

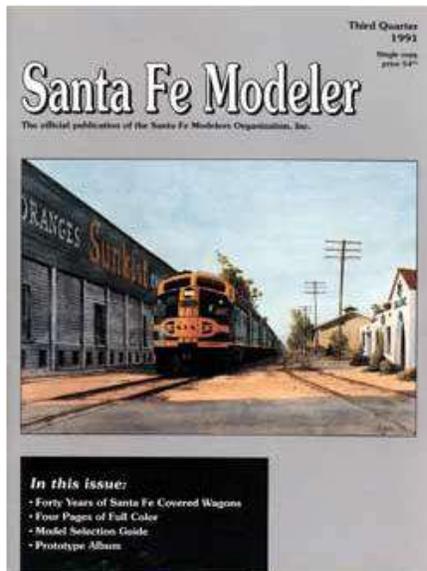
Santa Fe F Units
By Lee Berglund & Jay Miller

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This is information on Santa Fe F-units originally presented in the Third Quarter 1991 *Santa Fe Modeler*. Included here are some updates from the original publication, particularly in the modeling area. Below is a Table of Contents for this file.

Santa Fe F-Units



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Famed railroad artist and confirmed Santa Fe modeler John Signor painted our cover illustration for boyhood friend Bo Golson in 1981. Signor and Golson spent the summer of 1963 riding their Schwinn Wasps around their homes in Southern California watching trains and just "being boys." One long summer evening, they lucked out and caught the "Flip" passing the packing sheds of Olive - lucky because the train usually ran at night. Officially the SDX, she originated at San Bernardino and ran down the old Fourth District to San Diego. An immaculate set of 200's was in charge that evening, and two young men stared in awe as the markers trailed off into the distance along a row of tall, cool eucalyptus trees. Thanks John and Bo, for sharing your memory with us.

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Santa Fe Freight FT's



Four 100-class FT locomotives pose for the company photographer at Winslow, Arizona just before V-J Day (August 15) in 1945. From left to right, 142C sports a later version of the Santa Fe badge plate (see modeling notes) and a slight difference in the headlight housing. Units 118L, 130L and 121L are all graduates from La Grange class of 1943. -Santa Fe, John McCall Collection

FT's road numbers 100 through 199 and 400 through 430

Electro-Motive's 1939 demonstrator locomotive carried model designation FT, these initials standing for Freight, Twenty-seven hundred horsepower, under EMC's early model designation system. (The 2700 HP stemming from the total HP of an A-B set, EMC's intended sales package for the FT). The FT demonstrator carried road number 103 and did a barnstorming tour of the Santa Fe and many other railroads throughout the country in early 1940 turning in an impressive performance everywhere it went. It was made up of four separate power units of 1350 HP each for a total of 5400 HP, a close equivalent to the HP rating of the most modern steam locomotives of the day including the Santa Fe 's new 3765 class 4-8-4's and 5001 class 2-10-4's.

The FT thumbed its nose as it rolled past the water plugs where steam engines were compelled to stop all too frequently. At the end of the run it was just "fill her up and check the oil" and head out on another train instead of a visit to the roundhouse for the labor-intensive servicing required by a steam locomotive prior to another run.

Santa Fe's management was sufficiently impressed with 103's performance to place an order on October 1, 1940 for production units-the first railroad to do so. Santa Fe's FT deliveries began with two AB sets numbered 100LA (in December 1940) and 101LA (in January 1941), "L" (for lead) units having a cab and "A" being cab-less boosters. Road numbers on 100A and 101LA are

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said to have been painted out during early operations so that the only visible number on the quartet was on the lead unit number 100. This may have been done because of early rumblings from the labor unions about multiple unit diesel locomotives requiring multiple crews.

Santa Fe intended to use their FT's as 4-unit 5400 HP locomotives, so 101LA was quickly renumbered to 100BC, "B" being a cab-less booster and "C" being equipped with a cab. A new A-B-B-A set was built and numbered 101LABC, giving two full A-B-B-A locomotive sets. This very early renumbering was only a small hint of many subsequent renumberings to be inflicted on the 100 class during their service lives.

Before any more FT's were delivered, the railroad labor unions confirmed the Santa Fe's fears when they decreed that every cab unit must have a crew even though it was completely unnecessary for the operation of the locomotive. Of course, the railroad was not about to pay a second crew to sit in the cab of a trailing unit and do nothing, so management decided subsequent locomotives would be arranged in A-B-B-B sets rather than A-B-B-A to eliminate having a second cab and changed the first two locomotives to A-B-B-B sets as well.

FT-A's 100C and 101C were renumbered to 102L and 103L and new FT-B's numbered 100C, 101C, 102ABC and 103ABC, plus another new A-B-B-B set numbered 104LABC, were also built. By September 1941 the Santa Fe had five A-B-B-B sets of FT's in operation numbered 100LABC through 104LABC. Although EMC's (by this time it had become EMD - Electro-Motive Division of General Motors Corp.) intent was to market the FT as AB sets permanently coupled by a drawbar, the Santa Fe early on requested couplers on all units. Subsequently, all the Santa Fe's FT's, with the possible exception of the original two A-B-B-A sets, were delivered with couplers on both ends of all units, greatly adding to the flexibility of these units and making the shifting around of locomotive consists much easier.

The 100LABC set was well-photographed as it worked across the system with a dynamometer car in its very early days of service and testing. Because of all these early photos, it is generally not understood by most Santa Fe fans that its A-B-B-A configuration was quickly changed to A-B-B-B. The number 100 set spent the rest of its days in service with a single FT-A 100L as there was never another FT-A built with or renumbered to number 100C.

All locomotives from 105LABC through 151 LABC were built between March of 1942 and June of 1944 as A-B-B-B sets rather than A-B-B-A as commonly thought. By the time the 152LABC set was being built, the labor unions had relented and agreed that only one crew per diesel locomotive was required even if it contained more than one cab. Thereafter, all locomotives from 152LABC and up were arranged in A-B-B-A configuration and most of the earlier locomotives were changed to A-B-B-A sets as well.

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Electro-Motive's FT demonstrator 103 heads up eastbound #4 at Nelson, Arizona on March 9, 1940 on one of its first demonstration runs. The FT's performance resulted in the Santa Fe placing the first production order for FT's with EMC. Venerable dynamometer car 29 is immediately behind the trailing unit. Note the absence of dynamic brakes. -Gordon Bassett Collection

To accomplish this, boosters 100C through 151C were renumbered to numbers 152AB and upwards and new cab units were built, and some older cab units were renumbered to go with the renumbered B-units from the early locomotive sets to create locomotives 152LABC through 179LABC. For some reason, new cab units were never built to go with units 100LAB through 104LAB. This resulted in A-B-B sets 100LAB through 104LAB and four-unit sets 105LABC through 179LABC in service, most being A-B-B-A.

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FT 100L was at San Diego on February 14, 1941 when R. P. Middlebrook made this photo. This is one of the best black and white photographs which clearly illustrate the factory paint scheme of the FTA-units. Note the red separating stripes, the bronze Santa Fe nose badge and the black roof and pilot. The yellow paint was a creamier shade that used on the later passenger and freight units. "Santa Fe" lettering on the side was a gold bronze color. - Stan Kistler Collection

Since the last locomotive built with new cab units was 179LABC, higher numbered FT's from 180 through 199C and 400 through 430B were all renumbered from lower numbered units. The primary reason for renumbering many of the FT's again after all the trouble it had been to get most of them into A-B-B-A sets was because the railroad desired to move many of them to other parts of the system after the completion of their World War II duties. War demands had kept most of them on the western end of the system for the most part and the new assignments often did not require full four-unit locomotives. So, the 100 class was again largely renumbered for reassignments.

Most of the renumbered FTA's were from units 105C through 179C although not all of these "C" units were renumbered. Most of the locomotive sets numbered 180 through 199 that were created by this renumbering were of A-B-B configuration, but some were A-B-A. This was probably influenced by where the locomotives were to be assigned.

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The second cab unit for the first cross-country trip of the 100 did not have any numbers in the number boards. Shown here at Topeka in January 1941 (left to right), she will become the first 101L and here booster, 101A. Behind them are the 100A and the 100L cab unit on the point (with flags). In March 1941, cab unit was numbered 100C and in September 1941 renumbered to 102L.

Locomotives renumbered to 400 through 430 were initially set up for use in branch line or secondary line service to replace steam locomotives in those assignments, mostly in California, Texas and Oklahoma. The 400's varied from single cab units to complete A-B-B-A sets. The single unit and two unit 400's were equipped with footboards and rear headlights, which they retained until deliveries of new GP7s allowed their return to mainline freight service.

Later yet, the railroad renumbered many units to again create A-B-B-A sets, but most units involved in this renumbering did not get their original numbers back. Most of this renumbering came out of the 400 series, but some units did retain their 400 series numbers to the end of their careers.

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The shot of 117LABC in early 1945 near Cajon, California illustrates the as-delivered A-B-B-B configuration of all Santa Fe FT sets 102LABC through 151LABC acquired from 1941 through late 1944. 100LABC and 100LABC were also reconfigured to A-B-B-B in response to the operating union's demand requiring a crew in every cab unit. When the unions relented on this demand, most of the early FT sets were reconfigured to A-B-B-A shortly after World War II. -Stan Kistler Collection

Some units were renumbered as many as six times over the course of the years. Total FT numbers produced for the Santa Fe was 155 cabs and 165 boosters.

Santa Fe's FTB's were equipped with hostler controls that would allow limited operation of the booster unit. These rudimentary controls were located at the left rear of the engine resulting in an extra porthole on the left side of all Santa Fe FTB's. This fifth porthole was mounted on hinges and could be opened by the hostler so he could see where he was going. The hostler could also operate a small air horn which was located on the upper end wall of the carbody nearest the hostler control station. All Santa Fe's F3, F7 and F9 booster units had hostler controls, hinged porthole and small air horns.

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The red separating stripe was abbreviated by the Santa Fe on units repainted in the company shops. Cab units maintained the red stripes as shown here and it was eliminated entirely on boosters. 122L was at San Bernardino in February 1947 when R. P. Middlebrook made the picture. -Stan Kistler Collection

From the time they were built and into the early 1950's the freight FT's wore the familiar blue/yellow Santa Fe freight colors with a nose emblem known to railfans as the "catwhisker" design. This nose emblem featured a square Santa Fe herald on the nose door and three horizontal yellow stripes, "catwhiskers," extending from the herald around the nose to a point below the windshield.



In February 1951 an eastbound extra pulled by FT 144 passes the highway 138 grade crossing at Pine Lodge. Note the marker lamp at the left of the badge plate on the nose. Speculation is some units assigned in Cajon Pass helper service received this modification in 1950's thus eliminating the need for oil marker lamps at the rear end of the helpers.

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On early units, the nose herald was a separate bronze plate with the herald painted on in blue which was then bolted to the nose door. On later units, the herald appears to have a much lighter background (see the [modeling notes for additional details](#)). The as delivered paint scheme featured a red separating stripe between the blue and yellow colors. As units were repainted in company shops the red striping was at first maintained on the nose of A-units forward of the cab doors and was finally deleted completely, undoubtedly a cost saving measure. A-units carried the "Santa Fe" name on the carbody under the portholes and above the side number boards, but B-units did not carry the "Santa Fe" name.

Members may examine their reprints of EMD's styling diagrams included with this issue for comprehensive painting and lettering instructions for the as-built locomotives (also for F-3's and F-7's). EMD donated aperture cards of these original blueprints to the Santa Fe Modelers Organization and their courtesy is greatly appreciated. In the early 1950's, at least in late 1951 and early 1952, the Santa Fe experimented with a simplified paint scheme for its F-units that featured a solid blue carbody with a passenger style nose emblem and a yellow nose stripe. A fair number of FT's were repainted in this manner, from single A-units assigned as road switchers to complete A-B-B-A lashups. Fortunately, the Santa Fe decided against adopting this rather drab scheme and resumed painting its F-units in the full blue/yellow scheme although it did retain the passenger-style nose emblem and did away with the catwhisker emblem. Units that had received the simplified scheme were fairly quickly repainted with full yellow markings. B-units received the "Santa Fe" name below the portholes as on the A-units.

Over the years the Santa Fe added extra grab irons, wrecking lugs, and radio antennas the FT's which cluttered up their original smooth lines while giving them a distinctly Santa Fe appearance. By the mid-1950's the FT's were showing their age and the railroad began trading in some of the early high mileage units on new locomotives. 100LAB plus 180A (ex-100C) were the first to go, these units being traded in on four new GP-9's in February 1957. Early technology brake, throttle, and electrical systems made the FT's unattractive for a major rebuild, so their days were numbered. More would have been traded in on new GP-9's had a recession not delayed such a trade in at that time

By 1960 EMD was offering attractive trade-in programs to replace four worn out FT's with three new GP-20's, then GP-30's and GP-35's, so the FT's were traded in large numbers, giving up their still-useful Blomberg trucks for use under the new locomotives. All the Santa Fe's GP-20, 30 and 35's originally rode on traded-in FT trucks. The FT carbodies were cut up for scrap and not one Santa Fe FT survived scrapping.

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Brand new FT A-B-B-A set 100LA and 101LA pass through Nelson Arizona on what must be one of their first trips after delivery in January 1941. Shortly 101LA would be renumbered to 100BC. Look closely inside the headlight housing for a multiple-bulb unit. Very shortly after delivery this was discarded in favor of a single bulb design. Note also the nose badge which contrasts with other photos made at the same date. The reason for the contrast is due simply to the angle of light reflection and has nothing to do with color differences in this example.

In their early years the FT's were normally run as pure locomotive sets with the individual units operating together as one locomotive. By the mid- 1950s, individual units of different numbers began operating together and by the 1960's, it would have been relatively rare to find units with the same number in a lashup.

Into the 1960's the last survivors of the FT fleet were concentrated in Clovis to Argentine service so they would be near their Cleburne shops maintenance point to run out their last miles, many being arranged in A-B-B-B-A sets.

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FTA 405 (ex-143C) was one of several single unit FT road-switcher conversions with footboards front and rear and a steam locomotive type headlight at the rear on the roof. She carried full blue and yellow markings with the red stripe deleted completely but still with the "catwhisker" nose emblem at Bakersfield in May 1951. -Stan Kistler

HO scale FT models of varying quality have been available from time to time in brass over the past 30 years or so. The first brass FT model was probably the old Pacific Fast Mail/ Tenshodo FT imported from Japan in the late 1950's. The model was available factory painted in Santa Fe freight or passenger colors in A-B sets. It suffered from a very poorly contoured stamped nose and very crude detailing (by today's standards). Most of these have been relegated to collections these days and are seldom found in use on layouts. The next brass FT model was imported by Hallmark around 1970. These were made by KTM in Japan and featured a lost-wax casting nose that had very good contours. These came as a powered A/dummy B set and were available with side number boards per Santa Fe practice (or without per many other roads). These models ran well but were very noisy as was the case with virtually all brass diesel models in those days. It was an era of brass spur gear drive trains with loose tolerances and big, noisy open frame motors.

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FT 160LAC was southbound with a short freight south of Ardmore, Oklahoma in August 1956. 160 had been in passenger service a few years earlier and was re-gearred, reconfigured to A-B-A and repainted for freight service. The booster unit retains its steam generator, presence of which is betrayed by the vent on the roof (note also the fifth porthole for the hostler control station). The lead unit here is actually 160C, a small 'C' being visible just below the nose herald. -Gordon Bassett Collection

A subsequent early 1970's run by Hallmark had a slightly different gear train and was a little quieter in operation. I have several of these old Hallmark FT's that date from 1970 that have been in service on my layout longer than many of the prototype FT's were in service on the Santa Fe! They are noisy, but they still look and run very good.



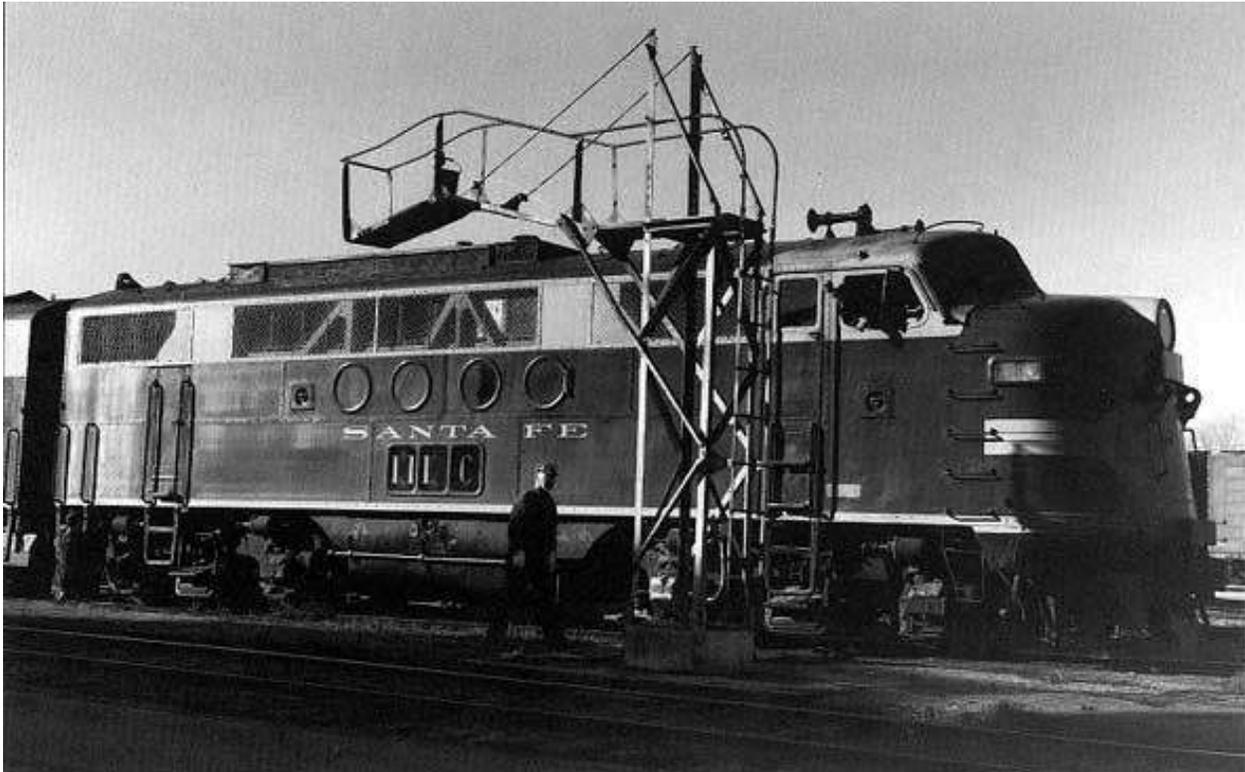
FT 173 at Argentine in June 1959 shows the addition of wrecking lugs on the nose and a flat plate radio antenna at the left rear on the roof (typical of the installation found on most FT's). Grab irons above the windshield will appear in a few months. None of the Santa Fe's FT's were equipped with nose MU connections. Note the early D/B housing on the center B-unit of this lashup.

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In the 1980's Hallmark imported more FT's from Korea with can motors and quiet gear trains and much more detailing, but they reverted to stamped brass noses and the contours on them do not look as correct as on the early 1970's models to me. Overland Models has more recently imported brass FT's factory painted in either blue and yellow or the solid blue experimental scheme. These models are state of the art and look and run great, but they are quite expensive.

At the Chicago Hobby Expo November 1 through 3, Stewart Hobbies announced their intention to market FT A and B units by the summer of 1992. The SFMO is actively providing prototype and modeling information to Stewart. Early indications are the models will be offered in several versions and paint schemes.



The "C" designator was applied to FT cab units so numbered in the manner shown on 11C at Arkansas City in February 1962. Unit 111C had previously carried numbers 426L and 135C (its original number). Note there are numbers in the nose number boards. -John McCall

Refer to the aperture card reprints and the modeling data for additional information on modeling Santa Fe FT's.

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At Barstow in July 1947, 111 waits for an assignment at the engine terminal. Note the curved sides of the dynamic brakes which were unique to units originally numbered 104 through 117. The red separating stripe stops at the cab door indicating this unit was repainted by the Santa Fe since delivery. The fifth port hole on the first B-unit is also clearly visible. -John McCall Collection

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Santa Fe FT Modeler's Notes

MODELERS' NOTE BOOK by the *Santa Fe Modeler Staff*

All FT's were delivered from EMD painted as shown on the styling diagrams. As mentioned on the diagram and in the text, the yellow paint used was a lighter, creamier yellow than the chrome yellow paint used on the Santa Fe's E-units of the same time period. In fact, the chrome yellow remained relatively constant until the late 1960's.

The creamy yellow paint was manufactured by Dupont and bore the trade name Duco. Duco was a nitrocellulose lacquer developed in 1924 and was one of the first paints formulated for spray guns. Efforts to obtain a paint chip of this creamy yellow paint (Duco 246-32564) were unsuccessful because Dupont's archives do not contain any paint samples earlier than 1955!

SFMO member Andy Sperandio, editor of Model Railroader magazine, experimented with available model paints and compared them to color slides made in the 1940's and early 50's. He determined that using either Floquil or Scalecoat Erie-Lackawanna Yellow and 10% to 20 % Reefer White will yield as correct a color for the creamy yellow as we can realistically expect. Given the lighting conditions under which a model is viewed and all other "unknowns," further attempts to exactly match a prototype paint chip are probably fruitless (not to mention the personal preference of the modeler).

The biggest problem in using the "new" color to available decals. Paint chips prepared using the paint formula above will be sent to Champ, Microscale and Accu-Paint with the suggestion they re-formulate their products to match the prototype color. We have received enthusiastic response from all three decal makers and expect this change (and a few others) to be in effect within a reasonable time. In the interim, aggressive modelers should consider spray-masking the "catwhiskers."

The creamy yellow paint was replaced in March 1952 on 200-class units delivered from EMD, Duco number 254-373 (possible the same color as 254-31423). -the chrome yellow became standard. We might assume that any FT's repainted by the Santa Fe at that time were repainted with that color. However, research indicates the "cigar band" paint scheme was not introduced on new models from EMD until October 1953, therefore it is generally accepted that all FT's that carried the "catwhisker" paint scheme used the creamy yellow paint.

After 1953 all repaints of FT locomotives followed the Santa Fe standard "cigar band" scheme as shown on the F-7 freight styling diagram. The red separating stripe was probably abbreviated on the first repaint by the railroad around 1947 as Santa Fe painting documents show it still "as delivered" as late as August 1945. It was eliminated altogether around 1951. These dates are based on the EMD styling diagrams, Santa Fe documents in our collection and photographic evidence. They may well be speculation but should serve as a general guide until (if ever) additional facts surface.

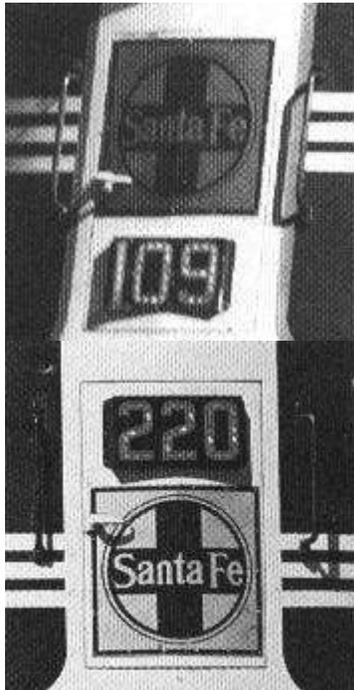
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The all blue experimental paint scheme was suggested by Santa Fe painting documents in January 1951 for both FT's and 200 class units. Units 102, 120, 133, 142, 155, 158, 170, 195, 199, and 405 are known to have carried the paint scheme. -Jay Miller

Nose Emblems

One of the biggest surprises in researching the painting and lettering was our discovery of the details for the Santa Fe nose medallion (badge) that appeared on the FT's-and the 200 class F-7's. EMD graciously provided us with drawings of the badge plate and what we found was as follows:



As built, FT's 100-119 carried a badge plate made of solid bronze with the Santa Fe emblem painted in the dark blue paint. Apparently, this was not too successful as the paint tended to get "sandblasted" away and a new badge was designed. In early 1943, the medallion background material was changed to steel and then painted dark blue. The cross and the outline were over-painted using bronze colored paint, leaving the "Santa Fe" and most of the background dark blue. The entire medallion was then baked in an oven yielding a medallion that looked the same but lasted much longer (and was probably cheaper since solid bronze was hard to get during the war years).

Differences in the early medallion appear in photographs but are caused by light reflecting off the early bronze. It has been suggested the early FT's were retrofitted with the new baked enamel medallion. One wonders what happened to them when they were replaced... Champ's decal emblem is as correct as one could expect given this new information. However, detailed drawings and specifications are being made available to all manufacturers. -Jay Miller

Dynamic Brakes

Three different external appearance for dynamic brakes were used on FT locomotives. The first 100, 101, 102 and 103 received one type which had no "boxes" on the ends and straight sided grids. First units 104 through 117 received another style with curved sided grids and no "boxes" The remainder of first 118 through the last unit produced featured "boxes." On each end of the straight-sided grids (be sure to check a roster for proper numbering based on renumbering and delivery dates). Also check out the photos of [111L](#) and [111C](#) as they reflect the second and third types (photos appear earlier in this document). Hallmark's brass imports feature the last version making them correct for the units listed above. -John Moore, Lee Berglund, and Jay Miller

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F-3 Freight Locomotives



Brand new freight F3 200LABC with an eastbound GFX train leaves San Bernardino the day after Christmas 1948. The "almost F-7" appearance of EMD's very late F3 deliveries tends to confuse many modelers. Only the absence of a circular dynamic brake fan on the roof reveals it is not an F7. 200 and sister 201LABC were the only freight F3's purchased by the Santa Fe. - Stan Kistler

Only two sets of F3's were purchased by the Santa Fe for freight service. Locomotives 200LABC and 201LABC were delivered in October and November 1948 just before EMD shifted production to the F7. Santa Fe had concentrated on early F3 purchases for use as passenger locomotives in order to dieselize all the remaining major passenger trains on the system and by the time that was accomplished, the F7 was ready to enter production.

In external appearance the 200LABC and 201LABC were nearly indistinguishable from F7's since late production F3's featured low roof fans, stainless steel grilles and the same porthole/side louver arrangement that was carried over into F7 production (in contrast to the "dead give-away" three porthole feature of early F3's). Their single external feature that identified them as F3's was the slit type dynamic brake openings in the roof.

These units were mechanically upgraded to F7 standards early on except they retained the F3 style dynamic brakes for their entire careers. That the Santa Fe did not consider them as a separate class points out just how close they were mechanically to the freight F7's that followed.

Stewart has just released an F3A in Santa Fe freight colors that represents the cab units of these two locomotive sets very well. Matching B-units are scheduled for summer 1992 delivery according to sources attending the recent Chicago hobby show. Stewart followed the EMD painting color specifications correctly for units as-built prior to 1953 (i.e. black roof).

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Unfortunately, however, the contour of the "vee" in the roof striping is incorrect (but better than anything heretofore available). The 'Santa Fe' nose badge color is also incorrect-a problem easily solved using Champ's nose badge decal.

All locomotives in the 200 class through 268 were delivered in the "catwhisker" paint scheme. Refer to the FT styling diagram for painting and lettering of the as delivered paint scheme.



Stewart Hobbies has truly blessed Santa Fe modelers with this exceptional locomotive. A superb runner and highly detailed, it will make a handsome addition to any modeler's layout. Discrepancies with the painting and lettering can easily be solved using the information contained herein and on the styling diagrams. Additional products from Stewart will likely be forthcoming. - Jay Miller

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F-7 Freight Locomotives



F7 206 leads a PFX train through Arizona shortly after delivery in the summer of 1949. The 200 class locomotives finally finished the job started by the FT's - total dieselization of the Santa Fe. - John McCall Collection.

Deliveries of Santa Fe's freight F7's began in June of 1949 with locomotive 202LABC and units procured through 258LABC were all essentially identical with 36 D/B fans, EMD's own horizontal slit stainless steel grilles (hereafter referred to as horizontal slit grilles"), and standardized F7 fuel tanks with full skirting over the top part of the fuel tank and battery box.

Units 259LABC through 268LABC were similar to the early units except they were delivered without the stainless-steel grilles. They had "chicken wire" screens in the upper carbody openings that was similar to the arrangement found on the early F3 production. I have heard for years that they gave up their grilles to early units of the 16 class that were built without stainless steel grilles. If this is true, EMD must have changed production from horizontal slit grilles to vertical slit "Farr Air" type stainless steel grilles (hereafter referred to as "vertical slit grilles") about that time. Almost all the 16 class were fitted with vertical slit grilles although some units, including 31L and 35L (and probably others) are known to have carried the horizontal slit grilles a least for a while. For some unknown reason, locomotives 269LABC and 268LABC were later fitted with stainless steel grilles while the 260LABC through 267LABC were never retrofitted with them spending their entire careers with "chicken wire" screens. Unit 259L had horizontal slit grilles retrofitted initially but ended up with vertical slit grilles. I have photos of it with both types of grilles. Perhaps its grilles were accidentally swapped with another unit during a shop visit since it is known that such shop errors happened fairly frequently.

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Boosters 254A through 266A carried a steam generator and all four units of these locomotive sets were equipped with steam and signal lines so they could be used on troop trains passenger specials or such other passenger trains as the need arose.

Freight F7's 269LABC through 280LABC were late production F7's and featured 48" D/B fans, vertical slit grilles, vertical slit filter openings between the portholes, air piping on the roof and wider fuel tanks with abbreviated skirting, features usually associated with F9's rather F7's.

The 200 class underwent very little re-numberings over the years with the exception of units 251BC through 256BC being renumbered to 281LA through 286LA in 1951. These units were renumbered back to their original numbers in 1953. Units 241L, 236C, 257C, 235C, 212L and 268C were renumbered to 101L through 106L for a few months in 1972 for use as lead units with road slugs on unit potash trains south of Clovis but reverted to their original numbers when CF-7s were assigned to that service.

Most of the 200 class were delivered in the standard blue/yellow freight livery with the "catwhisker" nose emblem similar to that applied to the FTs (see sidebar article on painting). No 200s are known to have received the solid blue experimental paint scheme of 1951/52 as they were probably too new for any to need repainting at that time. However, the "catwhisker" nose emblem was replaced with the passenger-style emblem on all units by the mid-1950's. As with the FT's, the addition of various grab irons, wrecking lugs, radio antennas, nose MU doors, and removal of fuel tank skirts gave them a distinctive Santa Fe appearance.

Like the FTs, individual 200 class units were operated together indiscriminately by 1960. The earlier practice of operating all four units in seriatim as a single locomotive was abandoned in favor of assembling lashups of whatever size was required from available units at terminals.

The 200's along with the FT 's formed the backbone of the Santa Fe's mainline freight motive power roster through the decade of the 1950's. Newer locomotives of GP20, SD24 and RSD-15 types pushed the FTs aside for the most part by 1960 but the 200's were still first class mainline power until the SD45's began arriving in 1965. These hood units bumped many of the 200s to secondary branch line freight service where they replaced GP7's that were transferred to yard service to replace aging yard switchers, especially Baldwins and FM's that were being retired. Assigned to Cleburne for maintenance where they replaced the departed FTs, 200s were a common sight on the Santa Fe into the mid-1970's. Their numbers were dwindling however as more and more A-units were rebuilt into CF-7's and B-units were retired. After the last A-unit was retired in 1978, some B-units were operational until the last one, F7B 262B was retired on October 31, 1980. The last active A-unit I saw was the 252C on July 2, 1977 at Amarillo along with a B-unit had come in from Lubbock on a local.

Santa Fe F Units
By Lee Berglund & Jay Miller



F7 222LABC is westbound at Lugo, California, in October 1950. All 200 class locomotives built prior to October 1953 were delivered in the catwhisker paint scheme. Units built through February 1951 were also delivered in the creamier yellow paint. Note also the Santa Fe nose badge plate. A Sinclair wagon wheel radio antenna sprouts from the left rear roof of the lead unit. - Stan Kistler



By December 1949 EMD had switched to twin seal-beam headlights as shown here on 220C (yes, there is a very tiny "C" just below the badge plate) eastbound on Cajon Pass. Note the partial wrap-around yellow stripes on the ends of all units. - Santa Fe, John McCall Collection.

Santa Fe F Units

By Lee Berglund & Jay Miller



The late Bill Gibson caught 210 resting at the Amarillo roundhouse in August 1952. By this date, the "catwhisker" paint scheme was in its last days. Note again the striping around the corners and the hostler air horn on the end of the first B-unit. - John McCall Collection.

Only one 200 class F7A is known to have received the yellow warbonnet paint scheme (number 271C) although a number of B-units received it. 271C was destroyed in a head-on collision in Texas in late 1973 about 18 months after it had received its yellow warbonnet paint. B-units were all blue with a wide yellow stripe at the bottom of the carbody and had no Santa Fe name, making them very plain looking. The few boosters in the 260 through 267 numbers with chicken wire" screens were even more plain since they did not have the stainless-steel grilles to give them some contrast to the blue of the upper carbody. No 200 class units were saved. They were all scrapped, traded in, or rebuilt into CF-7's.

As for modeling the 200 class, at this writing only the Athearn single headlight F7A and their F7B are useful for a Santa Fe freight F7 without much modification other than a paint job and application of details. Except for the steam generator fittings, Athearn's model is correct for modeling units 202LABC through 258LABC. The single headlight F7A is available only in undecorated form, it is not offered factory painted for Santa Fe. Athearn once offered their dual headlight F7A plus the F7B in a mid-1950's Santa Fe freight scheme, but the paint contours on the nose and cab roof were highly inaccurate and removal of the lower headlight, steam generator fittings and a new paint job would be advisable. Prior to the Athearn F7 in Santa Fe freight colors, Globe Models produced a single headlight F7 in Santa Fe freight colors. It was essentially the same model as the Athearn with the same inaccurate paint job. That the A-unit had a single head light makes it correct for a 200, but a repaint of the model would still be in order.

Santa Fe F Units
By Lee Berglund & Jay Miller



261C was built without stainless steel grilles and was never retrofitted with them. She looks a little tired after 24 years of service here at Amarillo in April 1975. She eventually became CF7 2446.



259L (with a CF7 and a GP7 in tow) is in charge of a southbound freight at Ponca City, Oklahoma this May day in 1975. 259 was built without stainless steel grilles but acquired vertical slit grilles at some point in time. Lower numbered 200's sported horizontal slit grilles.

Santa Fe F Units

By Lee Berglund & Jay Miller



256 and 251 await assignments at Emporia in August 1969. Neither of these units has nose MU capability. Most 200 class units received nose MU connections by this time. Emporia was F-unit heaven for railfans in the late 60's and early 70's. In 1991, the entire engine facility including the roundhouse, turntable and tracks is only a memory.

Athearn currently markets their dual head light F7A and 7B in the yellow warbonnet paint scheme with number 271C and 235C known to exist on the A unit. 271C is correct for the one 200 class F7A that actually received the yellow warbonnet scheme but 271C was a late production unit with 48" D/B fan and vertical slit grilles as well as other major differences which makes the Athearn model highly inaccurate for this unit.

Except for the dual headlight and steam generator fittings, the Athearn carbody is correct for number 235C, but that unit never wore the yellow warbonnet scheme. The B-unit in the yellow warbonnet scheme is actually fairly accurate for B-units in the 202 through 258 numbers that might have received this paint scheme, with a wide yellow stripe at the bottom of the carbody and the stainless-steel grilles painted silver. I am not certain how many B-units from that number group received the yellow. Warbonnet paint as photos of B-units are difficult to identify unless the photographer wrote down the unit number at the time he shot the picture. I do know several 200 class boosters got this paint, but I do not have a specific list of which ones.

Stewart's fine F7 has not been produced in a factory painted Santa Fe freight version as of this writing, but since they have the correct F7 shell already available, perhaps they will produce a single headlight version in Santa Fe freight colors eventually. If they do make a freight F7A, hopefully they will produce an F7B as well. In their later years, most of the 200 class A-units were equipped with nose MU connections, so any number of A-units could be run together, but some B-units in any given lashup would be much more typical of how the Santa Fe ran them.

Santa Fe F Units

By Lee Berglund & Jay Miller

Other plastic F7s have been available from time to time, some in Santa Fe freight colors, some not. Penn Line, Revell, Tyco/Mantua and a host of others have all produced F-units, but none are even close to the Stewart or Athearn F7 for accuracy or running qualities.



245L shows the final appearance of most Santa Fe F7's with fuel tank skirts removed and spark arrestors, nose MU doors, wrecking lugs and a host of grab irons installed. She was tied up at Larned, Kansas for use on the Jetmore branch during the wheat harvest rush in July 1973.



The engineer gives the photographer a wave as F7 259C and GP7 2722 cross the Ash Creek bridge west of Pawnee Rock, Kansas with a westbound Jetmore branch train. In the summer of 1970 wheat was still shipped in boxcars. Within a few years however, covered hoppers will usurp the 50-foot boxcar sending thousands of them to scrap.

Santa Fe F Units

By Lee Berglund & Jay Miller



253C heads up a westbound freight near Great Bend, Kansas in August 1970. Matched A-B-B-A sets of F's were relatively rare by this late date as the typical lashup included a few Geeps.

I seem to recall an F7 shell being made in brass for use with an Athearn chassis, but I cannot recall who imported it. My impression at the time was that the Athearn F7 was much better than the brass shell. F7s are probably low on most brass importers' priority lists because too many plastic F7 models make it too big of a risk for an importer to consider producing a brass F7, I assume.

Highliners has a B-unit kit available that is designed to be built into any F3B or F7B variant. Many extra parts are included in this kit which could be useful for modifying other brands of F-units to Santa Fe variants. The Highliner kit would be the logical choice for modeling one of the 260 through 267 series B-units that did not have stainless steel grilles.

The F3 slit type D/B casting could be installed in an Athearn single headlight F7A or a B-unit to create freight F3's 200LABC or 201LABC. With a great deal of other modifications, the extra 48" D/B fan could be applied to an Athearn F7 along with Detail Associates' vertical slit grilles to create a late production F7 in the 269 through 280 series.

Highliners is promising an A-unit kit that can be built into any F3A or F7A variant but is not yet available. I have a couple of the Highliner B-unit kits on hand, but I have not yet attempted to assemble one. I can see that the quality of the kit parts looks to be excellent, but I can also see that building one of these kits will be a good project for a kit builder of some experience.

Santa Fe F Units
By Lee Berglund & Jay Miller



212LABC was delivered with the catwhisker nose emblem as were most of the 200 class F7's. This A-B-B-A set was made from Athearn's single headlight A-units and F7B's to represent the as-delivered appearance of this locomotive. 212 had an early radio installed and carried a wagon wheel antenna (left rear roof) almost from the time it was placed in service.



This five-unit lashup of F7 freight units was made by the author using Athearn single headlight F7A and F7B models detailed and painted for the 200 class. Athearn's F7 most closely resembles units 202LABC through 258LABC. Removal of steam generator fittings from the roof is the most major modification required.

Santa Fe F Units

By Lee Berglund & Jay Miller



F7B 211A is typical of the 200 class boosters in original paint. Road number is stenciled at the front corner (note the "F") on the right side and diagonally opposite on the left side. This was the standard number location on 200 and 281 class boosters, but the FT's and all passenger F-unit classes were numbered at the rear on both sides. Many deviations from this "standard" stenciling are known to exist however! Note the hostler's horn.



F7B 265A shows the appearance of B-units in the 260 through 267 series that did not have stainless steel grills. The Highliner B-unit should be useful for modeling these boosters. 265A was in Emporia September 1974.

Santa Fe F Units

By Lee Berglund & Jay Miller



Recently repainted F7B at Gainesville, Texas in July 1974 shows the typical appearance of freight boosters that received the yellow warbonnet paint scheme. The wide chrome yellow stripe along the bottom of the car body matched the rear stripe of the A-units and the stainless-steel grill gave some relief from the large expanse of blue (except for a few grill-less boosters in the 260 through 267 series that received yellow warbonnet paint). See accompanying chart for details.

Santa Fe F Units

By Lee Berglund & Jay Miller

F-7 MODELERS' NOTE BOOK

by the *Santa Fe Modeler Staff*

Painting and Lettering

All 200-class F-7's except units 269 through 280 were delivered from EMD in the "catwhisker" paint scheme. The creamy yellow paint was specified for use on all units built through February 1951. Units 269 through 280 and the F-9's were delivered in the "cigar band" paint scheme as shown on the styling diagram

Refer to the Painting and Lettering discussion in the FT Modelers' section of this document for additional painting notes. To correctly paint and letter the latter units, refer to the F-7A and B styling diagrams. All 200-class units carrying the "catwhisker" scheme also received the latter version of the nose emblem.

The best date for Santa Fe's change over to the "cigar band" paint scheme is 1952. Santa Fe painting documents list several revisions beginning in 1951, It is possible the solid blue paint with the "cigar band" was, in fact, considered as a replacement for the "catwhisker."

One of the major differences in painting a 200-class unit as compared to an FT is the extension of the yellow stripes around the ends of the carbody. On all F-3's, F-7's and F-9's the yellow stripes at the top and bottom extended for about five inches on the rear end of the A-unit (obviously on both ends of the boosters). This applies to both paint schemes even though it is not clearly apparent on the styling diagram. Stewart's F-3A model is correctly painted in this manner. Ft's did not have the wrap-around stripes due to mechanical differences in the carbody and end. Stainless steel air grilles were unpainted.

On units originally delivered by EMD, the ends were painted standard dark blue but on later repaints, the Santa Fe specified the ends to be black (1954). At this time, the roofs of the units were also changed from black to blue.

Again, the styling drawings show the changeover from the "catwhisker" to the "cigar band" as being October 1953. Since there had been no deliveries of F-7's since September 1951, it is reasonable to assume the Santa Fe made the change in its own paint shops between those dates.

"Santa Fe" lettering on booster units does not appear in the "catwhisker" paint scheme. This lettering was added in the "cigar band" design.

Silver paint above the side cab steps appears to be present on delivery photos.

It is reasonable to assume the small 'L' and 'C' designators below the nose herald rarely appeared on locomotives wearing the "catwhisker" paint. In the "cigar band" scheme however, they appeared consistently.

Santa Fe F Units

By Lee Berglund & Jay Miller

Decals for the "cigar band" paint scheme are available from either Champ or Microscale as shown on the styling diagram. -Jay Miller

Diaphragms

As built, all Santa Fe F-units (both A and B units) were equipped with diaphragms. They were removed from most surviving units in their later years. Construction of model diaphragms is relatively easy with folded paper and a styrene striker plate. Commercially available detail parts from Walthers also work well. Refer to published drawings (or the styling diagrams) for the striker plate design, however. Photos of the locomotive you are modeling should be used for reference in order to accurately detail that particular unit at any given point in its career. -Lee Berglund

Pilots, MU Doors and other Details

Two rather distinctive pilots are present on 200-class units. Both the Athearn and Stewart models are equipped with what have become known as "passenger pilots" identified by a "notch" step on both sides.

A "freight pilot" was delivered on all FT units. It differed in that a small step was mounted outboard on each side above the rail and the pilot had no "notch." Some units of the 200-class were equipped with "passenger pilots." Among them was one unit of the 200 set- the other 200 had a freight pilot! Others spotted include 210, 212, 220, 222, 225, 227, 237 and 245. Check photographs for specific units you are modeling! Things tended to change as the years went by. - John Moore



Passenger Pilot on 237 at Cleburne -1972



Freight Pilot on 202 at Dallas – 1967

Units above number 207 were delivered with twin seal-beam headlights in the standard headlight housing. Lower numbered units were delivered with a single filament 64-volt lamp.

According to Locomotive Folio dated October 1, 1969 the following 200-class locomotives had front MU connections: 200C, 201C, 202LC-204LC, 206C, 208LC, 210LC, 211LC, 214C, 216LC-218LC, 219C, 220LC, 221LC, 224LC, 226LC 227LC, 229LC-244LC, 245L 246LC-250LC, 254LC, 255LC, 257LC, 259LC, 263LC, 268LC-274LC, 275L, 276LC, 278LC and 279LC. -John Moore

Santa Fe F Units

By Lee Berglund & Jay Miller

Late Production F-9's



274C shows the left side appearance of late production F-7's 269 through 280 (delivered in this familiar paint scheme). Air piping on the roof and the larger fuel tanks are clearly apparent in this photo at Kiowa, Kansas in September 1975. Fuel tank skirting on this unit is as it was delivered-less than on earlier units because of the larger fuel tank. Note also the 48" D/B fan and vertical slits in carbody. -Lee Berglund

Santa Fe F Units
By Lee Berglund & Jay Miller

Santa Fe Freight F9's

Road numbers 281LABC through 289LABC

The Santa Fe's last new F-unit purchase came in 1956 when F9's 281LABC through 289LABC were delivered. They came from the factory in blue/yellow with the passenger nose emblem. These units had single headlights, vertical slit grilles, vertical slit filter openings between the portholes, air piping on the roof, 48" D/B fans, and wide fuel tanks with abbreviated skirting as carried over from late F7 production. The F9's were initially assigned in Texas and seldom strayed from there until the late 1960's when they were placed in service system wide.

Many of the F9's went into the CF-7 rebuild program and three of them gave up their prime movers for rebuild of three Alco RSD-15's into CRSD-20's, 01 and 02. A number of the F9's were repainted into the yellow warbonnet freight scheme during the 1970's with at least three variations in the nose emblem known to exist. Some units had a blue nose stripe up and over the headlight to the base of the windshield (286L, 285C) some had an abbreviated stripe that ended just below the headlight (284C, 289C), others had just the nose emblem without a nose stripe (287C, 288L)

No HO model has been produced that could be used for a Santa Fe F9 without modification, but Stewart's F9A could be reworked to Santa Fe appearance with some effort, mostly in the area of the fuel tank and skirts - incorrect for Santa Fe F9's. Bachmann's F9 may have possibilities as well for re-detailing and painting, although it's very poor mechanism would have to be replaced. It is known to have been produced with either single or dual headlights in the body casting.

F9B's differed little in external appearance from F7B's. Any F7B could be reworked to an F9B with addition of a Highliner 48" D/b fan, Detail Associates vertical slit grilles, air piping on the roof and fuel tank modifications.

As with the FT's, the F3, F7, and F9 freight units underwent modifications over the years that gave them distinct Santa Fe character. Grab irons were added above the cab windows and up the right side of the nose on A-units and many, but not all, had wrecking lugs on the nose and rear carbody and nose MU receptacles installed. Those A-units that never had nose MU installed reportedly caused a lot of headaches at engine terminals in their later years as they had to be placed at one end or the other of whatever locomotive consist they were to operate with.

Most F7 units had the fuel tank skirts completely removed while F9's were delivered with precious little skirting. All locomotives received radio antennas of various types, some F7's getting the very early Sinclair "wagon wheel" antennas very soon after they were built. A few F7's had flat plate antennas, but most had either the "wagon wheel" type at the left rear of the roof or a simple "can" type on the roof mounted directly on the carbody.

Santa Fe F Units

By Lee Berglund & Jay Miller



F9A 287L does not have wrecking lugs installed on the nose, but she does have MU, extra grab irons and spark arrestors. The fuel tank skirting has been removed. The growth of grab irons was caused by federal safety rules in the late 50's or early 60's. By July 1970 there was little window washing cone at Emporia.



F9A 285 sits next to the Amarillo roundhouse sunning her yellow warbonnet livery. The blue stripe up and over the headlight is one of three known variations in the nose treatment of this class. many of the 281 class A-units were rebuilt to CF-7's (still classed as such even though they were F9's to begin with). Photo was made in July 1974 and she became CF-7 2436 in October 1977.

Santa Fe F Units
By Lee Berglund & Jay Miller
Passenger FT Locomotives



Just a couple of weeks out of the San Bernardino shops after its conversion to passenger service, FT 163LABC hauls the eastbound Chief through Pasadena California -Stan Kistler

Road numbers 158LABC through 168LABC

The Santa Fe's first passenger F-unit was FT locomotive 167LABC which was built with gearing and equipment for passenger service by EMD at Santa Fe's request in February 1945. Originally delivered in freight colors, it was tested in passenger service and was apparently successful enough as a passenger engine that it was repainted into the red and silver passenger scheme similar to that used on the 2 class E1's

Between April and August 1946 ten more A-B-B-A sets, road numbers 158LABC through 166LABC were removed from freight service and converted to passenger configuration by the Santa Fe. These locomotives were used in passenger service as a stopgap until enough newer F3 and F7 types had been purchased to dieselize all major passenger trains. One of the big reasons for converting the FT's to passenger service was that doing so enabled the railroad to dispense with helper service over Raton Pass. The dynamic brakes were also useful on the long downgrade in western Arizona allowing better train handling.

These eleven A-B-B-A FT sets wore the red/silver passenger colors during their brief stint as passenger engines, but all of them were eventually converted back into freight configuration and were repainted in freight colors with some of them receiving the solid blue experimental paint of 1951 - 52.

Santa Fe F Units

By Lee Berglund & Jay Miller

Some were converted back to freight service after only two years as passenger engines, most lasted four years in passenger service, and 167LABC and 168LA made it for five years as passenger engines. Units 167BC were renumbered to 415LA and retained their passenger colors for a while for use on the Phoenix-Ash Fork passenger train. They were eventually converted back to freight, probably sometime in 1953. Some kept their dual headlights and steam generators for a time, but these items were eventually removed from most of them.



Hallmark produced an FT A and B set in brass around 1970. This A-B-B-A set was painted in passenger colors and is shown here in charge of the eastbound California Limited at Spearville on the author's layout. The addition of a lower headlight was the only modification to these models.

Santa Fe F Units
By Lee Berglund & Jay Miller
F-3 Passenger Locomotives



Posed for their birthday portrait at La Grange, the first four members of the 16-class of F-3's are ready to hit the Santa Fe Trail. It is November 1946 and these first units will receive many, many changes during their lives.

EMD's first real model change following the FT was the F3. Upgraded to a 1500 HP rating and featuring greatly improved brake, throttle, and electrical systems as well as a new carbody, the F3 set the pattern for the next decade of locomotive production. An F2 model had been produced, but it was an interim model, essentially being an F3 with an FT main generator and 1350 HP rating, intended for operation with FT's. Santa Fe had no need for F2's and did not purchase any.

Santa Fe received its first F3's in November 1946 and deliveries continued into 1949 when the F3 was superseded by the F7. Santa Fe's passenger F3's comprised the 16 class (units 16LABC through 36LABC), all delivered in A-B-B-A sets, all set up for passenger service and wearing the famous red and silver paint scheme. The 16 class F3's were subject to continuous improvement, both by EMD during production and by the Santa Fe after delivery.

Early units 16LABC through 21LABC featured the classic F3 appearance of raised radiator fans and slit type D/B opening in the roof, "chicken wire" screening over the upper carbody openings, and three portholes on the sides of both A and B units. They did not remain in the as-delivered configuration for long, however, as the A-units underwent a modification that eliminated the center port holes, with the entire area between the two portholes being covered with "chicken wire" screening. B-units remained mostly unchanged.

Santa Fe F Units

By Lee Berglund & Jay Miller

EMD soon made a production change that resulted in another appearance change by the time units 22LABC through 29LABC were delivered. These units featured low profile roof fans and two portholes on the A-units with louvered filter openings between the portholes, but the "chicken wire" screening over the upper carbody openings remained. These and all subsequent passenger F's also featured stainless steel side panels in back of, and below the portholes, whereas the earlier units had painted panels.

The final delivery of 16 class F3's, units 30LABC through 36LABC came from the factory with stainless steel grilles over the upper carbody openings which eliminated the unsightly "chicken wire" screening of previous production units, making them similar to the later F7 in appearance.

Earlier units were also upgraded over a several year time span to have F7 appearance of the carbody sides, but they retained the raised early style roof fans. Units 16 through 21C featured the "long" version of the red warbonnet paint similar to that used on E-units to the end, however (see the styling diagrams of the F3 and F7 passenger units). Early 16 class units were delivered with single headlights, but not too long after delivery the Santa Fe installed a rotating Mars light in the upper headlight casing and a new headlight housing was installed on the upper portion of the nose door. Later units were delivered with the upper Mars light and the lower headlight arrangement. These changes seem to have been rather sporadic and the exact date for any given change is difficult to pin down, but it seems that all the 16 class had a close to F7 appearance by the very early 1950's.

As time passed, many extra grab irons were added and radio antennas of several different types appeared including a flat plate type mounted on four legs centered on the cab roof on a few units, similar to the arrangement used on E-units.

All the 16 class units were built with the typical F3 slit type D/B opening in the roof, but in later years some had a fan installed or had the D/B removed completely. The raised type early F3 cooling fans were often replaced with the later low-profile type and many ended up with any combination of raised or low-profile fans, but a few units retained all four raised fans to the end. Raised fans are even known to have migrated to a 200 class F7 or two as well, one known example being 240C. All the Santa Fe's F3's were upgraded to F7 mechanical standards by the mid-1950's.

Santa Fe F Units

By Lee Berglund & Jay Miller



F3 number 19LABC at Pasadena in December 1946 illustrates the "as delivered" appearance of 16 class units 16LABC through 21LABC. Identifying features include the three portholes, extended "E-unit" style warbonnet, "chicken wire" screens over the upper carbody openings and raised radiator fans on the roof. Compare this unit with the EMD styling diagrams. -Stan Kistler



Here's the same engine at the same station eighteen months later! By May 1948 the 19's two cab units have been modified with the addition of a lower headlight (Mars light installed in upper headlight housing), removal of the center porthole and installation of "chicken wire" screenings over openings cut in the side panels between the two remaining portholes. The B-units were slightly changed in external appearance. All the early F3A's (16-21) underwent these modifications within a couple of years of their delivery. -Stan Kistler

The 16-class remained in passenger service until the late 1960's when some became surplus and these were demoted to freight service and spent their last miles working branch line freights mixed with freight F's and geeps. When Amtrak took over passenger service the surviving 16 class that were still in passenger service were renumbered into the 300 class. The rest of the A-units were rebuilt into CF-7's while F3B's were sold or traded in. All passenger F3's not renumbered were off the roster by the end of 1972,

Several HO F3 models have been available over the years, the latest being Stewart's plastic import in several variations. Their "Phase I" F3 is useful for the as-delivered appearance of

Santa Fe F Units

By Lee Berglund & Jay Miller

Santa Fe units 16LABC through 21LABC. It is available factory painted in Santa Fe passenger colors with a superb paint job. Except for air horns that might have been better, the model is excellent in all respects.

Stewart's "Phase II" F3 would be used for those same units that were rebuilt with that style carbody for a brief time in the late 1940's. This model is not available factory painted in Santa Fe colors, but the undecorated version could be painted and decaled in the Santa Fe passenger scheme with little problem. Both the "Phase I and "Phase II" appearance were very short lived on Santa Fe F3's, "Phase I" only in 1946-48 and "Phase II" probably no later than 1951. Stewart's passenger F3's are available in both A and B units.

Hallmark imported a brass "Phase I" F3 in early 1970's and it would also do for the very early 16 class-as-delivered. These models had a mechanism similar to that previously described for the FT's. They ran well but were very noisy. Model Power makes a plastic "Phase I" F3A that has a fairly good body casting, but a poor mechanism. It could be a starting point for a rebuild and detailing project, but with Stewart's fine units being available, why bother with the Model Power F3 unless you are simply looking for a project for a project to work on? One of the first plastic HO models was the Varney F3. It was produced as a metal casting when it was originally introduced, later converted to plastic. Very crude by today's standards, it introduced a lot of modelers to HO scale, however. Cary also produced a cast metal F3 shell that could be built up into a very accurate F3, but I am uncertain if it is still available.

Santa Fe's late 16 class would probably be better modeled starting with either the Stewart or Athearn F7 as their late appearance was much closer to an F7 than to the classic early F3. The biggest problem would be in the D/B and stainless-steel grilles. The D/B fan could be replaced with the F-3 slit type D/B from a Highliner B-unit kit. Highliner raised cooling fans could also be used for modeling rebuilt early 16 class units. Stainless steel grilles on most 16 class units were of the vertical slit type rather than the horizontal type found on the Stewart and Athearn F7's. Detail Associates has a very nice vertical slit stainless-steel grille for E-units available and this can be shortened and installed on F-units to give the correct appearance.

Santa Fe F Units

By Lee Berglund & Jay Miller



Santa Fe's second batch of F3's received stainless steel side panels along the bottom of the carbody and one panel on the second row at the end. The rest of the side panels were painted to simulate stainless steel. Number 27 illustrates this pattern and the as-delivered lower headlight and shortened warbonnet of units 22-29. Units still have their "chicken wire" screens over the air intakes. Photograph was probably made soon after delivery in 1948 somewhere on Raton Pass. -Santa Fe, John McCall Collection



F3 23L typifies the appearance of late 16 class units 22 through 36 in their final years. Note the firecracker type radio antenna at the rear of the roof. Two blast from the Leslie 3-chime air horn and 23L will leave Newton with a freight train this February day in 1970.

Santa Fe F Units

By Lee Berglund & Jay Miller

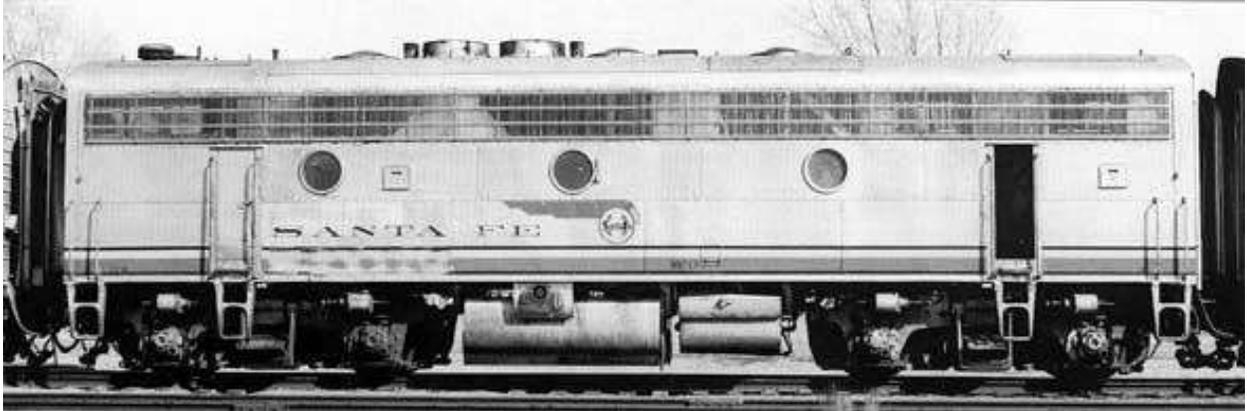


F3 19C has had a 36-inch dynamic brake fan added and the first two high mounted radiator fans replaced with low profile fans and wrecking lugs mounted on its nose at some point in its career. Units 16LC-21LC retained their long warbonnet paint to the end.



Stewart's "Phase I" F3 represents the as delivered appearance of Santa Fe's 16 through 21. As indicated elsewhere this appearance was very short lived as they were converted to "Phase II" appearance, sans the center porthole and more "chicken wire". Except for addition of Kadee couplers and a road number, this model is unmodified.

Santa Fe F Units
By Lee Berglund & Jay Miller



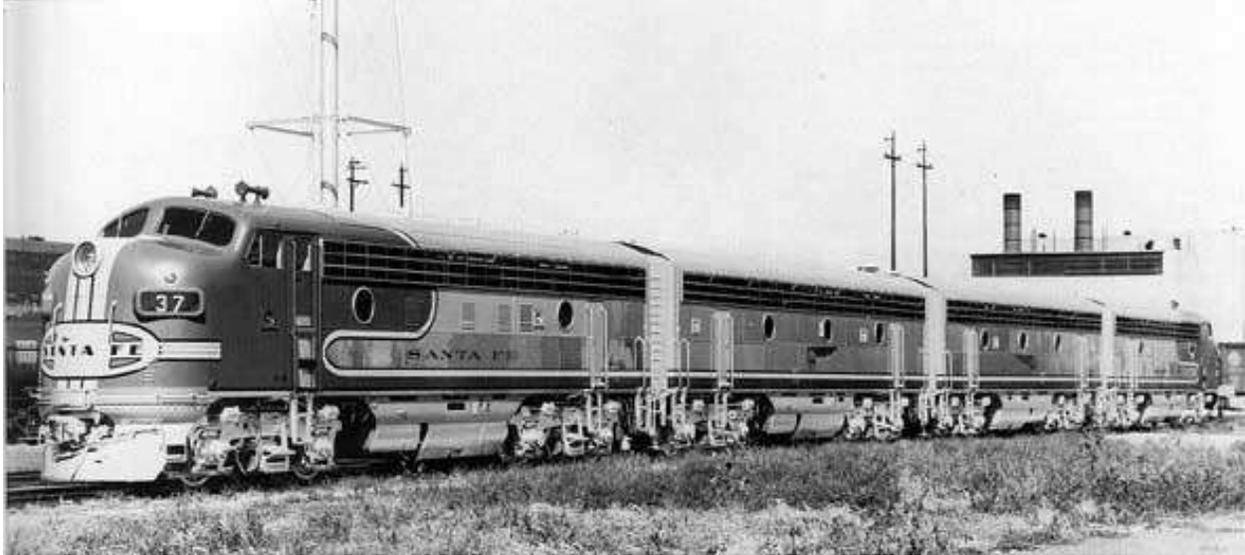
F3B 21B has had two of its original high mounted radiator fans replaced with low profile fans and its original dynamic brake has been replaced with a 36-inch fan as well. Such modifications were extremely common on the early 16-class F3's. Photographed at Nickerson, Kansas in February 1970.

Santa Fe F Units

By Lee Berglund & Jay Miller

THE PASSENGER LOCOMOTIVES - Electro-Motive F-7's

**Road Numbers 37LABC through 47LABC,
48A, 300LAB through 314LAB,
325LAB through 340LAB, 341LA through 344LA**



Class engine 37LABC sits at La Grange ready for delivery to the Santa Fe in September 1949. This locomotive set is the first true F-7 passenger locomotive delivered to the Santa Fe. The F-3 style dynamic brake slits were replaced with fans and the "chicken wire" side grilles were replaced with stainless steel side grilles. Twin sealbeam headlight is in place but they were later moved down, and a Mars light was fitted in the top housing. - Santa Fe, John McCall Collection

The F7 superseded the F3 in production in 1949 and Santa Fe orders from that point were delivered as F7's. F7 passenger units continued their numbers upwards from where the F3's let off. The 37 class of F7 passenger locomotives was comprised of A-B-B-A sets 37LABC through 47LABC plus one single B-unit numbered 48A.

They had the same basic appearance as the late 16 class F3's except the D/B had a circular fan rather than a pair of slits covered with "chicken wire." In this class the 1949 delivered units 37-41 had a 36"D/B fan while 1951 delivered units 42-47 and 48A had a 48"D/B fan.

Some of these units were delivered with horizontal-slit grilles, but all were changed to the vertical-slit type early on. Stewart's F7A "Phase II" has vertical-slit grilles and a 48"D/B fan but it is not painted and lettered for Santa Fe. Detail Associates vertical slit grilles would need to be applied over Stewart's or Athearn's Santa Fe lettered F7 horizontal slit grilles in order to model units 37-41. A 48" D/B fan from Highliner B-unit kit could be installed to model units 42-47 and 48A.

The 300 class of F7 passenger locomotives were built concurrently with the 37 class and they were identical in appearance to the 37 class except they were arranged in A-B-B sets instead of A-B-B-A, apparently the only reason they were assigned to a separate class. 1949 delivered units 300LAB through 305LAB had 36"D/B fans while 314LAB had 48" D/B fans. All had vertical

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slit grilles, so the same modifications mentioned for the 37 class would also apply to modeling the 300 class.

While in Amtrak service two of the 300 class F7A's (304L and 315L) and one F7B were repainted into the yellow warbonnet paint scheme, but Amtrak apparently did not like the yellow scheme and no further units were repainted while Amtrak was using the 300 class units.

The 325-class passenger F7's came about because the Santa Fe desired some locomotives geared for dual service, either passenger or freight. Built with compromise gearing for 80 MPH, the first units of the class were numbered in with the 300 class as number 306LAB through 316LAB when delivered in May 1950.

When more regular passenger units were delivered in late 1952, the dual service geared units were renumbered into a separate class units 325LAB through 335LAB, and the new 100 MPH units took the vacated numbers 306LAB through 314LAB. More dual service 325 class locomotives were delivered in 1953 numbered 336LAB through 340LAB and 341LA through 344LA. Intended primarily as protection power in case of failure of a normal passenger locomotive the units of this class did spend a considerable portion of their time in freight service, even in their early years.

325 class units had three variations in appearance. Units 326LAB through 331LAB had 36" D/B fans and horizontal slit grilles, making these units identical to both the Athearn and Stewart models. Units 325LAB and 332LAB through 335LAB had 36" D/B fans and vertical slit grilles. Units 336LAB and upwards had a 48" D/B fan and vertical slit grilles as in the late 37 class.

If you want to leave your Stewart or Athearn passenger F-7's unmodified you will need to number them in the 326LAB through 331LAB group as these seem to be the only passenger F7's built with the same appearance as these models.



F7 47C was the last A-unit of the 37 class. She guides her train to a stop at Albuquerque in April 1966. Lower headlight has been equipped with twin seal-beam lamps. Note the container mail cars.

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Class engine 325 was most likely built with vertical slit grilles as photos of it as early as 1950 show it with that type. The vertical slit grille was apparently used on most Santa Fe passenger F's except the 326 through 331 sets, but photo show that a few other units acquired horizontal slit grilles during shop visits. Photos of 31LA, 35LABC, and 303L show that they had horizontal slit grilles at one time or another, other units probably did also, but all seem to have ended up with vertical slit grilles.

Apparently the only sure way to determine what type of grille any given locomotive had at a particular time is to use photos for reference. Some passenger F3's are also known to have acquired D/B fans at some point in their careers as well, and some units originally equipped with 36" D/B fans had them replaced with 48" fans during shopping or wreck rebuilds.

As with the freight F's and the 16 class passenger F's the 300 and 325 class units underwent modifications over the years. Different air horns were installed, grab irons were added above the windshield and up the right side of the nose and radio antennas were installed. Most of them had wrecking lugs and nose MU installed on the A-units, and all had the fuel tank skirting removed. Photographs are a "must" to determine how any given unit was equipped.

The 16, 37, 300 and 325 classes remained pretty much intact aside from normal attrition through early 1971. When Amtrak took over passenger service in May 1971, surviving units of the 16 and 37 classes that were to be used in Amtrak service were renumbered into the 300 class. A-units filled some previously vacated "L" numbers as well as newly created numbers 300C through 314C plus 315L. B-units filled vacated numbers and spilled over into the 315AB through 321AB numbers. The 325 class was retained by the Santa Fe for freight service and was not used by Amtrak.

Some unrenumbered 16 class units were also transferred to freight service and were used mostly on branchline trains in Kansas and Texas until the last one was retired in 1972. After Amtrak stopped using the 300 class F-units between January and July 1973, the surviving operational units were also transferred to freight service and were renumbered into the 325 class in September.

When the 325 class was transferred to strictly freight service after Amtrak took over passenger operations, the Santa Fe decided to give them a freight color paint scheme. The first few repaints featured a blue warbonnet on A-units in place of the former red on the silver carbody and a blue stripe along the lower carbody on B-units. Seven A-units (325,327,329,332,335,338, and 343) and several B-units received the bluebonnet scheme. The blue scheme was apparently not well received and subsequent units were repainted with yellow warbonnets. Most of the remaining 325 class units received the yellow scheme before going into the CF-7 rebuild program, but 342L became the last A-unit to operate in the classic red warbonnet passenger scheme and it went to the CF-7 program still wearing red.

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This excellent overhead view of 303LAB shows the 36-inch dynamic brake fan immediately aft of the horns and steam generator fittings on the boosters. Boosters carried the steam generator while the cab unit carried a water tank. Fittings at end of roof on cab unit are for the water tank. Photograph made approaching Dallas Union Terminal in 1956. Gordon Bassett Collection



Booster 349A waits at the Bellville, Texas yard in 1971. Note the small hostler's air horn at the end and the marker lamp. Unit is painted in the yellow warbonnet paint but also shows the "Santa Fe" lettering which was added to B-units in early 1954. Jay Miller Collection

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Stewart's Santa Fe passenger F7 is beautifully painted and most modelers will likely be content to run them as is with only the addition of Kadee couplers and a road number. Their details make them correct for units 326LAB through 333LAB as delivered.



F7 number 40 leads the westbound Fast Mail out of San Bernardino in 1950. This excellent roof view shows the 36" D/B fan and several good steam generator details. Note the late version of the Mars light. - John McCall Collection

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At Fort Worth in the late 1960's 37C has just arrived from Brownwood with train 78 and awaits arrival of the Texas Chief. At this late date in her career, 37C has received lifting lugs on her nose, an assortment of grab irons and swapped her as built horizontal-slit grilles for vertical-slit grilles. - John McCall



F7A number 44 leads an A-B-B-A lashup over Raton Pass with El Capitan in June 1954. Sharp eyed modelers will note the 48" D/B fan on the lead unit. 44 has also received the new Leslie S5-T five chimer. -John McCall Collection.

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Several variations in the nose emblems used on yellow warbonnet 325's emerged as these units were repainted over a period of time. Some units (334, 340 and 341) had a solid blue emblem with a blue stripe running up and over the headlight to the base of the windshield as well as below the emblem. Others (326, 339, and 341) had an outline type nose emblem with solid blue stripe up and over the headlight. Another variation was found on 328 with an outline emblem and blue stripe above the emblem but not below it, and 331 and 333 had a solid emblem with no stripe. Renumbered units 346 and 347C had an outline type emblem with no stripe.

The 325-class dwindled in numbers into the late 1970's as more of the A-units went into the CF-7 program and B-units were retired. F-7A 347C (originally 39C) and F-3B (originally 35A) were saved and stored at Albuquerque with the rest of the Santa Fe's historic locomotive collection. Eventually donated to the California State Railway Museum at Sacramento, they are on display having been cosmetically restored to the red warbonnet passenger paint scheme, the only remaining Santa Fe F-units.

Mostly in 1969, seventeen B-units from the 16, 37 and 300 classes and nine from the 200 class were rebuilt into radio control equipment (RCE) cars numbered 10 through 35. The car bodies were gutted, traction motors and fuel tanks were removed, and ballast was added to compensate for the weight of the removed equipment. Radio receiver equipment (used in mid-train remote controlled helper service) was installed allowing a transmitter equipped locomotive on the head end to control the mid-train helpers without a crew on board. These RCE cars remained in service until locomotives with on-board receiver equipment eliminated the need for separate RCE cars and they were then scrapped. All were off the roster by the end of 1982.

Fourteen B-units, one from the 200 class and 13 from the 16 and 37 classes, were converted to road slugs in 1972 for use in potash trains originating in Carlsbad, New Mexico. Diesel engines, generators, fuel tanks and all other equipment was removed from the car bodies and concrete ballast was added to compensate for the lost weight. The traction motors were retained and drew their power from a powered control unit that was mated with the slug. Six 200 class F-7A's were initially equipped as the control units for the first six road slug conversions but they were replaced by CF-7 control units after about six months of service. The balance of the road slugs had CF-7 control units from the time they were placed in service. After several years of operation, the road slugs were retired and scrapped - all were off the roster by early 1983.

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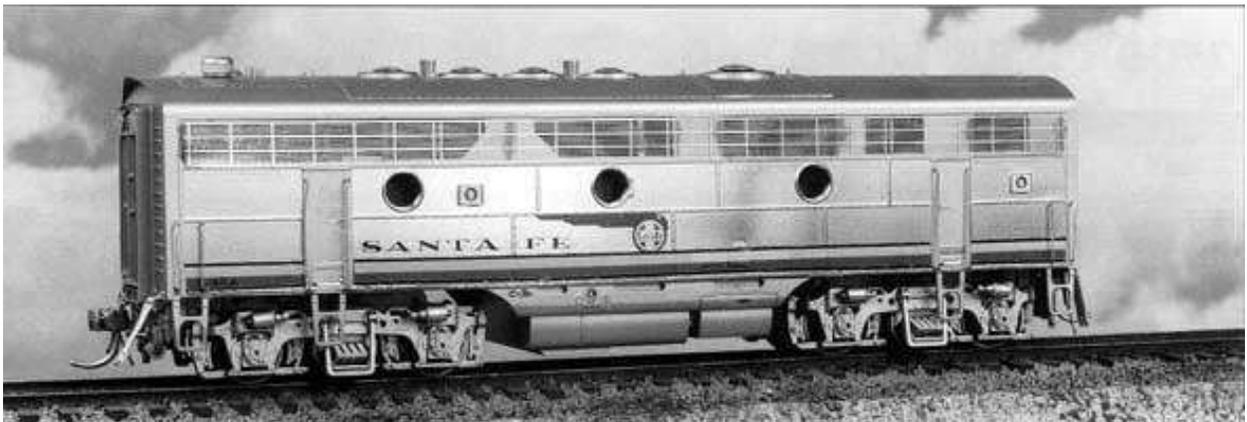
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Blue warbonnet F-7A 329 heads up an A-B-B-A lashup with every unit wearing a different paint job at Kiowa, Kansas in October 1975! This train of mostly grain hoppers is about to depart Kiowa for Enid, Oklahoma and points south.



F7's 339 and 303 and an unidentified B-unit pull a westbound freight over Ach Creek west of Pawnee Rock, Kansas in April 1970. Pure lashups of passenger F's on secondary mainline trains such as this one were quite common at the time.



John McCall built this model of F7B 45A using the plated version of the Highliner kit. Dr. McCall indicates the assembly is well within reach of most model builders. He used Scalecoat Aluminum to simulate the roof and side panels which were not stainless steel on the prototype. Five-inch tall "Santa Fe" letters were added by the railroad to B-units in March 1954. - Jay Miller

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F7A 301 leaves Del Mar ("Where the Surf Meets the Turf") with the southbound San Diegan in October 1954. Locomotive 300 through 314 were delivered from 1949 through 1952 as L-A-B lashups so by 1954 an extra cab unit had joined this consist. -John McCall Collection

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Modeler's Note Book

Painting and Lettering

Santa Fe's trademark warbonnet paint scheme first appeared in June 1937 on E1 locomotive set 2 and 2A. For over thirty years the red and yellow warbonnet changed very little.

The warbonnets worn by passenger FT locomotives and the F3's were products of EMD's styling designers and the Santa Fe's passenger and advertising departments. Both the eleven FT locomotive sets used in passenger service and the first six (16-21) E3's utilized a warbonnet scheme that was adapted from the E-units then in service. This "long" warbonnet was deemed out of proportion to the fifty-foot long locomotives and the shorter version was made standard with delivery of the next batch of F3's in 1948.

Since there were no stainless-steel panels on the FT's liberal use of Dupont Dulux Aluminum paint was required to turn the freight paint job into the image of a streamliner.

All the passenger FT's had vertical yellow nose stripe with a thin black stripe separating it from the red background. There were two thin black stripes down the center of the stripe starting just below the cab windows and stopping at the top of the headlight housing. They began again for a few inches just below the large cigar band nose herald. Microscale's set 87-101 has parts to make a correct decal of this design. The nose number boards on the FT's had a yellow background with reflective numbers. "Santa Fe" appeared in five-inch letters on the cab units centered under the right end sand filler hatch, just below the junction of the first and second side panels. Booster units were sparsely lettered with only the number at the end. One photograph has surfaced of a booster receiving the Indian head medallion (168A) and this photo was made in 1951.

The F3's paint styling is reflected on the styling diagram for the first units. The yellow nose stripe did not have a black stripe separating it from the red background. Only one early photograph of number 20 (made in 1947 prior to losing its "chicken wire" and middle port hole) shows a black stripe and it does not appear on the same engine in a 1954 shot.

The 6-foot long Indian head medallion was applied to all passenger booster units. It was painted on the side panels rather than applied as a badge like its brethren on the PA's and the E1's. Note the interesting colors called for on the styling diagram. No decal set currently available reflects these colors accurately. The medallion was relocated to 10" left of the center line in March 1954 when the five - inch "Santa Fe" letters were added to the booster units.

A survey of Santa Fe modelers revealed little agreement in the proper model paint to match the Santa Fe Red warbonnet. The most often claimed color was Scalecoat Santa Fe Red. Other choices included Floquil's Santa Fe Red and Caboose Red also received several nominations.

The "proper" color for yellow would be Dupont's Duco Chrome Yellow. This color remains the one constant on all styling diagrams donated to the SFMO by EMD (from the E-units to the FP-

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45). Most modelers suggest Reefer Yellow from Floquil or Scalecoat. A relatively new paint from SMP Industries is under evaluation and a report will be forthcoming in a future issue.

As previously mentioned, accurate color depends to a great extent on the color of the light under which the model is intended to be viewed and the personal preferences of the model builder.

Another area of decorating interest is the simulation of stainless-steel side panels. Testors Metallizer Stainless finish materials were suggested for the stainless steel and everything from Floquil Old Silver to Amtrak Platinum Mist was suggested for the prototype imitation stainless steel for the roof and side panels.

The Highliner B-unit kit is available in either plated or un-plated versions thereby eliminating the problem-at least on boosters. One enterprising Dallas modeler even nickel plates his brass units before painting!

The black, red and yellow striping extended around the side about five inches on the end (like the freight units). In the latter days, parts of this striping were applied to the units with a pressure-sensitive decal rather than a spray gun!

Generally speaking, the Santa Fe was very careful about housekeeping when it came to the locomotives pulling its prized varnish. Stories abound about men coming out to swab aluminum paint on trucks and pilots at terminals when the Super Chief stopped in route. Locomotive washers were active all along the line and, when the Chief was still chief, there was very little "weathering" of the warbonnet. Toward the end, however, it was another matter.

Jay Miller, Charlie Slater, Andy Sperandio, Steve Dunham, Lee Berglund, Frank Goodwin, John McCall, Steve Priest and Steve Boswell contributed with their suggestions. Much appreciation is also due to Floquil Poly-S Corporation, SMP industries, Microscale Decals and Bobby Hall's Hobby House for their assistance.

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Epilogue 1941 1991

The Santa Fe's F-units are now as much a part of history as the steam locomotives they replaced. Indeed, the CF-7's many of them became are now gone from the Santa Fe. Many CF-7's still carry on as the prime motive power of short lines from coast to coast and border to border (and even in Mexico) as most were sold off rather than scrapped or traded in.

For most of four decades the F-units symbolized the Santa Fe. They vanquished steam, they served in every capacity from power for premier passenger trains to mainline freights to branch line and local freights and even to occasional use as switch engines. They are fondly remembered by those of us who photographed them in their later years. Ask any Santa Fe engineman who is still around who ran them, and he will tell you they were the best engines the Santa Fe ever had.

Refer to Joe McMillan's book "Santa Fe's Diesel Fleet" for specific information on re-numberings of 16, 37, and 300 class units, and his "Santa Fe Motive Power" for specific information on units in the CF-7 program. Also pay particular attention to John McCall's book "Early Diesel Daze" for specific information on FT re-numberings as well as build dates and technical information on all classes of Santa Fe F-units.

I am indebted to Gordon Bassett, Stan Kistler, John McCall, Joe McMillan, Jay Miller and John Moore for information and photos. A very special thanks to John Signor and Bo Colson for the use of John's painting for our cover illustration. Thanks for your help, guys.

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Available HO F-unit Models by Ralph Back

Santa Fe F-Units

F-Unit HO Scale Models Commercially Available** - updated 2011

	FREIGHT								PASSENGER					
Factory Painted	FT		F3		F7		F9		FT		F3		F7	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Athearn RTR					X1	X1							X1/X3	X1/X3
Athearn GENESIS			X15	X15	X15	X15	X15	X15			X15	X15	X15	X15
Bowser/Stewart	X14	X14	X2	X2	X16	X16	X8	X8	X14	X14	X4	X4	X2	X3
Intermountain	X18	X18			X18	X18			X18	X18	X18	X18	X18	X18
MRC													X17	X17
Model Power											X20		X20	
Hallmark	X12	X12							X12	X12				
Overland Models	X19	X19			X19	X19	X19	X19	X19	X19	X19	X19	X19	X19
Division Point	X19	X19			X19	X19			X19	X19				
Oriental							X19	X19			X19	X19	X19	X19
Challenger													X19	X19
Walthers P2K			X22	X22	X22	X22					X22	X22	X22	X22
Broadway Limited													X23	X23
Pacific Fast Mail	X19	X19			X19	X19	X19	X19	X19	X19			X19	X19
Bachmann	X24	X24							X24					
	FREIGHT								PASSENGER					
Undecorated	FT		F3		F7		F9		FT		F3		F7	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Athearn					X5	X6							X10	X10
Highliners			X9	X9	X9	X9	X9	X9			X9	X9	X9	X9
Bowser/Stewart	X14	X14	X2	X2	X21	X21	X8	X8	X14	X14	X7	X7	X11	X11
Hallmark	X12	X12							X12	X12	X13	X13		
Oriental					X19	X19	X19	X19			X19	X19	X19	X19
Overland Models	X19	X19	X19	X19	X19	X19					X19	X19	X19	X19
Walthers P2K			X22	X22	X22	X22					X22	X22	X22	X22
Intermountain					X18	X18							X18	X18
Broadway Limited													X23	X23

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Footnotes:

01. Athearn Ready-To-Roll. Athearn's Santa Fe freight F7A and B units are closest to units 200 Class 202LABC through 258LABC as is. Steam generator (S/G) fittings need to be removed from the A-unit, but the castings could be left on the B-unit if model is numbered 254AB through 258AB as those units did have S/G. Originally available in a mid-1950's freight scheme with passenger style nose emblem ("cigar band"), the paint contours on the cab roof and on the top of the nose are incorrect.

Athearn's Santa Fe passenger F7A and B units are available as 37 Class A-B sets F7A 39L, A and 41L, A (Oct 2011); and single F7As 39C and 41C (Apr 2011). Horizontal-slit grilles makes these models incorrect for Santa Fe 37 Class passenger F7's 37LABC-41LABC because they had vertical slit grilles. The F7A has dual-headlights but incorrect S/G fittings. The F7B unit has S/G fittings, the Indian head medallion and "**SANTA FE**" lettering.

Athearn's Santa Fe freight F7A is also available as 200 Class number 271C and 281 Class 289C painted in the 1972-era freight blue/yellow warbonnet scheme but the 271C was a Phase II F7 and the 289C was a F9. Athearn's models are incorrect for these units in many respects including EMD F-unit model, different airhorn, side grilles, louvers, front pilot, different fuel tank and skirting arrangements, and incorrect S/G fittings. The 289C paint scheme is incorrect as there should no blue strip covering the headlight casing or above the headlight.

02. Stewart's Santa Fe freight F3A represents cab units 200L and C and 201L and C as delivered with the "catwhisker" paint scheme. As delivered the two Santa Fe freight F3's indeed had black roofs (see the revisions noted on the styling diagrams and the modeling notes). Nose emblem color is incorrect, and the roof stripe contour is also slightly incorrect. Much detail work could be done to the model if you decided to repaint it such as adding diaphragms, number plates, hoses. etc. However the model is a vast improvement over what previously was available. This model also available as undecked.

03. Athearn's RTR and Stewart's F7 passenger units are closest to units 326LAB through 331LAB out of the box. Horizontal-slit grilles makes these models incorrect for most other Santa Fe passenger F7's because most had a vertical slit grille. Steam generator fittings need to be removed from Athearn's A-unit and added to the Stewart B-unit (such as Details West part 118).

04. Stewart's "Phase I" passenger F3A has been available in two versions. The single headlight version is correct for the as-delivered appearance of units 16LABC through 21LABC. The dual headlight version may be incorrect on a "Phase I" carbody as those units may not have received the lower headlight until they were rebuilt to "Phase II" appearance.

05. Athearn's RTR undecorated (**No Longer Available from Athearn**) single headlight F7A is useful for modeling cab units in the 202-258 number series. S/G fittings should be removed from the roof as a basic first step and the modeler can add or remove other details as appropriate to the specific units he is modeling.

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06. Athearn's RTR undecorated (**No Longer Available from Athearn**) F7B needs only removal of S/G fittings to make it close to the appearance of most boosters in the 202-258 number series. S/G fittings can be left in place for modeling units 254 through 258 as those units were so equipped as built. As with the A-units, the modeler can carry detailing out to whatever extent he wishes.

07. Stewart's undecorated "Phase II" dual headlight F3A and F3B could be reworked to represent units 16LABC through 21LABC as rebuilt to "Phase II" appearance in the late 1940's. Addition of S/G fittings on the B-unit and a paint job is required.

08. Stewart's F9A and B is incorrect for Santa Fe appearance as is. Reworking of the fuel tank and skirting would be required as well as the addition of roof air piping. Not a difficult job considering the side grilles and filter panels are of the correct vertical-slit type. Factory painted in the B/Y cigar band scheme or undecked.

High-Tech Details makes a 1500-gal fuel tank (Part Number: HTD-6024) for the SF 200 Class Phase II number series 269LABC-280LABC F7s and 281 Class F9s.

09. Highliners' F-series body shell kits have components to build up any Santa Fe F3, F7 or F9 A or B unit variant. The modeler can detail and paint it for passenger or freight (as the kit has come either in plated or plain finish) as desired.

Features:

They are for use with powered or unpowered Athearn F7 chassis, or Stewart Hobbies/Kato F Unit drives. Includes molded plastic detail parts: four versions of the dynamic brake hatch, tall and short roof fans, five sets of side panel inserts, steam generator parts, two styles of sand filler hatches, flush-mounted porthole "glass", photo-etched stainless-steel fan grilles, door handles, lift rings and other detail parts. Also features true-to-scale headlights, three styles of number boards, two styles of pilots, two styles of cab and nose doors (with and without light), horns, five types of side porthole arrangement inserts, photo-etched stainless-steel windshield wipers, windshield and porthole "gaskets," cab side-window "wind wings," cab door "kick plates" and pilot corner steps.

Athearn purchased Highliners' F-series tooling in July 1998. See Footnote **15** as Athearn GENESIS has released many variations of factory painted Santa Fe F-units from the Highliners F-series tooling.

High-Tech Details makes a 1500-gal fuel tank (Part Number: HTD-6024) for the SF 200 Class number series 269LABC-280LABC Phase II F7s and 281 Class F9s.

10. Athearn's undecorated (**No Longer Available from Athearn**) dual headlight F7A would be useful for modeling passenger F7s in the 326LAB through 331LAB number series with removal of the S/G fittings.

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- 11.** Stewart's undecorated dual headlight F7 phase I is basically the same as Athearn's in appearance and is also useful for units 326LAB through 331LAB with the addition of S/G fittings to the B-unit.

- 12.** Hallmark's various brass FT imports with carbody side number boards on the A-units are useful for Santa Fe FT's number 118 and up because of the dynamic brake (see modeling notes). Modelers can add whatever level of detailing to the units as they were imported in as delivered appearance.

- 13.** Hallmark's brass F3 was basically a "Phase I" unit and useful for Santa Fe passenger units 16LABC through 21LABC in their as-delivered appearance.

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14. Stewart FT's have been delivered in the dual HL Passenger Warbonnet scheme (numbers 158LABC - 168LABC) and the single HL Freight Catwhisker scheme in LABC. The CW scheme has been released in the full red stripe, the cab only red stripe, and the "no red stripe" versions by Stewart. The kits come with different variations of the dynamic brake housing for you to decide which is appropriate. Santa Fe FT A-B sets in the blue/yellow "cigar band" and solid blue with yellow "cigar band" freight units have also been released.

Summary of the Bowser Manufacturing Santa Fe F-unit Releases

Bowser Manufacturing purchased Stewart Hobbies in 2005.

Class/ Road Model Numbers	Paint Scheme	Release Date	Model Detail Notes
100/FT NO# ²	Creamy yellow "catwhisker"	Released	No red stripe Black roof Bronze painted Santa Fe square nose badge plate with the Santa Fe emblem painted in the dark blue paint A-unit has bronze "SANTA FE" lettering B-unit has no lettering
100/FT 118L ² 140L ²	Blue/yellow "cigar band"	Released	B-unit number not specified.
100/FT 185L ²	Solid blue "cigar band"	Released	B-unit number not specified.
100/FT 163L ² 167L ² NO# ²	Red/silver Warbonnet	Released	Dual headlights B-unit number not specified Before purchase by Bowser, Stewart released an un-numbered FT A-B set with different variations of the dynamic brake roof housing.
200/F3 NO# ²	Blue/yellow "catwhisker"	Released	Both A and B-unit with no road number. Powered A dummy B. Chrome yellow with black roof, and incorrect narrow yellow frame stripe A-unit has yellow "SANTA FE" lettering B-unit has no lettering
200/F7 NO# ²	Blue/yellow "cigar band"	Released	Both A and B-unit with no road number. Powered A dummy B. A and B-unit have yellow "SANTA FE" lettering
281/F9 NO# ²	Blue/yellow "cigar band"	Released	Both A and B-unit with no road number. Powered A dummy B. Incorrect fuel tank and fuel tank skirting - should have 1500gal and abbreviated skirting.

¹ Single A-unit

² A-B set

15. The Athearn *GENESIS* non-"modernized" and "modernized" F units have been available in numerous variations of the passenger and the freight schemes. They use the Highliners F-series tooling and are finished beautifully. The passenger red/silver A and B units are finished to distinguish the difference between the silver painted areas and the stainless-steel side panels. F3's in several phases and F7's in several phases, both freight and passenger schemes, have all been offered. No undecked are available due to the partnership with Highliners, which has the exclusive on the undecked units.

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Summary of the Athearn GENESIS Santa Fe F-unit Releases (non-"modernized")

All Athearn GENESIS F-unit models made from the Highliners F-series tooling.

Class/ Road Model Numbers	Paint Scheme	Release Date	Model Detail Notes
16/F3 19L ¹ 34C ¹ 21L-21A ² 21C-21B ² 32L-32A ² 32C-32B ²	Red/silver Warbonnet	Released	Santa Fe modified appearance - horizontal upper body side air grilles 19L, 21L, 21C have the "long" version of the Red/Silver Warbonnet paint scheme, two side window port holes, Mars light in upper nose casing and headlight in upper portion of nose door 19L, 21L-21A, 21C-21B have F3 slit-type dynamic brake roof openings and four high profile roof cooling fans 19L has the Phase I horizontal side louvers 21L and 21C have the Phase II vertical side louvers
37/F7 37L-37A ² 37C-37B ² 42L ¹ 43L ¹ 46L-46B ² 46C-46A ² 47L-47A ² 47C-47B ²	Red/silver Warbonnet	Released	All - as-built appearance 42L, 47L, 47C have Leslie 5-Chime S5TR airhorn 37L, 37C, 43L, 46L, 46C have twin Leslie A200-156 airhorns
300/F7 304L ¹	Red/silver Warbonnet	Released	As-built appearance
300/F7 NO# ³	Red/silver	Released	Single B-unit with Indian head medallion - no lettering Athearn includes a small decal sheet with road numbers and the "SANTA FE" lettering that was applied to the B-units in later years Phase I Late (306A, B:1-316A, B:1 or 325A, B-335A, B) S/G fittings
200/F3 201L ¹ 200L-200A ² 200C-200B ²	Blue/yellow "cigar band"	Released	All - as-built appearance with A-unit nose number plate below headlight
200/F7 205L ¹ 212L-212A ² 212C-212B ²	Creamy yellow "catwhisker"	Released	All - as-built appearance 212L and 212C have correct "passenger pilot" A-unit nose number plate on nose door just above the nose badge plate A-unit has gold "SANTA FE" lettering and bronze painted Santa Fe square nose badge plate with the Santa Fe emblem painted in the dark blue paint B-units have no lettering A and B units have black roof and wrap-around yellow striping
200/F7 226C ¹ 263C ¹ 217L-217A ² 217C-217B ² 260L-260B ² 260C-260A ²	Blue/yellow "cigar band"	Released	All - as-built appearance with A-unit nose number plate below headlight A-units have incorrect "passenger pilot" 263C, 260L-260B, 260C-260A no upper body side air grilles (as-delivered).

¹ Single A-unit

² A-B set

³ Single B-unit

Santa Fe F Units

By Lee Berglund & Jay Miller

Athearn GENESIS has done a nice job of releasing Santa Fe F-unit HO models in "modernized" versions that represent Santa Fe's F-unit fleet in their final years during the early 1970s. As it applies to the Athearn GENESIS F-unit model, "modernized" means applying all the modifications made to the F-units over the years to keep up with federal regulations and industry standards in order to model the locomotive as it looked in its later years compared to its "as-built" appearance. All Athearn GENESIS "modernized" versions have the inertial air filter (housing behind the dynamic brake fan just in front of the first cooling fan). They are also equipped with either a "can"-type or "firecracker"-type radio antenna; and the proper prototype airhorn is also provided. Athearn has photos of all the "modernized" Santa Fe F-unit GENESIS releases on its Web site www.athearn.com. Most of these Santa Fe F-unit models indicate "Sold Out" on Athearn's Web Site.

Santa Fe F Units

By Lee Berglund & Jay Miller

Summary of the Athearn GENESIS "modernized" Santa Fe F-unit Releases

All Athearn GENESIS F-unit models made from the Highliners F-series tooling.

Class/ Road Model Numbers	Paint Scheme	Release Date	Model Detail Notes
281/F9 281C ¹ 286L-286A ² 286C-286B ²	Blue/yellow "cigar band"	Released	A-units have incorrect "passenger pilot" A-unit nose number plate below headlight No roof-top spark arrestors F9A and F9B have 1500 gal. fuel tanks with abbreviated skirting and air piping on roof 286L and 286C have twin single Leslie model S-25 type horns each on a single bracket mount - right facing forward, left to the rear 281C has a single as delivered Leslie model S-2M type horn - two bells on a two horn manifold on the right side.
325/F7 332L ¹ 329L-329B ² 325L-326A ²	Blue/silver "Bluebonnet"	Released	All - equipped with two roof-top spark arrestors and have correct " ARGENTINE " maintenance stencil. 329L has incorrect "passenger pilot" 332L has incorrect square end door window A-units not supplied with radio antennas B-units have " SANTA FE " lettering and no Indian head medallion.
300/F7 311L ¹ 303L-304B ² 310L-312A ²	Red/silver Warbonnet	Released	All - equipped with two roof-top spark arrestors A-units have a Leslie 5-Chime S5TR airhorn and "firecracker"-type radio antenna B-units have " SANTA FE " lettering, Indian head medallion, and S/G fittings. 310L represents ATSF F7A 310L:2, 312A represents ATSF F7B 312A:2.
300/F7 304L-319B ² 315L ¹	Yellow/silver "Yellowbonnet"	Released	All - equipped with two roof-top spark arrestors and A-units have a Leslie 5-Chime S5TR airhorn. Silver trucks, pilot and ends 304L and 315L detailed for F7 Phase I early with rear roof overhang 304L has a "can"-type radio antenna 315L has a "firecracker"-type radio antenna 319B is an F3B (nee-24A) and has " SANTA FE " lettering, Indian head medallion, S/G fittings, and has incorrect 48" dynamic brake fan - should have 36" fan. Renumbered into 325 Class as 345B in August 1973. Assigned to Amtrak service - 315L and 319B Chicago-Texas and 304L Chicago-California. 304L and 315L were the only F7As painted in the "Yellowbonnet" scheme while in Amtrak service.
325/F7 330L-339B ² 341 ¹	Yellow/silver "Yellowbonnet"	Released	All - equipped with two roof-top spark arrestors. 339B is a Phase II F7 that has " SANTA FE " lettering, Indian head medallion, and S/G fittings 341 detailed as Phase II F7 that has blue "passenger pilot", solid blue nose stripe and blue "cigar band" nose emblem, no nose lifting lugs, and Leslie 5-Chime S5TR airhorn and "can"-type radio antenna 330L detailed as Phase I Late F7 that has twin Leslie A200-156 airhorns and "can"-type radio antenna, no nose stripe and yellow "cigar band" nose emblem
37/F7 42C ¹ 44L-44A ² 44C-44B ²	Red/silver Warbonnet	Released	Detailed for F7 Phase II A-units have a Leslie 5-Chime S5TR airhorn and "firecracker"-type radio antenna B-units have " SANTA FE " lettering, Indian head medallion, and S/G fittings No roof-top spark arrestors.
200/F3 200C ¹ 201L-201A ² 201C-201B ²	Creamy yellow "catwhisker"	Released	Detailed for F3 Phase IV as-delivered appearance 200C and 201C are correct to not have "C" in the nose number boards A-unit has gold " SANTA FE " lettering and bronze painted Santa Fe square nose badge plate with the Santa Fe emblem painted in the dark blue paint A-unit nose number plate on nose door just above the nose badge plate B-units have no lettering A and B units have black roof and wrap-around yellow striping

¹ Single A-unit

² A-B set

Santa Fe F Units

By Lee Berglund & Jay Miller



With clean paint and recently washed, Santa Fe dual-service 325 Class F7A 327L and unidentified B-unit are on assignment to Santa Fe's *Texas Chief* train No. 16 at Union Station Houston, TX on December 12, 1970. This photo represents the 327L in its "modernized" appearance, and clearly shows the difference between the silver painted areas and the stainless-steel side panels. The 327L is a Phase I Late F7 that has a "freight pilot", twin Leslie A200-156 airhorns, 36" D/B fans, and stainless-steel horizontal slit side air grilles. Both the A and B unit have "**SANTA FE**" lettering and are equipped with two manifold spark arrestors. These 325 Class F-units have only about five months remaining in regular *Texas Chief* passenger service before being assigned exclusively to freight service in May 1971. Santa Fe's dual-service 325 Class consisted of F7s Phase I Late 325LAB-335LAB and Phase II 336LAB-340LAB, 341LA-344LA. Some 325 Class A-units had "freight pilots" and some had "passenger pilots". The entire class was retained by the Santa Fe for freight service and not used by Amtrak. The 327L would get the blue/silver "Bluebonnet" paint scheme before being remanufactured to CF7 2442 in August 1977. Athearn GENESIS has yet to announced "modernized" Santa Fe 325 Class F-units in the passenger red/silver Warbonnet scheme. —*Ralph Back*

MODELING NOTES - LETTERING: Santa Fe Maintenance Shop Assignment Stencils

In their later years after May 1971, Santa Fe's F-units were stenciled with their maintenance shop assignment either "**ARGENTINE**", "**BARSTOW**", or "**CLEBURNE**" in small upper-case letters on or above the frame at the designated front of the unit. The stencil color varied: black on red, white or yellow on blue, and black or blue on yellow. The "**BARSTOW**" stencil was only used for Santa Fe's 300 Class F-units in Amtrak service and assigned to the Barstow, CA maintenance shop. Athearn GENESIS has started putting the maintenance shop stencil on some of its "modernized" Santa Fe 300 Class and 325 Class F7 releases; but in some cases, they are not correct.

If you model any Santa Fe 300 Class F-unit assigned to Amtrak service during 1971-1973, it should have either a "**ARGENTINE**", "**BARSTOW**", or "**CLEBURNE**" maintenance shop stencil. Check prototype photos for these "modernized" Santa Fe F-unit releases for the correct maintenance shop stencil. Determining the correct maintenance shop assignment stencil can be difficult for some F-units due to the Santa Fe 300 Class re-numberings and maintenance shop assignment changes.

In general, after May 1971, Santa Fe F-units had the following maintenance shop assignment stencils:

- 200 Class and 281 Class "**CLEBURNE**" (Some "**ARGENTINE**" but most "**CLEBURNE**")
- 325 Class "**ARGENTINE**" (Some not stenciled until repainted "Bluebonnet" or "Yellowbonnet")
- 300 Class "**ARGENTINE**", "**BARSTOW**", or "**CLEBURNE**" (In Amtrak service May 1971 - July 1973)
- 300 Class "**ARGENTINE**" or "**CLEBURNE**" (When assigned to freight service beginning July 1973, "**BARSTOW**" re-assigned to "**ARGENTINE**")

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300 Class "modernized" ATSF "Yellowbonnet" F7 315L, with a "CLEBURNE" maintenance stencil, on assignment to Amtrak's *Texas Chief* train No. 16 at Union Station Houston, TX on December 31, 1972. The 315L was a Phase I early F7 built as Santa Fe 37 Class 40L in September 1949. The Farr vertical-slit stainless-steel side grilles replaced the horizontal-slit grilles early in its career. ATSF

40L was renumbered into the 300 Class as the 315L in June 1971 and assigned exclusively to Amtrak Chicago-Texas service. The 315L was painted in the "Yellowbonnet" scheme in August 1972 at the Santa Fe's San Bernardino, CA shops with a "BARSTOW" stencil, and then returned to Amtrak's *Texas Chief* service in September 1972 when the "CLEBURNE" stencil was applied for its maintenance shop assignment at Cleburne, TX. The Athearn model has the correct details for the "modernized" prototype but should have had the "CLEBURNE" maintenance stencil rather than the "BARSTOW" stencil. The Athearn model retains the rear roof overhang but has the two top door frame lift lugs just below and under the roof overland. The Santa Fe removed the roof overhangs on its F-units when lift lugs were added in later years. The 315L was assigned to freight service in July 1973 (retaining its "CLEBURNE" maintenance stencil), retired in March 1974, and remanufactured to CF7 2517 in June 1974. —Ralph Back

MODELING NOTES - PILOTS: Freight and Passenger.

The "passenger pilot" is identified by a notch step on both sides of the pilot. A "freight pilot" has a small metal step mounted outboard above the rail on each side of the pilot and the pilot has no notch. "Passenger pilots" and "freight pilots" can be found on A-unit members of all Santa Fe F-unit Classes. Athearn GENESIS Santa Fe A-unit models all have the "passenger pilot", but in some cases they are not correct. Athearn does not make a Santa Fe style "freight pilot". Check prototype photos for the Santa Fe F-unit releases for the correct A-unit pilot.

MODELING NOTES - 325 CLASS FREIGHT ASSIGNMENT:

"Bluebonnet" and "Yellowbonnet" Paint Schemes

"BLUEBONNET" - With their freight assignment after May 1, 1971, changes came to Santa Fe's classic red and silver Warbonnet paint scheme. In July 1971, almost a year before adoption of Santa Fe's "Yellowbonnet" scheme, Santa Fe began painting some members of the 325 Class F7s in a freight "Bluebonnet" paint scheme. Seven F7As were painted - 325L, 327L, 329L, 332L, 335L, 338L and 343L - with variations of nose stripes and emblems applied to them. The F7A paint scheme replaced the original red Warbonnet with freight blue retaining the Warbonnet design, silver painted and stainless-steel sides, the yellow "cigar-band" Santa Fe nose emblem with the black outline and five-inch "SANTA FE" letters on the carbody sides. The F7A variations were mostly in the nose vertical yellow stripe above and below the Santa Fe "cigar-band" nose emblem, and color of the front anticlimber above the pilot that wrapped around the

Santa Fe F Units

By Lee Berglund & Jay Miller

nose of the F7A. The 325L did not have the two vertical blue nose stripes between the nose door headlight and Mars light, and it had a blue painted anti-climber. The 327L and 335L had a yellow anticlimber while the 329L, 332L, 338L and 343L had black painted anticlimbers. The 338L had yellow nose side ladder grabs as the other six all had blue. The 335L and 338L had yellow painted eyebrow grabs while the other five were all painted blue. The 343L's "Bluebonnet" paint scheme varied the most from the other six. The 343L did not have the outer black separation stripe along the Warbonnet contour or above the stainless-steel frame side sill, the black outline around the Santa Fe cigar-band nose emblem, the two vertical blue stripes between the nose door headlight and Mars light or below the Santa Fe "cigar-band" nose emblem. Seventeen F7Bs received a blue stripe which replaced the red, and both ends of the unit were painted blue. The 6-foot long Santa Fe Indian head medallion was not present on any of the 17 F7Bs, but the "SANTA FE" letters were applied offset toward the rear of the unit - applied to B-units beginning in early 1954. The carbody side hand railings were all painted yellow. The trucks, fuel tank, frame side sill steps and A-unit front pilot were painted black rather than silver. These units all have blue ends.



Santa Fe 325 Class F7A 332L just out of the paint shop at San Bernardino, CA on May 6, 1972. Athearn GENESIS did an excellent job of correctly detailing the "modernized" "Bluebonnet" ATSF 332L. It has the correct details: black outline around the yellow "cigar-band" nose emblem, yellow nose stripe up and over the headlight with two vertical blue stripes between the nose door headlight and Mars light and below the nose emblem, yellow side body hand railings, blue nose-side grab irons, black "passenger pilot" and anti-

climber, blue end, black trucks and fuel tank, "ARGENTINE" stencil, nose lift lugs, small "L" below the yellow "cigar band" nose emblem, twin Leslie A200-156 airhorns, Farr vertical-slit stainless steel side grilles, and detailed as a Phase I Late F7. The 332L was remanufactured to CF7 2458 in May 1977 —Joe McMillan, Ralph Back collection

"YELLOWBONNET" - After the F7 "Bluebonnet" scheme was discontinued in June 1972, Santa Fe started painting the 325 Class F-units in a "Yellowbonnet" scheme. The "Yellowbonnet" scheme was more simplified than the "Bluebonnet" scheme. No need for a yellow separation stripe as only a narrow black stripe separated the yellow Warbonnet contour from the silver carbody side. No black stripe above the frame side sill either. Eight F7As were painted - 326L, 328L, 330L, 334L, 339L, 340L, 341 and 344L - with variations of nose stripes and "cigar-band" nose emblems applied to them. Four units - 334L, 340L, 341 and 344L - had a solid blue "cigar-band" nose emblem with a blue stripe running up and over the headlight to the base of the windshield as well as below the emblem. Two - 326L and 339L - had a yellow outline type "cigar-band" nose emblem with solid blue stripe up and over the headlight. The 330L had a yellow outline type "cigar-band" nose emblem but no blue nose stripe. Another variation was found on 328L with a yellow outline "cigar-band" nose emblem and blue stripe

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above the emblem but not below it. These units all have black trucks and underframe, and blue pilot and blue ends. The "Yellowbonnet" scheme B-units received a yellow stripe which replaced the red, and both ends of the unit were painted blue. They retained the Indian head medallion along with the five-inch "SANTA FE" letters on the carbody sides.

Three F7A members of the 325 Class never received either the "Bluebonnet" or "Yellowbonnet" paint scheme: the 336L, 337L and 342L retained their red/silver Warbonnet paint scheme, although in pretty bad condition, until remanufactured to CF7s. After July 1973 twenty-one 300 Class F3s and F7s, A and B units, were renumbered into the 325 Class and painted in the "Yellowbonnet" scheme.

16. Stewart's F7 freight is a Phase I early unit and was painted in both the Cat Whisker and the Cigar Band paint schemes. As with all Stewarts, they come un-numbered, so you can model which ones you desire. These units are best suited for numbers 202LABC - 258LABC, pre-1952 for the CW, and post 1952 for the Cigar Band scheme.

17. Model Rectifier Corp. makes 300 Class F7 A and B passenger units with and without a DCC decoder installed: F7A numbers 314C, 300L, and 300C; F7B numbers 312A. The A-unit models all models have S/G fittings and 47" dynamic brake fans. These models are no longer shown on their Web site.

18. Intermountain Railway Co. has offered the F7 phase I in several paint schemes. Both A and B units are offered. They have a unique unpowered chassis that is called a "Smart Dummy", that has power pick-up trucks so that you can more easily add sound to a multi-unit consist. These are nicely detailed units, and IM continues to bring out more variations of the F7. The passenger Warbonnet, the Catwhisker freight, and the Cigar Band freight have all been offered. They have also offered the "Yellowbonnet" scheme. The IM F7 Phase I undecorated kit models have a separate pilot, so the correct "passenger" or "freight" pilot can be applied where needed. These are offered separately as detail parts, as are their Farr or horizontal grilles for both the A and B units.



Santa Fe 325 Class F7A 341 at HB&T's Milby St. in Houston, TX on December 22, 1972. Athearn GENESIS did an excellent job of correctly detailing the "modernized" "Yellowbonnet" ATSF 341. It has the correct details: solid blue nose stripe up and over the headlight, yellow side body hand railings, yellow nose-side grab irons, blue "passenger pilot", blue end, black trucks and fuel tank, "ARGENTINE" stencil, no nose lift lugs, no small "L" below the blue "cigar band" nose emblem, Leslie 5-Chime S5TR airhorn, and detailed as a Phase II F7. The 341 was remanufactured to CF7 2468 in March 1977 —
Ralph Back

Summary of the Intermountain Railway Co. Santa Fe F-unit Releases

Class/ Road	Release
Model Numbers	Paint Scheme Date Model Detail Notes

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16/F3	16L ¹ -19L ¹	Red/silver Warbonnet	Released	Detailed for Phase II F3 with etched metal "chicken wire" applied to the body Santa Fe modified appearance - F3A Models feature the "long" version of the Red/Silver Warbonnet paint scheme. Mars light in upper nose casing and headlight in upper portion of nose door, four high profile roof cooling fans, twin Leslie A200-156 airhorns, and two side window port holes. B-unit has no number only the Indian head medallion and S/G fittings.
37/F7	39L ¹ 39C ¹ 40L ¹ 41C ¹ 39A ² 39B ² 40A ² 41B ²	Red/silver Warbonnet	Released	All - as-built appearance. A-units have twin Leslie A200-156 airhorns B-units have "SANTA FE" lettering and Indian head medallion and S/G fittings
300/F7	315L ¹	Yellow/silver "Yellowbonnet"	Released	Assigned to Amtrak Chicago-Texas service 315L has a Leslie 5-Chime S5TR airhorn
325/F7	326L ¹ 328L ¹ 334L ¹ 338A ² 342B ²	Yellow/silver "Yellowbonnet"	Released	326L and 328L have twin Leslie A200-156 airhorns and incorrect "passenger pilot" 334L has a Leslie 5-Chime S5TR airhorn and "passenger pilot" B-units have "SANTA FE" lettering and Indian head medallion
325/F7	332L ¹ NO# ²	Blue/silver "Bluebonnet"	Released	332L has twin Leslie A200-156 airhorns and correct "passenger pilot" B-unit has S/G fittings, "SANTA FE" lettering, and no Indian head medallion
200/F7	202 ¹ 206 ¹ 218 ¹ 220 ¹ 220A ²	Creamy yellow "catwhisker"	Released	Detail for F7 Phase I early as-delivered appearance All - incorrect blue roof (should be black) 220 has correct "passenger pilot" A-units have gold bronze color "SANTA FE" lettering and bronze painted Santa Fe square nose badge plate with the Santa Fe emblem painted in the dark blue paint A-unit nose number plate on nose door just above the nose badge plate B-unit has no lettering
200/F7	228L ¹ 228C ¹ 235L ¹ 235C ¹ 228A ² 228B ² 235A ² 235B ²	Blue/yellow "cigar band"	Released	All - as-built appearance All A-units have incorrect "passenger pilot".
100/FT	122L-122A ³ 122C-122B ³ 127L-127A ³ 135L-135A ³	Creamy yellow "catwhisker"	Released	w/Red separation stripe separating the blue and yellow colors - "as-built" appearance Both units powered. Models are factory ready to run on DC or DCC with optional SoundTraxx® Tsunami® Sound and are equipped with Kadee® couplers Nose herald is a separate bronze plate with the herald painted on in blue Number board below the nose badge plate Body side number boards are molded as appropriate to the prototype Roof mounted dynamic brake housing on A and B unit FTAs have gold bronze color "SANTA FE" lettering above the body side number boards FTBs have no lettering
100/FT	158L-158A ³ 160L-160A ³ 166L-166B ³ 168L-168B ³	Red/silver Warbonnet	Released	FTA has Mars light in upper nose casing and headlight in upper portion of nose door. FTB has S/G fittings and no lettering or Indian head medallion. Both units are powered, with DC and DCC function; and are also available with optional SoundTraxx® Tsunami® sound. Kadee® couplers are included. Model photos on the Intermountain Railway Co. Web site.
200/F7	NO#1& ²	Undecorated	Released	Detailed for Phase I F7A and B
37/F7	NO#1& ²	Shell kit		A-unit kits with freight or passenger pilot
325/F7	NO#1& ²			A and B kits with horizontal or Farr vertical air grilles.

Santa Fe F Units

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- ¹ Single A-unit
- ² Single B-unit
- ³ A-B set

19. Overland, Division Point, Oriental, Pacific Fast Mail, and Challenger have all offered brass F units over the years in painted and unpainted versions. Overland and Division Point are still in business, and more variations might be expected in the future. It is beyond the scope of this chart to give a detailed listing of all the different models that they have offered over the years. The "X19" mark in the box indicates that one of these have been offered at some time, in some variation. PFM has offered almost every variant (FT, F3, F7, and F9; A and B) at one time or another. Hallmark's offerings are discussed in other footnotes. Please reference *The Brown Book*, *The Brown Book of Brass Locomotives*, and the *Brass Model Trains Price & Data Guide* for production statistics.

Brass Santa Fe F-unit Releases - 2010 and Later

Listed here are brass model releases after the publication of *Brass Model Trains Price & Data Guide 2009 Edition*.

Class/ Model	Road Numbers	Paint Scheme	Importer/Builder	Catalogue No.	Year	Model Detail Notes
200/F7	263L, A ¹ 263C, B ¹ 265L, A ¹ 265C, B ¹ 260A ² 260B ²	Blue/yellow "cigar band"	Division Point/Ajin	DP-2144 ¹ DP-2144B ²	2010	Santa Fe EMD F-7 A-B sets and single B-units Factory painted "modernized" A-units have correct "freight pilot" No upper body side air grilles (as-delivered)

- ¹ A-B Set
- ² Single B-unit

20. Model Power has offered a Santa Fe 16 Class F3 16L, C-21L, C A unit only. It's listed as an F2A. Red/silver Warbonnet paint, three side port-hole windows, high fans, all metal model, see thru vents and lighted number boards. The model has these incorrect details: S/G fittings, single headlight, FT-style nose number boards, and too small yellow "cigar band" nose emblem.

21. Stewart's SHL undecked F7 phase II is like the Santa Fe's freight units 269LABC thru 280LABC. Their undecked DHL units are like passenger units 42LABC thru 47LABC +48A, 306LAB thru 314LAB, and 336LAB thru 340LAB, and 341LA thru 344LA. Some Santa Fe details will need to be applied.

22. Factory painted Passenger F3s and F7s are part of the release with the Walters Proto 2000 Name Train series for Santa Fe's *Super Chief* and *El Capitan*. Walthers indicates these Santa Fe passenger F-unit models are "Limited Run". Undecorated models can be configured as any Phase F3 or Phase I F7 - Santa Fe 16, 37, 300, or 325 Class passenger F3s/F7s and Santa Fe 200 Class freight F3s/F7s.

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By Lee Berglund & Jay Miller

Summary of the Walthers PROTO 2000 Santa Fe F-unit Releases

Class/ Road Model Numbers	Paint Scheme	Release Date	Model Detail Notes
200/F3 200L-200A ³ 200C-200B ³ 201L-201A ³ 201C-201B ³	Blue/yellow "cigar band"	Released	200L-200A, 200C-200B w/Sound & DCC and 201L-201A, 201C-201B standard DC Both A and B units powered Full cab interior w/crew figures Working headlight Rear-Mount wagon wheel radio aerial or firecracker antenna as appropriate Etched metal horizontal slit type "Stainless" side air grilles Partial fuel tank skirting
200/F7 233L-233A ³ 238C-238B ³ 251L-251A ³ 258L-258A ³	Blue/yellow "cigar band"	Released	Both A and B units powered Full cab interior w/crew figures Working headlight Etched metal horizontal slit type "Stainless" side air grilles All have partial fuel tank skirting 233L and 251L have "wagon wheel" radio antennas 238L and 258L have no radio antenna 258A has S/G fittings
16/F3 31L ¹ 31C ¹ 33L ¹ 33C ¹ 34L-34A ³ 34C-34B ³ 36L-36A ³ 36C-36B ³	Red/silver Warbonnet	Released	16 Class F3 F-units for <i>Super Chief</i> . W/Sound & DCC and Standard DC. Plated Metal Finish Leslie 5-Chime S5TR Airhorn Working Headlight and Mars Light "can"-type radio antenna Inertial Air Filter Etched Metal Vertical Slit Farr Type "Stainless" Side Air Grilles No fuel tank skirting A-unit has nose lift lugs B-unit has Indian head medallion and " SANTA FE " lettering (1954 and later), and S/G fittings No roof overhangs PROTO-Max™ Metal Knuckle Couplers
37/F7 38L-38A ³ 38C-38B ³ 39L-39A ³ 39C-39B ³ 40L ¹ 40C ¹ 47L ¹ 47C ¹ 40A ² 40B ² 47A ² 47B ²	Red/silver Warbonnet	Apr 2012	37 Class F7 F-units for <i>El Capitan</i> - detailed to match 1956-1960 era. Both A&B units powered. W/Tsunami® Sound & DCC and Standard DC. Full-Feature Tsunami® Sound & Control Decoder in DCC versions only! Plated Metal Finish Leslie 5-Chime S5TR Airhorn Working Headlight w/Bezel & Recessed Lens and Mars Light Inertial Air Filter 36-inch Dynamic Brake Fan Etched Metal Vertical Slit Farr Type "Stainless" Side Air Grilles Metal Grab Irons, Ladder Stand-Offs, Handrails & Lift Rings Complete Scale Fuel Tank w/Hangers, Battery Box, Air Tank & Underframe Detail PROTO-Max™ Metal Knuckle Couplers " Most Authentic Bulldog Nose Ever Done " - that's what Walthers says.
16/F3 NO# ³ 200/F3 NO# ³	Undecorated	Released	Detailed parts for any F3 Phase Both A and B units powered Full roof overhang Several types of radio antennas Working headlight - Mars light as appropriate Etched metal chicken-wire, horizontal, or Farr vertical grilles Full fuel tank skirting Dynamic brake roof vent Freight or passenger pilot A and B S/G fittings Cab nose lift lugs as appropriate

Santa Fe F Units

By Lee Berglund & Jay Miller

200/F7 NO#1&3	Undecorated	Released	Detailed parts for Phase I F7
37/F7 NO#1&3			Both A and B units powered
325/F7 NO#1&3			Full cab interior w/crew figures
			Working headlight - Mars light as appropriate
			Etched metal Farr or horizontal grilles
			Full or partial fuel tank skirting
			With or without dynamic brakes to match prototypes
			Freight or passenger pilot
			Nose lift lugs as appropriate

¹ Single A-unit

² Single B-unit

³ A-B set

23. Broadway Limited Imports. Photos of the BLI Santa Fe F-units are on the BLI Web site.

Summary of the Broadway Limited Imports Santa Fe F-unit Releases

Class/ Model	Road Numbers	Paint Scheme	Release Date	Model Detail Notes
37/F7	38C ¹ 37L-37A ² 37C-37B ² 38L-38A ²	Red/silver Warbonnet	Released	As-built appearance 37L-37A and 37C-37B are Paragon(TM) Series w/Quantum Sound(TM) 38C and 38L-38A are BlueLine series sound/DCC ready Operating headlight and Mars light Twin Leslie A200-156 airhorns Separately applied handrails, windshield wipers, and brass bell B-unit has Indian head medallion and S/G fittings Yellow "cigar band" nose emblem oval contour not accurate
325/F7	327LAB ³	Red/silver Warbonnet	Released	As-built appearance Paragon (TM) Series w/Quantum Sound (TM) Twin Leslie A200-156 airhorns Powered A and B units and one dummy B-unit B-units have Indian head medallion and no lettering
37/F7	NO#1	Undecorated	Released	Detailed for Phase I F7 early BlueLine series sound/DCC ready Twin Leslie A200-156 airhorns Dual headlights Single A and B unit

¹ Single A-unit

² A-B set

³ A-B-B set

24. Bachmann Trains has Santa Fe FTA and FTB models in the freight blue/yellow "cigar band" scheme, and FTA only model in the red/silver Warbonnet passenger scheme. These models are unnumbered and do have either nose or body side number boards. The passenger FTA only has a single headlight and has incorrect yellow nose stripe and incorrect "SANTA FE" lettering position.

First Compiled by Lee Berglund and Jay Miller with assistance from John Moore, Bryan Moseley of Abajo Depot and Guy Middlebrooks of Bobbye Hall's Hobby House. 2004 revision by Paul Brown. 2011 revision by Ralph Back. Please consider this a work in process. It has been

Santa Fe F Units

By Lee Berglund & Jay Miller

over 10 years since its creation. Much has happened since then. The brass listing alone is daunting.

Question: Please refer to footnote **09**. Was the Highliners A unit ever available in plated kit? (yet?) I know the B unit was.

GENERAL NOTES:

In this document, the notation :1 :2 :3 represents 1st, 2nd, 3rd unit(s) to carry that road number.

**** Not all models listed here are currently available, and many have been discontinued.**

Model and Prototype References:

Brown, R.A. *The Brown Book*. 2nd ed. Darwin Publications, 1982.

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"Santa Fe F-Units." The Santa Fe Railway Historical & Modeling Society. Online. Available <http://atsfr.net/resources/funits/index.htm>.

Thompson, John. "Santa Fe's F-units (1940's-50's)." The Santa Fe Railway Historical & Modeling Society Convention. 2001, July 20-21: Kansas City.

Priest, Dr. Cinthia. *The Santa Fe Diesel Volume One: Dieselization-1960*. Paired Rail Railroad Publications, Ltd., 1997.

"Santa Fe's F-Unit Fleet - The Final Years." *Diesel Era*. March/April 2001 Volume 12 Number 2: 9-24.

McCall, John. "Athearn Genesis F7 Passenger Service "yellowbonnet"." *The Warbonnet*. Volume 17, Number 1 First Quarter 2011: 38.

Back, Ralph. "A Yellowbonnet in Texas." *The Warbonnet*. Volume 9, Number 1 First Quarter 2003: 29-31.

Santa Fe F Units
By Lee Berglund & Jay Miller
A Prototype Album



At the very end of passenger service on the Santa Fe the 325 class F7's were still going strong. On January 30, 1971, 341LA and a similarly configured sister head train 74, the San Diegan, past Hobart Tower in Vernon, California. Note the five-chime horns on both A-units. - Joe McMillan

Santa Fe F Units
By Lee Berglund & Jay Miller

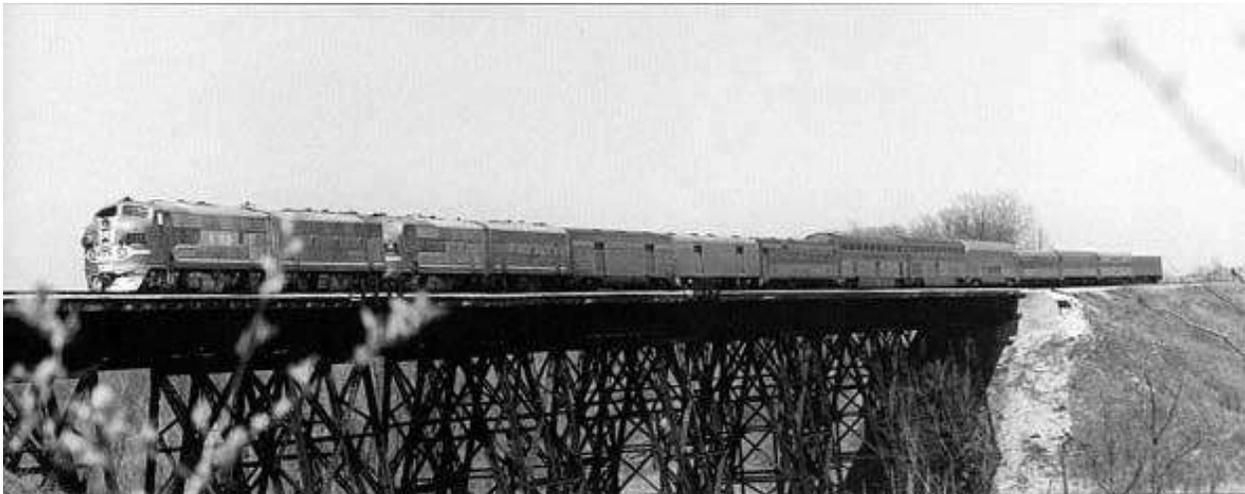


F3 324LABC helps another brace of F3's pulling the Fast Mail (train 8) out of Seligman, Arizona in January 1961. The F3 retains its single bulb headlight but has received grab irons and a five-chimer. - Richard Steinheimer

Santa Fe F Units
By Lee Berglund & Jay Miller



"It was zero degrees and sleeting at 3:00 a.m. in Newton," says John McCall, "and there I was - outside, taking pictures!" Train 15 was headed back to Texas on New Year's Day 1971 with 339LA in charge. Note the second set of 300's hooked up elephant style. One set of locomotives was switched at Gainesville, Texas for the Dallas section of the Texas Chief. - John McCall



F7 339LA and F3 19LA have charge of the westbound San Francisco Chief at Media, Illinois on April 4, 1969. Note the radio antenna on the first booster unit. Dressed in her yellow warbonnet, 339L was not chosen for Amtrak service, but did become CF-7 2470 in February 1977. - Joe McMillan

Santa Fe F Units
By Lee Berglund & Jay Miller



In a fitting winter scene from February 1961, F3 number 33 has charge of the Grand Canyon as it begins the assault on Raton Pass just west of Trinidad, Colorado. Note the dynamic brake fan on the middle booster unit. As built, F3's had "chicken wire" covers over their dynamic brake slits. By the late 1950's most F3's had been upgraded to F7 standards. - Richard Steinheimer

Santa Fe F Units

By Lee Berglund & Jay Miller



Twelve-thousand horsepower worth of F7's charge a GFX train loaded to the bunkers with Kern County spuds across the Colorado River at Topock, Arizona in early 1950. With 228 in the lead, the A-B-B-A helper set will stay with the train to Winslow. Lock and load! - R. Collins Bradley



Nearing the end of their days, four old warriors wait patiently at Altus, Oklahoma, for a call down the Orient in June 1973. 237L and the other members of the band sport spark arrestors, grab irons, antennae, and various other beads and rattles. Missing in battles over the years is virtually all the skirting. - E. L. DeGolyer, Jr.

Santa Fe F Units
By Lee Berglund & Jay Miller



FT 153L sported a rather unique twin seal-beam headlight when Dr. McCall inspected it down at Slaton, Texas in 1960. Perhaps the mechanical department thought it might help visibility in a South Plains dust storm. - John McCall

Santa Fe F Units
By Lee Berglund & Jay Miller



A brace of F7's heads for the Clovis roundhouse after coming in with a westbound train in 1960. Third booster may be one of the units (260 through 267) that did not receive stainless steel grilles. Cab unit 237C was built in 1950. - Don Erb

Santa Fe F Units
By Lee Berglund & Jay Miller



FT 159LABC has charge of a GFX near Belmont, Arizona. Note the nose badge color. - M. M. Snelson

Santa Fe F Units
By Lee Berglund & Jay Miller



Once dressed in passenger warbonnet, FT 162L retained her second headlight as a souvenir. Also worth noting are the two raised exhaust stacks that were common "custom jobs" on some late FT's. Note the flat plate radio antenna. -
John McCall



Just west of the Mojave River bridge at Victorville, California, 219L heads for Summit with a westbound extra. White flags flying, she has sprouted a wagon wheel radio antenna. Photograph is dated 1954 which makes it quite late for the "catwhisker" paint scheme.

Santa Fe F Units
By Lee Berglund & Jay Miller



Twenty-two-year-old passenger F7A 38C never looked better as she paused at Emporia with the eastbound Grand Canyon on a sunny March 12, 1971 - just a few weeks prior to Amtrak.



F3A's 16 through 21 wore a long warbonnet that was the same size used on the early E-units. Later passenger F's wore a shortened version more proportional to their carbodies. 16C was a Newton in 1972.

Santa Fe F Units
By Lee Berglund & Jay Miller



271C was the only 200 class F7A to wear the yellow warbonnet paint. It was destroyed in a head-on collision a year after this photo was made at Emporia in 1972.



F7A 206C at Emporia in February 1974 illustrates the appearance of the 200 class units 202 through 258 in their final years of service. Two months later, 206C was reborn as CF-7 2489.

Santa Fe F Units

By Lee Berglund & Jay Miller



304L and 315L were the only two 300 class passenger units to receive the yellow warbonnet scheme while in Amtrak service. 315L sits at Fort Worth with Amtrak's Lone Star in early 1974. - Bill Phillips



At least six 281 class F9A's received the yellow warbonnet. And, at least three variations in the nose stripe and "cigar band" emblems are known to have existed. 288L sits at Emporia in April 1974.

Santa Fe F Units
By Lee Berglund & Jay Miller



326L at Emporia in March 1973 illustrates one of several nose emblems found on yellow warbonnet 325 class units. Units of the 325 class were built as dual service locomotives, hence the stainless steel.



Seven 325 class units received the blue warbonnet (dubbed the "Bluebonnet" by Texas railfans). Here at Newton in October 1973, 332L awaits its next assignment.

Santa Fe F Units

By Lee Berglund & Jay Miller



In a rare close-up, the nose of FTA 172L is displayed at Temple, Texas in 1951. The blue and gold "Santa Fe" emblem was applied to a metal badge which was then attached to the nose door of the FT's by the builder. Many 200 class F7's also carried this type of badge when first delivered. Note also the creamy yellow paint. - K. B. King



FT A-B-A set 412LAC with 412L on the point leads an eastbound freight out of the yards at Emporia on September 21, 1958. A few FT's retained their 400 series numbers to the end. Contrast this latter-day "chrome yellow" paint scheme with the one preceding. - W. A. Gibson

Santa Fe F Units

By Lee Berglund & Jay Miller



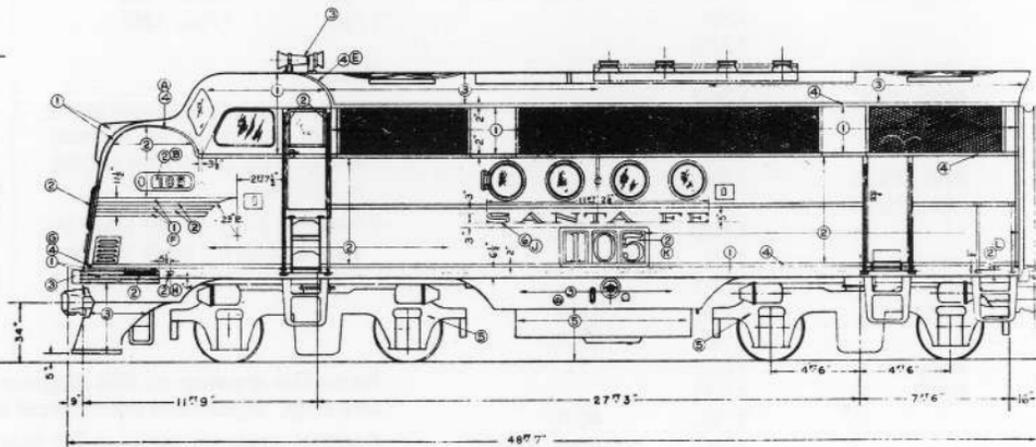
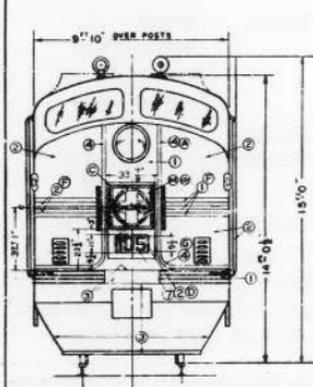
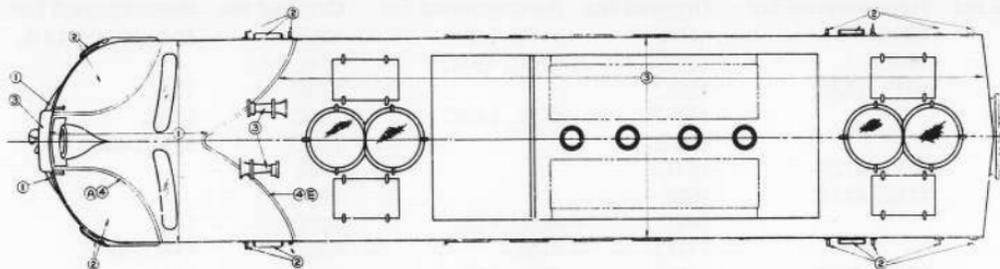
Westbound near Bealville in 1968, F7 305 has charge of the San Francisco Chief as it heads down the Tehachapi Loop. Believe it or not this photograph was made by SFMO member Don Mitchell last month on the La Mesa Model Railroad Club layout at Balboa Park in San Diego! Bob Schimmel super detailed the F7/F3 A-B-B-A set from standard Athearn models. According to Bob, well over 500 holes (many #80) were drilled to accommodate the details which also include a fully-functional Mars light, bug board lights and classification lights. All electronics are aboard the dummy lead A-unit. The powered boosters represent F3's which have been partially upgraded to F7 status. Bob's modeling work has been rewarded with numerous awards at NMRA regional and national contests. -
Photograph by Don Mitchell

Back Cover Image

SANTA FE DIESEL LOCOMOTIVE STYLING DIAGRAM

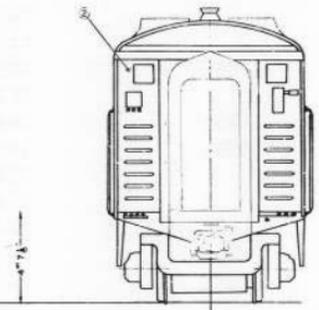
FT-A FREIGHT

8077447



1350 HP FREIGHT LOCO "A" SECTION

STYLING & PAINTING DATA				
COLORS AND QUANTITIES REQUIRED PER LOCOMOTIVE UNIT				
DU PONT DUCO 246-3654	YELLOW 12 21/2 GAL.			
DU PONT DUCO 246-53423	DARK BLUE			
DU PONT DUCO 246-2804	BLACK			
DU PONT DUCO 246-9098E	SWIFT RED			
DU PONT DUKLOR BR-008	BLACK			
DU PONT DUCO	GOLD BRONZE			
PAINTING SYMBOLS				
8077434	STRIPING PATTERN			
8077435	NUMBER BOX NUMERALS			
8077436	MEDALLION & PERMANENT MARKING			
804258	DU PONT DUCO 246-2804			
807549	DU PONT DUCO 246-9098E			
8077437	ROOF STRIPING PATTERN			
8077438	NOSE STRIPES			
8077439	STRIPING PATTERNS			
8077441	SANTA FE LETTERS			
8077442	17 1/2" NUMERALS			
8077443	2ND NUMERALS			
REMARKS: R.R. LEAD NOS. 100 - 119 ISS.				
8078810 MEDALLION				
DATE	REVISION	REVISED BY	CHECKED BY	APP. BY
4/6/50	-8078810 ADDED DU PONT 246-2804 AND 246-5342	W. G. D.	J. H.	J. H.



ELECTRO-MOTIVE DIVISION GENERAL MOTORS CORPORATION LA GRANGE, ILLINOIS, U.S.A.			
STYLING & PAINTING			
FIRST USED ON E 561.			
DR. B. DEER	0-2-43	APPROVED	DRAWING NO.
CH.	1-2-43		8077447
DATE OF PRINT		REVISION	

SANTA FE DIESEL LOCOMOTIVE STYLING DIAGRAM

FT-A (CAB) UNITS

Set 100 built 12/40. Remainder built 1/41 - 8/45

Original No.	Renumbered To†						
100L		159L*	135C	120C	417L, 118L	110C	404L, 407L, 137L
101L	100C, 102L	136C	198L	121C	119C, 121C	174L	
101C	103L	137C	401L, 168C	168L*		174C	178L
104L - 152L		160L*		168C*	415L, 142C	109C	140C
152C	413L	160C*		150C		108C	408C, 430L
122C	422L, 128C,	138C	403L, 412C	151C		175L	
122C		139C	416L, 411C	169L		175C	
123C	124L	161L*		169C	406L, 132L	107C	140L
152L	153I	161C*		119C	410L	106C	118C, 427L
153C	193L	140C	137C, 138L	118C	408L, 131C	178L	174C
124C		141C	414L, 118C	177L	407C, 114C,	178C	182B, 182C
125L	126L	162L*		429L		179L	179C, 185L
154L		162C*		177C			
154C		142C	428L, 110C	176L			
126C		143C	405L, 132C	176C			
127C	136C, 127C	163L*		105C	183L		
155L		163C*		170L			
155C	195L	144C	419L, 107C	170C			
128C	199L	145C	420L, 193C	117C	180L		
129C		164L*		116C	181L		
156L		164C*		171L			
156C	196L, 197C	146C	411L	171C			
130C	191L	147C	412L	115C	182L		
157C	197L	165L*		114C	177L		
157L		165C*	186L	172L			
131C	428L, 107L	148C	194C	172C			
132C	199C	149C		113C	407L		
133C	158L	166L*		112C	421L, 192C		
158C*	189L	166C*	187L	173L			
134C	400L	167L*		173C	184L		
135C	426L, 111C	167C*	188L	111C	409L, 120C		

Notes:

* Units received passenger paint, steam generators (in A units) and gearing for 95 mph service in 1945-46.

† Refer to *Early Diesel Daze* by John McCall for more comprehensive notes on renumberings.

Note: The drawing on this diagram is for painting and lettering use only. Significant mechanical differences may be present!

Aperture cards of original styling blueprints were donated to the Santa Fe Modelers Organization by Electro-Motive Division, General Motors Corporation.

Published by the SFMO, October 1991

Model Paints (see text):

Blue:	Floquil
	3 pts. Dark Blue
	1pt. Engine Black
	Scalecoat
	Santa Fe Blue
Yellow:	Floquil
	3 pts. E.L. Yellow
	1 pt. Reefer White
	Scalecoat
	Same colors
Black:	Floquil
	Engine Black
	Scalecoat
	Engine Black

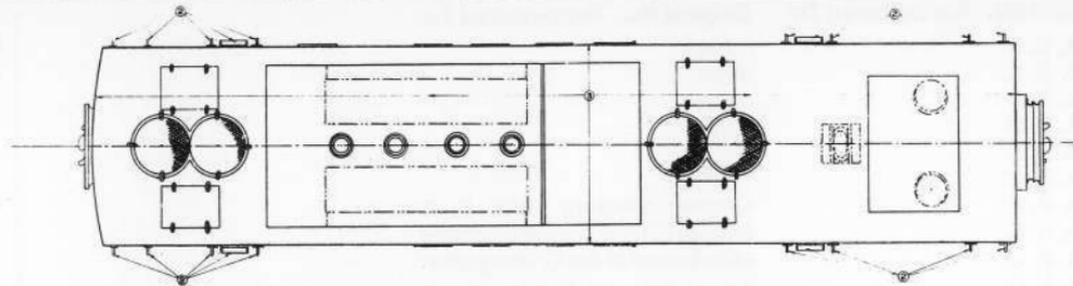
Decals:

Microscale	87-77 (HO)
	60-77 (N)
Champ	EH-72 (HO)
Champ's Santa Fe nose emblem has more correct background color for "catwhisker" scheme illustrated here.	

SANTA FE DIESEL LOCOMOTIVE STYLING DIAGRAM

FT-B FREIGHT

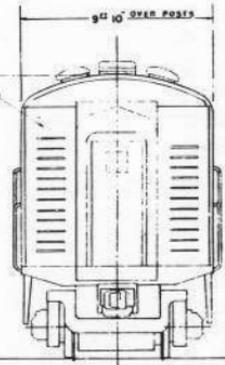
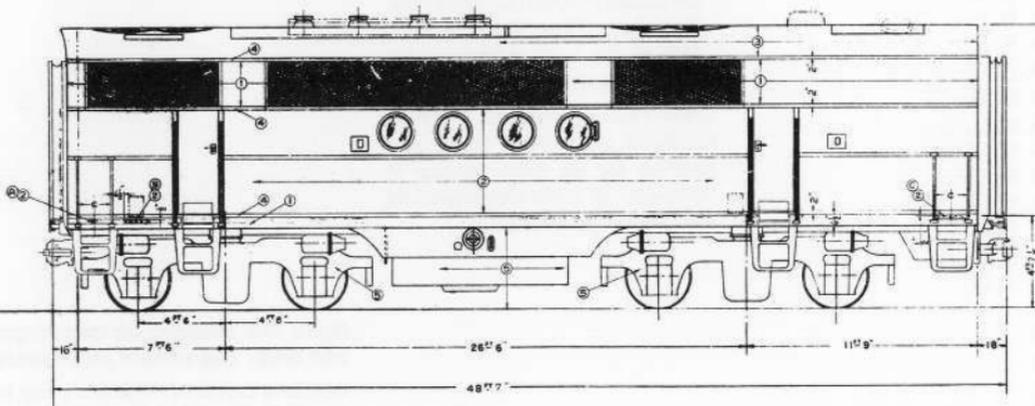
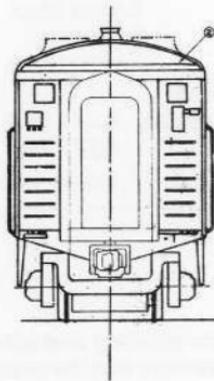
8077448



STYLING & PAINTING DATA			
COLORS AND QUANTITIES REQUIRED PER LOCOMOTIVE UNIT			
①	DUPONT DUCJ	246-32654	YELLOW
②	DUPONT DUCC	246-53623	DARK BLUE
③	DUPONT DUCC	246-2504	BLACK
④	DUPONT DUCC	246-9089 R	SWIFT RED
⑤	DUPONT DULUX	88-005	BLACK

PAINTING DETAILS	
①	8077444 2" LETTER "E"
②	8077443 2" NUMERALS
③	8077445 SANTA FE INITIALS

REMARKS: S.F. Loco. No. 1001-1002-1005-114 C. 1944.



1350 HP. FREIGHT LOCO - "B" SECTION

ELECTRO-MOTIVE DIVISION GENERAL MOTORS CORPORATION 150 COLUMBIA BLDG. PITTSBURGH, P. O. 8			
STYLING & PAINTING			
FIRST USED FOR	2-5-C	APPROVED	DRAWING NO.
DR. S. DENK	C-22-43		8077448
CH.			
INSP. J. J. J.	S. L. V. J.		
DATE OF PRINT		REVISION	

SANTA FE DIESEL LOCOMOTIVE STYLING DIAGRAM

FT-B (BOOSTER) UNITS

Set 100 built 12/40. Remainder built 1/41 - 8/45

Original No.	Renumbered To†	Original No.	Renumbered To†	Original No.	Renumbered To†
100A		128A, B, C		178A	
101A	100B	129A, B, C		178B	
101A	See footnote	130A, B, C		179A	
101C	for renumberings	131A, B, C		179B	
100C	of booster units	132A, B, C			
102A, B, C	101A - 151C.	133A, B, C			
103A, B, C		134A, B, C			
104A, B, C		135A, B, C			
105A, B, C		136A, B, C			
106A, B, C		137A, B, C			
107A, B, C		138A, B, C			
108A, B, C		139A, B, C			
109A, B, C		140A, B, C			
110A, B, C		141A, B, C			
111A, B, C		142A, B, C			
112A, B, C		143A, B, C			
113A, B, C		144A, B, C			
114A, B, C		145A, B, C			
115A, B, C		146A, B, C			
116A, B, C		147A, B, C			
117A, B, C		148A, B, C			
118A, B, C		148A, B, C			
119A, B, C		150A, B, C			
120A, B, C		151A, B, C			
121A, B, C		167A			
122A, B, C		167B			
123A, B, C		177A			
124A, B, C		177B			
125A, B, C		176B			
126A, B, C					
127A, B, C					

Notes:

Original numbers 101A, B, C through 151A, B, C were all booster units in spite of the 'C' designator.

†Units 101C-151C were renumbered into numbers above 152 around the end of WW II. This list shows as-built numbers only. See *Early Diesel Daze* by John McCall for comprehensive renumbering specifics.

Units 158A, B through 167A, B received passenger paint and gearing for 95 mph service in 1945-46. "B" units also equipped with steam generators.

Model Paints (see text):

Blue:	Floquil
	3 pts. Dark Blue
	1pt. Engine Black
	Scalecoat
	Santa Fe Blue
Yellow:	Floquil
	3 pts. E.L. Yellow
	1 pt. Reefer White
	Scalecoat
	Same colors
Black:	Floquil
	Engine Black
	Scalecoat
	Engine Black

Decals:

Microscale	87-77 (HO)
	60-77 (N)
Champ	EH-72 (HO)

Note: The drawing on this diagram is for painting and lettering use only. Significant mechanical differences may be present!

Aperture cards of original styling blueprints were donated to the Santa Fe Modelers Organization by Electro-Motive Division, General Motors Corporation.

Published by the SFMO, October 1991

SANTA FE DIESEL LOCOMOTIVE STYLING DIAGRAM

F3-A (CAB) UNITS

Original No.	Date Built	Original No.	Date Built
16L*	11/46	31L	10/48
16C*	11/46	31C	10/48
17L*	11/46	32L	10/48
17C*	11/46	32C	10/48
18L*	11/46	33L	11/48
18C*	11/46	33C	11/48
19L*	11/46	34L	1/49
19C*	11/46	34C	1/49
20L*	11/46	35L	1/49
20C*	11/46	35C	1/49
21L*	11/46	36L	1/49
21C*	11/46	36C	1/49
22L	3/48		
22C	3/48		
23L	3/48		
23C	3/48		
24L	4/48		
24C	4/48		
25L	4/48		
25C	4/48		
26L	5/48		
26C	5/48		
27L	5/48		
27C	5/48		
28L	6/48		
28C	6/48		
29L	6/48		
29C	6/48		
30L	9/48		
30C	9/48		

Notes:

* Original units 16 through 21 were delivered with *three* portholes and in the long warbonnet paint scheme used on E-units (as illustrated on reverse). Also, the lower side panels and the rear second row side panels were *painted* aluminum. Units 22 through 36 were delivered in the shorter (standard) warbonnet style with two portholes as illustrated by the F-7A styling diagram. The side panels indicated above were *stainless steel*. Therefore, this styling diagram applies *only* to units 16 through 21 as delivered.

Model Paints (see text):

Red: Scalecoat
Santa Fe Red
Floquil
Caboose Red

Yellow: Floquil
Reefer Yellow
Scalecoat
Reefer Yellow

Black: Floquil
Engine Black
Scalecoat
Engine Black

Aluminum: Floquil
Amtrak
Platinum Mist
Scalecoat
Aluminum

Decals:

Microscale 87-101 (HO)
60-101 (N)

Champ BRH-73 (HO)
(Long warbonnet from E-unit)

Note: The drawing on this diagram is for painting and lettering use only. Significant mechanical differences may be present!

Aperture cards of original styling blueprints were donated to the Santa Fe Modelers Organization by Electro-Motive Division, General Motors Corporation.

Published by the SFMO, October 1991

SANTA FE DIESEL LOCOMOTIVE STYLING DIAGRAM

F3-B (BOOSTER) UNITS

Original Number	Date Built	Original Number	Date Built
16A	11/46	31B	10/48
16B	11/46	31A	10/48
17A	11/46	32B	10/48
17B	11/46	32A	10/48
18A	11/46	33B	11/48
18B	11/46	33A	11/48
19A	11/46	34B	1/49
19B	11/46	34A	1/49
20A	11/46	35B	1/49
20B	11/46	35A	1/49
21A	11/46	36B	1/49
21B	11/46	36A	1/49
22A	3/48		
22A	3/48		
23B	3/48		
23A	3/48		
24B	4/48		
24A	4/48		
25B	4/48		
25A	4/48		
26B	5/48		
26A	5/48		
27B	5/48		
27A	5/48		
28B	6/48		
28A	6/48		
29B	6/48		
29A	6/48		
30B	9/48		
30A	9/48		

Notes:

* Original units 16L, C through 21L, C were delivered with *three* portholes and in the E-unit long warbonnet paint scheme. As on the cab units, the lower side panels and the rear second row side panels were *painted* aluminum. Units 22L, C through 36L, C were delivered in the shorter (standard) warbonnet style and the side panels indicated above were *stainless steel*. Therefore, this styling diagram applies *only* to units 16A, B through 21A, B as delivered.

Model Paints (see text):

Red:	Scalecoat Santa Fe Red Floquil Caboose Red
Yellow:	Floquil Reefer Yellow Scalecoat Reefer Yellow
Black:	Floquil Engine Black Scalecoat Engine Black
Aluminum:	Floquil Amtrak Platinum Mist Scalecoat Aluminum

Decals:

Microscale	87-101 (HO) 60-101 (N)
Champ	BRH-73 (HO)

Note: The drawing on this diagram is for painting and lettering use only. Significant mechanical differences may be present!

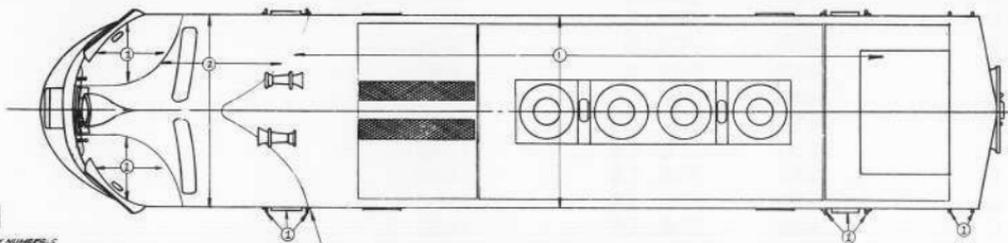
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Published by the SFMO, October 1991

SANTA FE DIESEL LOCOMOTIVE STYLING DIAGRAM

F7-A FREIGHT

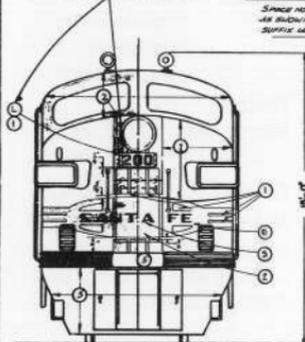
8138161



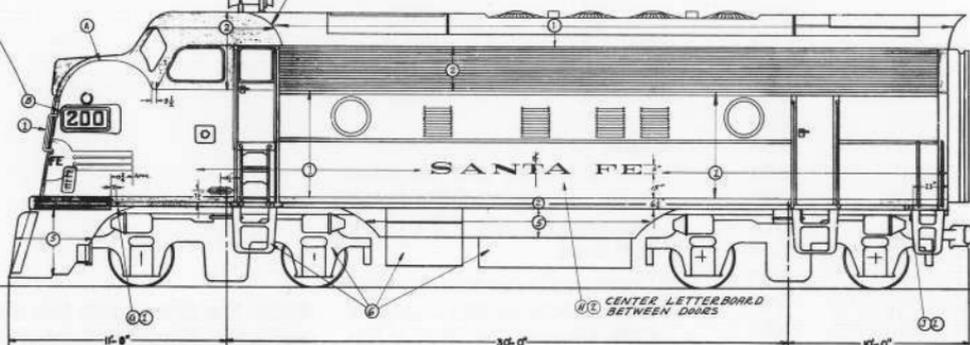
WHEN MTG. REFL. NO. PLATES
ABOVE DOOR SET
ALTERATION DRG. 8130692

200 C

SPACE AND BODY NUMBERED
AS SHOWN WHEN USING
STYLING METERS



18'-0"

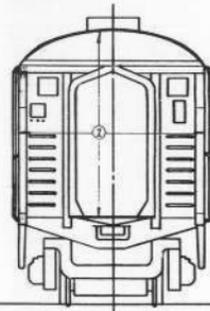


⑩ CENTER LETTERBOARD
BETWEEN DOORS

16'-0"

30'-0"

12'-0"



STYLING & PAINTING DATA	
COLORS & QUANTITIES REQUIRED PER LOCOMOTIVE	
① BLUE - 254 - DUPONT DUCO	END NO. 810699
② YELLOW - 254 - 774 - DUPONT DUCO	END NO. 810699
③ RED - 254 - 774 - DUPONT DUCO	END NO. 810699
④ BLACK - 80 - 758 - DUPONT DUCO	END NO. 810699
⑤	
⑥	
⑦	
⑧	
⑨	
⑩	
PAINTING DETAILS	
① BLEND-STEERING PATTERNS	⑩ DETAILS - 5" NUMBER BILLS
② BLEND-STEERING PATTERNS	⑪ DETAILS - 2" NUMBER BILLS
③ BLEND-STEERING PATTERNS	⑫ DETAILS - 1" NUMBER BILLS
④ BLEND-STEERING PATTERNS	⑬ DETAILS - 1/2" NUMBER BILLS
⑤ BLEND-STEERING PATTERNS	⑭ DETAILS - 1/4" NUMBER BILLS
⑥ BLEND-STEERING PATTERNS	⑮ DETAILS - 1/8" NUMBER BILLS
⑦ BLEND-STEERING PATTERNS	⑯ DETAILS - 1/16" NUMBER BILLS
⑧ BLEND-STEERING PATTERNS	⑰ DETAILS - 1/32" NUMBER BILLS
⑨ BLEND-STEERING PATTERNS	⑱ DETAILS - 1/64" NUMBER BILLS
⑩ BLEND-STEERING PATTERNS	⑲ DETAILS - 1/128" NUMBER BILLS
⑪ BLEND-STEERING PATTERNS	⑳ DETAILS - 1/256" NUMBER BILLS
⑫ BLEND-STEERING PATTERNS	㉑ DETAILS - 1/512" NUMBER BILLS
⑬ BLEND-STEERING PATTERNS	㉒ DETAILS - 1/1024" NUMBER BILLS
⑭ BLEND-STEERING PATTERNS	㉓ DETAILS - 1/2048" NUMBER BILLS
⑮ BLEND-STEERING PATTERNS	㉔ DETAILS - 1/4096" NUMBER BILLS
⑯ BLEND-STEERING PATTERNS	㉕ DETAILS - 1/8192" NUMBER BILLS
⑰ BLEND-STEERING PATTERNS	㉖ DETAILS - 1/16384" NUMBER BILLS
⑱ BLEND-STEERING PATTERNS	㉗ DETAILS - 1/32768" NUMBER BILLS
⑲ BLEND-STEERING PATTERNS	㉘ DETAILS - 1/65536" NUMBER BILLS
⑳ BLEND-STEERING PATTERNS	㉙ DETAILS - 1/131072" NUMBER BILLS
㉑ BLEND-STEERING PATTERNS	㉚ DETAILS - 1/262144" NUMBER BILLS
㉒ BLEND-STEERING PATTERNS	㉛ DETAILS - 1/524288" NUMBER BILLS
㉓ BLEND-STEERING PATTERNS	㉜ DETAILS - 1/1048576" NUMBER BILLS
㉔ BLEND-STEERING PATTERNS	㉝ DETAILS - 1/2097152" NUMBER BILLS
㉕ BLEND-STEERING PATTERNS	㉞ DETAILS - 1/4194304" NUMBER BILLS
㉖ BLEND-STEERING PATTERNS	㉟ DETAILS - 1/8388608" NUMBER BILLS
㉗ BLEND-STEERING PATTERNS	㊱ DETAILS - 1/16777216" NUMBER BILLS
㉘ BLEND-STEERING PATTERNS	㊲ DETAILS - 1/33554432" NUMBER BILLS
㉙ BLEND-STEERING PATTERNS	㊳ DETAILS - 1/67108864" NUMBER BILLS
㉚ BLEND-STEERING PATTERNS	㊴ DETAILS - 1/134217728" NUMBER BILLS
㉛ BLEND-STEERING PATTERNS	㊵ DETAILS - 1/268435456" NUMBER BILLS
㉜ BLEND-STEERING PATTERNS	㊶ DETAILS - 1/536870912" NUMBER BILLS
㉝ BLEND-STEERING PATTERNS	㊷ DETAILS - 1/1073741824" NUMBER BILLS
㉞ BLEND-STEERING PATTERNS	㊸ DETAILS - 1/2147483648" NUMBER BILLS
㉟ BLEND-STEERING PATTERNS	㊹ DETAILS - 1/4294967296" NUMBER BILLS
㊱ BLEND-STEERING PATTERNS	㊺ DETAILS - 1/8589934592" NUMBER BILLS
㊲ BLEND-STEERING PATTERNS	㊻ DETAILS - 1/17179869184" NUMBER BILLS
㊳ BLEND-STEERING PATTERNS	㊼ DETAILS - 1/34359738368" NUMBER BILLS
㊴ BLEND-STEERING PATTERNS	㊽ DETAILS - 1/68719476736" NUMBER BILLS
㊵ BLEND-STEERING PATTERNS	㊾ DETAILS - 1/137438953472" NUMBER BILLS
㊶ BLEND-STEERING PATTERNS	㊿ DETAILS - 1/274877906944" NUMBER BILLS
㊷ BLEND-STEERING PATTERNS	① DETAILS - 1/549755813888" NUMBER BILLS
㊸ BLEND-STEERING PATTERNS	② DETAILS - 1/1099511627776" NUMBER BILLS
㊹ BLEND-STEERING PATTERNS	③ DETAILS - 1/2199023255552" NUMBER BILLS
㊺ BLEND-STEERING PATTERNS	④ DETAILS - 1/4398046511104" NUMBER BILLS
㊻ BLEND-STEERING PATTERNS	⑤ DETAILS - 1/8796093022208" NUMBER BILLS
㊼ BLEND-STEERING PATTERNS	⑥ DETAILS - 1/17592186444416" NUMBER BILLS
㊽ BLEND-STEERING PATTERNS	⑦ DETAILS - 1/35184372888832" NUMBER BILLS
㊾ BLEND-STEERING PATTERNS	⑧ DETAILS - 1/70368745777664" NUMBER BILLS
㊿ BLEND-STEERING PATTERNS	⑨ DETAILS - 1/14073749155328" NUMBER BILLS
① BLEND-STEERING PATTERNS	⑩ DETAILS - 1/28147498310656" NUMBER BILLS
② BLEND-STEERING PATTERNS	⑪ DETAILS - 1/56294996621312" NUMBER BILLS
③ BLEND-STEERING PATTERNS	⑫ DETAILS - 1/112589993242624" NUMBER BILLS
④ BLEND-STEERING PATTERNS	⑬ DETAILS - 1/225179986485248" NUMBER BILLS
⑤ BLEND-STEERING PATTERNS	⑭ DETAILS - 1/450359972970496" NUMBER BILLS
⑥ BLEND-STEERING PATTERNS	⑮ DETAILS - 1/900719945940992" NUMBER BILLS
⑦ BLEND-STEERING PATTERNS	⑯ DETAILS - 1/1801439891881984" NUMBER BILLS
⑧ BLEND-STEERING PATTERNS	⑰ DETAILS - 1/3602879783763968" NUMBER BILLS
⑨ BLEND-STEERING PATTERNS	⑱ DETAILS - 1/7205759567527936" NUMBER BILLS
⑩ BLEND-STEERING PATTERNS	⑲ DETAILS - 1/14411519135055872" NUMBER BILLS
⑪ BLEND-STEERING PATTERNS	⑳ DETAILS - 1/28823038270111744" NUMBER BILLS
⑫ BLEND-STEERING PATTERNS	㉑ DETAILS - 1/57646076540223488" NUMBER BILLS
⑬ BLEND-STEERING PATTERNS	㉒ DETAILS - 1/11529215308044896" NUMBER BILLS
⑭ BLEND-STEERING PATTERNS	㉓ DETAILS - 1/23058430616089792" NUMBER BILLS
⑮ BLEND-STEERING PATTERNS	㉔ DETAILS - 1/46116861232179584" NUMBER BILLS
⑯ BLEND-STEERING PATTERNS	㉕ DETAILS - 1/92233722464359168" NUMBER BILLS
⑰ BLEND-STEERING PATTERNS	㉖ DETAILS - 1/184467444928718336" NUMBER BILLS
⑱ BLEND-STEERING PATTERNS	㉗ DETAILS - 1/368934889857436672" NUMBER BILLS
⑲ BLEND-STEERING PATTERNS	㉘ DETAILS - 1/737869779714873344" NUMBER BILLS
㉑ BLEND-STEERING PATTERNS	㉙ DETAILS - 1/1475739559429746688" NUMBER BILLS
㉒ BLEND-STEERING PATTERNS	㉚ DETAILS - 1/2951479118859493376" NUMBER BILLS
㉓ BLEND-STEERING PATTERNS	㉛ DETAILS - 1/5902958237718986752" NUMBER BILLS
㉔ BLEND-STEERING PATTERNS	㉜ DETAILS - 1/11805916475437973504" NUMBER BILLS
㉕ BLEND-STEERING PATTERNS	㉝ DETAILS - 1/23611832950875947008" NUMBER BILLS
㉖ BLEND-STEERING PATTERNS	㉞ DETAILS - 1/47223665901751894016" NUMBER BILLS
㉗ BLEND-STEERING PATTERNS	㉟ DETAILS - 1/94447331803503788032" NUMBER BILLS
㉘ BLEND-STEERING PATTERNS	㊱ DETAILS - 1/188894663607007576064" NUMBER BILLS
㉙ BLEND-STEERING PATTERNS	㊲ DETAILS - 1/377789327214015152128" NUMBER BILLS
㉚ BLEND-STEERING PATTERNS	㊳ DETAILS - 1/755578654428030304256" NUMBER BILLS
㉛ BLEND-STEERING PATTERNS	㊴ DETAILS - 1/151115730885606060512" NUMBER BILLS
㉜ BLEND-STEERING PATTERNS	㊵ DETAILS - 1/302231461771212121024" NUMBER BILLS
㉝ BLEND-STEERING PATTERNS	㊶ DETAILS - 1/604462923542424242048" NUMBER BILLS
㉞ BLEND-STEERING PATTERNS	㊷ DETAILS - 1/1208925847084848484096" NUMBER BILLS
㉟ BLEND-STEERING PATTERNS	㊸ DETAILS - 1/2417851694169696968192" NUMBER BILLS
① BLEND-STEERING PATTERNS	㊹ DETAILS - 1/4835703388339393936384" NUMBER BILLS
② BLEND-STEERING PATTERNS	㊺ DETAILS - 1/9671406776678787872768" NUMBER BILLS
③ BLEND-STEERING PATTERNS	㊻ DETAILS - 1/19342813553357575745376" NUMBER BILLS
④ BLEND-STEERING PATTERNS	㊼ DETAILS - 1/38685627106715151486752" NUMBER BILLS
⑤ BLEND-STEERING PATTERNS	㊽ DETAILS - 1/77371254213430302973504" NUMBER BILLS
⑥ BLEND-STEERING PATTERNS	㊾ DETAILS - 1/15474250842686060547008" NUMBER BILLS
⑦ BLEND-STEERING PATTERNS	㊿ DETAILS - 1/30948501685372121094016" NUMBER BILLS
⑧ BLEND-STEERING PATTERNS	① DETAILS - 1/61897003370744242188032" NUMBER BILLS
⑨ BLEND-STEERING PATTERNS	② DETAILS - 1/123794006741488483776064" NUMBER BILLS
⑩ BLEND-STEERING PATTERNS	③ DETAILS - 1/247588013482976967552128" NUMBER BILLS
⑪ BLEND-STEERING PATTERNS	④ DETAILS - 1/495176026965953935104256" NUMBER BILLS
⑫ BLEND-STEERING PATTERNS	⑤ DETAILS - 1/990352053931907860208512" NUMBER BILLS
⑬ BLEND-STEERING PATTERNS	⑥ DETAILS - 1/198070410786381572041728" NUMBER BILLS
⑭ BLEND-STEERING PATTERNS	⑦ DETAILS - 1/396140821572763144083456" NUMBER BILLS
⑮ BLEND-STEERING PATTERNS	⑧ DETAILS - 1/792281643145526288166912" NUMBER BILLS
⑯ BLEND-STEERING PATTERNS	⑨ DETAILS - 1/158456328691053276333824" NUMBER BILLS
⑰ BLEND-STEERING PATTERNS	⑩ DETAILS - 1/316912657382106552667648" NUMBER BILLS
⑱ BLEND-STEERING PATTERNS	⑪ DETAILS - 1/633825314764213105335392" NUMBER BILLS
⑲ BLEND-STEERING PATTERNS	⑫ DETAILS - 1/1267650629528426206700784" NUMBER BILLS
㉑ BLEND-STEERING PATTERNS	⑬ DETAILS - 1/2535301259056852413401568" NUMBER BILLS
㉒ BLEND-STEERING PATTERNS	⑭ DETAILS - 1/5070602518113704826803136" NUMBER BILLS
㉓ BLEND-STEERING PATTERNS	⑮ DETAILS - 1/10141205036227409536006272" NUMBER BILLS
㉔ BLEND-STEERING PATTERNS	⑯ DETAILS - 1/20282410072454819072012544" NUMBER BILLS
㉕ BLEND-STEERING PATTERNS	⑰ DETAILS - 1/40564820144909638144025088" NUMBER BILLS
㉖ BLEND-STEERING PATTERNS	⑱ DETAILS - 1/81129640289819276288050176" NUMBER BILLS
㉗ BLEND-STEERING PATTERNS	⑲ DETAILS - 1/162259280579638552576100352" NUMBER BILLS
㉘ BLEND-STEERING PATTERNS	㉑ DETAILS - 1/324518561159277105153200704" NUMBER BILLS
㉙ BLEND-STEERING PATTERNS	㉒ DETAILS - 1/649037122318554210306401408" NUMBER BILLS
㉚ BLEND-STEERING PATTERNS	㉓ DETAILS - 1/129807424437110842061282816" NUMBER BILLS
㉛ BLEND-STEERING PATTERNS	㉔ DETAILS - 1/259614848874221640122565312" NUMBER BILLS
㉜ BLEND-STEERING PATTERNS	㉕ DETAILS - 1/519229697748443280245130624" NUMBER BILLS
㉝ BLEND-STEERING PATTERNS	㉖ DETAILS - 1/1038459395496886560490271248" NUMBER BILLS
㉞ BLEND-STEERING PATTERNS	㉗ DETAILS - 1/2076918790993773120980542496" NUMBER BILLS
㉟ BLEND-STEERING PATTERNS	① DETAILS - 1/4153837581987546241961084992" NUMBER BILLS
① BLEND-STEERING PATTERNS	② DETAILS - 1/8307675163975092483922169952" NUMBER BILLS
② BLEND-STEERING PATTERNS	③ DETAILS - 1/1661535032795018967844339904" NUMBER BILLS
③ BLEND-STEERING PATTERNS	④ DETAILS - 1/3323070065590037935688679808" NUMBER BILLS
④ BLEND-STEERING PATTERNS	⑤ DETAILS - 1/6646140131180075871377735616" NUMBER BILLS
⑤ BLEND-STEERING PATTERNS	⑥ DETAILS - 1/132922802623601514275547122304" NUMBER BILLS
⑥ BLEND-STEERING PATTERNS	⑦ DETAILS - 1/265845605247203028551088244608" NUMBER BILLS
⑦ BLEND-STEERING PATTERNS	⑧ DETAILS - 1/531691210494406057102176489216" NUMBER BILLS
⑧ BLEND-STEERING PATTERNS	⑨ DETAILS - 1/106338242098881214204352978432" NUMBER BILLS
⑨ BLEND-STEERING PATTERNS	⑩ DETAILS - 1/212676484197762428408705956864" NUMBER BILLS
⑩ BLEND-STEERING PATTERNS	⑪ DETAILS - 1/425352968395524856817411913728" NUMBER BILLS
⑪ BLEND-STEERING PATTERNS	⑫ DETAILS - 1/850705936791049713634883827456" NUMBER BILLS
⑫ BLEND-STEERING PATTERNS	⑬ DETAILS - 1/1701411873582099427068967654912" NUMBER BILLS
⑬ BLEND-STEERING PATTERNS	⑭ DETAILS - 1/3402823747164198854137935309824" NUMBER BILLS
⑭ BLEND-STEERING PATTERNS	⑮ DETAILS - 1/6805647494328397708275870619648" NUMBER BILLS
⑮ BLEND-STEERING PATTERNS	⑯ DETAILS - 1/13611294988656795416551741239296" NUMBER BILLS
⑯ BLEND-STEERING PATTERNS	⑰ DETAILS - 1/27222589773313590833102824798592" NUMBER BILLS
⑰ BLEND-STEERING PATTERNS	⑱ DETAILS - 1/54445179546627181666205649597184" NUMBER BILLS
⑱ BLEND-STEERING PATTERNS	㉑ DETAILS - 1/108890359093253763332411299193728" NUMBER BILLS
㉑ BLEND-STEERING PATTERNS	㉒ DETAILS - 1/21778071818650752666482259398752" NUMBER BILLS
㉒ BLEND-STEERING PATTERNS	㉓ DETAILS - 1/43556143637301505332964519797504" NUMBER BILLS
㉓ BLEND-STEERING PATTERNS	㉔ DETAILS - 1/87112287274603010665929039595008" NUMBER BILLS
㉔ BLEND-STEERING PATTERNS	㉕ DETAILS - 1/174224574549206021319858079190016" NUMBER BILLS
㉕ BLEND-STEERING PATTERNS	㉖ DETAILS - 1/348449149098412042639716158380032" NUMBER BILLS
㉖ BLEND-STEERING PATTERNS	㉗ DETAILS - 1/696898298196824085279432316760064" NUMBER BILLS
㉗ BLEND-STEERING PATTERNS	㉘ DETAILS - 1/1393796596393648170558864635520128" NUMBER BILLS
㉘ BLEND-STEERING PATTERNS	㉙ DETAILS - 1/2787593192787296341117729271040256" NUMBER BILLS
㉙ BLEND-STEERING PATTERNS	㉚ DETAILS - 1/5575186385574592682235458542080512" NUMBER BILLS
㉚ BLEND-STEERING PATTERNS	㉛ DETAILS - 1/111503727711491836447091708841601024" NUMBER BILLS
㉛ BLEND-STEERING PATTERNS	㉜ DETAILS - 1/223007455422983672894183417683202048" NUMBER BILLS
㉜ BLEND-STEERING PATTERNS	㉝ DETAILS - 1/446014910845967357788366835366404096" NUMBER BILLS
㉝ BLEND-STEERING PATTERNS	㉞ DETAILS - 1/892029821691934715576733670732808192" NUMBER BILLS
㉞ BLEND-STEERING PATTERNS	㉟ DETAILS - 1/1784059643383869431153467341465616384" NUMBER BILLS
㉟ BLEND-STEERING PATTERNS	① DETAILS - 1/356811928676773886230693468291122768" NUMBER BILLS
① BLEND-STEERING PATTERNS	② DETAILS - 1/713623857353547772461386936582245536" NUMBER BILLS
② BLEND-STEERING PATTERNS	③ DETAILS - 1/142724771470709544492277387316449072" NUMBER BILLS
③ BLEND-STEERING PATTERNS	④ DETAILS - 1/285449542941419088984554774632898144" NUMBER BILLS
④ BLEND-STEERING PATTERNS	⑤ DETAILS - 1/570899085882838177969109549265796288" NUMBER BILLS
⑤ BLEND-STEERING PATTERNS	⑥ DETAILS - 1/1141798171765676355938199098515595568" NUMBER BILLS
⑥ BLEND-STEERING PATTERNS	⑦ DETAILS - 1/228359634353135271187639819703111191136" NUMBER BILLS
⑦ BLEND-STEERING PATTERNS	⑧ DETAILS - 1/45671926870627054237527963940622378272" NUMBER BILLS
⑧ BLEND-STEERING PATTERNS	⑨ DETAILS - 1/913438537412541084750559278812447554448" NUMBER BILLS
⑨ BLEND-STEERING PATTERNS	⑩ DETAILS - 1/1826877074825082169501118557648951088896" NUMBER BILLS
⑩ BLEND-STEERING PATTERNS	⑪ DETAILS - 1/3653754149650164390022371115137791377792" NUMBER BILLS
⑪ BLEND-STEERING PATTERNS	⑫ DETAILS - 1/730750829930032878004474222027554355584" NUMBER BILLS
⑫ BLEND-STEERING PATTERNS	⑬ DETAILS - 1/1461501659860065756008948444051088711168" NUMBER BILLS
⑬ BLEND-STEERING PATTERNS	⑭ DETAILS - 1/29230033197201315120178968881021773536" NUMBER BILLS
⑭ BLEND-STEERING PATTERNS	⑮ DETAILS - 1/5846006639440263024035793776204347072" NUMBER BILLS
⑮ BLEND-STEERING PATTERNS	⑯ DETAILS - 1/11692013278880526048071587552408684144" NUMBER BILLS
⑯ BLEND-STEERING PATTERNS	⑰ DETAILS - 1/23384026557761052096143151104817368288" NUMBER BILLS
⑰ BLEND-STEERING PATTERNS	⑱ DETAILS - 1/46768053115522104192286302209634736576" NUMBER BILLS
⑱ BLEND-STEERING PATTERNS	㉑ DETAILS - 1/93536106231044208384572604419269473152" NUMBER BILLS
㉑ BLEND-STEERING PATTERNS	㉒ DETAILS - 1/187072212462088416769114528838538946304" NUMBER BILLS
㉒ BLEND-STEERING PATTERNS	㉓ DETAILS - 1/37414442492417683353822905767707789264" NUMBER BILLS
㉓ BLEND-STEERING PATTERNS	㉔ DETAILS - 1/74828884984835366707645811535415578528" NUMBER BILLS
㉔ BLEND-STEERING PATTERNS	㉕ DETAILS - 1/1496577697736707334153116227083111576576" NUMBER BILLS
㉕ BLEND-STEERING PATTERNS	㉖ DETAILS - 1/299315539547341466830622445416623155153" NUMBER BILLS
㉖ BLEND-STEERING PATTERNS	㉗ DETAILS - 1/598631079094682933661248890833246310306" NUMBER BILLS
㉗ BLEND-STEERING PATTERNS	㉘ DETAILS - 1/119726215818936586732257778166492620612" NUMBER BILLS
㉘ BLEND-STEERING PATTERNS	㉙ DETAILS - 1/239452436437873173464515556332985241224" NUMBER BILLS
㉙ BLEND-STEERING PATTERNS	㉚ DETAILS - 1/47890

SANTA FE DIESEL LOCOMOTIVE STYLING DIAGRAM

F7-A (CAB) UNITS

Original No.	Date Built	Original No.	Date Built	Original No.	Date Built
200L, C*	10/48	232L, C	3/50	264L, C	8/51
201L, C*	11/48	233L, C	4/50	265L, C	9/51
202L, C	6/49	234L, C	4/50	266L, C	9/51
203L, C	7/49	235L, C	4/50	267L, C	9/51
204L, C	7/49	236L, C	4/50	268L, C	9/51
205L, C	7/49	237L, C	4/50	269L, C¶	11/53
206L, C	7/49	238L, C	4/50	270L, C¶	11/53
207L, C	7/49	239L, C	5/50	271L, C¶	11/53
208L, C	9/49	240L, C	5/50	272L, C¶	11/53
209L, C	9/49	241L, C§	5/50	273L, C¶	11/53
210L, C	9/49	242L, C	1/51	274L, C¶	11/53
211L, C	9/49	243L, C	1/51	275L, C¶	11/53
212L, C	11/49	244L, C	1/51	276L, C¶	12/53
213L, C	11/49	245L, C	2/51	277L, C¶	12/53
214L, C	11/49	246L, C	2/51	278L, C¶	12/53
215L, C	11/49	247L, C	2/51	279L, C¶	12/53
216L, C	11/49	248L, C	2/51	280L, C¶	12/53
217L, C	11/49	249L, C	2/51		
218L, C	12/49	250L, C	2/51		
219L, C	12/49	251L, C	2/51		
220L, C	12/49	252L, C	5/51		
221L, C	12/49	253L, C	5/51		
222L, C	12/49	254L, C	5/51		
223L, C	12/49	255L, C	5/51		
224L, C	12/49	256L, C	5/51		
225L, C	12/49	257L, C	5/51		
226L, C	12/49	258L, C	5/51		
227L, C	3/50	259L, C	8/51		
228L, C	3/50	260L, C	8/51		
229L, C	3/50	261L, C	8/51		
230L, C	3/50	262L, C	8/51		
231L, C	3/50	263L, C	8/51		

Notes:

* For all intents and purposes these units were F-7's But in fact were the only F-3's of the 200 class.

§ Destroyed in collision July 1955 and traded in on 289C. Original 205L became 2nd 241C in November 1955.

¶ Units *delivered* in paint scheme shown on this styling diagram. Refer to side bar article in Third Quarter 1991 magazine.

Model Paints (see text):

- Blue: Floquil
3 pts. Dark Blue
1pt. Engine Black
Scalecoat
Santa Fe Blue
- Yellow: Floquil
Reefer Yellow
Scalecoat
Reefer Yellow
- Black: Floquil
Engine Black
Scalecoat
Engine Black

Decals:

- Microscale 87-77 (HO)
60-77 (N)
- Champ EH-72 (HO)

Note: Early units painted in catwhisker scheme with creamy yellow paint. See FT styling diagram and text.

Note: The drawing on this diagram is for painting and lettering use only. Significant mechanical differences are present (drawing is actually an F-3 as all Santa Fe F-7's had D/B fans)!

Aperture cards of original styling blueprints were donated to the Santa Fe Modelers Organization by Electro-Motive Division, General Motors Corporation.

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SANTA FE DIESEL LOCOMOTIVE STYLING DIAGRAM

F7-B (BOOSTER) UNITS

Original No.	Date Built	Original No.	Date Built	Original No.	Date Built
200A, B*	10/48	227A, B	3/50	252A, B	5/51
201A, B*	11/48	228A, B	3/50	253A, B	5/51
202A, B	6/49	229A, B	3/50	254A, B	5/51
203A, B	7/49	230A, B	3/50	255A, B	5/51
204A, B	7/49	231A, B	3/50	256A, B	5/51
205A, B	7/49	232A, B	3/50	257A, B	5/51
206A, B	7/49	233A, B	4/50	258A, B	5/51
207A, B	7/49	234A, B	4/50	259A, B	8/51
208A, B	9/49	235A, B	4/50	260A, B	8/51
209A, B	9/49	236A, B	4/50	261A, B	8/51
210A, B	9/49	237A, B	4/50	262A, B	8/51
211A, B	9/49	238A, B	4/50	263A, B	8/51
212A, B	11/49	239A, B	5/50	264A, B	8/51
213A, B	11/49	240A, B	5/50	265A, B	9/51
214A, B	11/49	241A, B§	5/50	266A, B	9/51
215A, B	11/49	242A, B	1/51	267A, B	9/51
216A, B	11/49	243A, B	1/51	268A, B	9/51
217A, B	11/49	244A, B	1/51	269A, B¶	11/53
218A, B	12/49	245A, B	2/51	270A, B¶	11/53
219A, B	12/49	246A, B	2/51	271A, B¶	11/53
220A, B	12/49	247A, B	2/51	272A, B¶	11/53
221A, B	12/49	248A, B	2/51	273A, B¶	11/53
222A, B	12/49	249A, B	2/51	274A, B¶	11/53
223A, B	12/49	250A, B	2/51	275A, B¶	11/53
224A, B	12/49	251A, B	2/51	276A, B¶	12/53
225A, B	12/49			277A, B¶	12/53
226A, B	12/49			278A, B¶	12/53
				279A, B¶	12/53
				280A, B¶	12/53

Notes:

Units 254A through 280A equipped with steam generator.

* For all intents and purposes these units were F-7's but in fact were the only F-3's of the 200 class.

§ Destroyed in collision July 1955 and traded in on 289B. Original 205A became 2nd 241B in November 1955.

¶ Units *delivered* in paint scheme shown on this styling diagram. Refer to side bar article in Third Quarter 1991 magazine.

Model Paints (see text):

Blue:	Floquil
	3 pts. Dark Blue
	1pt. Engine Black
	Scalecoat
	Santa Fe Blue
Yellow:	Floquil
	Reefer Yellow
	Scalecoat
	Reefer Yellow
Black:	Floquil
	Engine Black
	Scalecoat
	Engine Black

Decals:

Microscale	87-77 (HO)
	60-77 (N)
Champ	EH-72 (HO)

Note: Early units painted in catwhisker scheme with creamy yellow paint. See FT styling diagram and text.

Note: The drawing on this diagram is for painting and lettering use only. Significant mechanical differences are present (drawing is actually an early F-3 as all Santa Fe F-7's had D/B fans and low profile cooling fans)!

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SANTA FE DIESEL LOCOMOTIVE STYLING DIAGRAM

F7-A (CAB) UNITS

Original Number	Date Built	Renumbered To:	Original Number	Date Built	Renumbered To:	Original Number	Date Built	Renumbered To:
37L	9/49		300L	10/49		306L	12/52	
37C	9/49		301L	10/49		307L	12/52	
38L	9/49		302L	10/49		308L	12/52	
38C	9/49		303L	10/49		309L	12/52	
39L	9/49		304L	10/49		310L	3/53	
39C	9/49		305L	10/49		311L	3/53	
40L	9/49		306L	5/50	325L*	312L	3/53	
40C	9/49		307L	5/50	326L*	313L	3/53	
41L	9/49		308L	5/50	327L*	314L	3/53	
41C	9/49		309L	5/50	328L*	336L*	4/53	
42L	10/52		310L	5/50	329L*	337L*	4/53	
42C	10/52		311L	5/50	330L*	338L*	5/53	
43L	10/52		312L	5/50	331L*	339L*	5/53	
43C	10/52		313L	6/51	332L*	340L*	5/53	
44L	10/52		314L	6/51	333L*	341L*	4/53	
44C	10/52		315L	6/51	334L*	342L*	4/53	
45L	10/52		316L	6/51	335L*	343L*	4/53	
45C	10/52					344L*	4/53	
46L	10/48							
46C	10/48							
47L	10/52							
47C	10/52							

Notes:

* Units of 325 class were dual-service locomotives geared for 80 mph.

Model Paints (see text):

Red:	Scalecoat
	Santa Fe Red
	Floquil
	Caboose Red
Yellow:	Floquil
	Reefer Yellow
	Scalecoat
	Reefer Yellow
Black:	Floquil
	Engine Black
	Scalecoat
	Engine Black
Aluminum:	Floquil
	Amtrak
	Platinum Mist
	Scalecoat
	Aluminum

Decals:

Microscale	87-101 (HO)
	60-101 (N)
Champ	BRH-73 (HO)

Note: The drawing on this diagram is for painting and lettering use only. Significant mechanical differences are present (drawing is actually an F-3 as all Santa Fe F-7's had D/B fans)!

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SANTA FE DIESEL LOCOMOTIVE STYLING DIAGRAM

F7-B (BOOSTER) UNITS

Original Number	Date Built	Renumbered To:	Original Number	Date Built	Renumbered To:	Original Number	Date Built	Renumbered To:	Original Number	Date Built	Renumbered To:
37A	9/49		300A	10/49		314A	6/51	333A*	338A*	5/53	
37B	9/49		300B	10/49		314B	6/51	333B*	338B*	5/53	
38A	9/49		301A	10/49		315A	6/51	334A*	339A*	5/53	
38B	9/49		301B	10/49		315B	6/51	334B*	339B*	5/53	
39A	9/49		302A	10/49		316A	6/51	335A*	340A*	5/53	
39B	9/49		302B	10/49		316B	6/51	335B*	340B*	5/53	
40A	9/49		303A	10/49		306A	12/52		341A*	4/53	
40B	9/49		303B	10/49		306B	12/52		341B*	4/53	
41A	9/49		304A	10/49		307A	12/52		342A*	4/53	
41B	9/49		304B	10/49		307B	12/52		342B*	4/53	
42A	10/52		305B	10/49		308A	12/52		343A*	4/53	
42B	10/52		305B	10/49		308B	12/52		343B*	4/53	
43A	10/52		306A	5/50	325A*	309A	12/52		344A*	4/53	
43B	10/52		306B	5/50	325B*	309B	12/52		344B*	4/53	
44A	10/52		307A	5/50	326A*	310A	3/53				
44B	10/52		307B	5/50	326B*	310B	3/53				
45A	10/52		308A	5/50	327A*	311A	3/53				
45B	10/52		308B	5/50	327B*	311B	3/53				
46A	10/48		309A	5/50	328A*	312A	3/53				
46B	10/48		309B	5/50	328B*	312B	3/53				
47A	10/52		310A	5/50	329A*	313A	3/53				
47B	10/52		310B	5/50	329B*	313B	3/53				
			311A	5/50	330A*	314A	3/53				
			311B	5/50	330B*	314B	3/53				
			312A	5/50	331A*	336A*	4/53				
			312B	5/50	331B*	336B*	4/53				
			313A	6/51	332A*	337A*	4/53				
			313B	6/51	332B*	337B*	4/53				

Notes:

* Units of 325 class were dual-service locomotives geared for 80 mph. Steam generators in all boosters.

Model Paints (see text):

Red: Scalecoat
Santa Fe Red
Floquil
Caboose Red

Yellow: Floquil
Reefer Yellow
Scalecoat
Reefer Yellow

Black: Floquil
Engine Black
Scalecoat
Engine Black

Aluminum: Floquil
Amtrak
Platinum Mist
Scalecoat
Aluminum

Decals:

Microscale 87-101 (HO)
60-101 (N)
Champ BRH-73 (HO)

Note: The drawing on this diagram is for painting and lettering use only. Significant mechanical differences are present (drawing is actually an F-3 as all Santa Fe F-7's had D/B fans)!

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