

# 1928 Gardner

2<sup>nd</sup> Series Models 75, 85, 95

Specifications

Source – MoToR January 1928

2<sup>nd</sup> Series Dec 1, 1927 – July 31, 1928

# Major Specifications of 1928 Cars

## Engine Details, Weight, Tire Size, Wheelbase, Axle Clearances Corrections in red

MAKE AND MODEL	Price cheapest 5-passenger closed model	Engine make and model	No. of cylinder and valve arrangement	Bore and stroke	Piston displacement	Taxable H. P.	Maximum brake H. P.	Compression			Weight cheapest 5-passenger closed model	Gear ratio	Tire size	Axle clearance for jack (tires inflated)		Wheel-base	Crankcase ventilating system	Oil filter or rectifier, make ★	Engine lubricating system, type	Chassis lubricating system, make	Fuel feed, make	Carburetor make as model
								Standard	Optional													
									Ratio	Ratio				Cost								
Gardner, 8-75.....	1395	Lycomg GT	8L	2 <sup>3</sup> / <sub>4</sub> x4 <sup>3</sup> / <sub>4</sub>	225.7	24.20	65@3200	5.00	.....	.....	4.88	31x6.00	9	13 <sup>1</sup> / <sub>2</sub>	122	.....	\$	Pr	Alemite	Stew	Sheblr SX222	
Gardner, 8-85.....	1875	Lycomg GS	8L	2 <sup>3</sup> / <sub>4</sub> x4 <sup>3</sup> / <sub>4</sub>	246.7	26.45	74@3200	5.00	.....	.....	.....	31x6.00	9	13 <sup>1</sup> / <sub>2</sub>	125	.....	Purol	Pr	Alemite	Stew	Sheblr SX222	
Gardner, 8-95.....	2275	Lycomg MD	8L	3 <sup>1</sup> / <sub>4</sub> x4 <sup>1</sup> / <sub>2</sub>	298.6	33.80	115@2200	5.35	.....	.....	.....	30x6.20	8	12 <sup>1</sup> / <sub>2</sub>	130	.....	Purol	Pr	Alemite	Stew	Sheblr SX222	
8-85 HP 86																						
Sheblr SX356																						
Sheblr SX356																						

8-85 HP 86

AC — AC Spark Plug Co  
 Alemite — Bassick Mfg Co  
 AlmZerk — Alemite Zerk — Bassick Mfg Co  
 Ball — Penberthy Injector Co  
 Bijur — Bijur Lubricating Corp

Gitz —  
 Hal Wn — Hall Winslow — Rich Tool Co  
 Handy — Handy Cleaner Corp  
 HWFil — HWFiltrator — Rich Tool Co  
 IreM — Ireland — Mathews  
 Kingst — Byrne Kingston & Co

Oilv — OilVac-Byrne, Kingston & Co  
 Purol — Purolator-Motor Improvements Co  
 Pr — Pressure  
 S — Sleeve  
 Sheblr — Wheeler Shebler Carburetor

Sp — Splash  
 Stew — Stewart Warner Speedometer Corp.  
 Stewrt — Stewart-Detroit Lubricator Co  
 Stromb — Stromberg Motor Devices Co  
 Swan — Swan Carburetor Co

Wall — Brandenburg Bros & Eeck  
 Zenith — Zenith Detroit Co  
 a — 4.38, 4.75, 5.08 Optional on all  
 b — 4.07, 4.54, 4.91 Optional models  
 c — 3.6, 3.8, 4, 4.25, 4.5, 4.75, 5, 5.1

**Caution:** Changes were made during the production run.  
 The June issue lists many of those changes

## MoToR - June 1928

# Engines, Pistons, Rings, Rods, Valves, Lubrication

MAKE AND MODEL	No. of cyl. & valve arrangement	Bore and stroke	Piston displacement	Taxable H. P.	Maximum brake H. P., R. P. M. in hundreds	Compression ratio		Crankcase ventilating system	Engine make and model	Engine mounting rubber	Piston			Piston ring			Wristpin bushing	Connecting rod bearing		Valves				Oil pressure to		Oil recommended	Normal oil pressure	Relief valve open, lbs.	Oil reservoir, quarts	Oil filter or rectifier	Chassis Lubrication									
						Standard	Optional				Clear- ance	Oil	Com.	Max. wall thickness	Head dia. (clear)	Tappet clear- ance		Main bearings	Connecting rods	Wrist pins	Camshaft bearings	Timing gear lubrication																		
																							Make or material	Greove depth	No. used							Width	No. used	Width	Intake	Exhaust	Angle of seat	Stem diameter	Intake .o	Exhaust .o
Gardner, 8-75....	8L	2 3/4 x 4 3/4	225.7	24.20	65@32	5.10	No	N	LGT	N	CI	16 3	146 2	2 1/2	1.005	2 1/8	1 1/2	15 1/8	1 1/4	1 1/4	a	1 1/4	06 H	08 H	Y	Y	N	N	N	P	Med	50@30	50	N	S	Alm				
Gardner, 8-85....	8L	2 3/4 x 4 3/4	246.7	26.45	85@34	5.10	No	N	LGS	N	NeBo	16 3	146 2	2 1/2	1.005	2 1/8	1 1/4	15 1/8	1 1/4	1 1/4	a	1 1/4	06 H	08 H	Y	Y	N	N	N	P	Med	50@30	50	N	Pur	Alm				
Gardner, 8-95....	8L	3 1/4 x 4 1/2	298.6	33.80	115@33	5.25	No	Y	LMD	N	NeBo	16 3	146 1	2 1/2	1.005	2 1/8	1 1/2	15 1/8	1 1/4	1 1/4	a	1 1/4	06 H	08 H	Y	Y	N	N	N	P	Med	30@30	50	N	Pur	Alm				

a—Inlet 30°, Exhaust 45°  
 Ad—Adjustable  
 Al—Aluminum  
 Alm—Alemite  
 AlZ—Alemite Zerk  
 B—Both  
 Bij—Bijur  
 Bow—Bowen

C—Cold  
 CI—Continental  
 C—Cast iron  
 d—Nelson Bohnelite & Lynite  
 DeLx—De Luxe  
 F—Front  
 Git—Gitz  
 H—Hot

Han—Handy  
 Hev—Heavy  
 HW—Hall Winslow  
 King—Kingston  
 L—Lycoming  
 L&M—Light in winter, medium in summer  
 Lyn—Lynite

M&H—Medium in winter, heavy in summer  
 Max—Maximum  
 Med—Medium  
 Myr—Myers  
 N—No  
 NeBo—Nelson Bohnelite

NkCI—Nickle cast iron  
 O—Overhead valves and camshaft  
 Otr—Oilmeter  
 P—Pressure  
 Pur—Purolator  
 R—Rear  
 S—Splash

SeStl—Semisteel  
 Skin—Skinner  
 Till—Tillotson  
 Wal—Wall  
 Y—Yes  
 Z—5.5 & 6  
 \$—Equipment not supplied



# Major Specifications of 1928 Cars

Make of Thermostat, Starting, Lighting and Ignition, Clutch, Axles, Brakes, Steering, and Springs

MAKE AND MODEL	Carburetor, size	Fuel filter, make	Air cleaner, make	Type, water circulation	Location of chassis serial number	Cooling		Electrical		Clutch		Drive		Axles		Brakes			Rear spring, type	Steering gear		Frame						
						Water thermostat, make	Radiator shut-ter, make	Igni-tion, make	Gener-ator, motor, make	Make	No. of driving discs	No. of driven discs	Transmission	Propulsion by	Rear		Front	Service		Hand	Type	Make	Make	Depth	Thickness	Flange width		
															Make	Type	Make	Type		Make							Location	
Gardner, 8-75.....	1 1/4	\$	\$	P	Fedco	Motrst	\$	DelRem	DelRem	B&B	2	1	Unit	Sp	Colmba	SF	Colmba	4	Mech	Colmba	Trans	SE	C&L	Ross	MdInd	7	1/8	2
Gardner, 8-85.....	1 1/4	Rafld	AMaze	P	Fedco	Yes	\$	DelRem	DelRem	B&B	12	1	Unit	Sp	Colmba	SF	Colmba	4	Hyd	Lockd	Trans	SE	C&L	Ross	MdInd	7	1/8	2
Gardner, 8-95.....	1 1/4	Rafld	AMaze	P	Fedco	Dole	\$	DelRem	DelRem	B&B	2	1	Unit	Sp	Colmba	SF	Colmba	4	Hyd	Lockd	Trans	SE	C&L	Ross	MdInd	7	1/8	2

\$ — Indicates equipment not fitted

A — Own rear Bendix front	Contal — Continental Motors Corp.	FmULFF — Frame under left front fender	LFFrHn — Left front frame horn	ODYneto — Owen Dyneto Corp	Salsby — Salisbury Axle Co	Till — Tillotson Mfg Co
AC — AC Spark Plug Co	DeJon — Electric Auto-lite Co	GasCo — GasCo-Lator, Bas-sick Mfg. Co	Lockd — Lockheed-Hydraulic Brake Co	Parish — Parish Pressed Steel Co	SE — Semi-elliptic	Tmken — Timken-Detroit Axle Co
Adams —	DelRem — Delco Remy Corp	Gemr — Gemmer Mfg Co	Long — Long Mfg Co	Rafld — Rayfield-Beneke Mfg Co	SF — Semi-floating	Tr — Transverse
AMaze — Air Maze Corp	DetPS — Detroit Pressed Steel Co	Handy — Handy Cleaner Corp	LRfm — Left rear frame member	RCMemb — Rear cross mem-ber	Sp — Springs	Trans — Transmission
AutoLt — Electric Auto-lite Co	Dole — Dole Valve Co	Hyd — Hydraulic	MdInd — Midland Steel Products Co	RFFram — Right front frame	Srvo — Servo-BK Booster	TT — Torque tube
B&B — Borg & Beek Co	DT — Double transverse	HydPS — Hydraulic Pressed Steel Co	Mech — Mechanical	Ross — Ross Gear & Tool Co	Stew — Detroit Lubricator Co	United — United Air Cleaner Co
Bndix — Bendix Brake Co	3/4E — 3/4Elliptic	Impr — Imperial Brass Mfg Co	Motrst — Motorstat-Bishop & Babcock Mfg Co	RR — Radius Rod	StPost — Steering post	W&G — Worm and gear
BLipe — Brown Lipe Gear Co	Eaton — Eaton Axle & Spring Co	Jacob — SaginawProductsCo,	Murphy — Murray Mfg Co	RRdCM — Right radiator cross member	Stromb — Stromberg Motor Devices Co	W&R — Worm and roller
Brown Lipe Chapin Co	3/4F — 3/4 Floating	LFFm — Left front frame member	NoEast — North East Elec-tric Co	RRFram — Right rear frame	Sylphn — Sylphon-Fulton Co	W&S — Worm and sector
C & L — Cam & lever	FE — Full elliptic			RRSRal — Right rear end side rail	TA — Torque Arm	W&W — Worm and wheel
Ca — Cantilever	FF — Full floating				ThrmCl — Thermo Cool-dayton Appliances Co	Westgh — Westinghouse
Clfrd — Clifford Mfg Co						4Whl — 4 Wheels
Colmba — Columbia Axle Co						

## Cylinders, Pistons, Rings, Connecting Rods—1928

MAKE AND MODEL	No. of cylinders and valve arrangement	Bore and stroke	Engine mounting rubber, front, rear or both	Engine	Cylinder bore finish	Piston					Piston ring		Wristpin			Wristpin bushing			Connecting rod		Connecting rod bearing										
						Make or material	Features	Weight, ounces	Clearance		Is lower groove drilled	Oil		Comp.	Max. wall thickness	Length	Locking method	Diameter	Outside diam.	Inside diam.	Length	Weight, ounces	Material	Material	Diameter	Length	Clearance	Make	Type of shims		
									Top	Bottom		No. used	Width																	No. used	Width
Gardner, 8-75.....	8L	2 3/4 x 4 3/4	.....	LyGT	.....	CIron	.....	16	016	003	Yes	2	1/8	2	1/8	120	2 3/8	Rod	1.005	7/8	37	37	Dural	Babb	2 1/8	.....	0015	Fedrl	None		
Gardner, 8-85.....	8L	2 5/8 x 4 3/4	.....	LyGS	.....	NeBohAlAl	.....	.....	016	003	Yes	2	1/8	2	1/8	120	2 3/8	Rod	1.005	7/8	37	37	Dural	Babb	2 1/8	.....	0015	Fedrl	None		
Gardner, 8-95.....	8L	3 1/4 x 4 1/2	.....	LyMD	.....	LycmgCI	.....	.....	.....	.....	Yes	1	1/8	3	1/8	120	2 1/8	.....	.....	.....	.....	.....	.....	Babb	2 1/8	.....	0015	Fedrl	None		

AlAl, AlAl, AlAl — Aluminum  
 AlySt — Alloy Steel  
 Babb — Babbitt  
 Boh — Bohalite  
 BrBB — Bronze backed Babbitt  
 Cn, Con, Cont, Contal — Conti-nental Motors Corp.

CIron — Cast Iron  
 CrNk — Chrome Nickel Steel  
 CStee — Carbon Steel  
 DeLuxe — DeLuxe Products Corp.  
 Fedrl — Federal Mogul Corp.

Fehrg — Fehrig  
 Flot — Floating  
 G — Ground  
 H — Honed  
 Invar — Invar Struts  
 L — Lapped

L, Ly, Lyc, Lycmg — Lycoming Motors Corp.  
 Lamd — Laminated  
 LtCI — Light Cast Iron  
 Lynit, Lynite — Aluminum C of America

Moly — Molybdenum  
 NckCI — Nickel Cast Iron  
 NeBoh, NeBohn — Nelson Bohalite  
 Pist — Piston  
 R — Reamed

Ribbd — Ribbed  
 S — Sleeve  
 SeStl — SemiSteel  
 Slottd — Slotted  
 Numbers which specify material refer to SAE specifications.



# Valves and Lubrication—1928

MAKE AND MODEL	Intake valve, make	Exhaust valve, make	Valve head				Angle of valve seat	Valve stem				Valve lift	Are valves with over-size stems made?	Tappet clearance		Valve spring pressure		Valve timing				Overhead valve lubrication	Oil pressure to										Chassis lubrication																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
			Intake		Exhaust			Material	Material	Length	Diameter			Intake	Exhaust	Intake	Exhaust	Opens	Closes	Opens	Closes		Main bearings	Connecting rods	Wrist pins	Crankshaft bearings	Timing gear lubrication	Oil pump, type	Oil, grade recommended	Normal oil pressure, pounds at m.p.h.	Pressure at which relief valves open	Capacity of oil reservoir, quarts	Oil pressure gauge, make	Drain oil, miles	Type of drain	Oil reservoir gauge type	External oil filter, make	Oil rectifier, make	Type	Make																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
			Material	Actual overall diameter	Material	Actual overall diameter																																			Intake	Exhaust	Intake	Exhaust	Opens	Closes	Opens	Closes	Main bearings	Connecting rods	Wrist pins	Crankshaft bearings	Timing gear lubrication	Oil pump, type	Oil, grade recommended	Normal oil pressure, pounds at m.p.h.	Pressure at which relief valves open	Capacity of oil reservoir, quarts	Oil pressure gauge, make	Drain oil, miles	Type of drain	Oil reservoir gauge type	External oil filter, make	Oil rectifier, make	Type	Make																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

# Fuel and Cooling Systems—1928

MAKE AND MODEL	Fuel system						Intake				Exhaust		Cooling system															Fan mak				
	Gasoline Tank		Feed	Gasoline filter make	Carburetor		Mixture heating	Heat adjustment	Electric mixture heating	Air cleaner make	Diam. exhaust pipe	Muffler, make	Circulation, type	Water pump	Thermostat, make	Radiator shutter		Radiator		Capacity, gallons	Radiator hose				Fan belt							
	Make	Capacity			Make and model	Size										Make	Control	Type	Make		Type	Make	Lower		Upper		Type		Coupling	Make	Length	Width
																							Inside diameter	Length	Inside diameter	Length						
Gardner, 8-75.....	Evans	16	Stew	\$	ShebSX222	1 1/4	.....	Fixed	\$	\$	2 1/4	Powell	P	Cent	Mostr	\$	.....	Clulr	Fedder	4 1/4	1 1/2	11-9	1 1/2	10	V	End	.....	42	5/8	Service		
Gardner, 8-85.....	Evans	16	Stew	\$	Rafld	ShebSX222	1 1/4	.....	Fixed	\$	\$	AMaz	2 1/4	Powell	P	Cent	Yes	.....	Clulr	Fedder	4 1/4	1 1/2	11-9	1 1/2	10	V	End	.....	42	5/8	Service	
Gardner, 8-95.....	Evans	16	Stew	\$	Rafld	ShebSX222	1 1/4	.....	Fixed	\$	\$	AMaz	2 1/4	Powell	P	Cent	Dole	.....	Clulr	Fedder	4 1/4	1 1/2	4-7	1 1/2	9	V	Coup	GratK	41	5/8	Service	

A—Air  
AC—AC Spark Plug Co.  
AF&B—Auto Fan & Bearing Co.  
AMaz—Air Maze Corp.  
Aut, Auto—Automatic  
AutoPrt—Auto Parts  
Ball—Penberthy Injector Co.  
Bufflo—Buffalo Pressed Steel Co.  
Car, Carter—Carter Carburetor Co.  
Chris—Christian  
Clatn—Clayton & Lambert Mfg. Co.  
Clifrd—Clifford Mfg. Co.  
Clulr—Cellular  
Cent—Centrifugal  
Contnl—Continental Motors Corp.  
Coup—Coupling  
Dayt—Dayton Rubber Mfg. Co.

Dole—Dole Valve Co.  
EJ—Exhaust Jacket  
End—Endless  
ES—Exhaust Stove  
Evans—Evans Mfg. Co.  
Fedder—Fedders Mfg. Co.  
Fedrl—Federal Rubber Co.  
Gasco—Gas-Co-Lator—Bassick Mfg. Co.  
Gates—Gates Rubber Co.  
Gilmer—Gilmer Co.  
Goodeh—B.F. Goodrich Tire & Rubber Co.  
Goodyr—Goodyear Tire & Rubber Co.  
GratK—Graton & Knight Co.  
Gray—Gray Hawley Mfg. Co.  
Handy—Handy Cleaner Co.  
Harisn—Harrison Radiator Corp.

Honey—Honeycomb  
HS—Hot Spot  
HT—Horizontal Tube  
HyDuty—Schwitzer Cummins Co.  
Imprl—Imperial Brass Mfg. Co.  
IreM—Ireland Mathews  
James—Jamestown Metal Equipment Co.  
Long—Long Mfg. Co.  
Man, Manl—Manual  
ManRb—Manhattan Rubber Mfg. Co.  
Marv, Marvel—Marvel Carburetor Co.  
Max—Maxim-Geuder, Paeschke & Frey Co.  
McRd—McCord Radiator & Mfg. Co.  
Modin—Modine Mfg. Co.  
Motrst—Motorstat-Bishop & Babcock Mfg. Co.

Murry—Murray Mfg. Co.  
Oakes—Oa'es Co.  
Oldbrg—Oldberg Mfg. Co.  
Olvc—Oil Vac—Byrne Kingston & Co.  
P—Pump  
Powell—Powell Muffler Co.  
Pratt—Pratt Chuck Co.  
Pres—Pressure  
Rafld—Rayfield-Beneke Co.  
R—Round  
RieNie—Durke Atwood Co.  
Service—Service Products Co.  
Sheb, Sheblr—Wheeler Schebler Carburetor Co.  
Spartn—Sparton-Sparks Withington Co.  
Stew—Stewart Warner Speedometer Corp.  
Stewrt—Stewart-Detroit Lubricator Co.

Strm, Stromb—Stromberg Motor Device Co.  
Swan—Swan Carburetor Co.  
Sylphn—Sylphon-Fulton Co.  
T—Thermo Syphon  
ThrCl—Ther-mo-Cool—Dayton Appliances Co.  
Till—Tillotson Mfg. Co.  
United—United Air Cleaner Co.  
V—Vane  
VP—Vacuum tank with vacuum pump  
VT—Vertical Tube  
Wintr—Pines Winterfront  
Wstrn—Western Metal Specialty Co.  
Zen, Zenith—Zenith Detroit Co.  
\$ Indicates equipment not fitted



# Generator and Lighting Circuits—1928

MAKE AND MODEL	Generator														Am-meter, make	Lighting switch, make	Lights														Horn		
	Make	Voltage regulation	Fuse capacity	Thermostat opening temperature	Cutout relay					Maximum normal charging rate				Candle power					Head				Side make	Tail make	Dash make	Type	Amperage draw						
					Make	To close			Amperes—To open	Hot	Cold	Armature speed	Car speed	Voltage			Big head	Small head	Side	Tail	Dash	Tail and dash in series						Double filament bulbs	Make	Reflector, make	Cover glass		
						Armature speed	Volts	Car speed																							Make	Diameter	
Gardner, 8-75.....	Del-Rm	3	No	150	Del-Rm	675	6	2.5	9	19	1450	30	6	Natnl	Del-Rm	21	3	.....	3	2	No	Yes	Coren	TwnBm	Mongrm	9 1/4	.....	Coren	Natnl	..	Klaxon	6	
Gardner, 8-85.....	Del-Rm	3	No	150	Del-Rm	675	6	2.5	9	19	1450	30	6	Natnl	Del-Rm	21	3	.....	3	2	No	Yes	Coren	TwnBm	Glolt	9 1/4	.....	Coren	Coren	Natnl	..	Spartn	4
Gardner, 8-95.....	Del-Rm	3	No	150	Del-Rm	675	6	2.5	9	19	1450	30	6	Natnl	Del-Rm	21	3	.....	3	2	No	Yes	Coren	Coren	Glolt	9 1/4	.....	Coren	Coren	Natnl	..	.....	..

AC—AC Spark Plug Co.  
Access—Accessories Mfg. Co.  
AGA—AGA AutoLamp Co.  
AutoLt—Electric Auto-Lite Co.  
Basco—Briggs & Stratton Co.  
Bausch—Bausch & Lomb Optical Co.

Cor, Coren—Corcoran Lamp Co.  
Cuno—Cuno Engineering Corp.  
DeJon—Electric Auto-Lite Co.  
DelRem—Delco Remy Corp.  
Delta—Delta Electric Corp.  
Depr. Bm—Depressed beam

Gu, Guide—Guide Motor Lamp Mfg. Co.  
Hall—Hall Lamp Co.  
IRyn—Illco Ryanlite—Indiana Lamp Co.  
Ind, Indna—Indiana Lamp Co.  
Kellog—Kellogg  
Klaxon—Klaxon Co.

NEast, NoEast—North East Electric Co.  
ODYnto—Owen-Dyneto Corp.  
Opt—Optional  
Parabm—Parabeam  
Roach—Roach Appleton  
Dress—

Stew—Stewart Warner Speedometer Corp.  
Stover—Stover Signal Eng. Co.  
TiltRay—Tilt Ray  
Twn Bm—Twin Beam  
US—U. S. Gauge Co.  
V—Viktor

# Clutch, Transmission, Drive Shaft—1928

MAKE AND MODEL	Clutch													Transmission							Drive shaft				Propulsion	
	Make	Disc		Oil or dry	Material	Facing				Adjustable	Brake		Universal, make	Make	Location	Speeds forward	Total gear ratio				Front universal		Rear universal			
		No. of driving	No. of driven			Diam.	Thickness	No. required	Yes or No		Adjustable	High					Second	Low	Reverse	Make	Type	Make	Type			
																								Inside		Outside
Gardner, 8-75.....	B&B	2	1	Dry	Asbest	6 1/8	8 7/8	1 1/8	2	Yes	No	No	No	Warner	Unit	3	4.88	8.24	15.19	18.44	Cleve	Metal	Cleve	Metal	Sp	
Gardner, 8-85.....	B&B	2	1	Dry	Asbest	6 1/8	8 7/8	1 1/8	2	Yes	No	No	No	Warner	Unit	3	.....	.....	.....	.....	Cleve	Metal	Cleve	Metal	Sp	
Gardner, 8-95.....	B&B	2	1	Dry	Asbest	6 3/4	9 7/8	1 1/8	2	Yes	No	No	No	Warner	Unit	3	.....	.....	.....	.....	Cleve	Metal	Cleve	Metal	Sp	

Asbest—Asbestos  
B&B—Borg & Beck Co.  
BLipe—Brown Lipe Chapin Co.  
Cleve—Cleveland Universal Parts Co.  
DG&M—Detroit Gear & Machine Co.

Fbric—Fabric  
Long—Long Mfg. Co.  
Mechan—Mechanics Machine Co.  
Muncie—Muncie Products  
Raybst—Raybestos

RR—Radius Rod  
Spicer—Spicer Mfg. Corp.  
Sp—Springs  
TA—Torque Arm

TT—Torque Tube  
Univer—Universal Products Co.  
Warner—Warner Gear Co.  
a 4.38, 4.75, 5.08 Optional on all models

b 4.07, 4.54, 4.91 Optional on all models  
c 3.6, 3.8, 4, 4.25, 4.5, 4.75, 5, 5.25, 5.5  
Optional on all models  
\$ Indicates equipment not fitted



# Ignition—Battery—Starting Motor—1928

MAKE AND MODEL	Ignition unit						Coil				Spark plug			Battery						Starting motor						No. of teeth				
	Make	Degrees advanced		Breaker gap	Timing		Condenser, make	Make	Amperage draw			Ignition switch	Thread	Shell	Make	Make	Shipped wet or dry	Bench charging rate		Terminal grounded	Make	Normal armature speed	Normal amperage draw	Normal running amperage and torque	State, amperage and torque		Drive, type	Pinion mesh, front or rear		
		Manual	Automatic		Degrees-Spark retarded	Firing order			Engine stopped	Engine running	Ballast fitted							Start	Finish										Voltage	
Gardner, 8-75.....	Del-Rm	15	15	.018	5A	16258374	Del-Rm	Del-Rm	4½	6	No	Del-Rm	Std	.....	Champ	Prest	Wet	120	4	4	6	P	Del-Rm	1520	145	2@145	15@450	Bendix	F	97
Gardner, 8-85.....	Del-Rm	15	15	.018	5A	16258374	Del-Rm	Del-Rm	4½	6	No	Del-Rm	Std	.....	Champ	.....	.....	.....	.....	.....	P	Del-Rm	1520	145	2@145	15@450	Bendix	F	97	
Gardner, 8-95.....	Del-Rm	15	15	.018	5A	16258374	Del-Rm	Del-Rm	4½	6	No	Del-Rm	Std	.....	Champ	.....	.....	.....	.....	.....	.....	Del-Rm	2000	155	2@155	15@570	Bendix	F	121	

A—After Dead Center  
AutoLt—Electric Auto-Lite Co.  
B—Before Dead Center  
Basco—Briggs & Stratton Co.  
Bendix—Eclipse Machine Co.  
Chum—Chum Mfg.

DeJon—Electric Auto-Lite Co.  
DelRm—Delco Remy Corp.  
Eltrik—Electrolock—Mitchell Specialty Co.  
Exide—Electric Storage Battery Co.  
ExLg—Extra long  
F—Front

Met—Metric 18 mm.  
N—Negative  
NoEast—North East Electric Co.  
ODynto—OwenDyneto Corp.  
P—Positive  
Pipe—Pipe 1/2 inch

R—Rear  
Soreng—Soreng-Manegold C  
Std—Standard 1/8 inch  
USL—U. S. Light & Heat C  
Will—Willard Storage Battery  
\* Indicates spark full advance

# Rear Axles—Tires—Springs—1928

MAKE AND MODEL	Rear axle											Axle clearance (tires inflated)		Tires				Rims			Springs										Shackles				
	Make	Type	Road clearance	Differential make	Gearing			Pinion adjustment	Pinion bearing adjustment	Pinion bearing in sleeve	Front	Rear	Make	Size	Number of plies	Inflation pressure		Make	Diameter	Width	Front					Rear					Spring lubrication	Type	Make		
					Type	Ring gear	Pinion									Ratio	Front				Rear	Make	Material	Length	Width	No. of leaves	Type	Make	Material	Length				Width	No. of leaves
Gardner, 8-75.....	Colmba	SF	9	NwProc	Spiral	44	9	4.88	Screw	Screw	.....	.....	13 1/4	Various	31x6.00	4	30	35	MoWhl	19	2 1/4	SE	DetSP	Comp	36	2	9	SE	DetSP	Comp	54	2 1/2	10	Graph	.....
Gardner, 8-85.....	Colmba	SF	9	NwProc	Spiral	44	9	4.88	Screw	Screw	.....	.....	13 1/4	Various	31x6.00	4	30	35	MoWhl	18	2 1/4	SE	DetSP	Comp	36	2	10	SE	DetSP	Comp	54	2 1/2	10	Graph	.....
Gardner, 8-95.....	Colmba	SF	9	NwProc	Spiral	44	9	4.88	Screw	Screw	.....	.....	12 1/4	Various	30x6.20	4	30	35	MoWhl	18	2 1/4	SE	DetSP	Comp	38	2	10	SE	DetSP	Comp	57	2 1/2	11	Graph	.....

AlSt—Alloy Steel  
Armst—Armstrong Rubber Co.  
Belfx—Beldex  
Bimel—Bimel Spike & Auto Wheel Co.  
B&S—Ball & Sockets  
BLiPe—Brown Lipe Gear Co.  
Budd—Budd Wheel Co.  
Ca—Cantilever  
Champ—Champ Spring Co.  
Clark—Clark Equipment Co.

Cleve—Cleveland Welding & Mfg. Co.  
Clmba—Columbia Axle Co.  
Comp—Composition  
CrmVan—Chrome Vanadium  
CSteel—Carbon Steel  
DetSP—Detroit Pressed Steel Co.  
DT—Double transverse  
1/4E—1/4 Elliptic

Eat, Eaton—Eaton Axle & Spring Co.  
1/4F—1/4 Floating  
Fafnir—Fafnir Bearing Co.  
Fairmt—Fairmont Machine Co.  
FE—Full Elliptic  
FF—Full Floating  
Fra, Firest—Firestone Steel Products Co.  
—Firestone Tire & Rubber Co.

Fisk—Fisk Tire & Rubber Co.  
Goodrich—Goodrich Rubber Co.  
Gdy, Goodyr—Goodyear Tire & Rubber Co.  
Graph—Graphite  
Gredg—Gredg  
Harvey—Harvey Spring & Forging Co.  
Hayes—Hayes Wheel Corp.  
Hypd—Hypoid

Jaxon—Jaxon Steel Products Co.  
Kelsey—Kelsey Wheel Co.  
Mather—Mather Spring Co.  
MWhl—Motor Wheel Corp.  
NewProc—New Process Gear Corp.  
Penn—Penn Spring Co.  
Perch—Spring Perch Co.  
RSIn—Rubber Shock Insulator Co.

Salsby—Salisbury Axle Co.  
SE—Semi-Elliptic  
SF—Semi-Floating  
SilMan—Silico Manganese  
StdSS—Standard Spring Steel Co.  
Studeb—Studebaker  
Timkn—Timken Co.  
Tr—Transverse  
Tryon—Tryon  
Va—Various



## Steering Mechanism, Front Axle and Brakes—1928

MAKE AND MODEL	No. of cylinders	Steering							Front axle			Foot brake														Hand brake										
		Gear			Turns of wheel for full swing	Car turning radius	Caster angle	Camber angle	Toe-in, inches	Make	Section type	End type	2- or 4-wheel brakes	Type	Make	Rear				Front				Per cent braking on rear wheels	Total braking area	Location	Internal or external	Drum diameter	Lining							
		Type	Make	Ratio												Drum diameter	Internal or external	Lining				Drum diameter	Internal or external						Lining							
																		Length per wheel	Width	Thickness	Clearance								Length per wheel	Width	Thickness	Clearance				
inner, 8-75	8	C&L	Ross		2.83	20	2		1/4	Colmba	I	REH	4	Mech	Colmba	13 3/4	Int	35	1 3/4	3/4	.020	13 3/4	Int	35	1 3/4	3/4	.020	50	200	Trans	Ext	8	24	2	3/4	1 1/4
ardner, 8-85	8	C&L	Ross		2.83	20	2		1/4	Colmba	I	REH	4	Hyd	Lockd	12	Int					12	Int							Trans	Ext	8	24	2	3/4	1 1/4
ardner, 8-95	8	C&L	Ross		3	21 1/4	2		1/4	Colmba	I	REH	4	Hyd	Lockd	14	Int					14	Int					50		Trans	Ext	8	24	2	3/4	1 1/4

A—Own, Rear—Bendix, Front	C&L—Cam & Lever	Ell—Elliott	Hyd—Hydraulic	Lockd—Lockheed—Hydraulic	REH—Reverse Elliott	Timken—Timken-Detroit	Tu—Tubular	W&R—Worm & Roller
Adams—Bendix Brake Co.	Colmba—Columbia Axle Co.	Ext—External	Int—Internal	Brake Co.	Ross—Ross Gear & Tool Co.	Co.	W&G—Worm & Gear	W&S—Worm & Sector
Bendix—Bendix Brake Co.	Eaton—Eaton Axle & Spring Co.	Geim—Gemmner Mfg. Co.	Jacob—Jacobs Products Co.	Midlnd—Midland Steel Products Co.	Salsby—Salisbury Products Co.	Trans—Transmission	W&N—Worm & Nut	W&W—Worm & Wheel
								4 Whls—4 Wheels

## Crankshaft, Timing Gears and Camshaft—1928

MAKE AND MODEL	Vibration damper or front flywheel	Main bearings		Crankshaft			Crankshaft bearings								Crankshaft gear		Camshaft gear		Generator gear		Timing chain					
		Material	Clearance	Material	Counter-balanced	End play	No. 1 diameter and length	No. 2 diameter and length	No. 3 diameter and length	No. 4 diameter and length	No. 5 diameter and length	No. 6 diameter and length	No. 7 diameter and length	Which takes thrust	Material	Make	Material	Make	Material	Make	Make	Length	Width	Number of links	Pitch	Adjustment
Gardner, 8-75.....	VD	.....	.002	.....	No	.004	2 3/8x1 3/4	2 3/8x1 1/2	2 3/8x1 1/2	2 3/8x1 1/2	2 3/8x1 3/4	.....	.....	3	.....	.....	.....	.....	.....	.....	Morse 45	24 1/2	1 1/4	49	1 1/4	No
Gardner, 8-85.....	VD	.....	.002	.....	No	.004	2 3/8x1 3/4	2 3/8x1 1/2	2 3/8x1 1/2	2 3/8x1 1/2	2 3/8x1 3/4	.....	.....	3	.....	.....	.....	.....	.....	.....	Morse 45	24 1/2	1 1/4	49	1 1/4	No
Gardner, 8-95.....	VD	BrBB	.002	.....	No	.004	2 3/8x2 3/8	2 3/8x1 3/4	2 3/8x1 1/2	2 3/8x1 1/2	2 3/8x2 3/8	.....	.....	2	.....	.....	.....	.....	1020	LkBlt	LkBlt	34	1 1/2	85	1 1/4	Manl

AlySt—Alloy Steel  
 Auto—Automatic  
 Babb—Babbitt  
 BrBB—Bronze backed Babbitt  
 Celrn—Celoron Co.—division of Diamond State Fibre Co.  
 CIron—Cast Iron

CMan—Carbon Manganese  
 Comp—Composition  
 Cont—Continental Motors Corp.  
 CrNk—Chrome Nickel Steel  
 CStee—Carbon Steel  
 DRem—Delco Remy Corp.  
 FF—Front Flywheel

GE—General Electric Co.  
 LkBlt—Link Belt Co.  
 Lycom—Lycoming Motors Corp.  
 Manl—Manual  
 Morse—Morse Chain Co.  
 NkSt—Nickel Steel  
 Ramsy—Ramsey Chain Co.

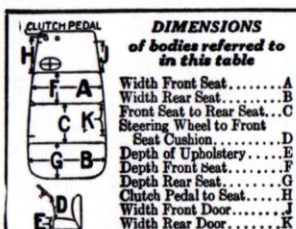
SeStl—Semi Steel  
 Silnt—Silent Chain Co.  
 Texto—Textolite-General Electric Co.  
 VD—Vibration Damper  
 Numbers which specify material refer to SAE specifications.

1—Packard 443—No. 8 2 3/8x No. 9 2 3/8x  
 2—Stearns Knight H. J.—No. 8 3x1 1/4 No. 9 3x3  
 3—Stuts BB—No. 8 2 3/8x1 1/4 No. 9 2 3/8x2 3/8



# Body Details and Tire Equipment of 1928 Cars

MAKE AND MODEL	Body model	Price and passengers	Seating arrangement	Make of body	Body material			Number of doors	Hardware	Finish			Standard upholstery						Top material	Front pillar width	Type top frame	Type seat cushions	Type seat backs	Body dimensions (See diagram at foot of page 234)											Tires		Wind-shield	Spare rim or wheel																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
					Frame work	Panels	Rear and quarter sec.			Color	Paint	Cushions and backs			Side and head lining			A						B	C	D	E	F	G	H	J	K	Size	Type																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
												Make	Below belt	Above belt	Striping	Make	Make																		Color	Type			Make	Color	Type	Make																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Gardner, 8-75.....	Roadster	1195-4	6	Centrl	Comp	Steel	Steel	2	Dura	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous	Vari-ous



Alum—Aluminum  
Andran—Anderson Body Co.  
Arco—Arco Co.

Baker—Baker-Rauland Co.  
Basco—Briggs & Stratton Co.  
BC, BrClth—Broadcloth Bldgmt—Biddle & Smart Co.  
Blum—Blumenthal & Co.  
Boyd—J. F. Boyd Co.  
Briggs—Briggs Mfg. Co.  
Brunn—Brunn's Carriage Mfg. Co.  
Butl, Butler—Butler Chain Co.  
Budd—Budd Mfg. Co.  
Bur—Burbank-Laidlaw Co.  
Carr—  
Cen, Centri—Central Mfg. Co.  
Chase—  
Collin—Collins & Aikman  
Camp—Composite  
Crbn—Corbin Cabinet Lock Co.

Credoy—Corderoy  
CrReh—Crompton-Richmond  
DetA—Detroit Accessories Corp.  
Ditz—Ditzler Color Co.  
Duntx—Dunetex-Duncan Co.  
Dr, Dura—Dura Co.  
DuPont—du Pont de Nemours & Co.  
Eagle—Eagle Ottawa Leather Co.  
Engish—English & Mersi  
Fbr—Fabric  
Fer, Ferro—  
Fisher—Fisher Body Corp.

Fleed—Fleetwood Body Corp.  
Fold—Folding  
Gats—Gates Mfg. Co.  
Glid—Glidden  
Hale—Hale Kilburn  
Hartz—J. C. Hartz Co.  
Hin, Hsen—Hinson Mfg. Co.  
Hylon—  
ImLhr—Imitation leather  
K—Keep Klean Kover Co.  
Kelg—Kellogg Mfg. Co.  
LeBarn—LeBaron  
Limane—Limousine Body Co.

Loche—  
Lthr—Leather  
McFln—McFarlan  
Merit—Meritas  
Merid—  
Mh—Mohair  
Mills—Millsbaugh & Irish  
Minax—  
Mono—Mono control  
Mounts—Mountain Varnish & Color Works  
Murco—  
Murray—Murray Body Co.

No. 9—Divided front seat  
No. 10—Undivided front seat

Oaks—Oakes Co.  
Ohio—Ohio Body Co.  
Parox—Paroxlyn  
Philips—Philips Custom Body Co.  
Prfetrn—Perfection Heater & Mfg. Co.  
R—Rim  
Robbin—Robbins Body Corp.  
Seaman—Seaman Body Corp.  
Sedon—Sedan Body Corp.  
Shend—Shepard Co.  
StdTex—  
Stud—Studebaker

No. 11—Two doors.  
No. 12—Three doors.  
No. 13—Four doors.

Stwrt—Stewart Co.  
Ternst—Ternstedt Mfg. Co.  
Tldo—Toledo  
Unn, Union—Union City Body Co.  
Val—Valentine & Co.  
Vario—Various  
Velmo—  
Vent—Ventilating  
VV—  
W—Wheel  
Walker—Walker Body Co.  
Weyman—  
Wilson—Wilson Mfg. Co.

No. 14—Open car; or closed car having front compartment with roof and open sides.  
No. 15—Front compartment without roof.  
No. 16—Front compartment closed—no partition.  
No. 17—Front compartment closed—sliding partition.  
No. 18—Front compartment closed—stationary partition.  
No. 19—Open car; or closed car having front compartment with roof and open sides.  
No. 20—Front compartment without roof.  
No. 21—Front compartment closed—no partition.  
No. 22—Front compartment closed—sliding partition.  
No. 23—Front compartment closed—stationary partition.

Yale—Yale & Towne Mfg. Co.  
Zapan—  
\$ indicates equipment not fitted

1. With partition  
2. Divided front seat  
3. No roof over front seat



## Equipment Used on 1928 Cars

MAKE AND MODEL	Body model	Price and passengers	Wheel-base	Weight	Gear ratio	Compression ratio	STANDARD EQUIPMENT INCLUDED IN LIST PRICE																																		
							Speedometer	Clock	Gasoline gauge			Car lock		Thermometer		Cigar lighter	Smoking set	Vanity case	Rear view mirror	Stop light	Spot light	Back-light	Wind-shields	Windshield cleaner		Car heater	Front bumper	Rear bumper		Trunk rack	Trunk	Standard wheels		Shock absorbers	Spring covers						
									Make	Make	Make	Type	Location	Make	Type									Make	Location			Make	Make			Make	Make			Make	Make	Type	Make	Make	Make
Gardner, 8-75	Roadster	1195-4	122	4.3	5	Stewrt	Yes	Natnl	Eltrc	Dash	DelRm	Ignitn	Natnl	Dash	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Vac	Folbth	Prfctn	CG	CG	CG	CG	Yes	Yes	Wood	MoWh	Gabrl2	Anden		
Gardner, 8-75	Sedan	1495-6	122	4.88	5	Stewrt	Yes	Natnl	Eltrc	Dash	DelRm	Ignitn	Natnl	Dash	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Vac	Folbth	Yes	CG	CG	CG	CG	Yes	Yes	Wood	MoWh	Gabrl2	Anden		
Gardner, 8-75	Victoria	1295-	122	4.88	5	Stewrt	Yes	Natnl	Eltrc	Dash	DelRm	Ignitn	Natnl	Dash	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Vac	Folbth	Yes	CG	CG	CG	CG	Yes	Yes	Wood	MoWh	Gabrl2	Anden		
Gardner, 8-75	Coupe	1295-	122	4.88	5	Stewrt	Yes	Natnl	Eltrc	Dash	DelRm	Ignitn	Natnl	Dash	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Vac	Folbth	Yes	CG	CG	CG	CG	Yes	Yes	Wood	MoWh	Gabrl2	Anden		
Gardner, 8-75	ClubSedan	1395-	122	4.88	5	Stewrt	Yes	Natnl	Eltrc	Dash	DelRm	Ignitn	Natnl	Dash	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Vac	Folbth	Yes	CG	CG	CG	CG	Yes	Yes	Wood	MoWh	Gabrl2	Anden		
Gardner, 8-85	Roadster	1605-4	125	5	Stewrt	Elgin	Natnl	Eltrc	Dash	DelRm	Ignitn	Natnl	Dash	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Vac	Folbth	Prfctn	BallCr	BallCr	BallCr	BallCr	Yes	Yes	Wood	MoWh	Yes	Anden		
Gardner, 8-85	Brougham	1875-5	125	5	Stewrt	Elgin	Natnl	Eltrc	Dash	DelRm	Ignitn	Natnl	Dash	Cuno	Yes	Yes	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	Vac	Folbth	Prfctn	BallCr	BallCr	BallCr	BallCr	Yes	Yes	Wood	MoWh	Yes	Anden		
Gardner, 8-85	Sedan	1895-5	125	5	Stewrt	Elgin	Natnl	Eltrc	Dash	DelRm	Ignitn	Natnl	Dash	Cuno	Yes	Yes	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	Vac	Folbth	Prfctn	BallCr	BallCr	BallCr	BallCr	Yes	Yes	Wood	MoWh	Yes	Anden		
Gardner, 8-85	CustomCoupe	2065-	125	5	Stewrt	Elgin	Natnl	Eltrc	Dash	DelRm	Ignitn	Natnl	Dash	Cuno	Yes	Yes	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	Vac	Folbth	Prfctn	BallCr	BallCr	BallCr	BallCr	Yes	Yes	Wood	MoWh	Yes	Anden		
Gardner, 8-95	Roadster	2095-4	130	5.35	5	Stewrt	Elgin	Natnl	Eltrc	Dash	DelRm	Ignitn	Natnl	Dash	Cuno	Yes	Yes	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	Corern	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Wood	MoWh	Yes	Anden
Gardner, 8-95	Brougham	2275-5	130	5.35	5	Stewrt	Elgin	Natnl	Eltrc	Dash	DelRm	Ignitn	Natnl	Dash	Cuno	Yes	Yes	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	Corern	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Wood	MoWh	Yes	Anden
Gardner, 8-95	Sedan	2095-4	130	5.35	5	Stewrt	Elgin	Natnl	Eltrc	Dash	DelRm	Ignitn	Natnl	Dash	Cuno	Yes	Yes	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	GnRap	Corern	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Wood	MoWh	Yes	Anden
Gardner, 8-95	CustomCoupe	2024-4	130	5.35	5	Stewrt	Elgin	Natnl	Eltrc	Dash	DelRm	Ignitn	Natnl	Dash	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Vac	Folbth	Yes	BallCr	BallCr	BallCr	BallCr	Yes	Yes	Wood	MoWh	Yes	Anden	

AC—A C Spark Plug Co.  
Acme—Acme Mfg. Co.  
Andren—Anderson Mfg. Co.  
ArWk—Ark Work Shop  
Aut—Automatic  
Badger  
BallCo—Cincinnati Ball Crank  
Co.  
Ballon—Ballon—Auto Equipment  
Mfg. Co.  
Bassett—Briggs & Stratton Co.  
Beacon—  
Bilfix, Bilfix—Bilfix Corp.  
Bfo—Buffalo  
Brown—  
Buckeye—Central Brass & Fixture  
Co.  
Budd—Budd Mfg. Co.  
Caso—Caso  
Castle—Casco  
Lite—Conant. Auto  
Stitching Co.  
CG—CG Spring & Bumper Co.  
Chi, Chgo—Chicago Electric Mfg.  
Co.  
ClrVis—Clear Vision—Johnson

Clum—Clum Mfg. Co.  
Coid—Coincidental Lock-Steering & Ignition  
Corcoran—Corcoran Lamp Co.  
Cuno—Cuno Engineering Corp.  
DeRim—Deleo Remy Corp.  
DETMP—  
Eltro—Electric  
Etain—Etain Clock Co.  
Elbro—Elbrolock-Mitchell Specialty Co.  
FenGr—Fender Guard  
Fisher—Fisher Body Corp.  
Fleetd—Fleetwood Body Corp.  
Folthb—Folther Inc.  
Galsb—Gabriel Smuber Mfg. Co.  
Greenl—Greenleaf Electric  
GrnRd—Grand Rapids Metalcraft Corp.  
Grolan—Grolan Mfg. Co.  
Guide—Guide Motor Lamp Mfg. Co.  
H&L  
Hall—Hall Lamp Co.

Hamer - R. H. Hamler, Inc.  
 Hays - Hayes Wheel Co.  
 Hibab - Hibab Products Co.  
 Haldy - Halladay - Biflex Corp.  
 Hoody - Houdaille - Houde Eng'r.  
 Co.  
 Hurl - E. V. Hartford, Inc.  
 Hyde -  
 Hydro - Hydrostatic  
 Ignite - Ignition  
 Ind, Indiana - Indiana Lamp Co.  
 Ingers - Ingers Hatch Co.  
 Jans - Jaxon Steel Products Co.  
 Johan - Johnson Automobile Lock  
 Co.  
 Kelch -  
 Klay - Kelsey Wheel Co.  
 Koko - Kokomo Automotive  
 Mfg. Co.  
 KSTL - King-Seely Corp.  
 Libty - Liberty  
 Lincoln - Lincoln Products Co.  
 Lin -  
 Lovjoy - Lovjoy Mfg. Co.

Mech—Mid West  
 Mech—Mechanical  
 Motor—Motor Meter Co.  
 MoWh—Motor Wheel Corp.  
 Mutl—Mutual  
 Nagel—Nagel Gauge Co.  
 Natl—National Electric & Equipment Co.  
 NEast—North East Electric Co.  
 New Era—  
 Outlook—Outlook—Sterling Mfg.  
 PhWlk—Phinney Walker  
 Prefr, Perfct—Perfection Heater & Mfg. Co.  
 Rad—Radiator  
 Seng—Seng Engineering Corp.  
 Strg, Strg—Sterling Electric Clock Co.  
 Sterling Spring Co.  
 Stewart—Stewart Warner Speedometer Co.  
 Stewart Co.  
 Stover—Stover Signal Eng. Co.

Stromb—Stromberg Motor Devices Co.  
TacoCo—Akron-Sells Co.  
Trans—Transmission  
Trico—Trico Products Corp.  
UBS—U. S. Corp.  
Vac—Vacuum  
Varus—Various  
Victor—Cincinnati Victor Co.  
Wahl—Wahl Pencil Co.  
Walt—Walworth Watch Co.  
Watson—John Warren Watson Co.  
WIWW—Wire Wheel Corp.  
Yale—Yale & Towne Mfg. Co.  
a—4.07, 4.54, 4.91 Optional on all models  
b—4.07, 4.54, 4.91 Optional on all models  
c—4.07, 4.54, 4.91, 4.25, 4.5, 4.75, 5, 5.25, 5.5 Optional on all models  
d—4.5, 5.3 Optional on all models  
e—4.5, 5.3 Optional on all models  
f—6.0, 6.5, 6.8 Optional on all models  
g—6.0, 6.5 or 6.11 Optional on all models

"\$" mark indicates equipment not supplied.

## Bearings—Electrical Units, Fans and Transmissions—1928

CAR NAME AND MODEL NUMBER	STARTING MOTOR a. Commutator end b. Drive end c. Outboard bearing	GENERATOR a. Commutator end b. Drive end	IGNITION UNIT AND FAN a. Ignition unit, upper b. Ignition unit, lower c. Fan bearing	CLUTCH a. Pilot b. Throwout c. Thrust	TRANSMISSION		
					a. Spigot or pocket b. Reverse idler	a. Mainshaft, front b. Mainshaft, rear	a. Countershaft, front b. Countershaft, rear c. Does countershaft rotate?
Gardner, 8-75.....	a. .5625x $\frac{11}{16}$ .....	a. ND 1203.....	a. Clron.....	a. ....	a. Bz.....	a. 209.....	a. Bz.....
Gardner, 8-75.....	b. .992x $\frac{11}{16}$ .....	b. ND 1203.....	b. Clron.....	b. Comp 2x3x $\frac{5}{8}$ .....	b. Bz.....	b. 306.....	b. Bz.....
Gardner, 8-75.....	c. GrBz .626x $\frac{3}{4}$ .....		c. ....	c. ....			c. No.....

Tapered roller bearing numbers are given in the following order: Cup-Cone

Plain bearing dimensions are given in the following order:  
Inside diameter x outside diameter x length

AlAlloy.....	Aluminum
BCA.....	Bearings Co. of America
Bz.....	Bronze
CIron.....	Cast Iron
Comp.....	Composition

Faf.....	Fafnir Bearing Co. *
Fed.....	Federal Bearings Co.
Gr.....	Graphite
Gr Bz.....	Graphite bronze
Gur.....	Gurney-Marlin-Rockwell Corp.
HB.....	Hess-Bright—SKF Industries, Inc.
Hy.....	Hyatt Roller Bearing Co.
ND.....	New Departure Mfg. Co.
Nice.....	Nice Ball Bearing Co.

Nor.....	Norma-Hoffman Bearings Corp.
Pl.....	Plain
Self Lub.....	Self lubricating
SKF.....	SKF Industries, Inc.
SRB.....	Standard Steel and Bearings Co.
Strom.....	Strom Bearings Co.
Tim.....	Timken Roller Bearing Co.

Other initial letters are part of the numbers of the ball or roller bearings