Trains

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How Amtrak deploys its 981,780 horsepower

The power behind the point

J. DAVID INGLES

IN the office, on the top floor of the squarish, tan-sided, mostly glass office building, hardly a head turns as Amtrak's *Silver Star* glides by across the street to the north, snaking its way beneath Penn Central's catenary in search of RF&P iron beyond the Potomac bridge. In a couple of minutes, the 18-car train will be in Virginia, bound for Florida 14½ hours and 750 miles away.

Although people who work at Amtrak headquarters can see two or three of their charges pass by each day, they can learn any pertinent fact about the trains by phone or paper records or computer. The locomotives, for instance. Up on the eighth floor, on the south side of the building (officially it's the north building of the L'Enfant Plaza complex, but in the lobby the sign read AMTRAK BUILDING although the railroad corporation occupies only 3¼ floors' worth of the top four), David Goehring, Manager—Locomotives, will tell you that the diesels on today's *Silver Star* should be two SDP40F's from the Hialeah pool maintained by Seaboard Coast Line at its Miami-area facility. The pool covers all Florida trains plus the *James Whitcomb Riley* and the *Mountaineer* [see map on page 27]. Which two units were on the *Star* today? A trip down to the fifth floor will answer that. (You must take an elevator. Bell Communications, involved with the Apollo space program, occupied the building before Amtrak; and security dictated that nonemergency access be by central-foyer elevators only.) Go into the windowless Amtrak Operation Center in the inner bank of offices, where Danny Boehr on duty as a Supervisor of Locomotive Utilization, between phone calls from the field will check his log sheets. Car consist on the *Star*? Nearby, in the office of Manager of Consists and Equipment Morris Andrea en, is a file of papers from which he can answer that.

FOR a farflung firm created from dust on May 1, 1971, Amtrak has come quite a way on the motive-power scene in four-plus years. It has progressed from owning not a single locomotive through intermediate periods of own-and-lease, "split images" (Amtrak name and number applied upon the colors of former owners), and all-silver mist to a new color scheme of silver with beltlike red, white and blue stripes, and—more significantly—a third generation of diesel-electrics.

Amtrak is not a "railroad" in the traditional sense, since it does not (yet) own any trackage, but the ICC considers Amtrak a Class I railroad because Amtrak is a common carrier by rail grossing more than 5 million dollars per year in revenue.

In terms of revenue, Amtrak ranked as the 19th largest railroad (or 18th largest "system"—see "Second Section" in this issue) with 59 million dollars in the first quarter of 1975. The central characteristic that sets Amtrak (and Auto-Train) apart from the others is that its map is simply superimposed over certain lines of contracting Class I railroads.

In route-miles Amtrak is clearly No. 1 with 24,000, but the statistic for comparison purposes is meaningless because the passenger carrier has branch-line density on all but a few hundred corridor miles. More to the point, Amtrak's 397 locomotives put it right in there with 4552-mile Frisco. SLSF, with 452 diesels and 63.5 million in revenue, is just above Amtrak on both lists.

During Amtrak's first year, its trains for the most part were just continuations of what the railroads had been running, albeit with occasional mixed-up equipment. Motive power was much the same; the veteran E and F units made redundant on railroads rosters when Amtrak was created were operated by the new corporation on a lease basis. By 1972, however Amtrak was becoming a viable operation and began the purchase of passenger units from the (then) 13 con-

SDP40F AND E9B HUSTLE NORTH COAST HIAWATHA ACROSS WISCONSIN
More than a dozen types or models of motive power

John E. Gruber

less arrow

Amtrak assumes its own motive-power identity

tracting carrier railroads: 262 diesels for an average price of $25,000 and 30 GG1 electrics for an average of twice that figure.

Amtrak drew up a numbering system for its units [pages 13-14, August 1972 TRAINS]. Self-powered equipment—RDC's and TurboTrains—was given two-digit numbers. F units were put in the 100's; E8's began at 200; and E9's began at the next available series, the 400's. Metroliners remained in the 800 series they had occupied in Penn Central's numbering scheme, and GG1's were assigned Amtrak 900's. Originally Amtrak was going to simply drop the "4" from the 4900-series G's it acquired, but later Amtrak decided to put its 30 owned GG1's in a solid block, 900-929. Penn Central in turn renumbered its remaining G's in the low 4900's to 4930-4939 so no GG1 would have the same last three digits (see chart on page 26).

In 1972, E units began to appear with the now-familiar silver Amtrak scheme. Many of the diesels were repainted without benefit of much mechanical work, though, and the effects of 25-year-old locomotives began to be reflected in worsening figures on Amtrak's on-time performance sheets. Regardless of what Amtrak's future held, the corporation had to do something immediately about new power. That "something," of course, was the SDP40F.

As Amtrak planned for new units, it also began to implement a program to overhaul all the secondhand diesels it had bought. A change in thinking was to curtail this, however, before all the units were rebuilt. Instead of relying primarily on older but refurbished E's and secondarily on brand-new power, Amtrak has gone to placing orders for additional new diesel models and has phased out a large number of its old cab units plus virtually all its B units.

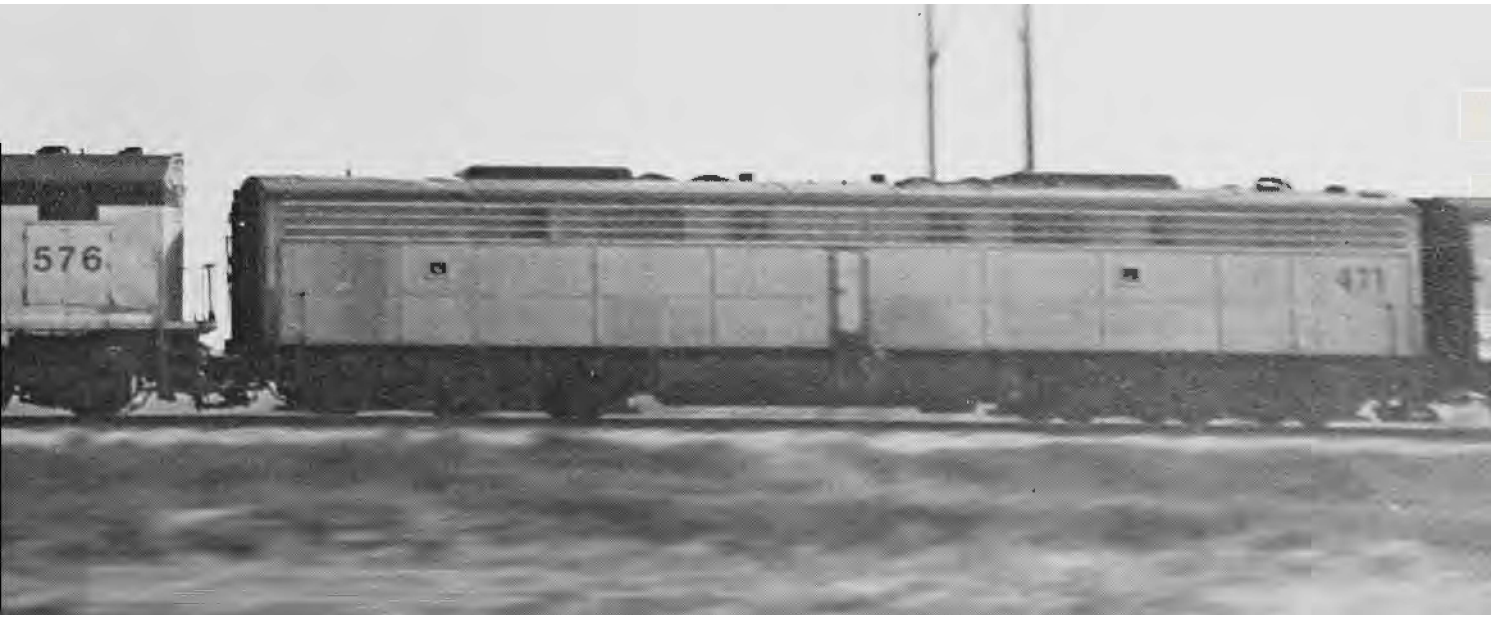
The rebuild program, pegged at a high-five-figures cost per unit, eventually encompassed 50 diesels—26 E9A's, 5 E9B's, and 19 E8A's. Work was performed at several locations, but the most comprehensive overhauls were done at West Milwaukee, Wis. (Milwaukee Road) and Altoona, Pa. (Penn Central). Other shops that did some degree of overhaul were at Jacksonville, Fla. (SCL); Paducah, Ky. (Illinois Central Gulf); West Burlington, Ia. (BN); Dale Street in Minneapolis (BN); and General Electric Apparatus Service Shops in Pittsburgh, Cleveland, and Chicago. Lesser amounts of work were performed by BN on F units at Livingston, Mont.; by SCL at Waycross, Ga., in 1971; and by Morrison-Knudsen on former UP units at Boise, Ida.

Amtrak motive-power officials give the Milwaukee Road's forces a high grade for their total-rebuild work. Initially, the West Milwaukee participation was to cover only the 8 E9A's and 5 E9B's purchased by Amtrak from the Milwaukee Road, but ex-Union Pacific E9's were added to the program there until the project was concluded last spring.

You can spot some of the later graduate of the Amtrak rebuild program, by the way, by a triple-lens headlight mounted in the nose door. The top two white lenses are alternating warning lights, and the lower red lens is automatically actuated in an emergency-brake application. All rebuilt E's contain two steam generators.

AMTRAK'S second motive-power era began on June 22, 1973, when three brand-new SDP40F cowl units hauled the *Super Chief* out of Chicago Union Station. The units were a culmination of Amtrak's first big step in becoming master of its own train operations. Ironically, the Santa Fe—noted for providing Amtrak with top-quality equipment and top-notch operation—was the mandatory choice for installation of Amtrak's first new locomotives. Amtrak had been leasing 74 of Santa Fe's venerable "warbonnet" F's, but the tired cab units were scheduled for the railroad's CF7 rebuild program at Cleburne, Tex.

The SDP40F was Electro-Motive's answer to bids requested by Amtrak



Ken Kraemer

Kalmbach Books: Mike Schafer

SDP 601 IN CONNECTICUT IN SEPTEMBER 1974 (LEFT) AND IN ST. LOUIS IN APRIL 1975 (RIGHT)
Amtrak-watchers will notice occasional shifts in locomotive assignments.

for 40 3000 h.p. C-C's with enclosed engine rooms. EMD, it is said, designated the model with the SDP40F mouthful so that the unit could be a "modification" of an existing model (SDP40) rather than a "new" model (FP40) for purposes of pricing (which at the time was under Federal government control).

The new units were numbered in the next series, beginning at 500, and three of the early ones (503-505) were tested on Santa Fe freights in June 1973 prior to acceptance by Amtrak. The first 30 went to the Santa Fe pool, and the final 10 of the order went to Burlington Northern to relieve old ex-Great Northern F's on the *Empire Builder*. After these 40 went into service in the summer of 1973, Amtrak quickly followed up with two more orders, for 40 and 70 units, of essentially identical locomotives. These SDP's, Nos. 540-649, came in spring and summer of 1974 and sounded the first chime in the knell for Amtrak's E units.

The second and third orders of SDP40F's have a few minor differences from the first order. The most obvious is the beveled, prowless nose on the newer ones, changed to simplify sheet metal work. Steps and grabirons are slightly modified, and roof fans on the newer SDP's are lower to allow for passage on certain tight-clearance lines on SP and in the East. Except in winter, when a snowplow to Southern Pacific specification must be attached to SDP's operating on the *San Francisco Zephyr* or *Coast Starlight*, and except for overhead clearance restrictions on Nos. 500-539, all 150 SDP's can be operated on any railroad. They have composite train control and radio capabilities, with a train-control system adaptable to any of the cab-signal or train-stop systems on regular Amtrak lines (found on AT&SF, ICG, PC, RF&P, and UP).

The SDP40F's have become the stars of Amtrak's long-distance trains. As of July 1975, the 150 cowl units were maintained in seven pools by six railroads [see chart on page 28]. Regular Amtrak-watchers who mind their locomotive numbers will notice occasional shifts in assignment, reflecting the units' versatility. Amtrak at one time had thoughts of assigning SDP's to the *Montrealer* north of New Haven and assigned Nos. 600 and 601 there. That utilization did not materialize, so the two SDP's held down Shore Line jobs between New Haven and Boston until early in 1975, when they were reassigned to the Harrisburg pool (still sporting windshield-guard screens applied at New Haven). When the *Mountaineer* began service last March 25, 600 and 601 became part of a shuffle to stock that train from the Hialeah pool.

The shuffle necessitated by the inauguration of the *Mountaineer* serves as a good example of the "checkers" game David Goehring and his associates occasionally must play. (The next major one was to be in October 1975 when the new Chicago-Boston train started.) The *James Whitcomb Riley* had been powered by E8's from the Cumberland (Md.) pool (with protection diesel power held at Washington Terminal), and since it and the *Mountaineer* are combined west of Russell, Ky., the *Riley*'s needs also had to be met. So the Hialeah pool of 40 SDP40F's was increased to 44 (the new trains need 8 units, but the pool had some slack in it) by robbing Harrisburg of 598-601. Also added to Hialeah were 630, a spare from the Woodcrest pool, and 582, a former Denver-based SDP which had been in a grade-crossing accident and had been repaired at Paducah. To balance the addition of this pair, 540 and 541 were reassigned from Hialeah to the Havre (Mont.) pool maintained by BN.

The infusion to Havre was necessitated by the *North Coast Hiawatha*'s going daily for the summer season on its Minneapolis-Seattle portion. In addition to 540 and 541, the Havre pool gained the 529 from Barstow and 578-579 from Harrisburg. The reductions in the Harrisburg group were made up by operating the *National Limited* with combinations of SDP-40F/E8 instead of a pair of the big cowls.

The Milwaukee Road pool at Chicago had had SDP's 575-577 and four E9B's in it to take care of the *North Coast Hi* on days when the train ran only Chicago-Minneapolis. With the change to daily Chicago-Seattle operation, 575-577 went into the Havre pool and the E9 boosters were sent elsewhere (450, 471, and 472 to Harrisburg and 451 to Barstow).

The loss of an SDP40F from the Barstow group was made up by changing the *San Diegans*' power from an SDP on each train to a pair of E's. Former UP E9's 416 and 417 were switched from Cleburne to Barstow, where they joined ex-Milwaukee E9B 452. Cleburne gained No. 433 (fresh from rebuilding at West Milwaukee) and 429 (from Cumberland, freed by the switch in *Riley* power).

Cleburne also had to have units added when Amtrak began the Dallas connection to the *Lone Star* in July, so ex-UP E8's 325 and 326 were sent from Denver where they had been surplus protection for the *San Francisco Zephyr*.

Don't look for E's bearing road numbers 325 and 326 on the Texas trains, however—the E8's were re-

Amtrak words in the locomotive lexicon

Diesel-electric

SDP40F Nos. 500-649. Built by EMD. Cowled carbody unit patterned after FP45's built at the request of the Santa Fe in 1967 (and for the Milwaukee Road in 1968). Model designation of SDP40F derived from specs: C-C ("SD"); steam-generator-equipped (two of them, per Amtrak practice for all diesel-electrics with steam) ("P"), 3000 h.p. ("40"), with full-width cab ("F"). Three orders for 40, 40, and 70 delivered in 1973 and 1974. SDP's, as Amtrak commonly calls them, hold down most long-distance trains and are noted for quietness, quick starts, and horns with a distinctive and pleasing sound.

P30CH Nos. 700-724. Built by GE. First diesels built for Amtrak with head-end-power (HEP) feature—that is, capability to provide train lighting, heating, and air conditioning with power drawn off main crankshaft. Cowl units, the P30's had GE ancestors on Santa Fe (steam-generator-equipped U30CG cowls) and Erie Lackawanna (HEP-equipped U36CH hoods). Model designation of P30CH derived from specs: passenger-service ("P"); 3000 h.p. ("30"); C-C ("C"); head-end electric power ("H"). Scheduled for delivery in 1975 and for assignment first to Boston-New Haven trains and then to Florida trains operated over Seaboard Coast Line.

F40PH Thirty to be built by EMD, with delivery scheduled for 1976. Junior versions of the SDP40F but with HEP feature for use with new Amfleet. Model designation derived from specs: full-width cab ("F"), 3000 h.p. ("40"), passenger service ("P"), head-end power ("H"). Not evident in designation is B-B truck configuration requested by Amtrak for short-haul, high-speed service. The F40's will succeed some P30's in New England and also will be used in other Eastern and Midwestern corridors on Amfleet trains.

"E8" Amtrak simplification for all E8 and E9 cab and booster units remaining in service. Survivors—many totally rebuilt—pull conventional-equipment trains in all corridors, and some hold down certain long-distance runs such as the *Inter-American*. More than 100 cab units from 13 railroads and 5 rebuilt ex-Milwaukee Road E9 boosters are still in service. Depending on how extensively and where rebuilt, the E's are rated from the factory figure of 2250 h.p. to 2600 h.p.

"FP7" Amtrak simplification for all F-type cab and booster units. From a fleet of 8 ex-BN cabs, 7 ex-BN boosters, 14 ex-SP FP7 cabs, and 5 ex-SP boosters, only a handful—perhaps as few as 4—of the former Espee cab units were scheduled to survive into 1976, as protection power at Oakland for the *San Joaquin*, Reno Fun Trains, and make-up sections of the *Coast Starlight*.

Electric

E60CP Nos. 950-975. Built by GE. Rakish, European-looking double-cab speedsters that were planned to be the successors to the GG1's in the Northeast Corridor. Model designation derived from specs: electric ("E"), 6000 h.p. (diesel equivalent) ("60"); C-C ("C"), passenger ("P"). Lowest-numbered 15 have steam generators, highest-numbered 11 have HEP feature for use with Amfleet. Alleged problems with the trucks held up delivery beyond the scheduled summer 1975 completion time. First two units painted (950 and 951) were the first locomotives to bear Amtrak's new silver with red-white-and-blue beltline stripe scheme.

GG1 "Grand old Girl" of Pennsylvania electrification continues to be a workhorse for Amtrak, singing along the Northeast Corridor on the point of all conventional-equipment trains (as well as on PC freights and mail trains plus New York & Long Branch commuters), seemingly an eternal creature defying replacement. A few of the 30 "G's" Amtrak owns bear a garish silver and red adaptation of Amtrak's color scheme, others sport a more tasteful solid black left over from PC ownership, with simply "Amtrak" painted in on the center of the flank. Yes, they still occasionally haul P70 coaches.

Lee Langum

FIRST DALLAS LONE STAR BEHIND E 437
Don't look for this number on Amtrak's roster.

numbered to 437 and 438 by Santa Fe to avoid conflict with the railroad's own engine series. The units are the fifth and sixth Amtrak locomotives to be so treated by AT&SF. Others were E8's 276 and 344, temporarily renumbered to 476 and 444 when based at Cleburne in 1974, and F booster 150 and 151, repainted as 398 and 399 when they worked on *San Diegans* before their retirement. Amtrak rosters do not indicate these Santa Fe changes.

AMTRAK relies on more than a dozen types or models of motive power. On July 1, 1975, Amtrak owned 397 locomotives: 367 diesel-electrics (186 E units, 150 SDP40F's, and 31 F units) and 30 GG1 electrics. An additional 55 diesel-electrics were on order: 25 from GE and 30 from EMD. (At midyear, the new E60CP electrics from GE were still undergoing tests, and none had been accepted by Amtrak.) In the quasi-locomotive category was self-powered equipment: 24 RDC's, 3 United Aircraft Turbo-Trains, 6 RTG Turboliners, and 71 Metroliners. Also, Amtrak operates the Harrisburg-Philadelphia local/commuter service with PC/SEPTA Silverliner M.U. cars and leases additional GG1's as needed from PC as well as 5 FL9's (5001, 5010, 5013, 5014, and 5029) to handle the Harmon-Grand Central Terminal leg.

The all-EMD/GE nature of Amtrak diesel locomotive is broken by one switcher and by Delaware & Hudson-owned Alco units used on the *Adirondack* between Albany and Montreal—four PA1's rebuilt to "PA4's" at Morrison-Knudsen's shop with New York State funds for $264,000 each, plus two backup steam-equipped RS3's D&H acquired in trade from Boston & Maine for a pair of D&H freight RS3's. The switcher is U.S. Army S2 7110, still Army-owned but painted Amtrak. In anticipation of Amtrak's starting auto-ferry service, the unit was leased for use at the proposed Poinciana (Fla.) terminal. When the auto-ferry plans were abandoned, the Alco was assigned to switch at Ivy City terminal in Washington, D.C.

Before any E60CP's were placed in revenue service, Amtrak normally operated 51 GG1's, the 30 it owns and 21 steam-equipped ones leased from PC. Further G's from PC's pool also were utilized, so on any given Amtrak conventional-equipment Northeast Corridor train, any passenger-pool GG1 could show up with the exception of 11 dedicated to the New York & Long Branch commuter service operated for New Jersey DOT.

Although the Budd RDC is termed by many observers as ideal for numerous Amtrak "corridor" runs outside the Northeast, the vehicle will see a limited future with Amtrak. Budd no longer will produce self-powered cars, and the old age of existing RDC's precludes Amtrak from trying to obtain any from other owners. As of last July, 13 ex-Penn Central RDC's (all former New Haven except No. 34, an ex-NYC car) were assigned to New Haven for the Connecticut Valley corridor and 5 were stationed at Brighton Park in Chicago to cover the *Black Hawk*, an Illinois 403b train to Dubuque, Ia. Ex-Burlington Northern RDC2's 30 and 32 in the *Black Hawk* pool were the only non-PC RDC's in service for Amtrak (sister 31 was wrecked at Galena, Ill., and set aside). No. 30 was originally Northern Pacific, and 31-32 were Western Pacific *Zephyrette* cars later bought by NP.

Amtrak's ex-BN RD 3's were set aside for sale at the Reading (Pa.) shops (site of all Amtrak RDC refurbishing) after plans to convert them to snack-coach or bar-lounge-coach configuration were dropped.

F UNITS have no future with Amtrak (30 were to be traded in on the new EMD diesel order), but E units do. Their role, however, will not be as big as originally envisioned, for Amtrak has no plans to resume the rebuild programs. There were 113 active Amtrak E's last July 1, about half of which had been rebuilt to some degree. The unrebuilt black ex-PC E8's were to get early retirement after P30-powered Amfleet trains were in service.

If any E's are to be given further shop attention, it might come in a continuation of the program to modi-

fy some to headend power (HEP) for use with the Amfleet. Five ex-Pennsy E8's—284, 288, 305, 315, and 317—were converted in 1974-1975 at Altoona at a cost of about $175,000 each. They have two Detroit Diesel engines in their aft end to provide the power for train lighting/heating. Three units are based in Chicago for use with ex-C&NW bi-level intercity cars on Illinois 403b trains. Another, 317, was sent to the DOT test track near Pueblo to test the first four Amcoaches since no new HEP locomotives were available.

The Amtrak/Rock Island situation illustrates how far in advance some locomotive decisions can be made. In the second quarter of 1975, the two carriers began negotiations for Amtrak takeover of the Rock's two intercity trains. Amtrak did not contemplate purchasing any Rock E units but instead earmarked five Amtrak E's to be equipped at Jacksonville, Fla., with Rock Island cab-signal apparatus. The units were 349, an ex-CB&Q E8 serving as a protect unit at BN's Chicago facility; 329 and 330, former UP E8's in the Woodcrest pool; and 401 and 421, ex-UP E9's then at the SCL shop in Jacksonville to get new boilers installed.

The selection of the Woodcrest pool as a base for RI-route units is logical enough, but the special-modification necessity had a parallel. When Amtrak purchased secondhand E's, it and Illinois Central couldn't come to terms on any IC units. But IC's train control dictated that specifically equipped units be run there, so former B&O E8's 203, 205, and 208 were modified at Woodcrest and assigned to that pool. Leased IC units (some repainted in silver but not renumbered or lettered for Amtrak) filled in until the SDP's were delivered. Amtrak later did buy one IC unit, Paducah-rebuilt E8 2021, which became Amtrak 436.

Woodcrest and other shops on the map on page 27 will likely continue to be Amtrak maintenance bases for some time. An Amtrak-owned diesel shop—either a new one or one deemed redundant by a railroad—is probably in Amtrak's future, but the subject does not have high priority owing to the young age and good condition of the majority of Amtrak's locomotives. Ideally, Amtrak would locate running shops in Florida, in the Midwest, and on the West Coast, plus having a single centrally located heavy-repair shop in the manner of the recently acquired Beech Grove (Ind.) car shop.

Since more than a decade has passed without any basic changes in diesel-electric locomotive prime movers, horsepower ratings, or configuration of units, in some respects we're still deep into the "second generation" of such motive power. But if the third generation of the diesel-electric does exist, it is or will be those beasts which sport all the 1970's air-emission, noise-control, and crew-safety refinements made necessary by Government fiat. Add to such appurtenances the capability to heat a passenger train electrically and you've got a third-generation creature for sure.

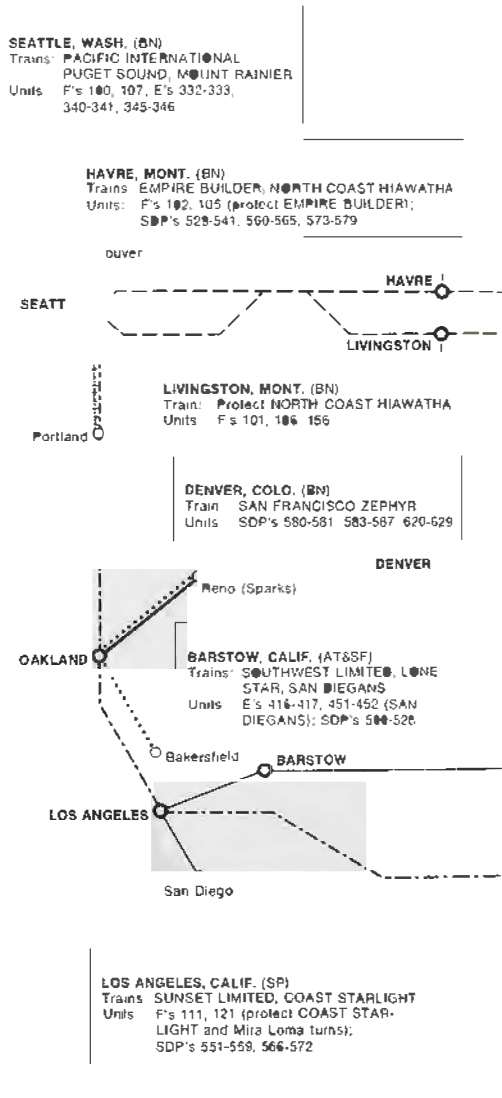
Amtrak's P30CH's from GE and F40PH's from EMD are such animals, descendants of commuter units on Erie Lackawanna (New Jersey DOT GE 34CH's) and Milwaukee Road (North/Northwest Suburban EMD F40C's). Amtrak's new GE's were ordered in 1974 and scheduled for delivery beginning last August. Initial plans called for about 15 to 17 of the P30's (P-boats?) to be assigned to New Haven and the remainder to Hialeah. This is because the first coaches were to be used in the Northeast Corridor, followed by inauguration of a winter-season all-coach New York-Florida train. Eventually, as the EMD F40's are delivered they will replace the GE's in New England so the P30's can be concentrated on Seaboard Coast Line, a long-time GE stamping ground.

The 30 new EMD's, scheduled for delivery in the first half of 1976, are to be junior versions of the F40PH's. The baby cowls will be about two-thirds the weight of the SDP's. More important is their B-B truck configuration (not evident in the model designation), which signals a halt to Amtrak's acquiring C-C's. Amtrak motive-power officials feel the need for six-motor power is limited to the long-distance trains, especially in the West, and that the present 150 units

AMTRAK 901 lettered PC. John R. Taibi photo

THE GG1 AND AMTRAK

Former PC No.	Interim Amtrak No.	Current Amtrak No.	Current PC No.
4892		900	
4897		901	
4899		902	
4900		903	
4901		904	
4902	902	905	
4903		906	
4904			4930
4905			4931
4906		907	
4907		908	
4908	908	909	
4909			4932
4910		910	
4911		911	
4912		912	
4913		913	
4914		914	
4915			4933
4916		915	
4917			4934
4918		916	
4919		917	
4920		918	
4921			4936
4922			4937
4923			4938
4924		919	
4925		920	
4926		921	
4927			4939
4928		922	
4929		923	
4930			Scrapped
4931	931	924	
4932		925	
4933		926	
4934		927	
4935			4935
4936			Scrapped
4937		928	
4938		929	



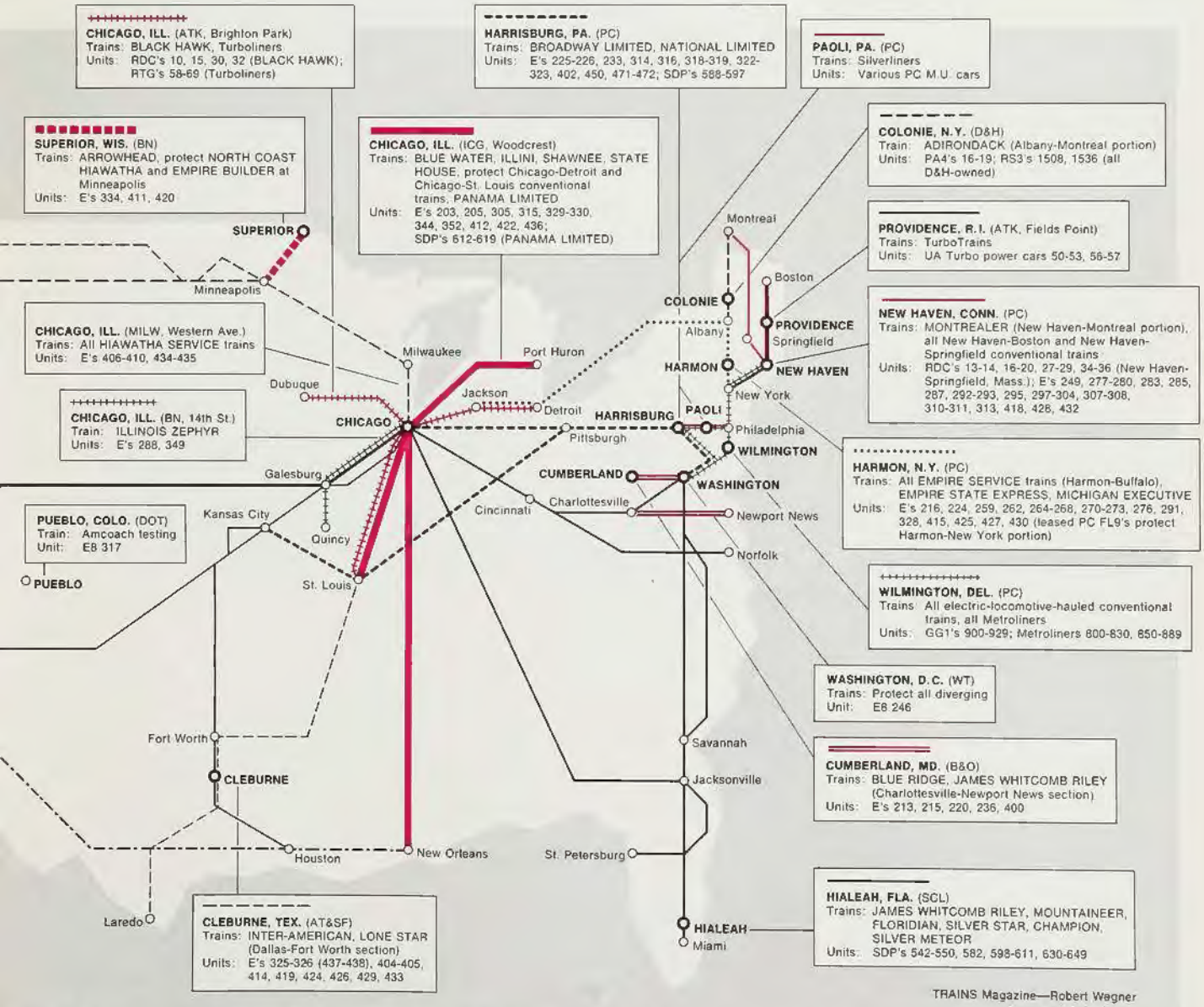
Stables

plus the P30's are sufficient to protect these requirements for the foreseeable future. The new EMD's, which will cost about $544,000 apiece, probably will be used all over the Midwest and East on Amfleet trains. They'll deliver about 2500 locomotive horsepower, since a maximum "hotel" load of 500 kilowatts consumes 500 to 700 horsepower.

For the short term, Amtrak's future appears to be with locomotive-hauled trains—both electric and diesel-electric—and turbo trains. The increasing of the Amfleet to almost 500; the quick reordering of EMD diesels; and the selection of the RTG turboliner for Americanization all signal Amtrak's intent to, for now, stick with proven designs *that work*. The Budd-built Amfleet is based on the Metroliner design; the EMD 645 engine is universal and the SDP40F's run like big sewing machines, giving 95 per cent availability; and the French-built RTG's have surprised many with their similarly high availability and lack of mechanical problems.

We'll likely have some GG1's and E8's around for another decade, though, if Amtrak's traffic continues to grow and if various states retain their current interest in funding additional short-haul trains. But always there will be shuffles. In the middle of 1975, for example, Amtrak thinking was to assign the new Rohr RTG's (due in summer 1976) to Empire Service runs and to move the United Aircraft Turbos from New York-Boston to the *San Diegans*. This would make the Boston services virtually all Amfleet and force more "checkers" moves with E8's and conventional coaches. (The possible choice of Empire Service for Turboliners is interesting in that New York State supposedly has been interested in purchasing new trains—either Turbos or LRC-style—itself. Whether Amtrak's providing of new equipment would whet a state's appetite or blunt its desire to spend more money would be worth watching.)

Meanwhile, as Amfleet trains pulled by P30's and F40's take over in the East and Midwest in the next couple of years, the introduction of new bi-level cars on Amtrak's Western long-distance trains is going to mean a metamorphosis for the SDP40F's. Amtrak's plans called for the conversion of 74 SDP's from steam generators to HEP status in the next year or



TRAINS Magazine—Robert Wegner

and tracks for Amtrak's horses

NOSES of SDP 588 and E8 310 at Harrisburg, Pa. Jim Bradley photo.

ACTIVE AMTRAK DIESELS—July 1, 1975

Model	Qty.	Road Nos.	Heritage
F7A	6	100-102, 105-107	BN (NP)
FP7	8	110-111, 113, 116-117, 119, 121-122	SP
F3B	1	156	BN (NP)
E8A	2	203, 205	B&O
E8A	4	213, 215-216, 220	RF&P
E8A	3	224-226	L&N (226 SLSF)
E8A	2	233, 236	SCL (ACL)
E8A	2	246, 249	SCL (SAL)
E8A	12	259, 262, 264-268, 270-273, 276	PC (NYC)
E8A	35	277-280, 283-285, 287-288, 291-293, 295, 297-305, 307-308, 310-311, 313-319, 322-323	PC (PRR)
E8A	5	325-326, 328-330	UP
E8A	10	332-334, 340-341, 344-346, 349, 352	BN (CB&Q)
E9A	3	400-402	B&O
E9A	1	404	SCL (SAL)
E9A	8	405-410, 434-435	MILW
E9A	20	411-412, 414-422, 424-430, 432-433	UP
E8A	1	436	IC
E9B	5	450-452, 471-472	MILW
SDP40F	150	500-649	Bought new
	278		

Note: Following E8's sold to Naporano Iron and Metal of Newark, N.J., in second quarter of 1975: 202, 209, 214, 217-219, 221, 223, 230-232, 234, 235, 237-245, 248, 250-252, 254, 327, 331, BN 9954 (347), 348, BN 9966 (350), 351.

STATUS OF AMTRAK-OWNED DIESEL LOCOMOTIVES—July 1, 1975

	E cab	E booster	SDP40F	F cab	F booster	Total
Units assigned in service	105	5	150	14	1	275
Units in backshop or awaiting repair	3	0	●	●	0	3
Units awaiting disposition	7	3	0	4	7	21
Units set aside	48	15	●	4	1	68
Total	163	23	150	22	9	367

DIESEL LOCOMOTIVE MAINTENANCE ASSIGNMENT BY RAILROAD—July 1, 1975

	E's	F's	SDP40F's	Total
AT&SF	14	0	29	43
B&O	5	●	0	5
BN	11	7	43	61
ICG	11	0	8	19
MILW	7	0	●	7
PC	60	0	10	70
SCL	●	0	44	44
SP	●	8	16	24
WT		0	0	
DOT (Pueblo)		0	0	
Total	110	15	150	275

two. For interim steam sources, Amtrak was considering using its fleet of former Union Pacific E9B's as boiler cars (some had seen such duty as stationary plants at Denver and St. Louis). Only the Milwaukee E-B's are rebuilt; the UP's had been set aside in 1974 and 1975.

Amtrak's timetable for conversion of existing Western trains to bi-levels call for the process to begin in May 1977 with one *Starlight* set. So, with new cars and by-then "old" SDP-40F's given new HEP equipment and the new color scheme, Amtrak trains will resist the "all-look-alike" tag they had been earning in the past year.

If Amtrak diesels "all look alike," then so do those on American mainline freights. A train-watcher is likely to see (depending on his location) just a parade of GP38's, U30-'s, SD40's, U23B's, or SD45's. The monotony is broken only here and there by such diversions as SP's "tunnel motors"; ICG's Paducah rebuilds; Southern's high nose; UP's "noot" noses; and Santa Fe's CF7's. To see the Alcos or other exotics that merely dent the EMD/GE stranglehold, you either have to search the branch lines or travel to the small or the out-of-the-way or the insolvent roads—the Utah Railways, the Lake Superior & Ishpemings, the Lehigh Valleys.

A major reason for this motive-power monotony is the plunge in traffic levels brought about by the depressed economy. Large roads purged minority units (Alcos, Baldwins, and FM's) from the active ranks; stored many (in some cases, all) of their U-boats; and even laid up *brand new* units from both GE and EMD. One reason for the latter phenomenon is that service warranties generally do not take effect until a locomotive is placed in service.

So whether or not 1976 will bring a slight revival of minority motive power, history will record that the 1975 recession killed Class 1 Baldwins and FM's in the same manner the one in 1958 killed Class 1 steam. The Delaware & Hudson sharks and the Milwaukee Road H10/H12 switchers were the exceptions to the submerging of all diesels from the old No. 3 and No. 4 builders to the shortline/industrial level.

The diesels of the old No. 2 builder, Alco, will be close behind, for you can count on both hands the locations where Schenectady products (Century series almost entirely) can be found in regular mainline service. (Try it—here are eight: PC in Ohio; BN out of Portland; Erie Lackawanna; Delaware & Hudson; Lehigh Valley; SCL in Florida; L&N in Kentucky; and C&NW in ore country.) First-generation Alcos hang on, but many Class I's relegated long lines of stored RS3's to the retirement lists, and only a few Alco loyalists gave 244's more life. D&H, Green Bay & Western, and Detroit & Mackinac, for instance, each operate RS's with rebuilt 244's or modified 251's under the rounded hoods. The first two roads did their own work, and D&M—buyer of the first RS2's in 1946—is having its roster rebuilt (one at a time) by Morrison-Knudsen.

Another casualty of the recession was rebuild programs. Illinois Central Gulf's is still going—in fact, the road is soliciting wreck-rebuild business from other firms and continues to do work for neighbor Precision

Scott Hartley

FL9 STILL BEARING NEW HAVEN LOGO ON AMTRAK'S SALT CITY EXPRESS
Leased diesel-electric-electrics handle the Harmon-Grand Central leg

Scott Hartley

SOUTHERN ALCOS IN STORAGE AT INMAN YARD IN ATLANTA IN JANUARY 1975
Many Class 1 roads relegated long lines of stored RS3's to retirement lists

Stanley H. Mailer

GB&W 307 FRESH OUT OF NORWOOD SHOP WITH 2000 H.P. ALCO-WHITE V-12 251-C
Only a few Alco loyalists are giving old 244 models renewed life.

Arnold Burchardt

19 BRAND-NEW UP UNITS IN STORAGE AT COUNCIL BLUFFS IN APRIL 1975
Warranties do not take effect until a locomotive is placed in service.

National Corporation—but programs on Burlington Northern, North Western, Santa Fe, and Milwaukee Road either were cut way back or were temporarily halted.

The F unit may be doomed on Amtrak and on most Class I freight-haulers, but it will enjoy a few more years of life on Burlington Northern. BN, anticipating a continuing upward spiral of coal traffic and a need for more locomotives, is overhauling in kind its remaining F's at Dale Street Shop. The work, which includes new wiring but little exterior change, is similar to the five-year-extension work North Western began at Oelwein on its secondhand F's before the recession put the units in storage. Although BN retired almost three dozen F's in 1973-1974, at the beginning of 1975 the road still owned 3 F3's, 45 F7's, and 73 F9's.

The diesel world is not quite as dreary in Canada. While it is made up largely of SD40's, GP9's, and six-axle M series hoods, the scene is spiced up by wide-cab versions of standard models from both GM and MLW; by Canadian National's application of cab-unit-style striping to its road-switchers; and by British Columbia Railway, which is bringing back the B unit.

WHAT of tomorrow's locomotive? Hard-pressed railroads still will play around with toys such as the Stanray-sponsored Hungarian-built Quarter Horse diesel-hydraulic switcher and with Electro-Motive's GM6C electric demonstrator, but the diesel-electric still reigns supreme and will continue to do so.

Electrification, when it comes, is conceded to be a mainline tool only, and one that will require Government funding to implement. The economics of electric operation may be sound (after increasing in price by only one-third between 1967 and 1973, diesel fuel doubled in price in the following 12 months), but the wiring of even main lines seems to be around a distant curve despite such hopeful signs as UP's test catenary, the GM6C, and BN's new coal line. Troubles besetting the Black Mesa & Lake Powell and Amtrak's new GE electrics haven't helped the cause any, either.

Diesel-electrics continue to undergo improvements and modifications, of course. Electro-Motive is developing a high-traction B truck to complement its HT-C six-motor truck, for instance, and EMD, GE, and the AAR—with FRA guidance—are working on a safer and more human-related diesel locomotive cab design with a functional, padded, rounded, and protective interior. So the bulk of tomorrow's locomotives simply will be evolutionary examples of today's I