DATA SHEET

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Sheet #:	**D9a.3**
Title:	**LOCOMOTIVE GENEALOGY - DIESEL**
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References:	Contemporary Diesel Spotters Guide, Kalmbach Pub. Co., 2nd edition, 1995 Model Railroader, Kalmbach Pub. Co., Trains, Kalmbach Pub. Co., Model Railroading, Railfan & Railroad, Carstens Publications 1997 Car and Locomotive Cyclopedia
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INTRODUCTION

The intent of this Data Sheet is to allow modelers to make locomotive model choices consistent with their modeled era. Early internal combustion railroad locomotive development focused on industrial and light switching.

Pinkepanke[1] suggests the need to distinguish between industrial and railroad locomotives. He observes that after 1934 locomotives classified as industrial were those with a maximum of 600 hp and 100 tons gross locomotive weight.

This was later de-facto modified with the 1937 labor-management agreement on the "90,000# rule" which set maximum locomotive weight for one-man operation. Locomotives in excess of 90,000# required a fireman. Now 600hp and 90,000# stands as the generally accepted line between industrial and railroad motive power.

Primary electrical suppliers were General Electric and Westinghouse. After 1953, only GE continued to serve locomotive manufacturers. GE was and is a strong competitor for the railroad locomotive electrical business in domestic and export markets.

AMERICAN LOCOMOTIVE COMPANY

A. *American Locomotive Company (ALCO) - General Electric (GE) - Ingersoll Rand (IR)*

In 1924, *GE* requested the Ingersoll Rand Company of Phillipsburg, NJ, to develop an internal combustion engine suitable for rail use. As the three corporations worked together, they produced a standard line of 60- and 100-ton boxcab switchers from 1925-28. These locomotives served as industrial, shop, and light switching power.

B. *ALCO*

Manufactured heavy steam locomotives but sensed industry needs for new types of power. In 1929, *ALCO* purchased the McIntosh and Seymour engineworks at Auburn, NY, a successful builder of marine diesels. Leaving *IR, ALCO* launched out on its own in the diesel locomotive field providing its own engines and using *GE* electrical components.

C. *ALCO-GE*

By 1940 and until 1953, *ALCO* cooperated with *GE* who provided the electrical and control equipment and *ALCO* the engines and car bodies for a full line of locomotives marketed as the *ALCO-GE* line.

D. *ALCO Products*

From 1953 to 1964, *ALCO* marketed its own line of locomotives, although it continued to rely on *GE* as a supplier of electrical equipment. In 1956, the American Locomotive Company adopted the corporate identity of *ALCO Products.*

[1] Pinkepanke, Jerry A. Diesel Spotter's Guide. Milwauke, WI: Kalmbach Publiching Co., 1967.

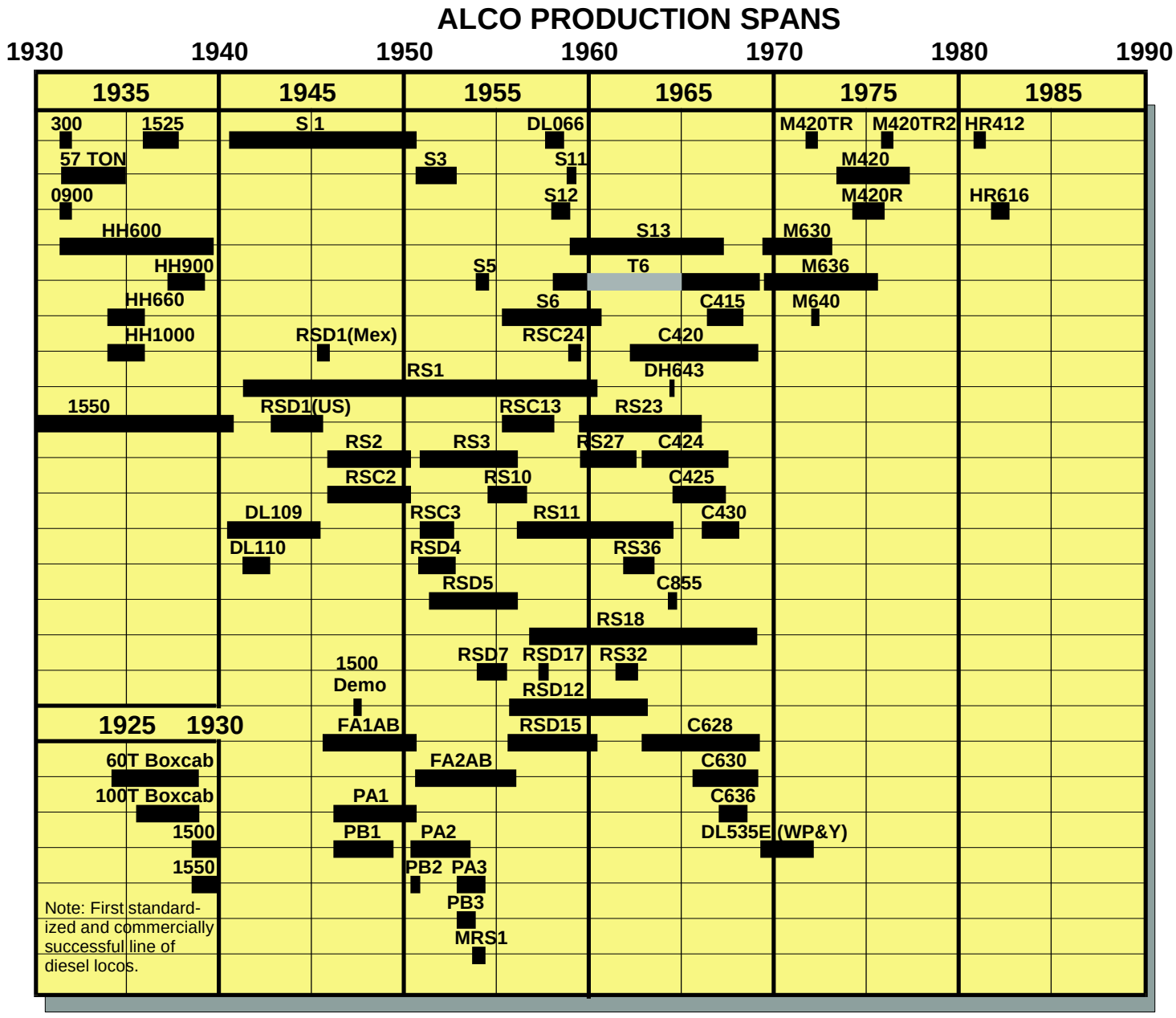
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E. *ALCO-Worthington*

The Worthington Corporation acquired *ALCO Products* in 1964. By 1969, *ALCO* terminated its United States production of locomotives.

F. *Montreal Locomotive Works (MLW)*

A Canadian manufacturer of steam locomotives, *MLW* served a national and export market. *ALCO* became affiliated with *MLW* as a minority partner who manufactured diesel locomotives under a license arrangement. In 1969, when *ALCO* left the market, *MLW* continued to build *ALCO* designs for export and domestic use. By 1979, *MLW* was acquired by Bombardier, Ltd. *MLW* has not been successful in producing locomotives for the North American market since.



BALDWIN LOCOMOTIVE COMPANY

A. *Baldwin (BLW)*

The Baldwin Locomotive Company developed a line of small gas-mechanical industrial locomotives in the decade of the 1920s as its early contribution to internal combustion locomotives. By the early 1930s, *BLW* developed a line of small switching locomotives. It fielded experimental units in 1925,'27,'29,'36, '39 and '43. Baldwin produced car bodies and Westinghouse produced the electrical equipment. In 1939, *BLW* introduced a standardized line of switching locomotives using the VO engines in 660- and 1,000-hp sizes. In 1945, *BLW* launched into a line of road locomotives. From 1947-50, Westinghouse had stock control of *BLW.*

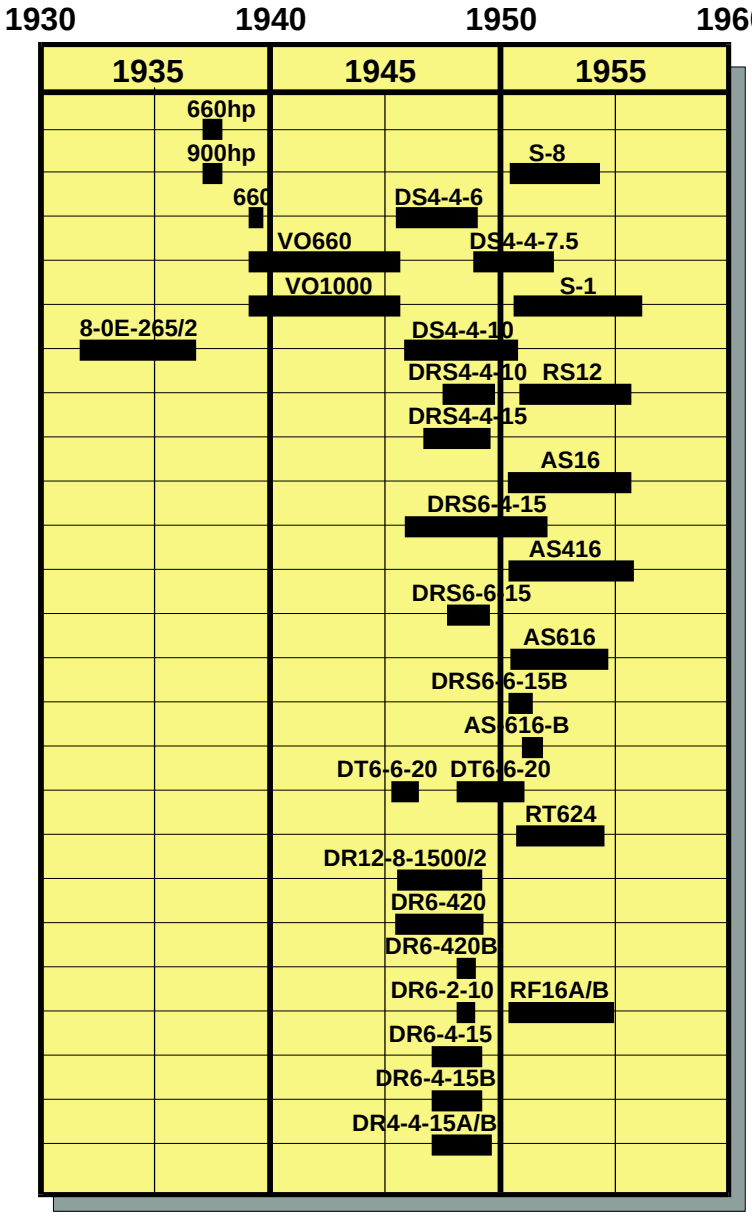
B. *Baldwin-Lima-Hamilton Corp. (BLH)*

In 1950, *BLW* merged with Lima and Hamilton. In 1953, Westinghouse announced its departure from the manufacture of heavy traction motors and locomotive control equipment. *BLH* switched to *GE* components. *BLW* built its last locomotives in 1956.

C. *Research at BLW*

While not a major player in total production, *BLW* did make substantial contribution to the motive power revolution in American railroading. In 1946-47, it built two steam turbine-electric locomotives for the Pennsylvania Railroad and, in 1954, the Jawn Henry steam turbine locomotive for the Norfolk and Western Railroad .

BALDWIN PRODUCTION SPAN



GENERAL MOTORS

A. *Electro-Motive Corporation (EMC)*

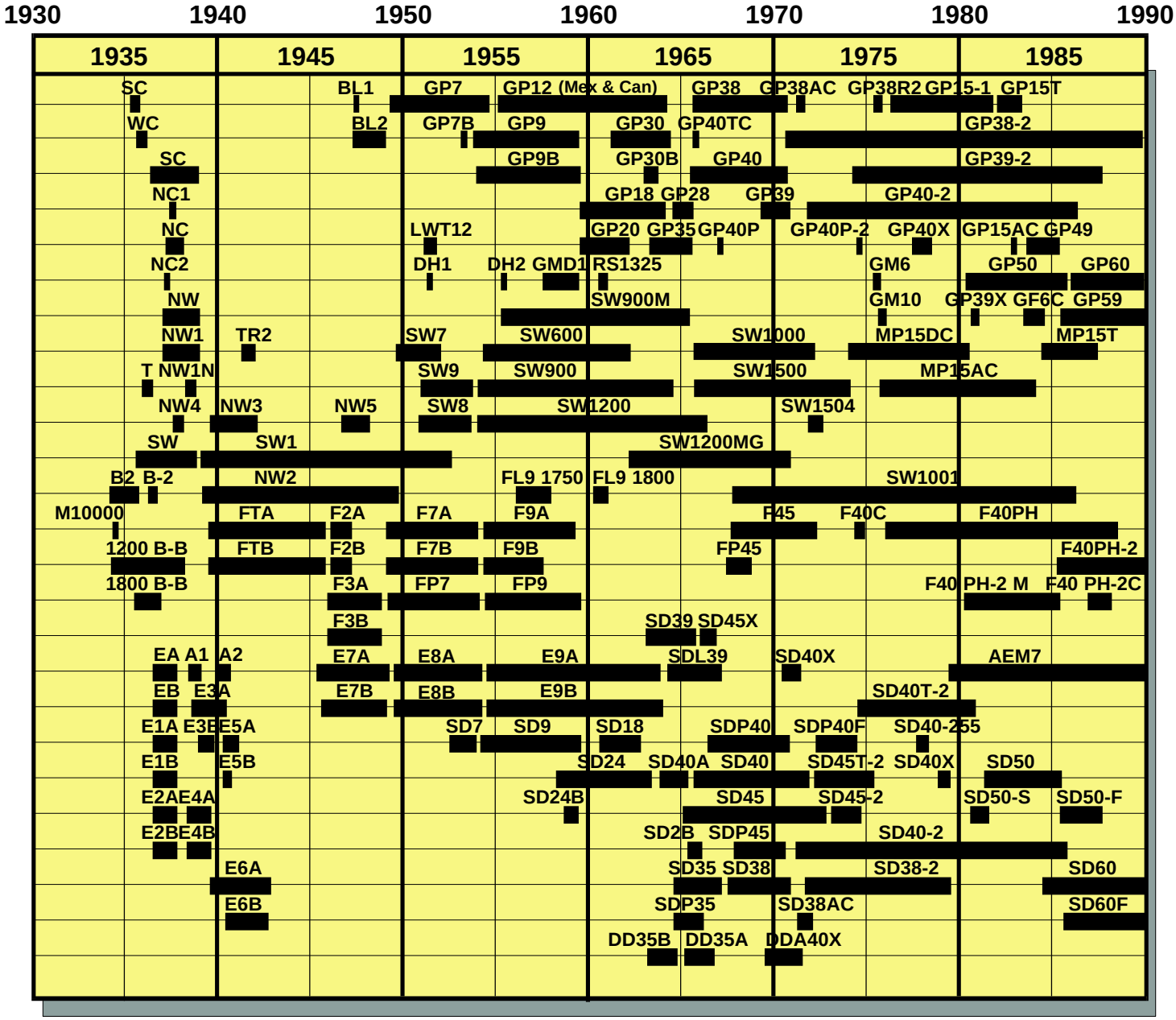
In 1930, General Motors acquired the Electro-Motive Corporation and the Winton Engine Company, manufacturers of gas-electric railcars and engines for this market. In 1934, *EMC* established their La Grange facility (in McCook, IL). *EMC* built some multi-unit passenger sets including the M10000.

GENERAL MOTORS - continued

Both passenger engines and a standard catalog of diesel switchers were being offered starting in 1935. Some dozen models were available by 1940.

In 1939, *EMC* introduced the FT locomotive sets that sounded the death knell for steam locomotives in the United States. World War II gave *EMC-EMD* a monopoly on freight diesel production.

GENERAL MOTORS PRODUCTION SPAN



GENERAL MOTORS - continued

B. *Electro-Motive Division of General Motors Corporation (EMD)*

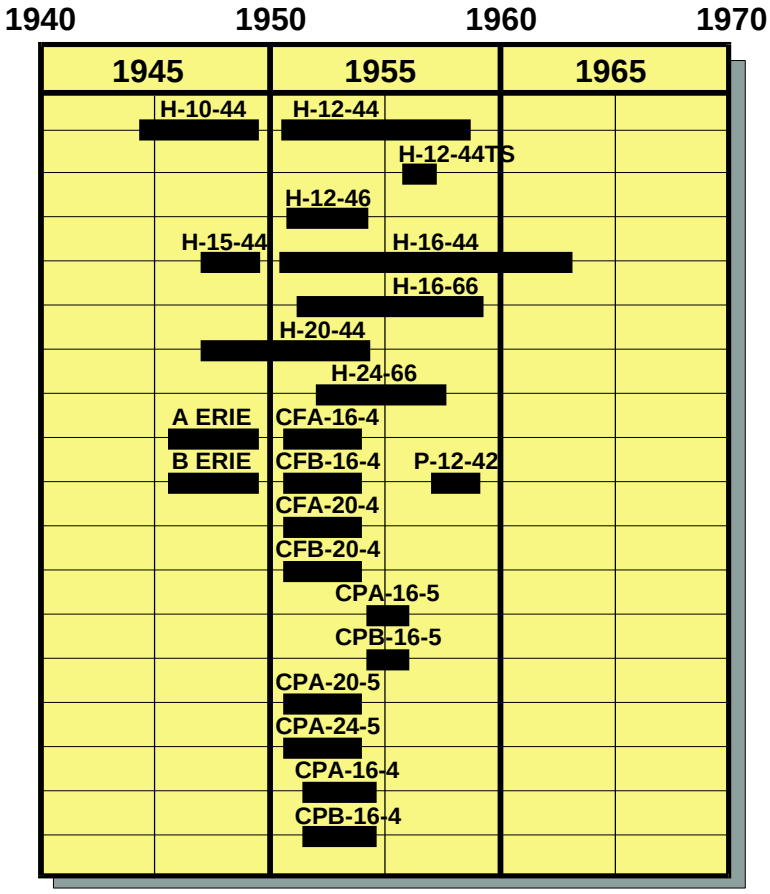
On January 1, 1941, the Electro-Motive Corporation and Winton Engine Company were merged to form the Electro Motive Division of General Motors. Locomotive construction continued at the La Grange facility. Until 1938, *EMC* used *GE* electrical components and occasionally Westinghouse. After that time, *EMC-EMD* developed and manufactured its own electrical components based on *GE* designs.

In 1950, *EMD* established a second locomotive manufacturing facility at London, Ontario, Canada, known as General Motors Diesel Ltd. *(GMDD).* In 1988, *EMD* suspended locomotive manufacturing at La Grange, transferring car body and assembly to *GMDD* at London. Component and parts production continue at *EMD* La Grange.

FAIRBANKS-MORSE

Fairbanks-Morse (FM) entered the railroad locomotive field by manufacturing diesel engine designs based on its marine diesel engines to repower old gas/electric rail units. At the close of World War II, it launched a line of locomotives for general railroad use. From 1944-58, it used *GE* and Westinghouse (until 1953) electrical components. In 1958, it built its last locomotive for the American market. Export deliveries to Mexico ended in 1963. Switchers were built by *F-M* but the road units were assembled by *GE* and, in Canada, by the Canadian Locomotive Company.

FAIRBANKS-MORSE PRODUCTION SPAN



GENERAL ELECTRIC

A. *General Electric (GE), The Supplier*

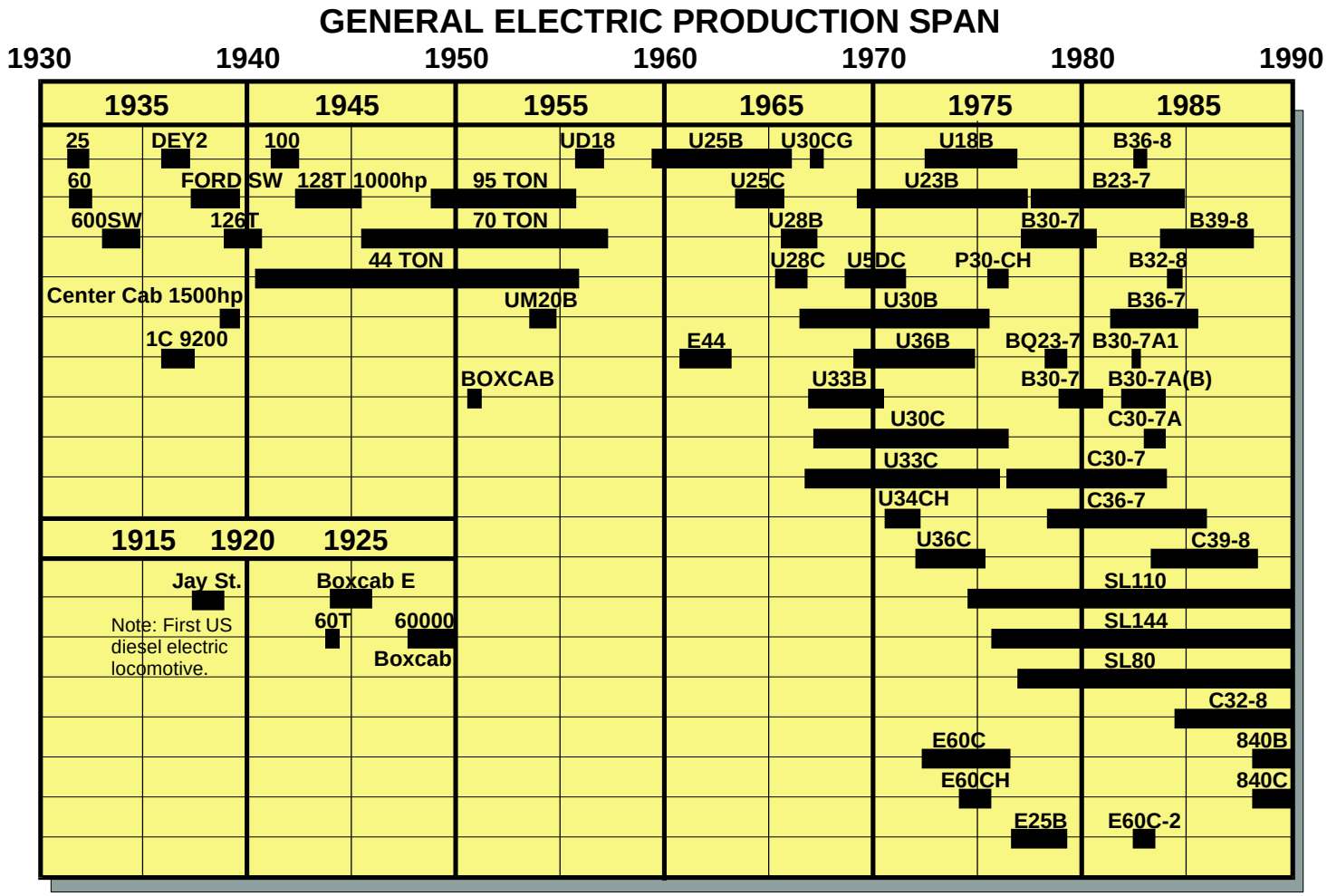
GE's roots are in supplying the electric traction industry, embracing streetcars, interurbans, heavy electric locomotives, and traction motors for diesel locomotives. At one point it supplied transmissions for gas-electric railcars. After dissolving several manufacturing partnerships, *GE* continued as a component supplier - even when finished locomotives were in direct sales competition !

B. *General Electric, The Innovator*

GE produced the first-known diesel locomotives in the United States in 1918. First was a 200-hp V-8 for the Jay Street Connecting Railroad. In partnership with *ALCO* (car bodies) and Ingersoll-Rand (engines), *GE* developed boxcab switchers in the 1920s

C. *General Electric Locomotives*

When *ALCO* left the *ALCO-GE-IR* partnership in 1930, *GE* and *IR* continued to build switchers,



GENERAL ELECTRIC - continued

mostly industrial-sized 44, 60 and 70 tonners.

From 1940-53, *GE* again became a partner with *ALCO,* marketing the jointly produced road locomotives.

From 1950 on, *GE* was heavily into the locomotive export market.

In the mid-1950s, *GE* worked at developing its own line of heavy road locomotives, introducing the U25-B in mid 1959, becoming a direct domestic competitor for *ALCO* locomotives. Within three years, *GE* had become dominant.

Today *GE* continues as one of the two principal builders, introducing new models as industry needs call for change.

GE PRODUCTION MODELS AND YEARS - as of 1/95

MODEL	PERIOD PRODUCED	APPROXIMATE # SOLD
Dash 8-32BWH	*12/91-	20
Dash 8-40B	*5/88-	150
Dash 8-40BW	*10/90-	83
Dash 8-40BWH	*4/93-`	44
C32-8	*9/84-	10
Dash 8-40C	*12/87-	130 (100-US/30 Can)
Dash 8-40CM	*2/90-	84 (Canada)
Dash 8-40CW	*12/89-	875
Dash 8-41CW	*9/93-	27
Dash 8-44CW	*7/93-	50
Dash 9-44CW	*11/93-	447 (424-US/23 Can)
AC44CW	*6/94-	68

* Indicates model still in production or still in the builder's catalog

MODEL	PERIOD PRODUCED	SOURCES
Dash 9-40CW	*1/96-	Model Railroading 4/96
Genesis I	4/93-	Trains 7/93
Genesis II	3/95-	Trains 7/95
AC6000CW	6/96-	Trains 12/96
9-44CWL	11/94(?)-	Trains 9/96

* Indicates delivery date

LIMA LOCOMOTIVE WORKS

Lima Locomotive Works (LLW) was a steam locomotive builder known for its "Super Power" in the heyday of steam. In 1949, it built its first diesel switcher with Westinghouse electrical components. In October 1950, *LLW* merged with *BLW.* In 1951, *LLW* production ended and was not absorbed by the *BLW* line.

LIMA LOCOMOTIVE WORKS
PRODUCTION SPAN

