

X28/29, M-26/-27, Proposed 1923 ARA Design and Related Box Auto Cars

Road	Class	Style	Builder	Lot/Order No.	Year	Quantity	Series Start	Series End	Cross-ties	Cross-beamers	Side Ladder	Trucks	Notes
B&M		Alternate ARA	BCF		1929	21	71954	71974	Duryea	Duryea	7	ARA Type Y	Duryea underframe; B&M 3-panel doors; Ajax geared hand brake
B&O	M-26	ARA	P-S		1926	2000	265000	266999	3'2-1/2"	9'10"	6/1		5'0" bolster -to-striker; KD brakes; Vertical staff hand brake; single door stop
B&O	M-26A	ARA	SSC		1926	1000	268000	268999	15-1/2"	9'9-1/4"	6/1		5'0" bolster -to-striker; KD brakes; Vertical staff hand brake; two widely spaced door stops
B&O	M-26A	ARA	BSC	DF 2680	1926	1000	269000	269999	15-1/2"	9'9-1/4"	6/1		5'0" bolster -to-striker; KD brakes; Vertical staff hand brake; two widely spaced door stops
B&O	M-26A	ARA	SSC		1927	500	270000	270499	15-1/2"	9'9-1/4"	6/1		5'0" bolster -to-striker; KD brakes; Vertical staff hand brake; two widely spaced door stops
B&O	M-26A	ARA	AC&F		1927	500	270500	270999	15-1/2"	9'9-1/4"	6/1		5'0" bolster -to-striker; KD brakes; Vertical staff hand brake; two widely spaced door stops
B&O	M-26A	ARA	PSC		1927	500	271000	271499	15-1/2"	9'9-1/4"	6/1		5'0" bolster -to-striker; KD brakes; Vertical staff hand brake; two widely spaced door stops
B&O	M-26B	1923 X29	BSC	DF 2435	1926	1000	267000	267999	15-1/2"	9'9-1/4"	6-1		5'0" bolster -to-striker; KD brakes; Ajax geared hand brake
B&O	M-26C	Alternate ARA	BCF		1928	1000	271500	272499	3'2-1/2"	9'10"	6/1		5'6" bolster -to-striker; KC brakes; Vertical staff hand brake; two closely spaced door stops (later changed to M-26A configuration)
B&O	M-26D	ARA	BCF		1928	1000	272500	273499	Duryea	Duryea	7		5' 10-3/4" bolster-to-striker; Duryea underframe; KD brakes; Ajax geared hand brake
B&O	M-26D	ARA	BCF		1929	250	273500	273749	Duryea	Duryea	7		5' 10-3/4" bolster-to-striker; Duryea underframe; KD brakes; Ajax geared hand brake
B&O	M-26D	ARA	BCF		1928	750	273750	274499	Duryea	Duryea	7		5' 10-3/4" bolster-to-striker; Duryea underframe; KD brakes; Ajax geared hand brake
B&O	M-26D	ARA	BCF		1929	2000	274500	276499	Duryea	Duryea	7		5' 10-3/4" bolster-to-striker; Duryea underframe; KD brakes; Ajax geared hand brake
B&O	M-26D	ARA	BCF		1930	1500	276500	277999	Duryea	Duryea	7		5' 10-3/4" bolster-to-striker; Duryea underframe; KD brakes; Ajax geared hand brake
B&O	M-26E	ARA	BCF		1931	1000	278000	278999	Duryea	Duryea	7		5' 10-3/4" bolster-to-striker; Duryea underframe; KD brakes; Ajax geared hand brake
B&O	M-27	ARA	SSC		1926	1000	290000	290999			6/1	Cast sideframe, integral journal boxes	10" wide, 1-1/2 doors; 9'0" IH; 5'0" bolster-to-striker; KC brakes; Vertical staff hand brake
B&O	M-27A	ARA	SSC		1926	500	291000	291499			6/1	Arch bar	12" wide, double doors; 9'0" IH; 5'0" bolster-to-striker; KC brakes; Vertical staff hand brake
B&O	M-27A	ARA	BSC	DF 2990	1926	500	291500	291999			6/1	Arch bar	12" wide, double doors; 9'0" IH; 5'0" bolster-to-striker; KC brakes; Vertical staff hand brake
C&O	B5-2	Modified ARA	SSC		1930	500	8000, 9001	9499	8'5-3/4"	32"	7	Cast sideframe, integral journal boxes	Creco door/ Creco hardware; Climax Radial roof; Dreadnaught ends; Vertical staff hand brake
C&O	B5-2	Modified ARA	SSC		1930	1000	8001	9000	8'5-3/4"	32"	7	Cast sideframe, integral journal boxes	Youngstown door/ Camel hardware; Climax Radial roof; Dreadnaught ends; Vertical staff hand brake
CGW		CGW Modified ARA	P-S Michigan City, IN		1930-1931	500	85000	85998			6-1	Dalman Two-Level	Unique side rivet pattern; "Reverse" 3-panel doors; 9'1-3/4" width over channel side sills (3" less than other prototypes); 18" straight grabs; KC brakes; Duryea underframes on 85900-85998
CGW		CGW Modified ARA	P-S Michigan City, IN		1931	500	86000	86998			6-1	Dalman Two-Level	Unique side rivet pattern; "Reverse" 3-panel doors; 9'1-3/4" width over channel side sills (3" less than other prototypes); 18" straight grabs; KC brakes
CGW		CGW Modified ARA	P-S Michigan City, IN	5498	1933	500	87000	87998			6-1	Coil elliptic	Unique side rivet pattern; "Reverse" 3-panel doors; 9'1-3/4" width over channel side sills (3" less than other prototypes); 18" straight grabs; KC brakes
CNJ		Alternate ARA	SSC			400	21000	21399	3'2-1/2"	9'10"	6-1	Dalman Two-Level	Hutchins Dry Lading roof; Top hung Creco doors; KC brakes
CNJ		Alternate ARA	BSC	DF 3029	1926	400	21400	21799	3'2-1/2"	9'10"	6-1	Dalman Two-Level	Hutchins Dry Lading roof; Top hung Camel corrugated doors; KC brakes
CNJ		Alternate ARA	ACF			200	19000	19199	3'2-1/2"	9'10"		Dalman Two-Level	Auto car; 10'0" IH; Hutchins Dry Lading roof; Top hung Camel corrugated doors; KC brakes
DTI		1923 X29			1924-1925		18000	18149	15-1/2"	9'9-1/4"	6-1	PRR 2DF4	
DTI		1923 X29			1924-1925		20000	20199	15-1/2"	9'9-1/4"	6-1	PRR 2DF4	
Duryea		1923 X29	SSC		10/1925	1			Duryea	Duryea	6-1	ARA cast sideframe	Duryea underframe
Erie		Modified ARA	PSC		1928	500	75000	75499	8'5-3/4"	32"	7	ARA cast sideframe	Youngstown door/ Camel hardware; Climax Radial roof; Dreadnaught ends with bulges at center joint; KD brakes
Erie		Modified ARA	GAC		1930	400	75500	75899	8'5-3/4"	32"	7	ARA cast sideframe	Youngstown door/ Camel hardware; Climax Radial roof; Buckeye ends
Erie		Modified ARA	GAC		1930	100	75900	75999	8'5-3/4"	32"	7	ARA cast sideframe	Youngstown door/ Camel hardware; Climax Radial roof; Buckeye ends
HPT&D		Alternate ARA	BCF		1929	25	401	425	Duryea	Duryea	7-1	ARA cast sideframe	Duryea underframe; 10'0" IH; Creco door; Ajax geared hand brake; two widely spaced door stops
LNE		Alternate ARA	PSC		10/1927	200	8001	8200	3'2-1/2"	9'10"	6-1	ARA Type Y	KC brakes; Carmer cut levers; X29 (5-rung) ladders w / grab
LNE		Alternate ARA	Magor		01/1931	300	8201	8500	3'2-1/2"	9'10"	6-1	ARA cast sideframe	KC brakes; Carmer cut levers; X29 (5-rung) ladders w / grab
LNE		Alternate ARA	Magor		12/1934	250	8501	8750	3'2-1/2"	9'10"	6-1	Coil elliptic	4/4 Dreadnaught ends; Murphy panel roof
MEC		Alternate ARA	SSC		1929	1004	5000	6003	3'2-1/2"	9'10"	6/1	ARA cast sideframe	early Viking roof; KC brakes
MTC (B&M)		Alternate ARA	BCF		1929	4	71996	71999	Duryea	Duryea		ARA Type Y	Duryea underframe; B&M 3-panel doors; Ajax geared hand brake
N&W	BPA	X28				1000	41000	41999	15-1/2"	9'9-1/4"	6-1	PRR 2DF4	Auxiliary door sealed in 1930's; Auxiliary door removed and main doors replaced with Youngstown in 1940's; Ajax brake wheel and housing added in late 1940's
NYC	Lot 504-B	1923 X29	Despatch		1925	100	97000	97099	15-1/2"	9'9-1/4"	6-1		

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PM		Modified ARA	SSC		1930	1500	82000	83499	8'5-3/4"	32"	7		Youngstown door / Camel hardware / "concealed" door rollers; Hutchins Dry Lading roof; Dreadnaught ends
PRR	X29	1923 X29				1868	90633	92500	15-1/2"	9'9-1/4"	6-1		Creco doors; KD brakes; Carmer cut levers; two closely spaced door stops
PRR	X29	1923 X29				2132	93995	96126	15-1/2"	9'9-1/4"	6-1		Creco doors; KD brakes; Carmer cut levers; two closely spaced door stops
PRR	X29					2051	97949	99999	15-1/2"	9'9-1/4"	6-1	PRR 2DF4	Creco doors; KD brakes; Carmer cut levers; two closely spaced door stops
PRR	X29					3949	502000	505948	15-1/2"	9'9-1/4"	6-1	PRR 2DF4	Creco doors; KD brakes; Carmer cut levers; two closely spaced door stops
PRR	X29	1923 X29				8000	566091	574090	15-1/2"	9'9-1/4"	6-1		Creco doors; KD brakes; Carmer cut levers; two closely spaced door stops
PRR	X29	1928 X29			1928-1929	5151	49314	54463	15-1/2"	9'9-1/4"	6-1	PRR 2DF4	Youngstown doors / "concealed" door rollers; some number of cars had two widely spaced door stops as a transitional configuration, but most had a single bottom door stop
PRR	X29	1928 X29	BSC	DF 5442	1930	3000	54464	57463	15-1/2"	9'9-1/4"	6-1	PRR 2DF4	Youngstown doors / "concealed" door rollers; Bottom door stop
PRR	X28	1928 X29				177	57464	57641	15-1/2"	9'9-1/4"	6-1	PRR 2DF4	Youngstown doors / "concealed" door rollers; Bottom door stop
PRR	X29	Late X29			1932, 1934	3325	100000	103324	15-1/2"	9'9-1/4"	6-1	PRR 2DF4	Youngstown doors / "concealed" door rollers; AB brakes; Bottom door stop
PRR	X28	1923 X29			1924	2900	28100	30999	15-1/2"	9'9-1/4"	6-1		9'3" IH; 10' door opening (4' auxiliary door); Creco doors; KD brakes; Carmer cut levers; Converted to single door cars beginning in 1933, reclassified as X28A and renumbered into 120012-125000, some doors replaced with Youngstown doors; door
PRR	X28	1923 X29			1924	100	37000	37099	15-1/2"	9'9-1/4"	6-1		9'3" IH; 10' door opening (4' auxiliary door); Creco doors; KD brakes; Carmer cut levers; Converted to single door cars beginning in 1933, reclassified as X28A and renumbered into 120012-125000, some doors replaced with Youngstown doors; door
PRR	X28	1923 X29	BSC	DF 2955	1926	600	57861	58460	15-1/2"	9'9-1/4"	6-1	PRR 2DF4	9'3" IH; 10' door opening (4' auxiliary door); Creco doors; KD brakes; Carmer cut levers; Converted to single door cars beginning in 1933, reclassified as X28A and renumbered into 120012-125000, some doors replaced with Youngstown doors; door
PRR	X28	1923 X29	ACF		1926	1400	58461	59860	15-1/2"	9'9-1/4"	6-1	PRR 2DF4	9'3" IH; 10' door opening (4' auxiliary door); Creco doors; KD brakes; Carmer cut levers; Converted to single door cars beginning in 1933, reclassified as X28A and renumbered into 120012-125000, some doors replaced with Youngstown doors; door
WLE		1923 X29			1925	1000	25000	25999	15-1/2"	9'9-1/4"	6-1	PRR 2DF4	Carmer cut levers
<b>Total</b>						<b>61058</b>							

**Ladders**

- 6-1 = six rung ladder plus one drop grab iron
- 6/1 = seven rung ladder with a drop grab for the bottom (seventh) rung
- 7 = seven rung ladder
- 7-1 = seven rung ladder plus one drop grab iron

**Car Types**

ARA Standard - ARA side sheathing configuration, Flat riveted panel roof, flat riveted ends, auto car style underframe (if not Duryea underframe)  
 1923 X29 "Standards" - 1923 X29 side sheathing configuration, Flat riveted panel roof, flat riveted ends, auto car style underframe; KD brakes  
 1928 X29 "Standards" - 1928 X29 side sheathing configuration, Flat riveted panel roof, flat riveted ends, auto car style underframe; KD brakes  
 1932 X29 "Standards" - 1928 X29 side sheathing configuration, Flat riveted panel roof, Dreadnaught ends with inward corrugations, auto car style underframe; AB brakes  
 Alternate ARA - ARA side sheathing configuration, 3'2-1/2" cross-tie and 9'10" cross-beamer spacing (from car center; if not Duryea underframe) flat riveted ends  
 Modified ARA - unique side sheathing configuration; cross-beamers under doors; Van Sweringen roads  
 CGW Modified ARA - unique side sheathing configuration; 3" narrower than other prototypes; "reverse" 3-panel doors

- AC&F - American Car & Foundry
- BC&F - Baltimore Car & Foundry
- BSC - Bethlehem Steel Car Co.
- GAC - General American Co.
- P-5 - Pullman Standard Car Manufacturing Co.
- PSC - Pressed Steel Car Co.
- SSC - Standard Steel Car Co.

**References:**

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