Carolina Conductor

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Preserving the Past Active in the Present Planning for the Future

Web Site: hubcityrrmuseum.org
Facebook: Carolina Railroad Heritage Association & Hub City RR Museum

Hub City Railroad Museum and SOU Rwy Caboose #X3115:

Spartanburg Amtrak Station
298 Magnolia Street
Spartanburg, SC 29301-2330
Wednesday 10-2 & Saturday 10-2

Meeting Site:

Fountain Inn Presbyterian Church
307 North Main Street
Fountain Inn, SC 29644
Third Friday of the Month at 7:00 p.m.

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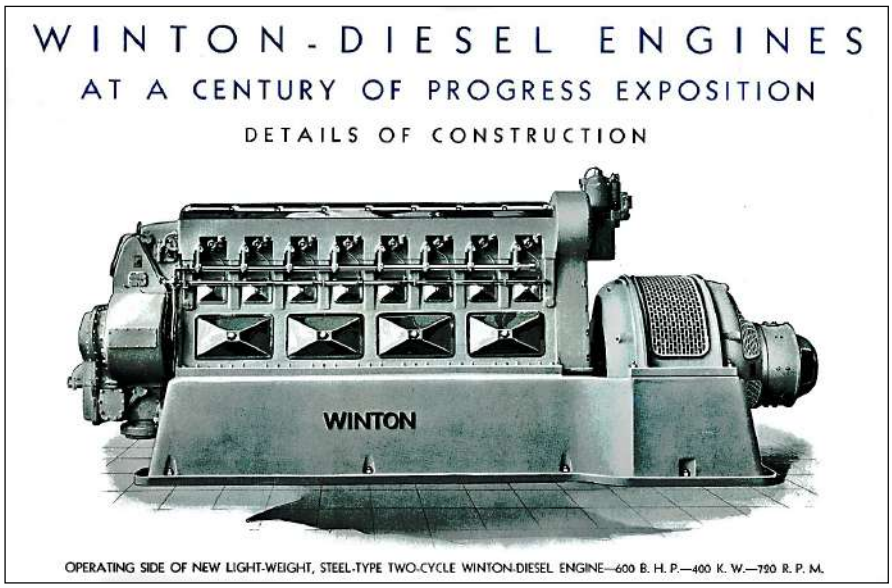
Articles can be submitted anytime.

EMD

This article was compiled by Steve Baker from Railroad History magazines from 2018.

As often happens with innovative technology, initial developments are slow. Alexander Winton incorporated the Winton Gas Engine & Manufacturing Co. in 1912, in Cleveland, Ohio. The company's first diesel engine was constructed in 1913 and installed at the plant to provide auxiliary electric power. Sailing ship's need for electrical power was growing, for navigation lights, radios, below deck illumination, and auxiliary propulsion. Between 1913 and 1919 Winton auxiliary propulsion units were installed in 5 freight schooners. Soon after, the first diesel-electric propulsion unit was built for a yacht.



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Museum Happenings

↑ A recent donation to the museum shows the SOU Greenville yard in its early days. Same photo after hand oil coloring for a postcard. Notice the huge coal dock. ↓

→ Pat and Bruce set a Charleston & Western Carolina or possibly a Columbia Newberry & Laurens whistle post near the caboose. Bob helped and was behind the camera.

For you animal lovers.

Wanted—Articles for the Carolina Conductor

Submit an article of 200 words or more with some photos and captions and see them in print. Every one of us has some unique railroad experience that would make interesting reading for our membership. Your editor always needs more contributions of railway history and news.

Charles Kettering, head of Research for General Motors, visited Winton Engine Company in 1929, while shopping for engines for his new yacht. He was attracted by the more compact and flexible diesel electric power plant. He was so impressed by the equipment that he advocated buying Winton Engine Co. and Electro-Motive Co. to General Motors president Alfred Sloan. In 1930, GM bought both Winton and EMC.

The US Navy ordered the first Model 12-201 engine for submarine testing in 1933. The engine has an 8 inch bore and 10 inch stroke, operating at 720 RPM. Later that year two engines were completed and delivered to the US Navy. That same year an 8-201A engine was delivered to the Budd Company to power the original Burlington Zephyr streamlined passenger train.

↑ **CB&Q Winton powered *Zephyr* train circa 1934.**

↓ **Us Nave "P" class submarine powered by Winton diesel engine.**

Business was picking up for the Winton Engine Company. The US Navy ordered 16 1,300 horsepower Model 16-201A diesel engines for its planned P-class fleet submarines, with an additional engine for training at the New London, CT, Submarine Training School. Also in 1934, the original Burlington Zephyr made a highly publicized non-stop 13 hour and 5 minute 1,015 mile dawn to dusk run from Denver to Chicago, averaging 77.5 MPH and hitting a top speed of 112.5 mph.

GM ran ads in 1935, in Railway Age announcing the Electro-Motive Corp., recently merged with the Winton Engine Corp., and is again established as a separate GM subsidiary. The new corporation would build complete locomotives for road and yard service. Additionally, as in the past, the company will supply power plants for railway motor cars and streamlined trains. GM also announces plans to construct the LaGrange, IL assembly plant on 70 acres. In 'December 1935, the LaGrange facility began pilot production, and in January 1936 the plant entered full production.

GM/EMD builders plate.

GM was all in to support this new product line, building an EMC traveling training car in 1937. The training car is featured on the cover of Railway Age. Good publicity is key to letting potential customers know they will have comprehensive training in the new technology of diesel electric power units.

As the railroad business picks up, so does work for the US Navy. In 1938, the Navy placed orders for Electro-Motive propulsion units for use in fleet tugs. These were prototypes for the wartime LST (Landing Ship, Tank) program. Diesel electric propulsion for ships has the same advantages as for

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↑ **Landing Ship Tank (LST) powered by EMD diesel engines.**

↓ **EMD FT model demonstrator locomotives.**

replacing steam train locomotives. While the railroads see the benefits of diesel- electric, especially in the dry Southwest, many orders for the FT locomotives are delayed by the War Production Board due to scarcity of key materials such as copper (remember steel pennies?). EMD's production is focused on supplying the US Nay propulsion needs, postponing the railroad's conversion from steam locomotives to diesel-electric locomotives until the end of World War 2.

Even with little actual availability of the new diesel electric locomotives, in 1944, E-M issues catalogs showing diesel shops with elevated servicing ramps and constructs a 1:48 (O scale) scale model shop to illustrate the concept. By late 1947, 39 railroads had built maintenance shops to EMD suggested designs. Railroads enthusiastically embraced diesel electric technology - with wholesale scrapping of steam locomotives, to the chagrin of rail fans.

EMD locomotive craftsmanship reduced future annual sales, so by 1990 they only sold 255 locomotives. General Electric locomotive market share increased, even as the overall market shrank, due to highway trucks increasing the percentage of freight movement. In 2009, as part of GM's business woes, it filed for Chapter 11 reorganization, with $172 billion in debt. In 2010, Progress Rail Services, subsidiary of Caterpillar, purchased Electro-Motive Diesel for $820 million.

Progress Rail
A Caterpillar Company

In 2019, Progress Rail relocated engine and parts distribution to a former Caterpillar facility in Winston-Salem, NC. Car body fabrication and electrical cabinet operations were moved to Muncie, Indiana. The remnants of the innovator of diesel electric propulsion continues production, but with reduced sales volume and production facilities.

↑ **Progress Rail demonstrator locomotives.**

↓ **Progress Rail "Joule" battery electric locomotive.**

Progress Rail

Here is overview of the current Progress Rail production models. ED.

EMD GT38AC—GT42AC _ GT46AC

The EMD GT-Series locomotive platform includes GT38AC, GT42AC and GT46AC models. These locomotives integrate EMD 710-Series engines together with AC traction technology to provide superior efficiency and performance for a broad range of operations. We pioneered development of AC traction for heavy haul diesel-electric locomotives, and today thousands of EMD AC locomotives operate worldwide providing enhanced adhesion performance and lower life cycle costs.

The advanced technologies of EMD GT-Series Locomotives provide key product solutions for safety, reliability, efficiency and sustainability, with GT38AC, GT42AC and GT46AC locomotives delivering optimal rail solutions in service across South America, the Middle East, Africa and Southeast Asia.

EMD GT38ACL

With some slight variances, the GT38ACL is significantly lighter and faster than its parent GT38AC model. The GT38ACL is a full 15T lighter and has a 12mph faster maximum speed than the GT38AC, allowing it to better suit the customers needs.

EMD GT46ACS

The GT46ACS was specifically designed with the harsh environment of the Middle East and Northern Africa in mind. This locomotive features an advanced filtration and cooling system, helping withstand the heat and sand of the desert environment. This locomotive also features the EM2000 Microprocessor Control System, Automatic Engine Start Stop (AESS) and the 16-cylinder, 4,300 THP 16-710G3C-ES engine.

EMD GT46 Ace-Gen II

EMD GT46C-ACe Gen II locomotives are engineered for best-in-class tractive effort and adhesion, while meeting Australia's demanding standards and conditions. This locomotive series integrates the EMD 710 Engine, providing worldclass reliability and fuel-efficiency and low lube oil consumption. The

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platform also features a redesigned crashworthy cab structure and fuel tank for operator safety, along with features for enhanced ergonomics and comfort.

EMD GT46C Ace—Gen III

Our range of EMD GT46C-ACe locomotives are engineered for best-in-class tractive effort and adhesion, while meeting Australia's demanding standards and conditions. This locomotive series integrates the EMD 710 Engine, providing world-class reliability and fuel-efficiency and low lube oil consumption. The platform also features a redesigned crashworthy cab structure and fuel tank for operator safety, along with features for enhanced ergonomics and comfort. Cabs are ergonomically designed to meet the visibility requirements for 5th percentile and 95th percentile people.

EMD SD70ACe—SD70ACS

Based on the EMD SD70ACe locomotive, with thousands operating in heavy-haul service across the globe, the EMD SD70ACS model is specially designed for railroads operating in harsh climatic conditions and temperatures up to +50° C. Through integration of custom design features and technologies, the SD70ACS delivers safety and performance for challenging desert service including sand and extreme heat.

The SD70ACS locomotive is equipped with the EMD 710 engine, AC traction, EM2000 microprocessor control system, and an isolated cab. This locomotive is also fitted with European Train Control System (ETCS) equipment.

EMD SD70 ACe—BB

The EMD SD70ACe-BB Locomotive was custom designed for Brazil's uniquely challenging operating environment. This eight-axle, meter-gauge locomotive provides increased tractive effort and capacity to haul more freight. It is also equipped with the EMD 710 engine, AC traction and a cab custom designed for operator safety and comfort.

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EMD SD70ACe-T4

EMD SD70ACe-T4 is the new Tier 4 locomotive provides a solution specifically tailored to North American railroad operations, meeting stringent emissions regulations without the use of urea and providing substantial savings for railroad applications.

EMD SD70ACe/45

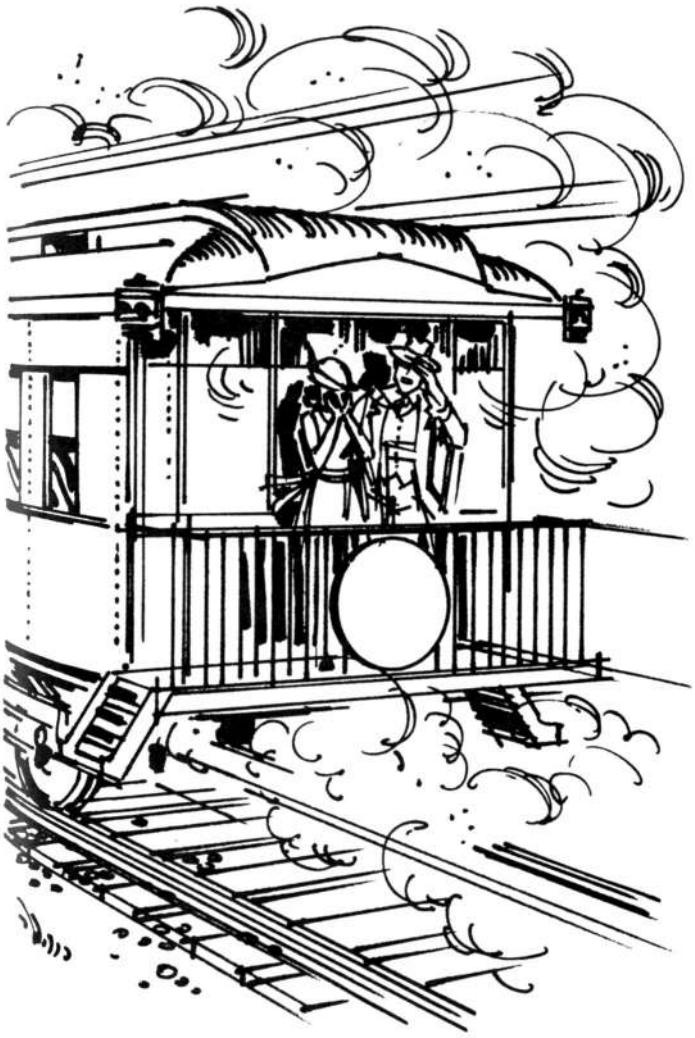
The EMD SD70ACe/45 locomotive was custom designed for Brazil's uniquely challenging operating environment. This six-axle, broad-gauge locomotive provides increased tractive effort and capacity to haul more freight. It is also equipped with the EMD 710 engine, AC traction and a cab custom designed for operator safety and comfort.

EMD SD70ACe—LCI

The SD70ACe Locomotive was introduced in 2005 for heavy-haul freight applications worldwide, with the SD70ACe/LCi model specially designed for low clearance mining operations. This powerful and efficient locomotive integrates the world-class reliability of the EMD 710 engine, EM2000 microprocessor control system and AC traction.

EMD SD80ACe

The powerful and efficient 5,300 traction horsepower EMD SD80ACe locomotive integrates the EMD 710 engine, EM2000 microprocessor control system and AC traction. It also features a tropical roof and a cab engineered for operator safety and comfort.



CINDER SNAPPER

On observation cars, 'twas said,
Most riders eyes were often red.
No matter how they tried to squint,
The cinders were not soft like lint!

Passengers on the observation platform of the rear car soon learned the hazards of riding there after the train was under way. Cinders from the steam locomotive were attracted aerodynamically to the back end of the last car. The crew humorously called such passengers "cinder snappers". It seems the platform was better suited as a forum for political candidates while the car was standing.

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