-1 different.



Pullman-Standard PS-1 design evolution changes

Early PS-1 design incorporated a differing number of welded panels as compared to later production cars. Ed Hawkins, a noted freight car historian, has documented the following changes throughout early PS-1 production.

- **Initially, the PS-1 utilized 12-panel welded sides rather than the more common 10-panel arrangement. C&O, Mississippi Central, Nickel Plate, and Rock Island also had 12-panel welded sides cars which were constructed in 1948-1949.**
- **The second detail of note is the “bowtie” roof corrugations; 1950-built and later PS-1s had 12 bowtie corrugations on all 12 roof sheets, whereas pre-1948 cars utilized a 10-panel arrangement with the two outermost roof panels consisting of flat panels.**

- **PS-1s built in 1947-1948 lacked the six rectangular reinforcement embossments at the top of the car ends that were found on post-1949 built examples.**
- **PS-1s built prior to 1950 utilized a three-attachment-point end grab iron on the car ends. Later cars used a more typical four-point mounting arrangement.**
- **Pre-1950 PS-1 end ladders utilized a straight end ladder stile as compared to a wider angled stile found on post-1950 built cars.**
- **Pre-1950 sill steps below the side grab irons were angled as found under the side ladders. Post-1950 production cars utilized a “U” shaped sill step.**
- **There were differences in shapes of the side sill “tabs” at the bolsters and under the door.**
- **Underframes of 1947-1948 PS-1s were similar to those of A.A.R. boxcars. No cross members were located at the center of the door. Post-1950-built PS-1 design utilized six stringers between the bolsters as compared to four found on earlier examples.**

Bob Chapman shared his model of a truly excellent example of a Seaboard Air Line Pullman-Standard AF-4 boxcar recently which has long been a favorite of SAL modelers. The model was expertly finished and constructed which immediately drew my attention for an article. The starting point for the model was a Kadee 40' PS-1 with 7' door opening boxcar (Kadee part number 4101), which required backdating.



Kadee kit 4101 can be used as the basis for the AF-4 with modification. **(Kadee photograph)**

Kadee's model accurately captured the post-1950 features, however, Bob removed the most overt detail differences to include the roof corrugations and the six rectangular stiffeners on the car ends. A new side sill which accurately captures the look and heft of the prototype was created that uses a separate door track and supports. Bob used Southwest Scale Productions (currently out of production) seven foot 7-panel Superior doors, which were fitted below the existing and extended door tracks. An interesting note of these distinctive cars is the main door is located on the right side of the opening with the auxiliary door located to the left. The door opening measured 14'0" feet wide by 10'6" tall. The doors found on the prototype were constructed of 0.06" high tensile steel, and the scale replacement doors accurately capture this look.



Above: The outermost end panels of the raised panel roof, commonly referred to as “bowties” due to their shape, were removed to accurately follow the prototype. In this view above, the extended door track to the left of the door was made using strip styrene to match the extant track. The application of the track was placed according to prototype photos. **Below:** The deep sill profile of the AF-4 series is unique when compared to predecessor AF-3 AAR 10'0" IH boxcars. The existing sill was removed and a new sill was applied using strip styrene. The sill was cemented into place and separate door tracks and standoffs were applied below the door per the prototype. *(Bob Chapman photographs)*



Bob followed the prototype photographs on hand of SAL 22643 and installed the appropriate Kadee 50-ton ASF A-3 Ride Control trucks (part number 562) and the appropriate Universal brake wheel (part number 2023) and housing. The Kadee Apex running board and brake step were installed and are the finest examples of these appliances currently offered. The additional design changes were not addressed, but could now be upgraded with additional Kadee parts as appropriate (three-attachment-point end grab iron, straight stile end ladders, removal of grab iron below end ladder). Also, for those modelers who wish to fully follow the prototype, the application of additional Archer Fine Transfers (currently out of production) could also be applied to model the appropriate rivet locations.

Bob painted the model using Scalecoat II Boxcar Red for the car sides and Engine Black for the car ends and roof. The model was decaled using Speedwitch (now National Scale Car Company) set D-194 Seaboard Air Line boxcar decals and lightly weathered to best fit his 1950 era. The model is a testament to Bob's attention to detail and is a fine addition to any fleet stretching throughout North America.



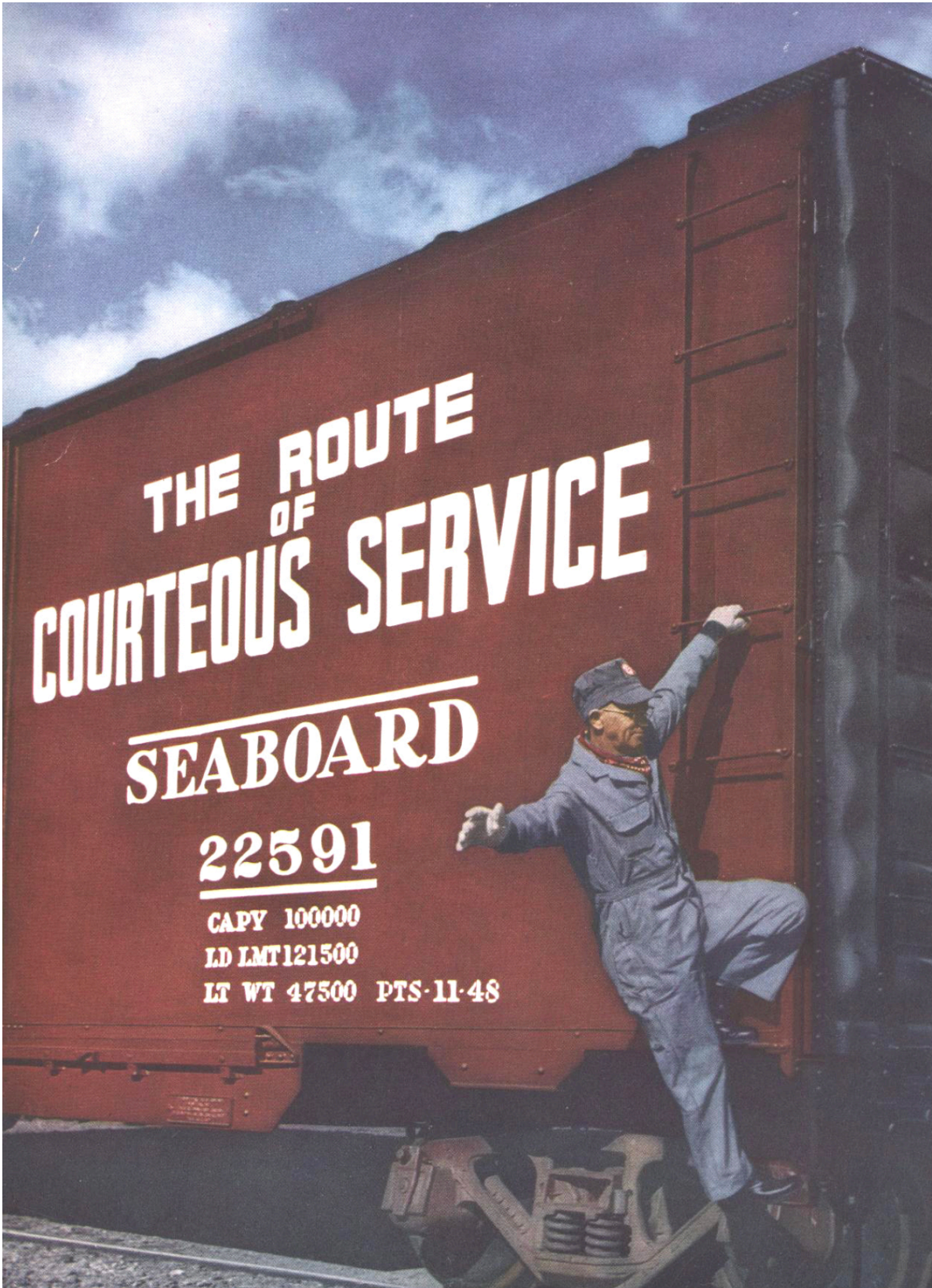
Above: Speedwitch / National Scale Car Company Seaboard Air Line 1948 B-10 / AF-4 Decal set D194. Additional data can be used from set D103 as appropriate.

Sources:

Many thanks to Ted Culotta with his excellent documentation of the design changes of the Kadee PS-1 on his blog *Prototype Railroad Topics*, John Golden, Ed Hawkins, and Bob Chapman.







SAL 1949 Yearbook Photo, featuring SAL AF-4 22591 with black ends and roof (John Golden collection)

Modeling with a Master: Bill Welch

By Justin May

Prototype photographs as noted



Prototype modeling is not entirely about railroad equipment, right of way, or structures being critically examined and recreated in scale, but rather about the builder. The builder holds the most critical eye of detail, knows the mistakes not plainly seen, and sees his work with the most discerning eye. I was fortunate to be friends with a modeler who is known to many as the Reluctant Weatherer, a Y'all Modeler, The Extreme Modeler, and the foreman of the Clearwater Car Shops, the late Bill Welch.

Circumstances arose recently that interjected Bill back into my modeling world after a three-year absence. Bill Welch was a real friend, and would often converse with me via email, telephone, or over a big plate of bar-b-que while discussing a multitude of topics ranging from local railroad history, prototypes of various L&N, NC&StL, and CRR rosters, upcoming models, and techniques. Bill taught me so much in the brief time we knew one another, however, his attention to technique and detail is what really taught me to learn the intricacies of freight car modeling and how to be a better craftsman.

Sadly, Bill Welch passed away due to pancreatic and liver cancer on November 15, 2020, but left his mark on many. His departure affected many and it was far too soon for all of us.

Bill would often meet with me over dinner and a plate of ribs only to produce his latest project. Greasy fingers and a completely rebuilt Sunshine Models kit are never a good combination, but to Bill it did not matter as he would assure me, he would be grit blasting away any of the grease when he got back home prior to paint. While attending the 2023 Prototype Rails RPM meet, another friend and equally talented modeler contacted me with a brief note to relay I would receive a package. I had absolutely no idea what it would contain, but this friend knew I was a modeler of southeastern railroads and would truly appreciate the details and accuracy Bill Welch applied to the models.

Using what Bill taught me, I will attempt to identify the models, and the materials used to accurately create these unique Clinchfield models which were created and built by one of the master builders.

Clinchfield 48144

Due to materials shortage during World War II, the AAR Car Construction Committee collaborated with several car builders to minimize steel usage for car construction so that it could be dedicated to national defense. The AAR 50-ton open hopper was identified as a selected design which used wood in place of steel to alleviate shortages. The cars were intended at the outset of construction to be temporary, yet satisfactory until the emergency period expired.

Clinchfield ordered 500 cars from American Car & Foundry (ACF) in January 1944. The series included car numbers 48000-48499 and utilized Universal hand brake equipment, Wine door locks, and AAR Double truss trucks. The cars were placed in the FH-5 class and were capable of containing 1,970 cubic feet of material. The cars were rebuilt with steel sides in 1957, and were painted black with Snolite white lettering.



(American Car & Foundry photograph, used with permission courtesy of G. Elwood's Fallenflags.org)





(American Car & Foundry photograph, used with permission courtesy of G. Elwood's Fallenflags.org)

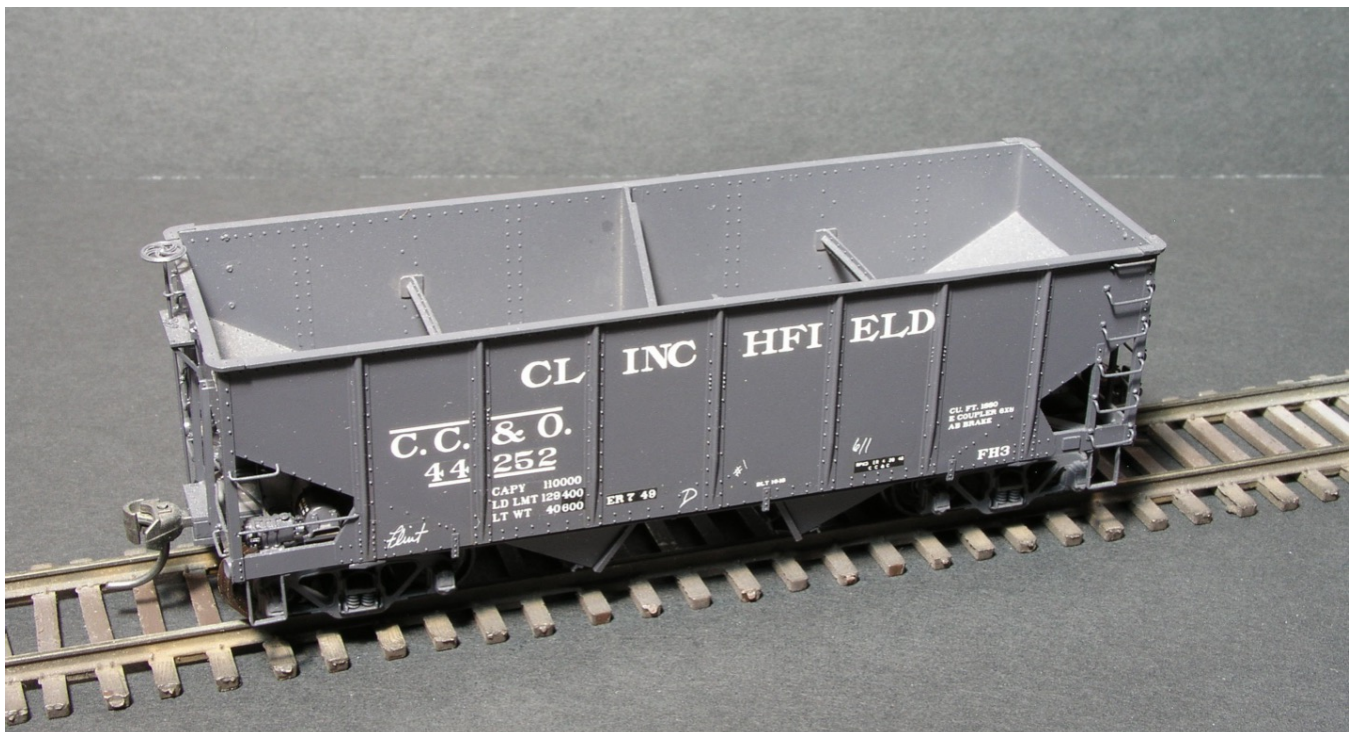
Bill used the Proto 2000 War Emergency 50-ton hopper to create the model of CRR 48114. The model was assembled and painted using separately applied wire grab irons which replaced the provided grab irons. Additionally, Bill revised the, “ladder grab” configurations which used drop grab irons attached to the flange of the steel shape that forms part of the steel frame. He noted other examples have a straight grab iron attached in the middle of the “Z” bracing. Bill painted the model grimy black and lettered the model using Curt Fortenberry Clinchfield decals (currently out of production). The contrast of the grimy black body color compared to a starker shade of black can only be attributed to Bill’s preference and his intention to pre-fade the model prior to weathering. This is a technique that Bill would use frequently to modulate the color of the model to accentuate differences. The model represents a prototype that was reweighed in Erwin, TN in November 1951. The added chalk marks and repack data enhances the model’s appearance and demonstrates Bill’s strict adherence to era appropriate detailing.

Clinchfield 44252 and 44555

To modernize the nation's freight car fleet during World War I, the United States Railway Administration ordered 22,000 55-ton twin hoppers which featured all-steel construction. The hoppers were assigned to 23 different railroads throughout the United States with many thousand examples being ordered following the war often termed "clones." The USRA 55-ton design was utilized through the 1960s with several southeastern railroads owning examples. The design was favored by L&N, which rostered 1,000 original examples followed by 11,000 clones. Additional examples of southeastern owners include Seaboard Air Line (200), A&WP (55), Western Railway of Alabama (25), RF&P (80), NC&StL (325), and Georgia Railroad (50) owning post-war 'clones'.

As added interest, Charleston & Western Carolina purchased 346 hoppers in 1952-53 from L&N which were constructed in 1919. These 55-ton hoppers were initially numbered C&WC 5200-5561 and were intended for use of the Savannah River Plant traffic. In 1959, the cars were conveyed to ACL and were numbered ACL 80000-80345. Atlantic Coast Line replaced the original Andrews trucks with AAR standard trucks and repainted or patched the cars into a standard black paint scheme with white lettering. The cars were utilized in sand service through the mid-1960s until retired.

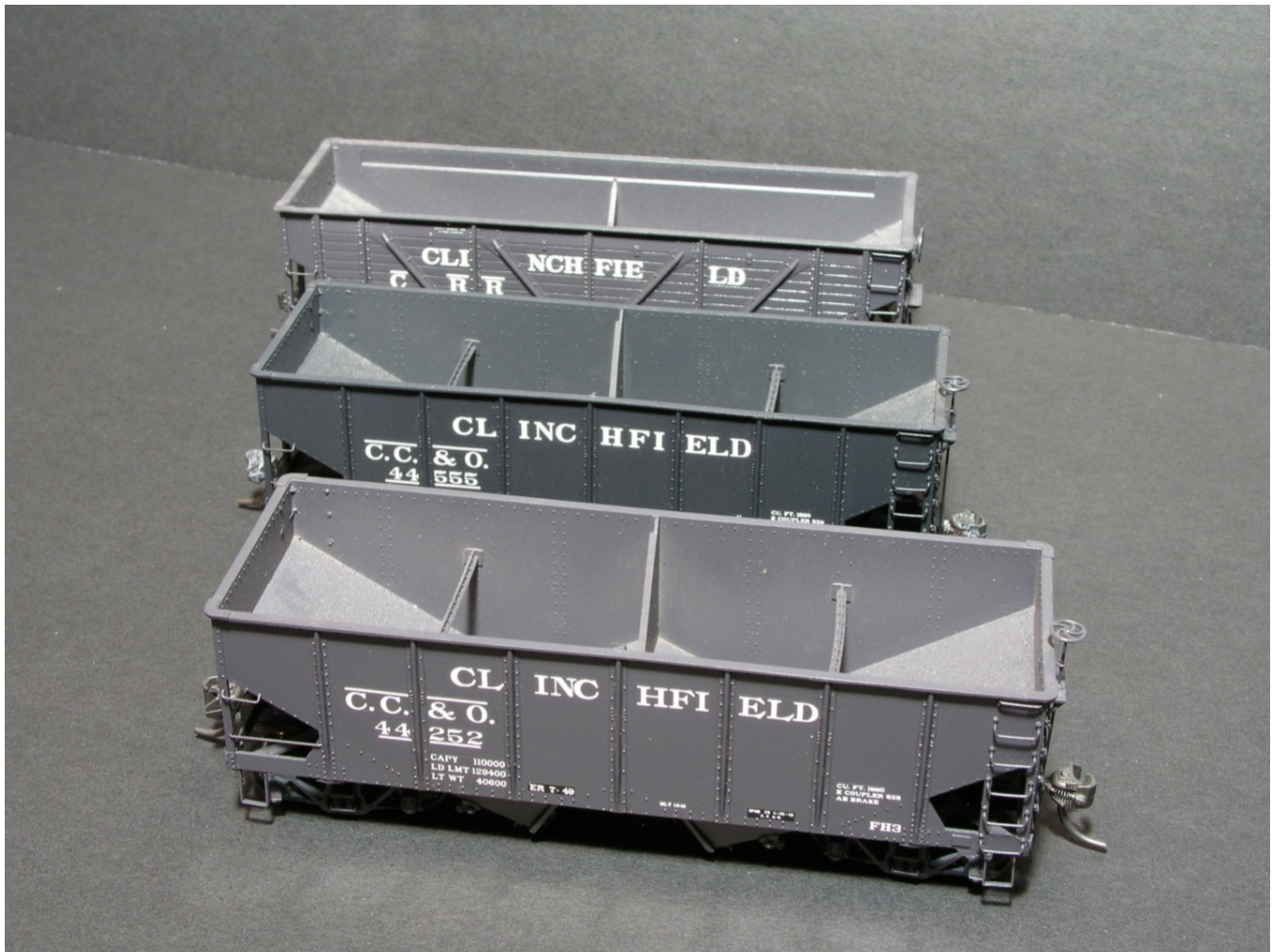
The hoppers utilized an interior length of 30 feet six inches, and were equipped with KD brakes and 50-ton Andrews trucks. Clinchfield was allocated 1,750 examples of the USRA 55-ton hopper which were numbered CRR 43750-45499 and assigned to the FH-3 class. The hoppers were delivered in December 1918 and served throughout the end of steam as larger hopper designs were created.



Bill created the models of CC&O (Carolina, Clinchfield, and Ohio) 44252 using the Tichy Train Group styrene kit. Bill favored the kit given its separately applied grab irons as compared to other available models. The two center panels are slightly out of scale compared to the Accurail model, but given the work needed to remove cast-on grab irons, Bill was a strong proponent of the kit due to the relative ease of creating a credible model. The ability to modify the brake components and use a stem winder brake wheel or modern brake gear was another deciding factor.

The model was constructed using the stock kit components, and painted according to the prototype. The model was lettered using a now out of production decal set once offered by Curt Fortenberry which contained era appropriate lettering. The application of chalk marks, reweigh data, and repack data sets the model apart from sister car, CC&O 44555.

The two models offer a differing appearance from the War Emergency hopper, a later design, but demonstrate Bill's attention to details and expert construction.





Clinchfield 60045

Clinchfield rostered four orders of American Car & Foundry examples of the 1,958 cubic foot covered hopper.

Clinchfield received a 5-car order (Lot 2364) which were numbered CRR 60000-60004 in September 1941. The cars were placed in the FL1 class and featured Ajax hand brakes, Apex running boards and brake step, and the entire car body and trucks were painted black with white stencils.

In June 1946, Clinchfield received 20 additional cars numbered CRR 60005-60024 in the FL2 class (Lot 2917). The cars utilized Universal XL hand brakes, Apex running boards and brake step, and the entire car body and trucks were painted Pittsburg Battleship Gray and stenciled in black.

Clinchfield's third order of 1,958 cubic foot two-bay covered hoppers were numbered CRR 60025-60059. The 35 cars of the FL3 class (Lot 3397) were built in August 1949 and featured Ajax hand brakes, U.S. Gypsum running boards and brake step, and were painted Pittsburg Aluminum Gray for the sides, ends, slope sheets, AB brake parts, and trucks. The roof and roof components were painted black, in addition to the hoppers, outlet hardware, and underframe. The cars were stenciled in white over the aluminum gray car body.

In January 1952, Clinchfield received 40 cars (Lot 3659) numbered CRR 60060-60099 of the FL4 class which featured Ajax hand brakes, U.S. Gypsum running boards and brake step, and the entire car body and trucks were painted black and stenciled in white.

As built all cars received Enterprise outlets, and received 70-ton double-truss spring-plank trucks. When viewing from the side, the spring planks are seen as a simple plate below the outer springs, so they have a very similar appearance to 70-ton double-truss spring-plankless trucks. Additionally, all cars were equipped with steel wheels, however, the first 3 orders came with 1-wear steel wheels, while the last order received 2-wear steel wheels. The first two orders were built at the ACF plant in Madison, Illinois, while the last two orders built at Berwick, Pennsylvania.

The first order is equipped with a Type 2 arrangement of the hatch covers and locking bars, whereas the last 3 orders were of a Type 1 arrangement. Clinchfield utilized these cars expressly for cement and feldspar service and served through the end of CRR in varying service to include sand and Maintenance of Way service.



CRR 60039 captured on film in Erwin, Tennessee is now utilized here in Maintenance of Way sand service based on the piles adjacent to the car. This undated photograph can be traced to the early 1980s based upon the presence of a March 1981 service date below the capacity data. **(Warren Calloway collection)**



Roof Types

Type 1 - Hatch covers hinged near the running board, one 24" hand hold mounted at the outer edge of the hatch cover, one locking bar per side mounted low to the side plate having one arm per hatch cover (centered each hatch cover), one lock handle each side at the center of the side.

Type 2 - Hatch covers hinged crosswise, covers open towards the ends; one long 24" hand hold each cover the opposite hinges; one locking bar per side mounted 5 7/8" above side plate, four transverse bars with two locking arms per hatch cover.



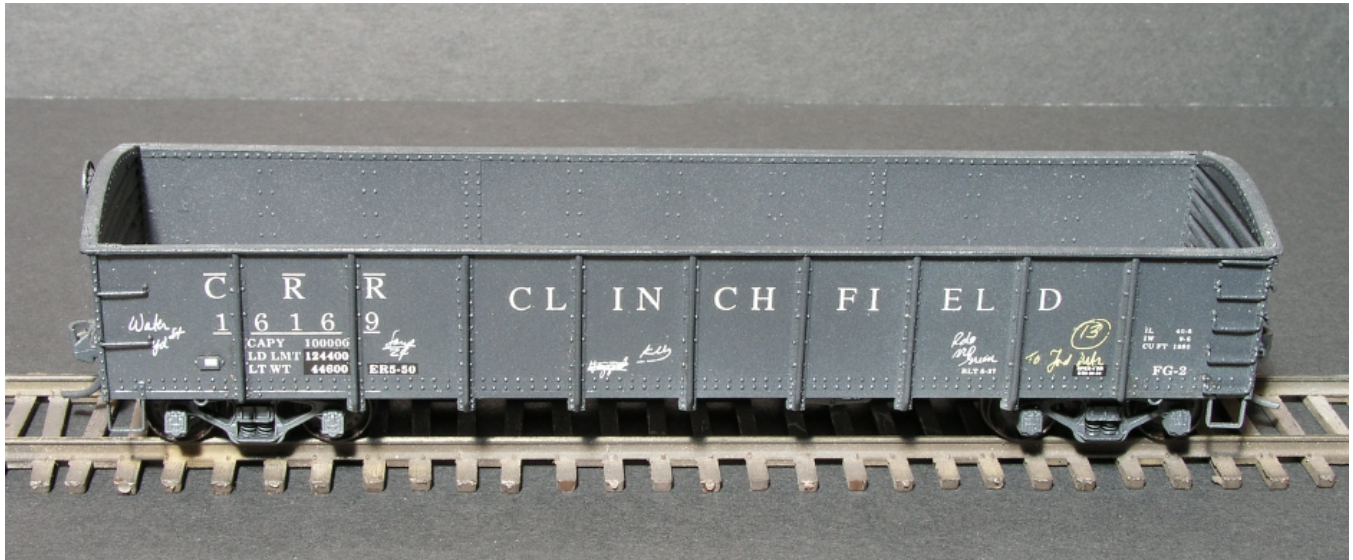
Bill's model of CRR 60045 follows prototype practice by utilizing US Gypsum running boards and laterals, and an Ajax brake wheel. The model is expertly finished and I believe the model is an extensively upgraded example of an Eastern Car Works styrene kit. Bill modified the car to include individual latch rod guards located on the eaves of the model. The appropriate ASF Ride Control trucks are placed beneath the model and it is lightly weathered to capture a 1940s appearance. I have been unable to determine the source of the decals, but the separately applied latch rod guards, grab irons, and brake gear piping all mark Bill's attention to detail.



Clinchfield 16169

One of my favorite models Bill has constructed is Clinchfield 16169. I knew little information concerning these prototypes, so had to turn to the Sunshine Models 67.6 instructions to determine the heritage of the prototypes. "Between 1930 and 1937, the C&O purchased 5,000 steel gondolas for coal service, its 40000-44999 series. These were steel floor cars, a typical preference of coal-hauling roads. The first 4,000 cars had vertical brake staffs and angular peaked ends. The final 1,000 cars, the 44000-44999 series purchased in 1936-37, had radial arched, five-corrugation Dreadnaught ends, ARA trucks, and Ajax power hand brakes. In 1937, the Clinchfield duplicated the C&O 44000 series with 250 cars in its 16000-16249 series. These also used ARA trucks and Ajax power hand brakes. The cars were painted black with white lettering. In 1953, only one car had been removed from service."

The models were released as a series of gondola kits produced by Martin Lofton of Sunshine Models. The C&O and Clinchfield kits were unique in that they included radial arched ends compared to others in the series. Bill was a huge fan of 40' gondolas of both high and low side configurations, and I was fortunate enough to have a handful of his images on hand as reference. The model uses 50-ton ARA trucks, and a variety of chalk marks indicating it has seen plenty of bituminous coal throughout its existence. The 1950 reweigh date places this firmly before his 1955 era cutoff. The FG-2 class of gondolas was rated for 1,980 cubic feet, had an overall length of 41'6" and an interior height of 5'1", and by 1976 only 20 examples remained on the roster. The longevity of these gondolas is a testament to the all-steel design.



Bill finished the model with black paint and the kit provided decals. His signature application of chalk marks, reweigh data, and light weathering sets the model apart from any other gondola model in my collection.



(Photographers unknown, Bill Welch collection)

Through the years, many of us have marveled at the craftsmanship, execution, and adherence to prototype fidelity shown by Bill Welch. Bill's expertise, attention to detail, and craftsmanship are all attributes that we, as prototype modelers, strive for. I have gained many opportunities to learn from Bill through the years, and am thankful for not his only skills, but his willingness to share with those interested in southeastern prototype modeling. Bill was one of the truly great prototype modelers in this world, and I appreciate him as mentor, fellow prototype modeler and above all else, a true friend. We at the Seaboard-Coast Line Modeler are indebted to him for the contributions he has made to the prototype modeling movement through the years, and while gone, he is certainly not forgotten. Thank you, Bill.

Sources:

A special thank you for the assistance of Ed Hawkins, Larry Goolsby, Ted Culotta, and George Elwood's Fallenflags.org. Additional research was conducted using Richard Hendrickson articles of Railmodel Journal (May 1995, December 2000).

Seaboard Air Line E7A: The Silver Fleet Workhorse

By Robert Harpe

Prototype Photographs as noted



Seaboard 3047 and unidentified E7A are powering Number 3, an express, mail, and passenger train. The locomotive was part of a four-unit order in April 1949. (**Warren Calloway photograph**)

As a model railroader I have to admit I am a devout Southern Railway modeler, but I enjoy building locomotives that were operated by different railroads that run, or at one time ran through the southeastern part of our country.

My good friend and prolific Seaboard Air Line photographer and historian, Warren Calloway, often shares photographs and information on the Seaboard for those of us too young to recall or were not taking photographs during this era. After viewing many of his photographs, I have always appreciated the appearance of Seaboard Mint Green passenger units Warren shares, and especially those units which have been washed or washed enough to remove the original mint

green color, but still have just a hint of the original color showing through. When contacted by the Seaboard-Coast Line Modeler editorial staff, I was asked to author an article for the next issue, which I quickly decided upon an SAL E7A passenger unit. I present to you Seaboard Air Line E7 3038 in its post-1960 appearance of SAL Mint Green, and I hope you enjoy what you see and review.

Seaboard Air Line EMD E7s

Following on the heels of Seaboard Air Line's early introduction of dieselized passenger service units such as the EMD E4 and E6 locomotives, which proved themselves reliable in the toughest passenger assignments, SAL

returned to EMD to purchase additional passenger locomotives. The signature EMD “bulldog” face now replaced the longer, sleek lines of the predecessor E units, which became a fixture on many of Seaboard’s

premier and secondary passenger trains.

In March 1945, Seaboard placed an order for four units, 3017-3020. These were followed closely by an additional 10 units which were



SAL 3031 was built in September 1946 and is seen awaiting assignment in Hamlet, NC nearly twenty years later on December 26, 1965. The weathering and road grime are indicative of the use these E7s saw throughout the 1960s. SAL 3031 is coupled with SAL 1115, a 1964 built SDP35, which were purchased to supplement the aging E unit fleet. **(Warren Calloway photograph)**

ordered in August/September 1945 and numbered 3021-3030. In September 1946, Seaboard Air Line again ordered four additional units, numbered 3031-3035. After a three-year lapse, Seaboard placed an order for four additional units, numbered 3036-3040 in February 1948, which were followed closely by an additional order for four more units ordered in July 1948, numbered 3041-3044. In April 1949, Seaboard ordered four additional units, 3045-3048. SAL also ordered three E7B units in July 1948 which were numbered 3105-3107.

Due to the sheer number of units ordered, the 32 examples of Seaboard Air Line E7A units

feature both early and late phase changes.

While not as noticeable as later production second generation unit phases, the most noticeable external change is the application of the number boards. Additional details such as the intake louver aft of the cab, and the application of screen material to the rear most window to provide steam generator air flow, were the most noticeable changes although these were at times railroad-specific. The 2,000-horsepower locomotive was often paired with other E7A and E7B locomotives on many of the Silver fleet passenger trains to complete runs from New York to Florida.



RALEIGH, NC 30APRIL 1965 © WARREN CALLOWAY



Opposite Top: E7A 3036 was at the helm of SAL train number 10, the *Palmland*, while stopped in Savannah, Georgia in June 1965. The E7A was assisted by two SDP35s with a head end heavy consist. **(Bill McCoy photograph)**

Opposite Bottom: SAL 3043 is stopped in Raleigh, NC on April 30, 1965 with another E7A. Both units are equipped with a Nathan M5 horn which replaced the Hancock air whistle which was favored by Seaboard. The units by this date are beginning to show the wear and tear of continual passenger train usage. **(Warren Calloway photograph)**

Above: SAL 3043 is taking on baggage and express shipments in August 1964 at Hamlet, NC. The *Palmland*, a secondary passenger train was typically found with various head-end cars to include express boxcars, baggage cars, and RPOs. The details abound in this image to include the Pullman sleepers in storage left of the consist which marked Hamlet as the "Hub of the Seaboard". **(Bill McCoy photograph)**



Capable of a top operating speed of 117 miles per hour, the SAL units were rated for 98 miles per hour and each E7A weighed an average of 317,332 pounds. Two units were retired prior to the 1967 SCL merger, with units SAL 3027 and 3042 retired early due to wrecks. The E7s were also used infrequently in freight service due to motive power demands and available horsepower for hotshot trains such as piggyback trains TT-23/24.

Prototype Details



The phase changes of the E7A are not as numerous as those found on later generation EMD models, but variation did exist.

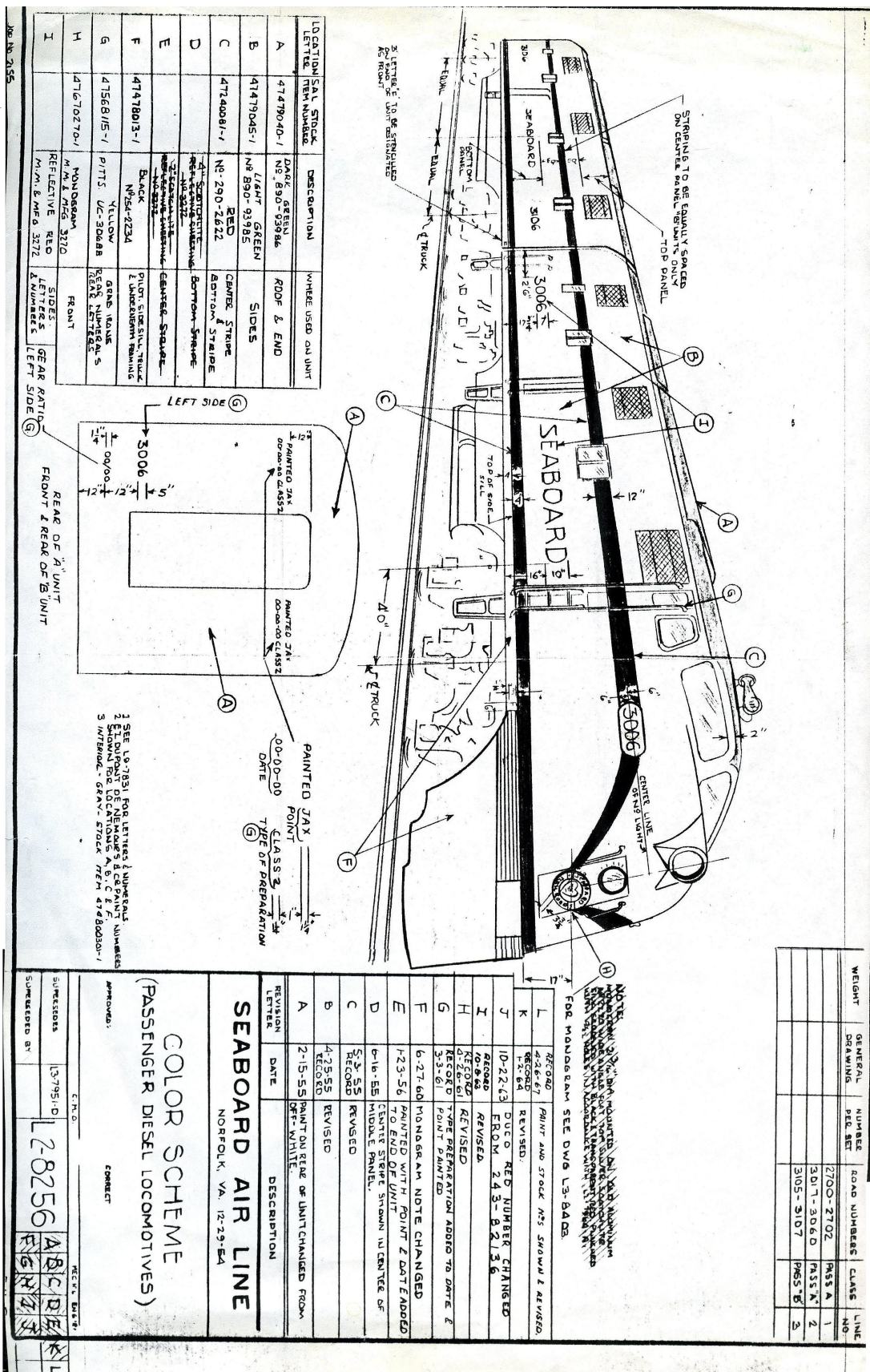
The differences in air intakes aft of the cab is one of the more prevalent details. Units 3017-3030 featured screen intakes while 3031-3048 utilized louvered air intakes.

The change in number board size and orientation occurred with unit 3036. Early units featured small number boards while later units featured large 45-degree number boards.

Units 3017-3020 were unique in that they featured a single headlight until the application of a horizontal twin-sealed beam headlight above the front door.

Seaboard Air Line EMD E7A Roster

Unit	Unit	Order	Serial Number	Build Date	Retired	Remarks
SAL 3017	SCL 544	E-534	1929	3-15-1945	09-1972	
SAL 3018	SCL 545	E-534	1930	3-15-1945	2-21-1971	
SAL 3019	SCL 546	E-534	1931	3-17-1945	09-1972	
SAL 3020	SCL 547	E-534	1932	3-17-1945	3-02-1972	
SAL 3021	SCL 548	E-640	2875	8-24-1945	12-21-1971	
SAL 3022	SCL 549	E-640	2876	8-24-1945	05-1974	Renumbered 5549 09-1973
SAL 3023	SCL 550	E-640	2877	9-06-1945	12-21-1971	
SAL 3024	SCL 551	E-640	2878	9-06-1945	05-1972	
SAL 3025	SCL 552	E-640	2879	9-08-1945	12-1971	
SAL 3026	SCL 553	E-640	2880	9-11-1945	12-1971	
SAL 3027	Retired	E-640	2881	9-12-1945	05-1961	Wrecked Raleigh, NC
SAL 3028	SCL 554	E-640	2882	9-12-1945	05-1974	Renumbered 5554 09-1973
SAL 3029	SCL 555	E-640	2883	9-13-1945	1-05-1972	
SAL 3030	SCL 556	E-640	2884	9-13-1945	2-17-1972	
SAL 3031	SCL 557	E-697-A	3031	9-21-1946	05-1974	Renumbered 5557 09-1973
SAL 3032	SCL 558	E-697-A	3612	9-21-1946	05-1974	Renumbered 5558 09-1973
SAL 3033	SCL 559	E-697-A	3613	9-21-1946	08-1972	
SAL 3034	SCL 560	E-697-A	3614	9-21-1946	3-03-1972	
SAL 3035	SCL 561	E-697-A	4444	9-23-1946	12-23-1971	Wrecked St. Petersburg, FL
SAL 3036	SCL 562	E-969-A	6028	2-24-1948	05-1968	Wrecked Colonial Heights, VA
SAL 3037	SCL 563	E-969-A	6029	2-23-1948		Wrecked St. Petersburg, FL
SAL 3038	SCL 564	E-969-A	6030	2-23-1948	6-25-1969	Wrecked Winter Haven, FL
SAL 3039	SCL 565	E-969-A	6031	2-23-1948	06-1972	
SAL 3040	SCL 566	E-969-A	6032	2-23-1948	05-1972	
SAL 3041	SCL 567	E-969-A	6149	7-13-1948	Unknown date, 1970s	
SAL 3042	Retired	E-969-A	6150	7-13-1948	1959	Wrecked 1958
SAL 3043	SCL 568	E-978-A	6151	7-14-1948	08-1972	
SAL 3044	SCL 569	E-978-A	6152	7-15-1948	06-1972	
SAL 3045	SCL 570	E-1146	8259	4-21-1949	08-1972	
SAL 3046	SCL 571	E-1146	8260	4-15-1949	12-31-1968	Wrecked Winter Haven, FL
SAL 3047	SCL 572	E-1146	8261	4-16-1949	03-1972	
SAL 3048	SCL 573	E-1146	8262	4-16-1949	04-1972	
SAL 3105	SCL 667	E-978-B	6153	7-13-1948	2-17-1972	
SAL 3106	SCL 668	E-978-B	6154	7-13-1948	2-17-1972	
SAL 3107	SCL 669	E-978-B	6155	7-14-1948	3-02-1972	



Seaboard Air Line passenger diesel locomotive painting and lettering diagram (Warren Calloway collection)



The steam generator vent added to the rear of Seaboard 3044 and 3106. The screen material replaced the as-built window due to the heat developed in this compartment. The screen was a post-1960 addition to most all E7A and E7B locomotives.

(Warren Calloway photographs)



Small details such as the style of the sand fill hatches, the cut lever extensions, and walkways add to the appearance of a later era Seaboard E7A. The builder's plates, antenna conduit, horn configuration, and nose doors are also unique Seaboard details.



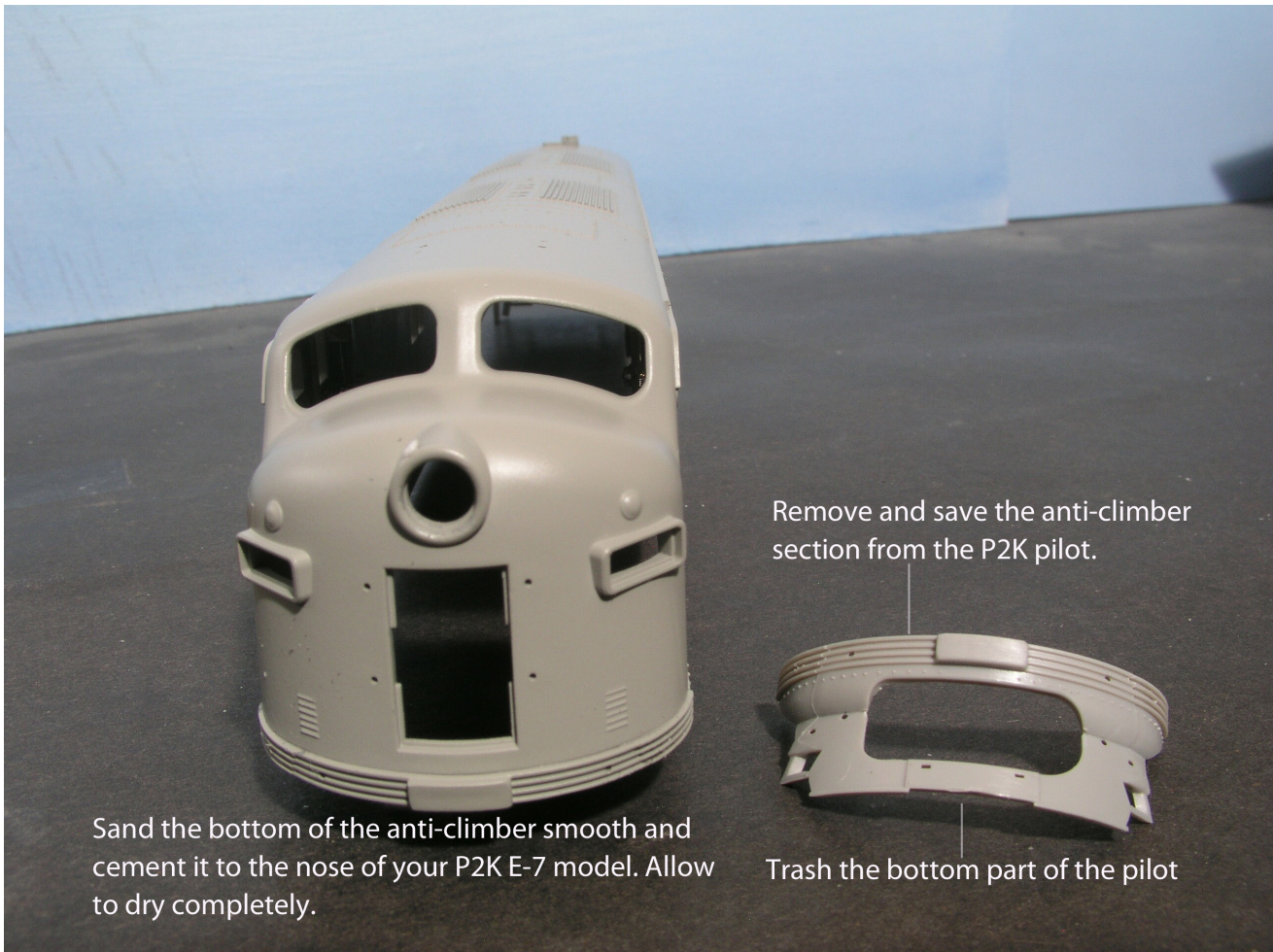
To ease maintenance during service, multiple sections of the lower skirting were removed to access the various equipment below the sill of the locomotive. The modification to the skirting of the E7A were uniform on both sides of the locomotive. The red door painted on the leading edge of the skirting indicates, "**FIRE EQUIPMENT**".

Available E7 Models

Model railroading is an ever-changing realm of improvement, and with the introduction of DCC, sound, LED illumination, and separately applied details, it has only hastened the improvement of models. When considering the available models for this project, I was faced with two models to choose from. The Life-Like Proto 2000 model has been a staple of prototype modelers and remains readily available for the budget-conscious modeler. Additional examples available from Broadway Limited Imports feature improved drives, sound, and DCC, although these significant improvements result in a higher price. Walthers acquired the Proto 2000 tooling and made significant improvements to the drive, electronics, and shell, but it too is not readily available as it is limited run. Having an undecorated example of the Life-Like Proto 2000 E7 was the reason I chose to construct SAL 3038 using this model as a basis, as it saved the tedious process of deconstruction, paint stripping, and reconstruction.

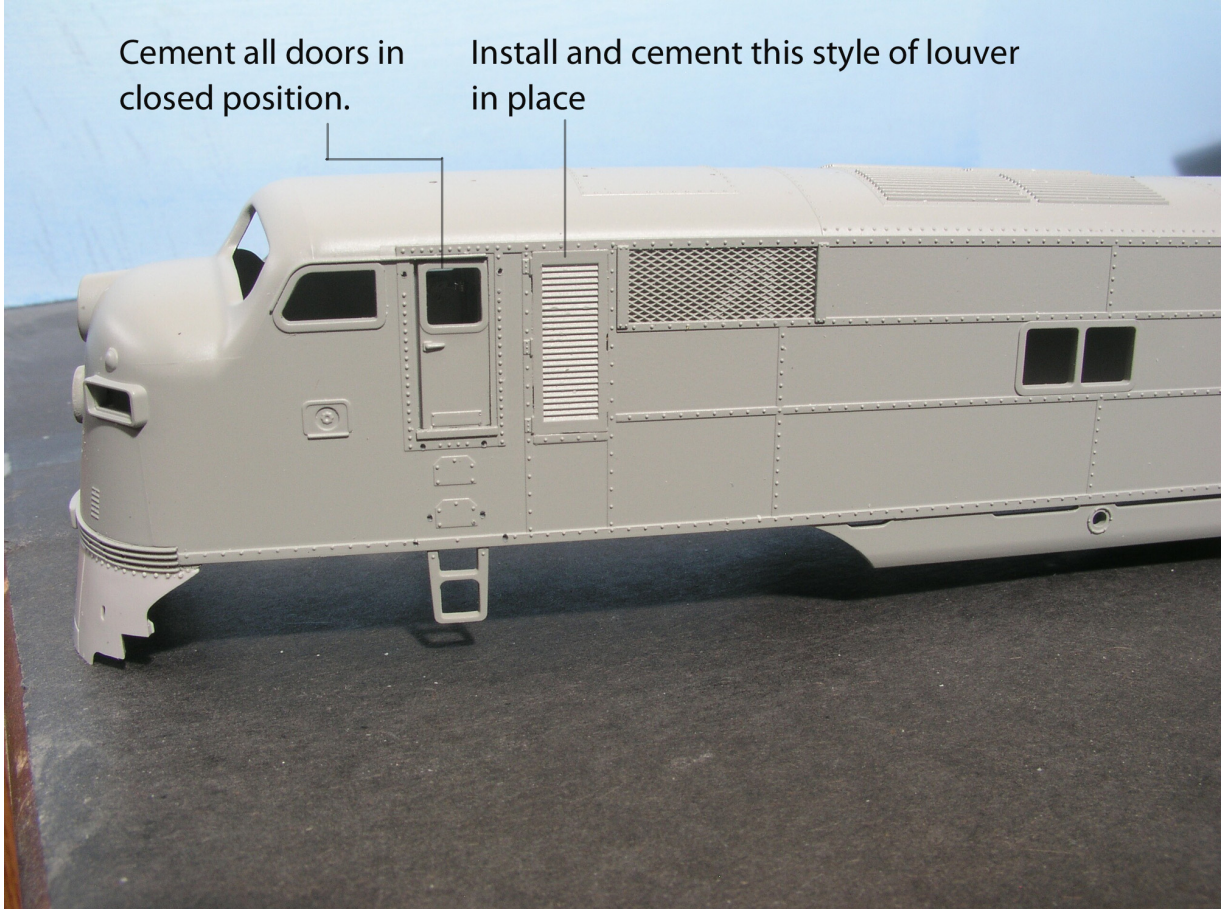
Construction

To begin the construction process of Seaboard Air Line 3038, carefully remove the anti-climber from the Proto 2000 pilot. Sand the area smooth and cement the anti-climber to the lower sill of the nose and allow to dry thoroughly.





- P2K E-7 front door cemented into place
- P2K anti-climber cemented into place
- Highliner passenger pilot cemented onto the P2k anti-climber



- Cement all doors in closed position.
- Install and cement this style of louver in place

Remove the plastic screens from these three areas and file smooth.



Using .030" x .060" styrene replace the screen supports for all three areas



The next step requires you to cement the kit-supplied E7 front door into place using liquid cement. Once sufficient time has elapsed for the anti-climber to dry, locate a new Highliners passenger pilot and cement it below the anti-climber as shown. Allow the pilot modifications to completely dry before moving on. Once fully set, cement the doors into the closed, secured position, and install the single pane louvered intake into place aft of the engineer's side cab door using liquid cement.



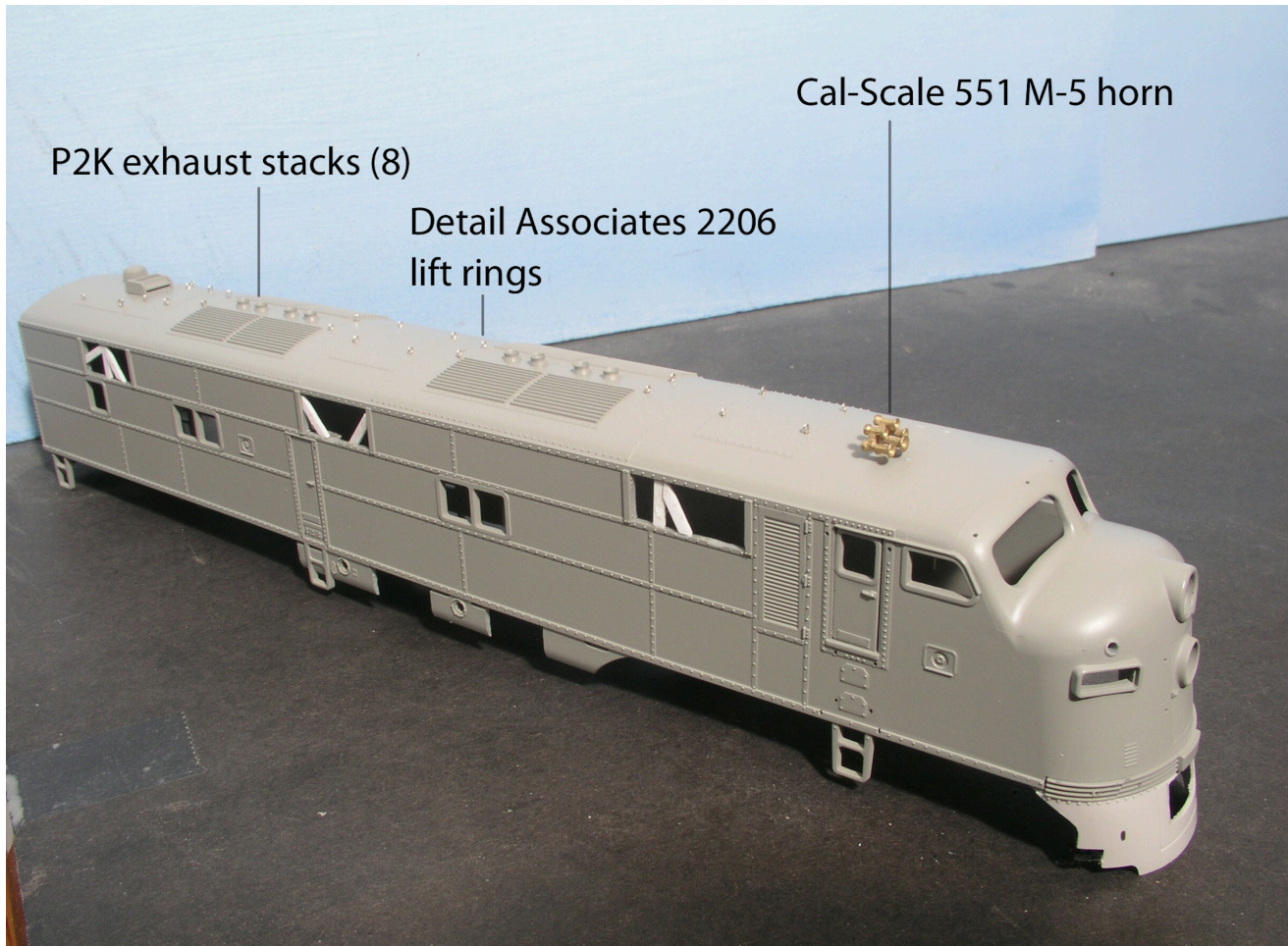
The following modifications require the use of a new, sharp X-acto blade and sure hands, so work carefully and slowly. The three plastic intake screens are removed so that we can install finer etched material in these locations. Remove the radiator intake screens on both sides of the car body and file each opening smooth. Once satisfied with the fit and finish of the openings, install 0.030" x 0.060" Evergreen strip styrene to replace the screen supports. Cut new supports and cement them into place using liquid styrene cement for all six openings.

Enlarge the four holes where the horn mounting points are located using a 0.030" drill bit. Using 0.30" styrene rod, fill the holes located on the fireman's side and the leading hole on the engineer's side of the cab. We will use the trailing hole on the engineer's side for a new horn. Once the rod has thoroughly set and dried, it may be necessary to sand and smooth the roof line to eliminate any traces of the rod.

After several years of service, Seaboard removed segments of the skirting to allow for ease of maintenance. Remove the areas marked with the **red X** and file and sand the edges smooth as indicated. The remaining areas should include the leading edge of the skirting, the areas surrounding the fuel and water fills, and the entry step.



Use a #80 drill bit to drill the holes which are located above the outside of the front windshield. Repeat this process for the fireman's side windshield and install two 0.0125" roof grab irons in the locations and cement in place from within the body shell. The body construction is now complete and we are ready to proceed with painting.



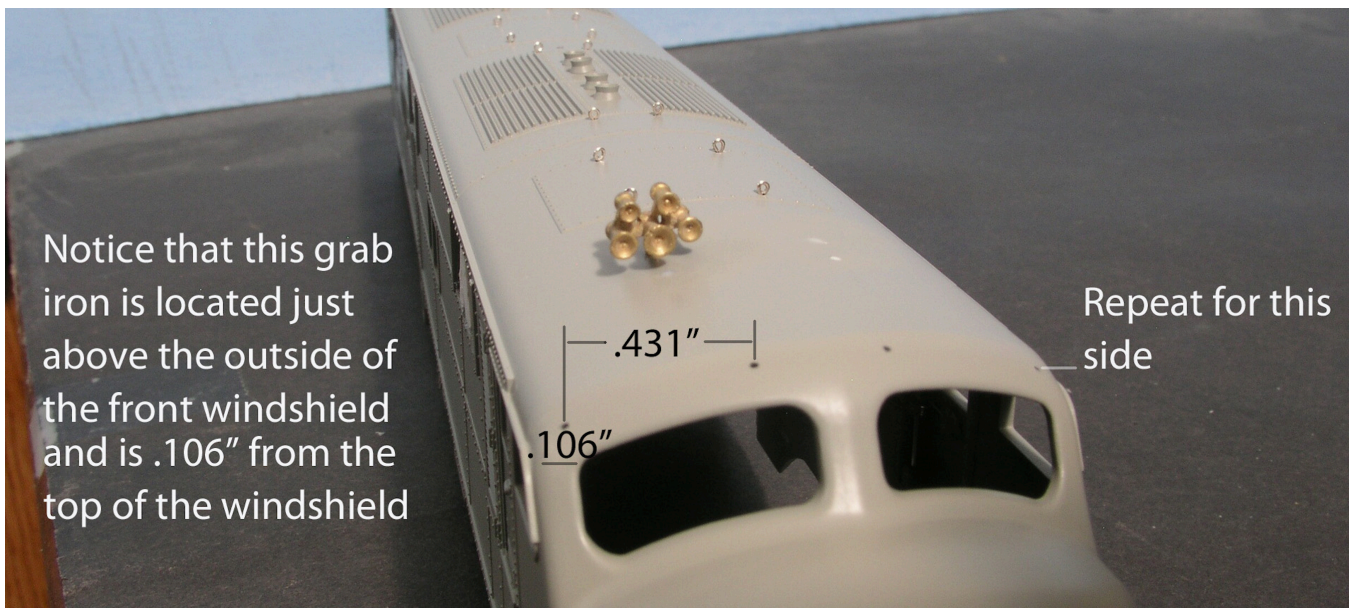
Moving to the roof of the unit, install the included eight exhaust stacks in their respective mounting locations between the radiator vanes. Install Detail Associates 2206 lift rings in the provided holes as shown, and lastly, install the Cal-Scale 551 Nathan M5 horn into the existing hole.

We will turn our attention to the rear of the unit where the prototype featured a series of six 24" drop grab irons located on the engineer's side of the locomotive. Using a jig, mark the locations of the grab irons to be installed. Once satisfied with the orientation, use a #79 drill bit to drill through the rear of the locomotive, and install the grab irons. Secure the grab irons from within the model using CA adhesive.

It is important to use a digital caliper to determine the proper measurements for the "brow" grab irons above the windshields. Locate and mark a hole to be drilled 0.106" above the windshield adjacent to the engineer's side window pillar. Locate and mark a second hole 0.431" towards the center pillar, and also 0.106" above the windshield.



Note the installation of the 24" drop grab irons on the engineer's rear side of the locomotive. The grab irons are installed per the prototype. Additionally, note the location of the "brow" grab irons above the windshields. The dimensions are best located using a digital caliper.



Notice that this grab iron is located just above the outside of the front windshield and is .106" from the top of the windshield

Repeat for this side

Painting

I prefer to wash the model using warm soapy water, rinse it thoroughly and allow it to completely dry before painting. My preferred paints are Scalecoat II products, which are currently unavailable, so please consult prototype references to reproduce accurate colors. It is important to allow sufficient drying time between color applications which can be as much as 24 hours. It is important when painting with Scalecoat products to use an appropriate thinner and use your preferred airbrush.

To begin the process, mask the model on both sides, rear end, and cab windows at the bottom of the batten strip. Continue masking at the top of the three open grills so we can airbrush Scalecoat II C&NW green onto the roof.



Looking at the following image, notice that there is no decal that is curved and fits the area shown so we have to paint our own. The stripe begins as a 12" stripe at the front of the number board and curves down to a point approximately 18" above the anti-climber. The nose herald will cover both points of each stripe, so an exact measurement is not needed since it will be concealed beneath the herald. Mask and paint the two stripes using Scalecoat II Bright Caboose Red and allow to dry.



There are no decals that will fit the curved nose stripe shown here so you will have to mask the area shown in red and try to fit the two areas in red as shown in this photo.



Scalecoat II C&NW Green

Scalecoat II White mixed with Scalecoat II C&NW Green

Scalecoat II Black

Scalecoat II Bright Caboose Red

To maintain the correct the color of the nose stripes, I airbrushed the area of the red stripe that runs along both sides of the model. These stripes begin at the rear of the number boards and both are 12 scale inches in width. The bottom of each stripe is located at 48 scale inches above the bottom of the batten strip, and both stripes terminate at the ends of the model. When dry, mask the area for the red stripes in preparation for the Mint Green color. When the Mint Green color has had time to dry, mask the area above the lower batten strip and above the pilot anti-climber and spray the batten strip, pilot and steps your favorite color of black.



Engineer's side of the painted model.

The mixture for the SAL Mint Green is determined by two decisions you must make. First, is to determine what your idea of the color Mint Green should look like, and secondly, do you want a freshly painted model or do you want one that has been washed many times in the strong acidic acid wash that Seaboard used to keep their units clean? I examined every photo that Mr. Calloway sent to me, and determined I wanted a semi-fresh coat of paint on my model.

There is no commercially available Seaboard Air Line Mint Green which matches my determination of what it should look like, so I created a custom mixture though it may sound strange. After several attempts to correctly model the color, I decided to use Scalecoat II C&NW green as the tinting color to a white base. I use a Paasche air brush to paint all of my models, and use the small metal color cup as my unit of measure. I filled the color cup halfway with Scalecoat II White. I then used a small screwdriver and added two drops of Scalecoat II C&NW green to the white paint. The C&NW green is the dominant color in the



mixture so be cautious when adding this color.

I thinned the mixture approximately 35-40% with Scalecoat II thinner, stirred it well, and applied the color mixture to the model. I was pleased with the mixture I created for Seaboard Air Line Mint Green, and even though the color seemed to have too much green in it, I knew a thin coat of Testors Dullcote would diminish the brightness of the color to an acceptable tone where I wanted it in the end.

Decaling

I used Microscale Mini-Cal set 4013 for the Seaboard Air Line name and nose herald, Microscale 87-110-5 for the lower red stripes, and Virnex S-2083 for the rear side numbers. To complete the model, I used ShellScale set 117 for the number boards. The decals were applied per prototype photographs and following the manufacturer's instructions.

Final Details

There are several remaining details needed to complete our model of SAL 3038 which must be installed after painting and decaling are complete. Install Highliners screen set 10010, which is intended for the EMD F2-F3 chicken wire grill-equipped F units, into the car body openings.

Carefully measure each screen opening and transfer that measurement to a section of the Highliners screen. Now, tape the length needed with masking tape and cut the screen as needed. Test fit the new screen to the opening to make sure the length is correct and then you can apply a small amount of Microscale Micro Liquitape around the edges of the screen opening and insert the new screen in place. Repeat for all six screen openings.



Create all new body handrails for your model and install each one and then cement them in place with an ACC type cement. Next, paint the new handrails using your favorite shade of yellow and allow to dry before handling.



Create the new handrails using .0125 brass wire
Paint handrails using your favorite shade of Yellow

Using the American Model Builders window set #248, carefully follow the instructions and insert the side windows in place. Next, remove the windshield pieces from the sprue and insert them into place. The side windows can be inserted from the outside of the model, but the two windshield glass sections work best if they are inserted into place from the inside of the model. When all of the glass sections are in place and are completely fitted as they should be, apply a liberal amount of Future Floor Polish around each section of glass, allow to dry and then carefully remove the thin paper backing found on each glass section by using a new #11 X-ACTO blade.





The top Mars headlight holder is found on a Highliners glass sprue as are the two headlight covers. Cement the Mars light piece into place as shown. Next, when dry, insert and cement one clear Detail Associates 1708 in the upper hole and when it is dry, paint the head end of another section of the Detail Associates 1708 Headlight using a Bright Red paint color. When that is dry, insert it into the bottom hole and hold into place using the Future Floor Polish. Use another headlight glass cover from the Highliners glass kit sprue and set aside to dry.

Create two cut lever bars from .0125" brass wire and install on the rear of the model held in place using Detail Associates lift rings. Next, paint a set of the Details West 266 MU hoses and when dry, install them in the location shown using an ACC-type cement. Also install the DW 268 air hose in its position as shown. Finally, weather the KD 158 coupler and when dry install onto the model.

To complete the model, I reviewed the images provided by Warren Calloway, and it was evident that Seaboard Air Line took great care of their passenger units and washed them often to uphold their appearance. I followed Warren's photo on the 3038 and tried to weather my model to match. I chose to use Floquil flat colors to weather this model and airbrushed the trucks, fuel tank, and pilot using a medium gray color on each part of this model and then over-spraying these parts using a very flat Roof Brown color to match the prototype weathering.



.0125 brass cut levers ———

KD 158 coupler ———

Details West MU-266 MU
hoses

Details West 268 air hose

Bill of Materials:

American Model Builders 248, Acrylic window kit
 Cal-Scale 551, Nathan M5 horn
 Detail Associates 2206, lift rings
 Details West 268, Air Hose
 Details West 266, MU Hoses
 Floquil Medium Gray and Roof Brown
 Highliners Passenger Pilot
 Highliners 10010, F2-F3 "Chicken Wire" screens
 Life-Like Proto 2000 E7A, undecorated with 45 degree number boards
 Microscale Industries MC-4013, SAL passenger decals
 Microscale Industries 87-110-5, Red stripes
 Kadee 158, semi-scale coupler
 Scalecoat II paints, C&NW green, White, Black, CB&Q Red
 ShellScale decals 117, number board decals
 Tichy Train Group 24" drop grab irons
 Tichy Train Group #1106, 0.0125" phosphor bronze wire
 Virnex S-2083, number set



Sources

I would like to acknowledge Warren Calloway, Bill McCoy, and Larry Goolsby, all of whom contributed a multitude of source information. Additional roster and prototype information were sourced from *Seaboard Air Line Railroad Company Motive Power* by Warren Calloway and Paul Withers.



Seaboard Air Line FUEL OIL CARS:

A Review of the Rapido Trains UTLX X-3 10,000-gallon tank car

By Justin May



Seaboard Air Line's Savannah, Georgia yard looking south circa 1954 -- Andrew Bunn photograph, Robert Wayne Johnson collection

Company-use tank cars were often a necessity for the transport of various fuels, oil, waste, and water throughout a railroad's physical plant. The cars used in fuel oil service would be loaded at bulk shipping locations and sent to outlying locations which did not have storage sites. Conversely, company-use cars were also found in dedicated shipping lanes from a source of supply to major company shops where diesel locomotives were serviced and maintained. Seaboard Air Line used their company tank cars in both capacities.

Seaboard's company service fleet of tank cars was distinctive and was drawn from several sources which included the Mexican Petroleum Corporation (later renamed Amoco) and Sinclair Oil, and consisted of many differing designs. Seaboard purchased tank cars from second-hand dealers throughout the 1950s to augment the existing fleet as earlier cars were retired and withdrawn from service. Seaboard rostered a handful of revenue tank cars which were obtained in the 1925 acquisition of the Charlotte Harbor & Northern (CH&N). The 10,000-gallon 50-ton tank cars were constructed in 1913 and 1920 and consisted of 10 cars numbered 3000, 3002-3010. By 1966, SAL rostered only five examples of revenue tank cars. In comparison, Seaboard rostered 169 tank cars of 8,000- and 10,000-gallon capacities, and 92 water cars of 6,200-to-12,000-gallon capacities, in company service. Water cars were similarly used and most often found in Maintenance-of-Way service to supply the many steam



SAL 073152 is an example of the UTLX X-3 design released and decorated by Rapido Trains in HO scale. The prototype was captured in Jacksonville, Fla., on April 20, 1973 by Stanley Jackowski.

derricks still in use, and as sources for cooking, bathing, and toilet water for MofW crews in remote locations. According to a 1966 Condensed Roster of work equipment, the tank cars in company service were as follows:

<u>Series:</u>	<u>Service:</u>	<u>Quantity:</u>	<u>Notes:</u>
OW72495	Fuel/Water	1	Old flat car
OW73251	Fuel/Water	1	Ex-AMOX 1115 (10K gals)
OW73255	Fuel/Water	1	Old 41883, 8000 gals
O71841 -O73258	Oil Tank	169	Capacity either 8K or 10K gals
W71837-W73254	Water	92	Capacity 6,200 to 12K gals

Seaboard Air Line used the O prefix to indicate Oil, the W prefix to indicate water, and the 'OW' prefix to denote water and oil. For the OW cars, Seaboard would create multi-compartment tanks within the same shell to carry both quantities of the designated commodity. A small manway hatch was typically used in conjunction with the larger diameter dome to fill the specified compartment with water or fuel.

History

New specifications for all tank car construction went into effect in May 1917. All cars built after that date had to meet the Class III specification. As a key participant in the Master Car Builders Association and the ARA committees that established this specification, Union Tank Car Company (UTLX) agreed with and was prepared to meet this new specification. Among

the most visible changes this specification brought to UTLX's designs was the lowering of the running boards to a height equivalent to that of a flat car. UTLX built upon its successful Class II spec design, known as Class X to UTLX, by creating the X-3 class.

While sharing many design features, the X-3 design evolved over time with certain visible distinctions. X-3 cars were built by UTLX and commercial builders in sizes ranging from 4,500 to 12,000-gallon nominal capacities. Essentially, two-thirds (12,924 out of the 19,425 X-3s built) were of the 10,000-gallon capacity. The 10,000-gallon X-3s were built between 1917 and 1930. (Hile)

For a complete explanation of the prototype evolution and design, visit http://resincarworks.com/extras/kit4-01_UTLX10kX-3_protodata.pdf which contains additional information.



SAL 073161, formerly Mexican Petroleum Corporation (MPLX) 724, is an example of a 10,000-gallon riveted tank car constructed in January 1920 by ACF (Lot Number 8727D). The car uses a gauging table of 4 (0.2242" thickness, 9.146 pounds per square foot). The lack of a pronounced end sill arrangement and inward facing braces denotes this as an ACF product. (Larry Goolsby photograph, Hamlet, NC taken on August 8, 1976)

UTLX Spotting Features

Union Tank Car Company created their own unique design which included an AC&F-like sill, which had an extended end sill arrangement with wooden decks beyond the end of the tank, poling pockets, and other unique UTLX details such as commodity boards and defect boards

mounted on a square steel panel. Many UTLX cars also had an arrangement of the triple valve above the reservoir on one side of the car. Some cars had a single ladder and dome platform on only one side. (Gatwood)

The underframe was the classic version of the X-3 with built-up box section bolsters, as indicated by the pattern of six rivets on the stub side sills. The end sills were straight across, and the area between the end sills and the bolsters was completely covered with wood decking.

These cars had tanks with 60-inch inside-diameter domes and the manway cover was the safety type, secured by a ring of fold-down bolts. The safety valves were well spaced away from the car center line on the top of the dome. Imagine lines drawn from the center of the dome at 45 degrees either side of the car center line. The safety valves were placed on those lines. (Many earlier X-3s had safety valves closer to the centerline and quite a few cars built in earlier batches had 54-inch ID domes.) As was common with most X-3s, these cars were built with only one dome platform and ladder, located on the brake equipment (left) side of the car.



SAL 073111 is another 10,000-gallon example constructed by ACF in 1925-1926. The shell capacity contained 10,216 gallons, while the dome was capable of containing 210 gallons. The car is a former MPLX car which consisted of eight various series, and the original car number is not known. (Warren Calloway photograph taken in Hamlet, NC circa 1965)

The cars were delivered with U-section Andrews trucks and retained them for most of their lives. KC-style brakes were used until well past World War II, when UTLX engaged in a massive project to convert to AB brakes by the required deadline. Heavy brackets were installed and required additions to support the reservoir and triple valve, while the brake cylinder stayed in the same location as with the KC brake set. Top-operated couplers were replaced by bottom-operated ones, probably after WWII. (Hile)

TARIFF 300-I

UNITED STATES AND MEXICAN SECTION-Continued

SEABOARD AIR LINE RAILROAD COMPANY

Used for Transporting Diesel Fuel Oil

Address: Portsmouth, Va.

Cars marked: S. A. L.

CAPACITY			CAPACITY			CAPACITY			CAPACITY		
CAR No.	Shell	Dome	CAR No.	Shell	Dome	CAR No.	Shell	Dome	CAR No.	Shell	Dome
	Gallons			Gallons			Gallons			Gallons	
71841	8010	243	73102	10203	210	73134	10090	257	73166	10220	322
71842	8012	245	73103	10176	210	73135	10086	257	73167	10181	210
71854	10068	322	73104	10070	322	73136	10048	257	73168	10073	322
71855	10162	270	73105	10183	210	73137	10049	257	73169	10179	210
73057	10073	230	73106	10164	210	73138	10049	257	73170	10190	210
73058	10164	210	73107	10196	210	73139	10092	257	73171	10184	210
73059	10176	210	73108	10160	210	73140	10038	248	73172	10194	210
73060	10177	210	73109	10216	210	73141	10181	343	73173	10186	210
73061	10071	213	73110	10163	210	73142	10211	274	73175	10204	210
73062	8097	243	73111	10216	210	73143	10207	275	73176	10201	210
73063	10158	449	73112	10199	210	73144	10200	271	73177	10210	210
73064	10092	267	73113	10223	210	73145	10201	275	73178	10228	210
73065	10093	257	73114	10217	210	73146	10162	281	73179	10181	210
73066	8091	357	73115	8000	257	73147	10210	349	73180	10197	210
73067	10094	257	73116	10089	257	73148	10167	286	73181	10199	210
73068	8131	245	73117	10031	248	73149	10179	275	73182	10215	210
73069	10091	257	73118	10085	257	73150	10055	142	73183	10183	210
73070	10072	234	73119	10091	257	73151	10126	270	73184	10182	210
73071	10033	234	73120	10050	257	73152	10122	118	73185	10185	210
73072	10089	257	73121	10048	257	73153	10063	270	73186	10200	210
73073	10151	449	73122	10035	257	73154	10048	257	73187	10200	210
73091	10071	322	73123	10035	257	73155	10160	270	73188	10200	210
73092	10183	210	73124	10076	257	73156	10193	270	73189	10200	210
73093	10155	210	73125	10039	257	73157	10051	257	73190	10200	210
73094	10206	210	73126	10048	257	73158	10024	270	73192	10200	210
73095	10155	210	73127	10085	257	73159	10020	270	73193	10200	210
73096	10216	210	73128	10047	257	73160	10168	270	73194	10200	210
73097	10210	210	73129	10032	257	73161	10159	210	73195	10200	210
73098	10183	210	73130	10054	257	73162	10208	210	73196	10200	210
73099	10206	210	73131	10087	257	73163	10215	322	73197	10200	210
73100	10208	210	73132	10089	257	73164	10234	322	73198	10097	326
73101	10217	210	73133	10131	257	73165	10206	322			

Tariff 300-I, Seaboard Air Line Railroad Company roster of fuel oil service tank cars. (ACL & SAL HS collection)

Rapido Trains – UTLX X-3 Model

In 2023, Rapido Trains of Ontario, Canada, released an all-new HO scale styrene model of the UTLX X-3 tank car. The model was designed from original blueprints, and contains numerous scale features such as correct tank bolster pads, correct 54” diameter dome, UTLX commodity and defect boards, Andrews or Bettendorf trucks as appropriate, full underbody detailing with two distinct brake systems offered, correct end platforms, coupler cut levers, handbrakes, semi-scale couplers, and draft gear.

Until now, a resin kit once offered by Sunshine Models was the only means to obtain this prototype, however it has not been available in over a decade. More recently, Resin Car Works also offered a revised resin kit (Kit 4.01 and 4.02), but these have since sold out and a future production date is not known. Resin Car Works kits offered two different dome diameters, and multiple tank capacities to include 6,500-, 8,000-, and 10,000-gallon capacities.

The Rapido Trains 10,000-gallon UTLX X-3 is equipped with a 54” diameter dome, which fills a unique void in the realm of tank cars and is truly an excellent model. The model is weighted appropriately and is a free-rolling car. The model is decorated for a variety of private road





names, but more importantly is offered in Seaboard Air Line company service lettering.

The model is offered in three separate road numbers to include SAL O73152, O73157, and O73159. The models include free-standing grab irons and railings and are expertly assembled and painted. The inclusion of an ACI label is good for those who model the 1960s and beyond. If not needed, a small portion of paper towel can be applied over the offending label, and once repeatedly soaked with Walthers Solvaset decal solution, the label can be easily removed without much difficulty.

The UTLX X-3, when compared to ACF Type 21 and 27 tank cars, lacks a comparable number of rivets, fewer courses of radial riveting, and the four prominent seam bands that



mark these as completely different prototypes. The signature UTLX six-rivet pattern at the bolster location is present on the end sill of the model and is accurately represented.

The rivets on the UTLX are well done and properly sized. The dome details are well done, and the construction of the car is excellent. Rapido even went so far as to include a routing card holder on the end sills, a detail not typically included in the ready-to-run market. The bolster detail, banding anchors, and stanchions which support the service railing surrounding the tank are some of the best to date in scale.

Due to their intended role and service, repainting and relettering of these cars was not frequent. The lettering and stenciling on the cars are impressive and can be read without magnification. The cars are accurately lettered following Seaboard Air Line practice and

include reporting marks located on the center sill of the model.

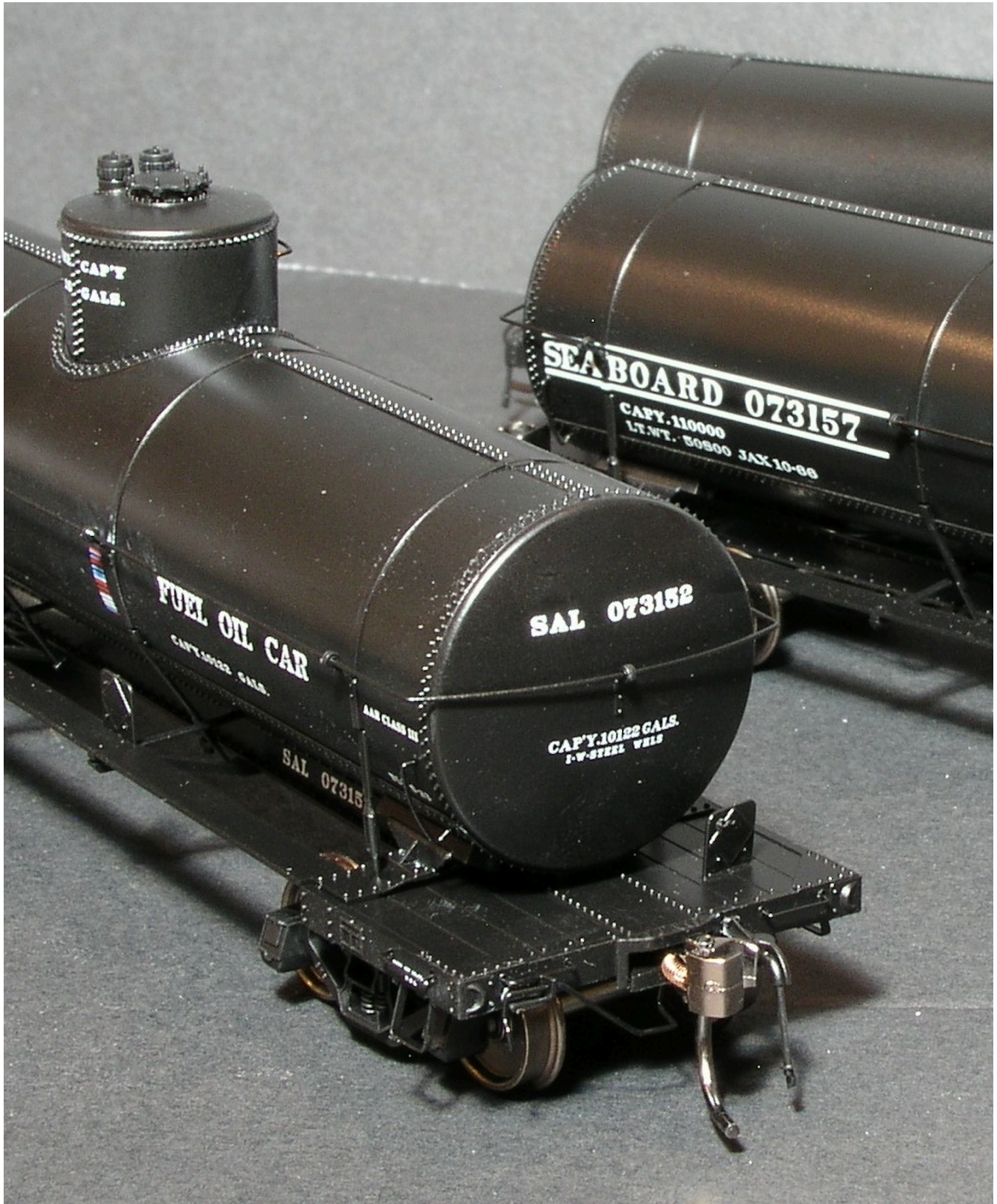
The additional details such as cut levers, air hoses, and commodity boards installed complete the unique appearance of these cars. Although photographic evidence has not been found of the SAL X-3s having wood planking replaced with steel, some prototypes received this modification during the 1960s.

Upon review of my models, the only needed change is to replace the provided metal coupler with a semi-scale Kadee 158. The models should be weathered appropriately to fit your era and mine will receive an ample overcoat of flat finish and Tamiya X-19 Smoke to simulate the spillage and staining surrounding the dome. The UTLX X-3 is a welcome addition to any service track, or passing through on a manifest freight to the next major terminal, and should be considered as essential equipment for your layout.

Sources

I would like to acknowledge Steve Hile, (the authoritative source on UTLX tank cars and author of UTLX Steam Era Tank Cars, available from Speedwitch Media), Elden Gatwood, George Elwood's Fallenflags.org, Resin Car Works, Warren Calloway, and Larry Goolsby, all of whom contributed a multitude of source information.





Upcoming Events:

ANNUAL MEETING

JAX 2023 was held February 2-5, 2023 and was a successful meet. 87 attendees participated and a good time was had by all in attendance. More information will be shared in *Lines South* and *Lines for Members*.

DIVISIONAL MEETINGS:

We are advancing several possible meetings:

Fall-Winter 2023 - Florida Division, Central at Winter Garden, FL

Winter-Spring 2023 - Florida Division, South at Deerfield Beach, FL

To Be Determined - Atlantic Division, Elm City and/or Rocky Mount, NC

Late Summer 2023 - Western Division at Pueblo, CO, home to SAL *Ft. Lauderdale*, ACL *Naples*, and several ACL and SAL/FEC coaches.

We would like to add one each for the Central and Midwest by the end of 2023. Please share your ideas at info@aclsal.org

2023 Calendar:

The Atlantic Coast Line and Seaboard Air Line Railroads Historical Society 2023 calendar is now available for purchase at <https://www.aclsal.org/article/2023calendar>

2024 Calendar:

The Atlantic Coast Line and Seaboard Air Line Railroads Historical Society 2024 calendar is now available for purchase at <https://www.aclsal.org/article/2024-calendar-arriving-soon>



Upcoming Modeling Articles:

Seaboard Coast Line Wimauma, Florida Depot

Seaboard Air Line Fruit Growers Express 50' RBL Part 2

Atlantic Coast Line P-11 Flat cars

Seaboard Coast Line Plan 7600 52 seat coach

Seaboard Air Line Plan 3585A, 10-1-2 Heavyweight Sleeper, Lake Alexander

Seaboard Air Line Pullman-Standard 40' PS-1 Boxcars

Seaboard Air Line Ventilated Boxcars: V-9 and V-10 series

Seaboard Coast Line Stump Gondolas

Seaboard Coast Line Alco RS11

PARTING SHOT

Seaboard Coast Line 1203, sits in Hialeah, Florida on a hot August 1967 afternoon. SCL 1203 was one of two units repainted into the Jolly Green Giant paint scheme. SAL 100 and SAL 101 were repainted on the eve of the SCL merger and would retain the scheme well into the SCL era. (**Warren Calloway collection**)

