A class by itself

When EMD's new FT diesels came to the Santa Fe, it was the opening shot of a railroad revolution

By Wally Abbey • Photos by the author

ELECTRO-MOTIVE INTRODUCED its first diesel-electric locomotive in 1939, designed specifically for freight service. The "Model F" or "FT" was a 2700-h.p. combination of two drawbar-connected carbody sections, one with an operators' cab and one without. Because that's the way the olive-and-gold demonstrator was configured, and because most railroads that acquired FT's bought and used them that way initially, the FT became best known as a 5400-h.p., 193-foot combination of two locomotives coupled back to back, running in multiple.

FT's began to arrive on U.S. railroads just in time to help move the traffic generated by the approach of World War II—and ironically their delivery into this critical service was delayed greatly by such war-related contingencies as the Navy's need for EMD engines and a copper shortage. By 1945 the FT had sounded the death knell for steam on most railroads.

First to order and receive FT's was the Santa Fe. Early in 1941, Santa Fe put to work the first of what by 1945 would be a fleet of 80—roughly a third of total production. Most of the 100-class units spent the war years working between Winslow, Ariz., and points in California. Out on Santa Fe's Coast Lines the grades were arduous, the water bad, the traffic fierce. Yet the FT's kept Santa Fe fluid. Steam couldn't have done the job they did.

In all, 23 railroads employed 1418 FT sections—counting A and B units separately—mostly in freight service but occasionally on passenger trains. In a sense, the FT, warts and all—it was by no means perfect—taught EMD how to build the better locomotives that became the subsequent F3, F7, and F9.

In the mid-1950's, Wally Abbey was managing editor of TRAINS Magazine. Long before then, Santa Fe and its FT's had become particular objects of his studies. Now, he is finishing "Class By Itself," a book on Santa Fe's FT's and their contributions to many facets of railroading. For TRAINS CLASSIC, he has adapted the introduction to his book.

It's the morning of March 28, 1950, and No. 70 (opposite) is about to leave the shop town of Chanute, Kans., behind the 169. Showing off the earliest shades of Santa Fe's blue and yellow, FT's roll through California's Tehachapi Pass (below).

LINN WESTCOTT

Chicago was the stage

ALL RIGHT, DEAR READER, let's begin with a reminiscence, if you don't mind. Perhaps in this way I can give you an idea about where we're coming from, and a clue to where we're going.

First, though, let's meet three others. Tom Harley, Chic Kerrigan, and Dave Wallace were inmates of Evanston Township High School north of Chicago during World War II, as was I. The label hadn't become popular, yet—come to think of it, it might not even have been invented yet—but we were "railfans." Sooner or later, we each would find a way to pester the railroad industry from within. At the time, we could do little more than be so intrigued by railroads that we'd almost suffer to see trains in action. As parents, pocket money, and the constraints


Santa Fe
169

Santa Fe train 40, known simply as "The Meat," dashes past Coal City, Ill., at high speed behind the 100 sometime in the summer of 1945.

imposed by the war would permit, we'd investigate everything the railroads of the Chicago area could show us—unofficially, of course. On weekends, we'd roam from Highland Park to Hinsdale to Hegewisch. Steam locomotives were commonplace in those days, but diesel-electrics were not. The objective of our train-watching naturally tended to be the elusive and colorful diesels.

Insides and idiosyncrasies

ACTUALLY, FOR ME, by then railroading had become more than a spectator sport. The summer before our story begins, I'd worked in the Santa Fe's shop at 21st Street in Chicago as the type of near-laborer known to the Mechanical Department as a diesel repairman's helper.

Santa Fe's 21st Street was the first shop on the railroad, if not in all of U.S. railroading, to be built exclusively for the care and feeding of diesel-electrics. At the time of our story, it was the maintenance base for most of the Santa Fe's then-modest fleet of diesel passenger locomotives. I poured lube oil into crankcases and Crater compound into traction-motor gearboxes, helped pull cylinder heads, barred over engines for air tests, performed as craneman high above the shop floor (until someone checked my age), and, when it became necessary to move locomotives around on the shop leads, I even served as yard switchman. I learned the insides and idiosyncrasies of those early units as only a diesel repairman's helper could.

The shop at 21st Street and the locomotives that came into it absolutely fascinated me. They still did even after I no longer was an employee of the Santa Fe. Now and then I'd ride the streetcar out Archer Avenue to the shop, as I'd done on the way to work on so many summer afternoons, just to see what was going on.

This I did on what must have been a spring evening in 1945, nine months or so after I'd cleaned out my locker. One or two others from the trio of Harley, Kerrigan, and Wallace were along. That they don't now recall the occasion subtracts nothing from the importance of what we stumbled into.

Let's hope that you, too, think the discovery we made that day was important. For it was then and there, at 21st Street in Chicago in 1945, that, for all practical purposes, a lifelong fascination with a diesel began.

The rendezvous

AT THE SHOP we encountered George McNeish, a "riding maintainer" brought in off the road to be a shop mechanic. I'd often been George's helper.

You should have been here earlier, George said. The 167 was in the shop.

I didn't understand. The 167? The FT? A *freight* locomotive? From out *west*? What was it doing at 21st Street? And what was it doing in a service routinely—no, *automatically*—protected by red-nosed passenger engines?

George shrugged. He knew only that earlier that very evening, the 167—geared for passenger-train speeds, rigged with steam generators and with the automatic train control necessary on the Illinois Division—had left the shop and spirited the *Super Chief*

away to California. And we'd just missed seeing it!

Now, if you too had appreciated the exotic where locomotives were concerned, what would you have done?

Just as did we, of course: confirm the existence of this apparition personally—and, if at all possible, photograph it. Cameras were standard equipment for ETHS train-watchers. Film was sometimes almost impossible to get. We expended many hours in the search for it—and for my folding postcard-size Kodak I needed 122-size film, which was particularly hard to find. How many times I started out with just one roll!

We computed the schedule of that set of *Super Chief* equipment out to Los Angeles and back. We planned that on the day of its return, we'd be unavailable for such mundane pursuits as school. If we could find the 167, and we had an idea about how and where to do that, we were going to see it for ourselves!

Evanston was some distance from the Santa Fe—in fact, from all of Chicago's many railroads save the North Western, the North Shore, and, to stretch the definition, the Chicago Rapid Transit "L." None of us had a car. But we'd developed a certain ingenuity in the use of public transportation. Generally, we could find a way to get to any point at which we wanted to observe the trains on Chicago's railroads.

The route we'd chosen for our encounter with the 167 was this: downtown on a North Western "scoot;" down Clinton Street on foot to Union Station; southwest on the Burlington to Harlem Avenue; south on a West Towns bus a couple of miles to the railroad underpasses; up onto the Chicago & Illinois Western fill; and west along the C&IW track to what we regarded as a suitable location for a picture of a train on the Santa Fe, the right-of-way of which paralleled that of the C&IW (an Illinois Central switching-road subsidiary).

Every step of the way, our cameras were carefully concealed. There was a *war* on!

The day was chilly and wet. We arrived well ahead of the scheduled passage of the *Super Chief*. We realized that our odyssey could be in vain. Perhaps the 167 had been diverted! And so it was with considerable relief and excitement that we saw a long blue-and-yellow diesel coming our way out of the west, shoving its headlight beam ahead of it through the fog and drizzle.

Out came the cameras.

Thoroughbred racehorse

"THAT'S a *freight* train!"

Which of us so exclaimed is not recorded. No matter; we all saw it at virtually the same instant—a locomotive displaying a road number in the very low 100's (precisely which number being a fact long lost, as are the pictures—but the number had to be 100 or 101) pulling a train the head end of which was mostly orange SFRD refrigerator cars.

Our eyes were giving us fascinating information! A member of the 100 class—that is, a member of the class other than the 167—had slipped its harness! It'd wandered onto the easternmost part of the Santa Fe to boot some laboring 2-8-2 off its assignment! The type and class of locomotive that was bringing diesels to freight service—the diesel we'd been given to understand was out in Arizona winning the war against Japan, that we'd actually seen only in the literature of the time—unexpectedly, that magic, mystical machine had materialized out of the mists of McCook!

To be sure, the *Super Chief* showed up shortly, obediently trailing the 167. But an encounter with *that* locomotive on *that* train had suddenly lost its urgency. We'd seen another member of Class 100 in its natural service, but hundreds of miles from its natural habitat!

What was going on here? I went back to 21st Street on another day. I watched from the door of the shop as a man in a suit and a felt hat (Tom Blickle, if memory serves), walked the 167 up from the roundhouse as if it were a thoroughbred racehorse. With that gentleman's permission, I explored the 167's cabs and caverns. I noted its fresh suede-gray interior, the sliding panels that could cover the illuminated road numbers on its flanks, the similarities to, and the differences from,

The 167, an FT that came from EMD equipped for passenger service, stands inside Santa Fe's revolutionary diesel shop at 21st Street in Chicago on September 20, 1945.

Repainted in Santa Fe's magnificent red, yellow, and silver "Warbonnet" passenger livery, the 167 leads an unidentified passenger train off the Illinois River bridge east of Chillicothe, Ill., on July 21, 1946.

the passenger diesels in and under which I'd labored so mightily a year or so earlier.

On yet another day I rode the streetcars out Archer Avenue past the 21st Street shop and on to 38th Street, and then west to Corwith Yard. A member of Class 100 was there. It seemed hopelessly out of place in that ancient citadel of steam.

Finally, the story came together: There were, in fact, two 5400-h.p. diesel-electrics assigned to freight service east of Argentine Yard in Kansas City, and by fall there would be five. Soon, almost every day at about 2 p.m. the 100 itself, or the 101, the 102, the 103, or the 104, would arrive at Corwith with No. 40, "The Meat," the train we had seen purely by accident over near McCook. The diesel then would depart for the west promptly at 6 p.m. with No. 39, the *Oklahoma-Texas Fast Freight*, a train that many years later I'd ride.

Kansas capers

THE SUCCESS of that fact-finding mission changed altogether the pattern of my explorations of Chicago's railroads. I began to hunt those 100's wherever I could reach a likely spot for a photo: Corwith, Bridge 9C over the canal east of Harlem Avenue, Willow Springs, Romeo, Joliet. Sometimes, when Mother and Dad could spare the Dodge and there was enough gas in it, I'd venture farther west, out along the Illinois Division, far beyond the reach of Chicago's public conveyances.

I went away to the University of Kansas that summer. I found that the 167 would pause occasionally at Lawrence with the *Kansas Cityan* and its equal and opposite number, the *Chicagoan*. When fall arrived and the leaves came off the trees, from an upstairs window in the dormitory on Mount Oread I could see the 167 as a flash of blue

and yellow, leading the *Chicagoan* out of town.

To the south of Lawrence, I soon discovered an occasional member of the 100 class in the stream of 2900-class 4-8-4's and related steam-breathing monsters that worked the freight trains across the Ottawa Cutoff. Most regularly, the diesels would show up on that same train 39. Hiking and hitchhiking into position, I scouted out those 100's at Turner, Holliday, Zarah, on the curves of Olathe Hill in the Mill Creek Valley, and from my favorite train-watching place, the tower at Ottawa Junction.

About suppertime on April 15, 1946, east of Lawrence, I photographed the westbound *Kansas Cityan* behind its regular complement of red-nosed units. As I walked back toward town I watched the westward automatic block signal a mile or so east of the depot clear up behind the passenger train—and then promptly drop back. Its yellow aspect and its blade at 45 degrees told me that Eleven had met an eastbound train down at the depot, although none was scheduled. The Extra East had come out of the passing track and was headed toward me, dumping the signals out ahead of it. I could hear a second air horn.

Out of the vanguard

WHAT SOON APPEARED in the failing light was the third coincidence, the third genuine surprise, in my deepening association with Class 100: locomotive 160, painted red and silver, running light. I'd learn later that it was on its way back to Argentine from Topeka, where it had been light-weighed after its conversion to a passenger-puller like the 167.

A trip home to Evanston for Easter was imminent. On the Saturday before the holiday, I was exploring the possibilities for photos presented by the reverse curve at Bridge 9C when I saw the 160 and photographed it again, this time as it led the *Chief* out of Chicago. Dieselization of transcontinental passenger trains other than the *Super Chief* and *El Capitan* had that day begun. And so also began another pattern of systematic exploration and photography: recording the use of displaced freight-luggers on some of the nation's tonier passenger trains.

With something of a vengeance I pursued what for a time would be called the 158 class through Illinois and Kansas—at Dearborn Station; the 18th Street roundhouse; my 21st Street diesel shop and the Pennsy crossing not far away; on Edelstein Hill near Chillicothe, Ill.; at Kansas City Union Station; at Ottawa Junction—and sometimes I'd be behind a member of the class as I rode to or from K.U.

On August 31, 1948, a freight train derailed at Edgerton, Kans., on the Ottawa Cutoff. Thirty-two wayward cars chased operator William Adam and a 12-year-old visitor out of the depot and blocked both main tracks. By coincidence, I was aboard the eastbound *Oil Flyer* the next evening, coming back as far as Kansas City with my parents after a family celebration down in Cherryvale, Kans. We crept through the house track to get around the derailment. For a day or so, until the Cutoff was reopened, 100's were in and out of Lawrence in quantity, detouring their charges between Argentine and Emporia over the single-track First District. That was more freight than the First District had handled for a long time. But I had to be in class.

Someone told me later that the locomotive on the train that had derailed at Edgerton was the first for the Santa Fe of a new type and class, one of several successors to the 100's. Its road number: 200. That couldn't have been possible—the 200 wouldn't be delivered until October—but EMD F3's and

The author's all-time favorite Santa Fe train-watching place: Ottawa Junction, Kans. The 195 West is about to cross the Lawrence District. The first car behind the units carries a B-47 wing for the Boeing plant in Wichita. The diesels wear the FT's final livery–yellow and blue with the "cigar band" emblem on the nose.

F7's of the 200 class, and considerably more versatile machines known as GP7's, would indeed soon set the 100's to wandering widely over the Santa Fe in search of a second glorious history, as diesel locomotive histories go.

Such a glory would not really come, however. Too much had changed. Though traffic was still high, the war was over. New motive power was on the scene. The 100's were no longer as essential as they had been, relatively speaking. There were no battles for them to fight with altitude, traffic volume, and bad or no water that couldn't be fought better by newer locomotives.

Organized labor by then had settled into a restive peace with the idea of diesel locomotives in freight service. Provisions of labor agreements that would inhibit the use in road service of locomotives like the GP7 had been neutralized. The "road-switcher" type of diesel had been born many years earlier, but it was about to become the type of choice, on the Santa Fe and across the entire railroad industry.

And the 100's? By then they were simply the progenitors of a freight-hauling fleet of rapidly growing size and diversity, and they were wearing out. Their successors would be so different mechanically and electrically that, could they have been able to count, the 100's should have been able to count their remaining days. Motive-power philosophies were changing, too: Standardization was becoming the industry's accepted route to fleet efficiency. In the future there would be little room on the roster for prima donnas.

Downhill runners

ULTIMATELY, I went from watching railroads for fun to writing about and photographing railroads for compensation. As reporter and editor I encountered Class 100's in Kansas, Texas, New Mexico, and Illinois. I saw 100-class units assembled in threes, fours, and fives on main lines, and operating in solo on locals.

The 100's had long been gone from Santa Fe's Coast Lines when finally I made it out to Arizona, to the territory over which those pioneering locomotives had fought their legendary battle during the war. When in 1953 I inspected the long, steady ascent from Winslow up to the Arizona Divide and the tortuous ride back down to Seligman, I did so over the snout of a 6000-h.p. F7 numbered 235.

West of Winslow, the Santa Fe was famous for its long uphill grades. West of Winslow therefore was also a great place to employ a graceful way to get a train *down* a mountain. How to do that best had been introduced to the Santa Fe—indeed, to all of diesel railroading—on the 100's. On the descent from Supai through Johnson Canyon Tunnel, I saw how a whining device called the dynamic brake could hold in check the considerable tonnage that the 235, without helper, had towed to the top of the hill.

The conqueror surrenders

IN DUE COURSE the 100's were destroyed, of course, in small part by the economics of returning to EMD parts usable in newer and better locomotives, in far larger part by obso-

lescence. The last of the Santa Fe's 320 FT units was retired in 1966. By chance I saw its obituary in a railfan publication. The Santa Fe itself made no official comment on the locomotive's passing. At about the same time, though, the railroad did publicize the arrival of a new diesel on the 25th anniversary of what it wished to have the world believe was the 100's first transcontinental trip. Which it was not.

In that quarter-century, diesel-electric locomotives had changed radically, inside and out. The unit horsepower of the products of La Grange had doubled, at least, and even greater increases in unit horsepower were still ahead. Save for their essential concepts, these locomotives that brought with them the end of the reign of the 100 class were very much a new breed, compared to the diesels that, at least in legend, had stormed Cajon Pass, conquered the Tehachapis, and flattened the Arizona Divide at the time of the Second World War. These new locomotives were at least a generation farther advanced technologically—but by the time 25 years had passed, some of them also had become the elder generation. Or they, too, had gone the way of those pioneers of the 1940's.

An all-time classic

ALL RIGHT, SO BE IT. If it weren't for progress in dieseldom, as elsewhere in railroading, there would be no railroads to enjoy at all. But here and now, and sounding quite like a railfan, I want to declare that if there is an all-time classic diesel-electric locomotive—classic much more for how it played its designated role than for how interesting it might have been to the locomotive-watcher—it is the Santa Fe's 100-class FT.

With few complaints about their working conditions, those 100's dug in and pulled a world of freight—as they pulled *over* a world of railroad tradition. The locomotive that Electro-Motive Chief Engineer Dick Dilworth had sketched out on wrapping paper with a carpenter's pencil—if you believe the legend, and I know it's fact, not legend—and of which the Santa Fe had acquired a third of EMD's total locomotive production, should be thoroughly memorialized even though more than a half-century has passed since its singular story began. For after all, the class of locomotive that the Santa Fe called 100 was, by any measurement you care to apply, a class by itself. ❑

With the vermillion stripe gone and the nose number plate raised so it won't interfere with the new emblem soon to replace the familiar "cat whiskers," the 178 (below) crosses the Des Plaines River at Bridge 9C, 10 miles west of Chicago's Dearborn Station. A three-unit FT (bottom) in 1950 doubleheads with 4-6-2 3448 east out of Chanute, Kans., probably on train 70, the daily freight from Wellington to Argentine.