SPECIAL EDITION

PACKARD SERVICE LETTER

VOL. 14 No. 17 SEPTEMBER 15, 1940

SERVICE INFORMATION FOR THE 1941 CARS

This issue of the Service Letter lists the standard sizes and adjustments, weights and license information on the 1941 Packard cars. It contains wiring diagrams and lubrication chart.

Car designations for 1941 are as follows:

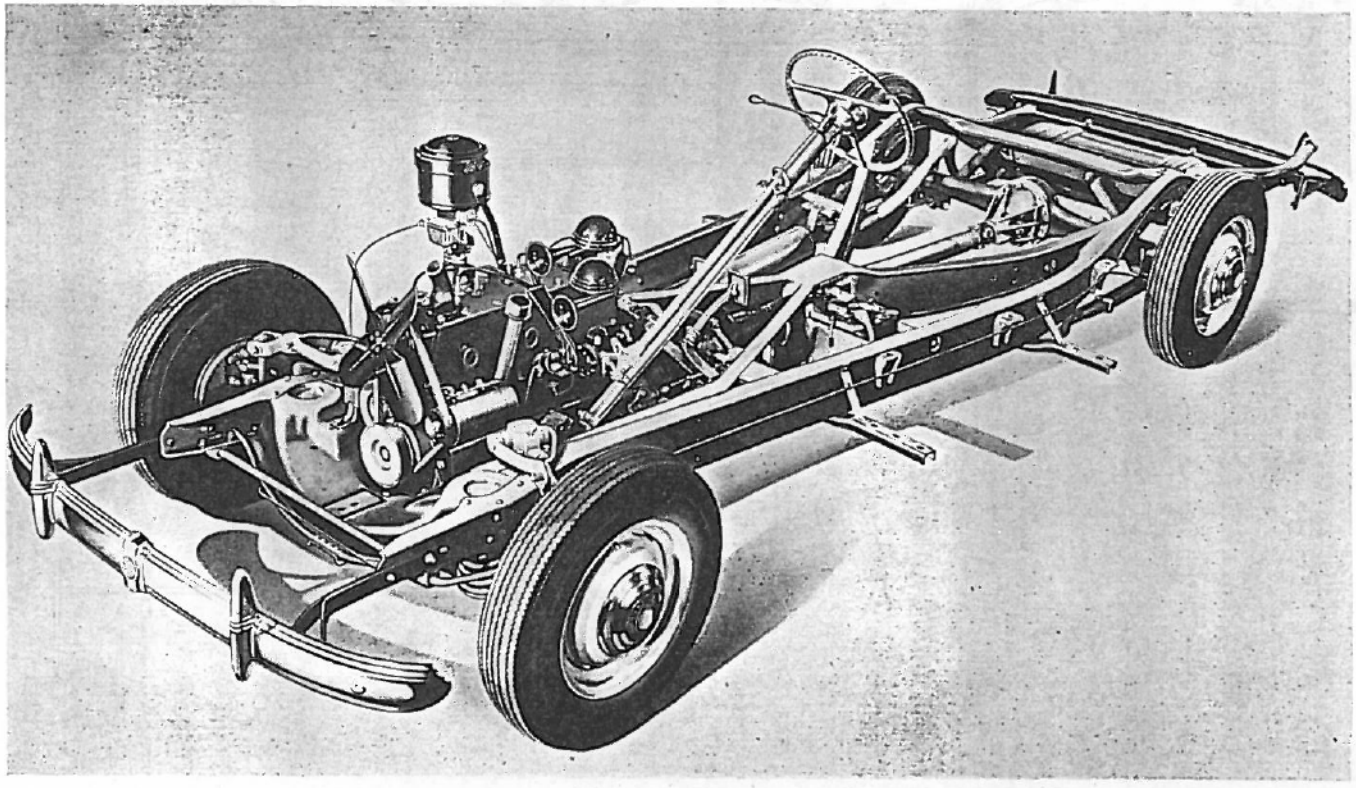
Packard One-Ten	Model 1900
Packard One-Twenty	1901
Packard Super-8 One-Sixty	1903-4-5
Packard Custom Super-8 One-Eighty	1906-7-8

Additional service information is available in the Service Announcement Film and the Film Supplement. This covers all the new mechanical features, their adjustment and servicing.

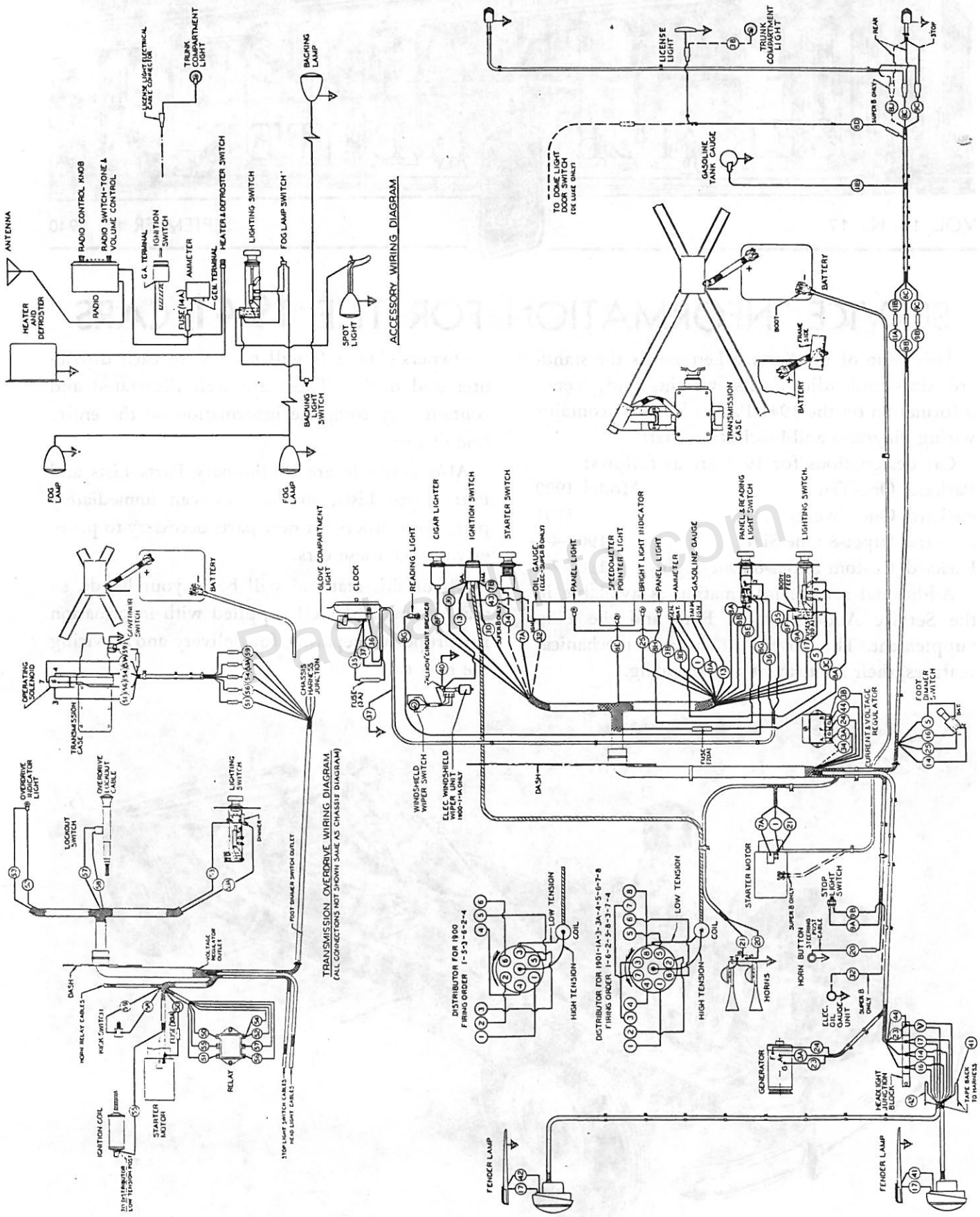
Owners' Manuals will be sent to each distributer and dealer. These are well illustrated and contain very complete information on the entire line of cars.

Also available are Preliminary Parts Lists and Parts Price Lists, so that you can immediately place your orders for new parts necessary to properly service these cars.

All of this material will be in your hands, so that you will be well supplied with information for properly preparing for delivery and servicing the new cars.



WIRING DIAGRAM



ECONO-DRIVE WIRING

NO.	GAUGE	COLOR	LOCATION
50	12	Black	From Starter Motor Switch to Relay Post No. 1
51	14	Yellow	From Relay Post No. 3 to Solenoid Post No. 3
52	18	Brown	From Relay Post No. 4 to Overdrive Indicator Light
53	18	Brown	From Lighting Switch to Overdrive Indicator Light
54	12	Black	From Relay Post No. 4 to Solenoid Post No. 4
55	16	Green	From Relay Post No. 2 to Ignition Coil—Low Tension Post
56	14	Green	From Relay Post No. 6 to Solenoid Post No. 6
57	16	Black with Red Tracer	From Relay Post No. 5 to Overdrive Lock-out Switch
58	16	Black with Red Tracer	From Kick Switch to Overdrive Lock-out Switch
59	16	Black with Red Tracer	From Kick Switch to Governor Switch
53A	18	Brown	From Lighting Switch to Solenoid Post No. 7

CHASSIS WIRING

NO.	GAUGE	COLOR	LOCATION
1	10	Red	From Starter Motor Switch to Ammeter
3A	10	Red	From Current Regulator to Generator
3B	10	Black	From Current Regulator to Ammeter
3C	12	Black	From Lighting Switch to Ammeter
3D	12	Black	From Ammeter to Ignition Switch
5	14	Black	From Lighting Switch to Foot Dimmer Switch
7A	16	Black	From Starter Switch to Starter Motor Switch
7B	16	Black	From Starter Switch to Ignition Switch (Not Used on Super 8)
8A	16	Black	From Lighting Switch to Panel Light Switch
8B	16	Black	From Panel Light Switch to Rear Harness Junction
8C	16	Black	From Rear Harness Junction to Rear Lights
8D	16	See Drawing	From Rear Harness to License Light
8E	16	Black	From Panel Light Switch to Speedometer Pointer Light
8F	14	Yellow	From Cigar Lighter to Lighting Switch
8G	16	Black	From Panel Light Switch to Reading Lights
8H	16	Black	From Panel Light Switch to Panel Lights
8J	16	Black	From Splice at 8C to Rear Lights (Upper)
9A	16	Green	From Fuse at Lighting Switch to Stop Light Switch
9B	16	Green	From Stop Light Switch to Rear Harness Junction
9C	16	Green	From Rear Harness Junction to Stop Lights
11A	18	Tan with Black and Red Tracers	From Gasoline Gauge to Rear Harness Junction
11B	18		From Rear Harness Junction to Gasoline Tank Gauge
13	16	Black	From Ignition Switch to Gasoline Gauge
14	14	Red	From Foot Dimmer Switch to Junction Block and Headlamps (City)
16	14	Green	From Foot Dimmer Switch to Junction Block and Headlamps (Drive)
17	16	Black with Red Tracer	From Lighting Switch to Junction Block to Lamp Junction and Fender Lamps
20	16	Brown	From Steering Post Horn Button to Horn Relay
21	12	Black	From Starter Motor Switch to Horn Relay
23	14	Black	From Generator to Headlamp Junction Block
24	18	Brown	From Current Regulator to Generator
25	18	White	From Foot Dimmer Switch to Speedometer Bright Light Indicator
32	16	Yellow with Black Tracer	From Electric Oil Gauge (Panel) to Electric Oil Gauge Unit (Motor) (Super 8 Only)
34	16	Black	From Current Regulator to Starter Switch (Super 8 Only)
35	18	Red	From Lighting Switch to Fuse at Clock
36	18	Black	From Clock to Panel Light Switch
37	18	White	From Clock to Glove Compartment Door Hinge Screw
38	16	Black	From Rear Compartment Light to License Light Electric Cable Connector
39	16	Red	From Electric Windshield Wiper Unit to Ignition Switch
40	16	Green	From Electric Windshield Wiper Unit to Ignition Switch Mounting Screw
41	16	Yellow	From Fender Lamp Left to Lamp Junction Block
42	16	Yellow	From Fender Lamp Right to Lamp Junction Block
43	16	Black	From Ignition Switch to Electric Oil Gauge (Super 8 Only)
44	14	Black	From Current Regulator to Headlight Junction Block

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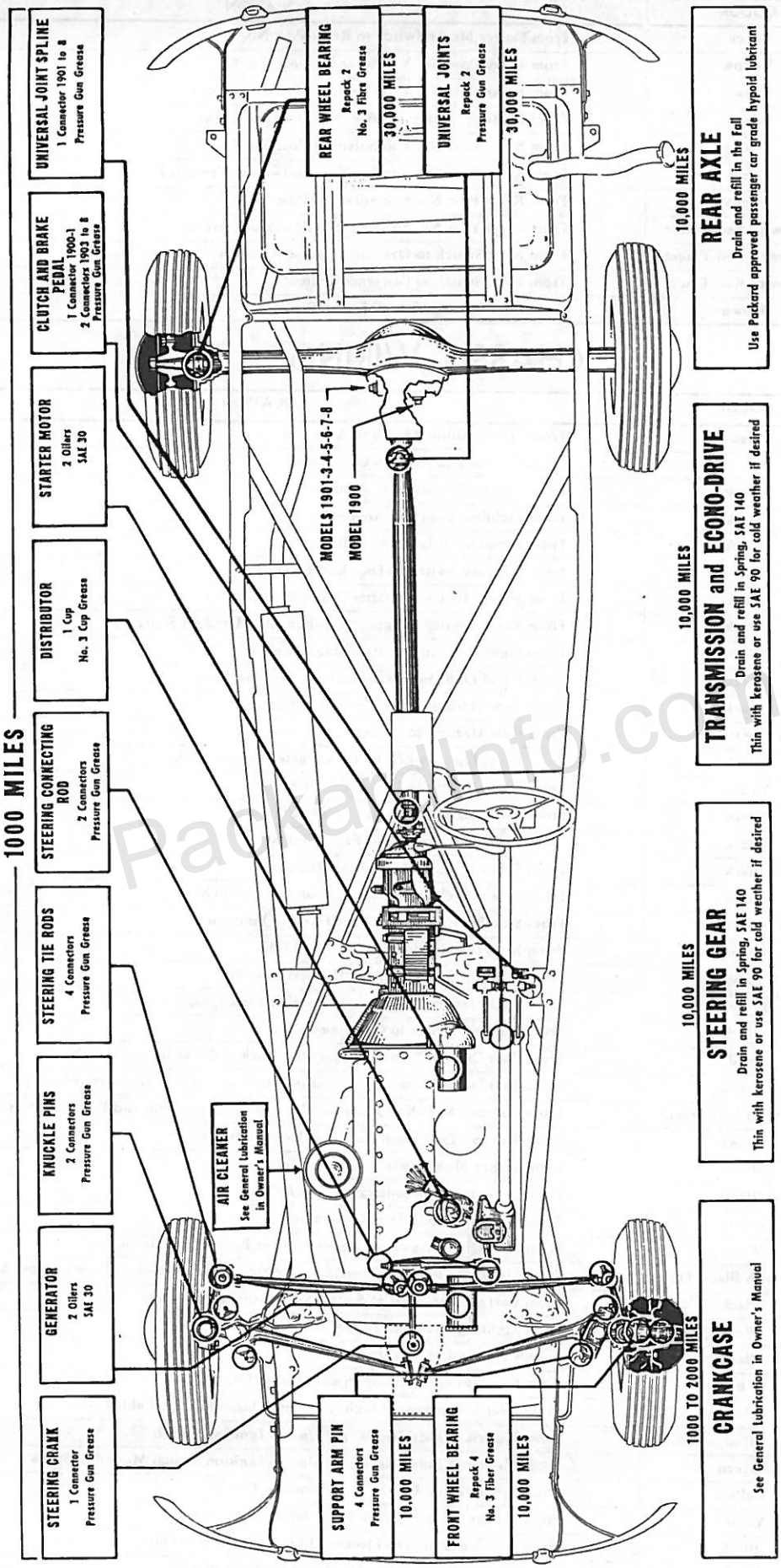
LUBRICATION DIAGRAM



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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS

19th SERIES

NAME	1900	1901-1901A	1903-3A-4-5-6-7-8
ENGINE			
Make	Packard	Packard	Packard
Type	L Head—Vertical En bloc	L Head—Vertical En bloc	L Head—Vertical En bloc
A.M.A. Horsepower	29.4	33.8	39.2
Maximum Brake Horsepower	100	120	160
Revolutions per Minute	3600	3600	3600
Suspension	Rubber Mounted	Rubber Mounted	Rubber Mounted
Firing Order	1-5-3-6-2-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4
Bore	3½"	3¼"	3½"
Stroke	4¼"	4¼"	4⅝"
Piston Displacement	245 cu. in.	282 cu. in.	356 cu. in.
Cylinders	6 in line	8 in line	8 in line
Compression Ratio—Standard	6.39 to 1	6.41 to 1	6.45 to 1
Compression Ratio—Optional	6.71 to 1	6.85 to 1	6.85 to 1
Weight with Clutch and Transmission	673 lbs. 731 lbs. with overdrive	781 lbs. 839 lbs. with overdrive	986 lbs. 1036 lbs. with overdrive
Cylinder Head Material	Cast Iron	Cast Iron	Cast Iron
Motor r.p.m. per Mile—Std. Ratio	3229	2953-1901 3276-1901A	2732-1903-6 3164-1903A 2851-1904-7 3039-1905-8
CRANKCASE			
Type	Integral with cylinders	Integral with cylinders	Integral with cylinders
Upper Half Material	Cast Iron	Cast Iron	Cast Iron
Lower Half Material	Steel Stamping	Steel Stamping	Steel Stamping
Oil Capacity	5 Qts.	6 Qts.	7 Qts.
Main Bearing Diameter	2¾"	2¾"	2¾"
Main Bearing Length No. 1	1 19/32"	1½"	1 11/32"
Main Bearing Length No. 2	1½"	1 7/32"	1 3/16"
Main Bearing Length No. 3	1½"	1 19/32"	1 3/16"
Main Bearing Length No. 4	2 5/16"	1 7/32"	1 3/16"
Main Bearing Length No. 5	None	2 5/16"	1 11/16"
Main Bearing Length No. 6	None	None	1 3/16"
Main Bearing Length No. 7	None	None	1 3/16"
Main Bearing Length No. 8	None	None	1 3/16"
Main Bearing Length No. 9	None	None	2 3/32"
Crankcase Oil Gauge	Dip Stick, left side	Dip Stick, left side	Dip Stick, left side
Total Main Bearing Area	45.1 sq. in.	56.6 sq. in.	86.8 sq. in.
Crankcase Drain Plug	⅝"—18	⅝"—18	⅝"—18
VALVES			
Valve Lift	Ex. .3175" Int. .318"	Ex. .3175" Int. .318"	.340"
Valve Arrangement	L Head	L Head	L Head
Valve Head Diameter—Inlet	1 19/32"	1 31/64"	1.670"
Valve Head Diameter—Exhaust	1⅜"	1⅜"	1 7/16"
Valve Stem Diameter—Inlet	.33975"	.33975"	.33975"

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NAME	1900	1901-1901A	1903-3A-4-5-6-7-8
VALVES—Continued			
Valve Stem Diameter—Exhaust	.33975″	.33975″	.33975″
Valve Over-All Length	5.619″	5.619″	6.212″
Valve Material—Inlet	Chrome Nickel	Chrome Nickel	Chrome Nickel
Valve Material—Exhaust	Austenitic Steel	Austenitic Steel	Austenitic Steel
Valve End (Type)	Split Cone	Split Cone	Split Cone
Valve Stem Clearance—Inlet	.0025″	.0025″	.0025″
Valve Stem Clearance—Exhaust	.0045″	.0045″	.0045″
Valve Tappet Clearance Inlet—Warm	.007″	.007″	Automatic take up
Valve Tappet Clearance Exhaust—Warm	.010″	.010″	Automatic take up
Inlet Valve Opens	1° BTDC	1° BTDC	4° BTDC
Inlet Valve Closes	39° ALDC	39° ALDC	51° ALDC
Exhaust Valve Closes	5° ATDC	5° ATDC	10° ATDC
Exhaust Valve Opens	45° BLDC	45° BLDC	49° BLDC
Tappet Clearance for Timing Inlet	.0125	.0125	—
Tappet Clearance for Timing Exhaust	.015	.015	—
Valve Seat Angle—Inlet	30°	30°	30°
Valve Seat Angle—Exhaust	45°	45°	45°
Valve Spring	Single	Single	Single
Valve Spring Load Valve Closed	47-52 Lbs. (1 5/8″)	47-52 Lbs. (1 5/8″)	55-61 Lbs. (1 3/4″)
Valve Spring Load Valve Open	114-124 Lbs. (1 1/16″)	114-124 Lbs. (1 1/16″)	130-140 Lbs. (1 11/32″)
Exhaust Pipe Diameter	2″	2 1/4″	2 1/2″
Muffler Size—Front	5″ x 38 1/2″	5 5/16″ x 38 3/4″	6.075″ x 41 5/8″
FRONT END			
Gear Cover	Steel Stamping	Steel Stamping	Steel Stamping
Camshaft Drive	Silent Chain	Silent Chain	Silent Chain
Make of Chain	Morse 3682-R or Ramsey	Morse 3682-R or Ramsey	Morse 3682-R
Length, Width and Pitch of Chain	58 links; 1 1/4″; .375″	58 links; 1 1/4″; .375″	62 links; 1 1/4″; .375″
No. of Camshaft Bearings	4	5	8
Clearance of Camshaft Bearings	.001″-.003″	.001″-.003″	.001″-.003″
Camshaft End Play	.0025″-.006″	.0025″-.006″	.0025″-.006″
Camshaft Sprocket—Material and Size	Cast Iron—42 teeth	Cast Iron—42 teeth	Cast Iron—42 teeth Hardened
PISTON			
Weight	20 1/4 oz.	17 1/4 oz.	20 1/4 oz.
Weight with Rings and Pin	26 3/4 oz.	23 1/8 oz.	26 3/4 oz
Over-all Height	3 7/8″	3 7/8″	3 7/8″
Height Centerline of Pin to Top	2 1/8″	2 1/8″	2 1/8″
Type and Material	Autothermic Aluminum alloy with strut	Autothermic Aluminum alloy with strut	Autothermic Aluminum alloy with strut
Skirt Clearance	.0005″-.001″	.0005″-.001″	.0005″-.001″
Piston Pin—Size	3 1/64″ x 7/8″	2 51/64″ x 7/8″	3 1/64″ x 7/8″
Type	Floating	Floating	Floating
Lubrication of Pin	Pressure	Pressure	Pressure
Piston Pin Hole—Ream	.87515″-.87485″	.87515″-.87485″	.87515″-.87485″
Piston Pin Fit in Piston	Finger Push at 160°	Finger Push at 160°	Finger Push at 160°
Piston Pin Fit in Rod	Size to Size	Size to Size	Size to Size
Piston Pin Oversizes	003″-.006	.003″-.006″	.003″-.006″
No. of Rings per Piston	3	3	3
No. of Oil Rings per Piston	1	1	1
Depth of Piston Ring Grooves No. 1	.1882″	.1782″	.1882″
Depth of Piston Ring Grooves No. 2	.1837″	.1782″	.1837″
Depth of Piston Ring Grooves No. 3	.1817″	.1762″	.1817″
Type of Compression Rings	1 Per. Circle No. K200 1 Per. Circle No. K70	1 Per. Circle No. K200 1 Per. Circle No. K70	1 Per. Circle No. K200 1 Per. Circle No. K70
Type of Oil Rings	1 Per. Circle No. X90-"C" Wall	1 Per. Circle No. X90-"C" Wall	1 Per. Circle No. X90-"C" Wall
Width of Compression Rings	No. 1—.0930″-.0935″ No. 2—.1240″-.1235″	No. 1—.0925″-.0935″ No. 2—.1240″-.1235″	No. 1—.0930″-.0935″ No. 2—.1240″-.1235″
Width of Oil Rings	.1865″-.186″	.1865″-.186″	.1865″-.186″

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NAME	1900	1901-1901A	1903-3A-4-5-6-7-8
Piston Ring Wall Thickness No. 1	.165″-.175″	.152″-.162″	.165″-.175″
Piston Ring Wall Thickness No. 2	.165″-.175″	.152″-.162″	.165″-.175″
Piston Ring Wall Thickness No. 3	.122″-.130″	.121″-.129″	.122″-.130″
Piston Ring Gap—Compression	.007″-.017″	.007″-.017″	.007″-.017″
Piston Ring Gap—Oil	.007″-.015″	.007″-.015″	.007″-.015″
Location of Rings	Above Pin	Above Pin	Above Pin
Piston Oil Drain Holes	12—5/32″	12—5/32″	12—5/32″
Piston Oversizes	.005″, .010″, .020″, .030″, .040″	.005″, .010″, .020″, .030″, .040″	.005″, .010″, .020″, .030″, .040″
CONNECTING ROD			
Weight	1 lb. 15.6 oz.	1 lb. 15.6 oz.	2 lbs. 10 oz.
Material	Steel Forging	Steel Forging	Steel Forging
Bearing Type	Detachable Shell	Detachable Shell	Detachable Shell
Center to Center Length	7 11/16″	7 11/16″	9 1/4″
Diameter of Crankpin Bearing	2 3/32″	2 3/32″	2 1/4″
Length of Crankpin	1 1/4″	1 1/4″	1 3/8″
Clearance Bearing to Crankpin	.0005″-.0015″	.0005″-.0015″	.0005″-.0015″
End Play on Crankshaft	.004″-.010″	.004″-.010″	.004″-.010″
Oil Lead to Piston Pin	Rifle Drilled	Rifle Drilled	Rifle Drilled
Bearing Material	Babbitt	Babbitt	Babbitt
Assembled in Motor	Oil Hole Toward Camshaft	Oil Hole Toward Camshaft	Oil Hole Toward Camshaft
Cap Attached	Bolts, Nuts and Lock Nuts	Bolts, Nuts and Lock Nuts	Bolts, Nuts and Cotters
Shims	Not Used	Not Used	Not Used
CRANKSHAFT			
Type	Counterbalanced	Counterbalanced	Counterbalanced
Material	Steel Forging	Steel Forging	Steel Forging
No. of Counterweights	6 Forged Integral	8 Forged Integral	8 Bolted
No. of Main Bearings	4	5	9
Main Bearing Diameter	2 3/4″	2 3/4″	2 3/4″
Thrust Taken on	No. 1	Center	Center
Vibration Damper	Rubber Friction Disc, Waterproof	Rubber Friction Disc, Waterproof	Rubber Friction Disc, Waterproof
Weight	81 1/2 lbs.	95 lbs.	104 lbs.
End Play	.003″-.008″	.003″-.008″	.003″-.008″
Main Bearing Material	Babbitt Lined Steel Shell	Babbitt Lined Steel Shell	Babbitt Lined Steel Shell
Clearance—All Main Bearings	.0005″-.0015″	.0005″-.0015″	.0005″-.0015″
Crankshaft Sprocket—Material and Size	Steel—21 teeth	Steel—21 teeth	Steel—21 teeth
Shims	Not Used	Not Used	Not Used
MOTOR LUBRICATION			
Type	Full Pressure	Full Pressure	Full Pressure
Oil Pump Type	Gear	Gear	Gear
Crankcase Capacity	5 Qts.	6 Qts.	7 Qts.
Oil Filler Location	Left Side	Left Side	Left Side
Oil Filter Location	Spl. Eqpt.	Spl. Eqpt.	Left Side
Oil Measuring Stick	Left Crankcase	Left Crankcase	Left Crankcase
Oil Intake	Floating	Floating	Floating
Crankcase Ventilator	R. H. at rear of block	R. H. at rear of block	R. H. at rear of block
Oil Pressure—Normal Driving	40 lbs.	40 lbs.	50 lbs.
Oil Drain	Hex. Head Flange Plug 5/8″—18	Hex. Head Flange Plug 5/8″—18	Hex. Head Flange Plug 5/8″—18
CHASSIS LUBRICATION Every 1,000 to 2,000 miles			
Crankcase—S.A.E. 30* *Below—10° F.—10-W plus 10% Kerosene —10° F.—10-W +10° F.—20-W +32° F.—S.A.E. 30 *Average Daylight Temperature 90° F.—S.A.E. 40	Drain and Refill—5 Qts.	Drain and Refill—6 Qts.	Drain and Refill—7 Qts.
Knuckle Pins—Pressure Gun Grease	2 Lub. Connectors	2 Lub. Connectors Reservoir Type	2 Lub. Connectors Reservoir Type

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NAME	1900	1901-1901A	1903-3A-4-5-6-7-8
CHASSIS LUBRICATION—Continued			
Steering Connecting Rod—Pressure Gun Grease	2 Lub. Connectors	2 Lub. Connectors	2 Lub. Connectors
Steering Tie Rods—Pressure Gun Grease	4 Lub. Connectors	4 Lub. Connectors	4 Lub. Connectors
Universal Joint Spline—Gun Grease		1 Lub. Connector	1 Lub. Connector
Generator—S.A.E. 30	2 Oilers	2 Oilers	2 Oilers
Starter Motor—S.A.E. 30	2 Oilers	2 Oilers	2 Oilers
Distributor—No. 3 Cup Grease	1 Cup	1 Cup	1 Cup
Clutch and Brake Pedal—Pressure Gun Grease	1 Lub. Connector	1 Lub. Connector	2 Lub. Connectors
Steering Crank—Pressure Gun Grease	1 Lub. Connector	1 Lub. Connector	1 Lub. Connector
Every 10,000 miles			
Support Arm Pin, Outer, Gun Grease	4 Lub. Connectors	4 Lub. Connectors	4 Lub. Connectors
Front Wheel Bearing, Fibre Grease	(4) Repack 4 oz. per wheel	(4) Repack 4 oz. per wheel	(4) Repack 4 oz. per wheel
Transmission, S.A.E. 140 Summer—90 Winter	Drain and Refill—2 pts.	Drain and Refill—2 pts.	Drain and Refill—2 pts.
Transmission Overdrive Case, S.A.E. 140 Summer—90 Winter	Drain and Refill—1 ¼ pts.	Drain and Refill—1 ¼ pts.	Drain and Refill—1 ¼ pts.
Steering Gear, S.A.E. 140 Summer—90 Winter	Drain and Refill (11 oz.)	Drain and Refill (11 oz.)	Drain and Refill (11 oz.)
Rear Axle—See Packard Dealer	Drain and Refill—5 pts.	Drain and Refill—6 ¾ pts.	Drain and Refill—6 ¾ pts.
Every 30,000 miles			
Rear Wheel Bearing, Fibre Grease	Repack 2 oz. per wheel	Repack 2 oz. per wheel	Repack 2 oz. per wheel
Universal Joints, Gun Grease	Repack	Repack	Repack
CLUTCH			
Type	Single Dry Plate	Single Dry Plate	Single Dry Plate
Free Pedal	1½"—2"	1½"—2"	1¾"—2¼"
Facing Material	U. S. Asbestos No. 1133-G Woven	U. S. Asbestos No. 1133-G Woven	U. S. Asbestos No. 1133-G Woven
Size Facing	6" x 9½" x .125"	6" x 10" x .125"	6½" x 11" x .125"
Throwout Bearing Lubrication	Packed	Packed	Packed
Clutch Spring Pressure	163 lbs. at 1 3/16"	125 lbs. at 1 3/16"	160 lbs. at 1.677"
No. of Springs	6	9	9
Vibration Neutralizer	Springs	Springs	Springs
TRANSMISSION			
Type	Selective—Silent Synchronized	Selective—Silent Synchronized	Selective—Silent Synchronized
No. of Forward Speeds	3	3	3
Overdrive High	3.28 Std.	1901 3.15 Std. / 1901A 3.53 Std.	1903-6 3.15 Std. / 1903A 3.39 Std.
High	4.55 4.3	4.36 4.09 4.9 4.7	4.36 3.92 4.7 4.54
Second	6.96 6.57	6.67 6.25 7.5 7.19	6.67 5.99 7.19 6.94
First	11.05 10.44	10.59 9.93 11.92 11.42	10.59 9.53 11.42 11.03
Reverse	14.38 13.59	13.78 12.92 15.5 14.86	13.78 12.40 14.86 14.35
Overdrive			1904-7 3.15 Std. / 1905-8 3.28 Std.
High			4.36 4.09 4.54 4.36
Second			6.67 6.25 6.94 6.67
First			10.59 9.93 11.03 10.59
Reverse			13.78 12.92 14.35 13.78
Oil Capacity	2 Pts.	2 Pts.	2 Pts.
Overdrive	1 ¼ Pts.	1 ¼ Pts.	1 ¼ Pts.
Oil Level Plugs	½"—14 pipe	½"—14 pipe	½"—14 pipe
Gear Teeth	Helical	Helical	Helical
Steering Post Shift	Standard Equipment "Mechanical"	Standard Equipment "Mechanical"	Standard Equipment "Mechanical"
FRAME	1900-T1900*		
Type	Taper Pressed Steel Double Drop, Box Section Side Rail in Front	Taper Pressed Steel Double Drop, Box Section Side Rail in Front	Taper Pressed Steel Double Drop, Box Section Side Rail in Front
Depth	6 13/16"—1900 6 31/32"—1900 Convt. 7" —T1900	6 13/16"—1901 7 1/32"—1901A 7" —1901 Convt.	7" —1903-4-6-7-3 Convt. 7 1/32"—1905-8-1903A
Thickness	7/64"—1900 5/32"—1900 Convt. 9/64"—T1900	7/64"—1901 5/32"—1901A 9/64"—1901 Convt.	9/64"—1903-4-6-7-3 Convt. 5/32"—1905-8-1903A
No. of Cross Members	5 I-Beam, X Type Member in Center	5 I-Beam, X Type Member in Center	5 I-Beam, X Type Member in Center

*T1900—6 Cyl. Taxi.

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NAME	1900	1901-1901 A	1903-3A-4-5-6-7-8
Wheelbase	122″—1900-1900 Convt. 133 3/32″—T1900	127″—1901 160″—1901A	127″ —1903-6 138 3/32″—1904-7 148″ —1905-8 160″ —1903A
STEERING GEAR			
Make	Packard	Packard	Packard
Type	Worm and Double Tooth Roller	Worm and Double Tooth Roller	Worm and Double Tooth Roller
Steering Wheel	18″—3 Spoke "T"	18″—3 Spoke "T"	18″—3 Spoke "T"
Ratio	20.19 to 1	20.19 to 1	20.19 to 1
Type of Steering Wheel	Vulcanized Rubber Over Steel Frame	Vulcanized Rubber Over Steel Frame	Molded Plastic Over Steel Frame
Minimum Turning Radius	20 ft. 6 in.	21 ft. 2 in—1901	22 ft. 6 1/2 in.—1903-6 24 ft.—1904-7 24 ft. 6 in.—1905-8
FRONT SUSPENSION			
Make	Packard Safe-T-fleX	Packard Safe-T-fleX	Packard Safe-T-fleX
Type	Independent Parallelogram	Independent Parallelogram	Independent Parallelogram
Axle End	Reverse Elliot	Reverse Elliot	Reverse Elliot
Steering Knuckle Pin Bearings Upper and Lower	.866 x 1.1875 1.089″ long 26 rolls—.1184 dia.	.866 x 1.875—1.089″ long 26 rolls—.1184 dia.—1901 .855 x 1.189—1.187 long Antimony Lead—1901A	.855 x 1.189 1.187″ long Antimony Lead
Thrust Bearings	Antimony Lead	Antimony Lead—1901 Ball Bearing—1901A	Ball Bearing
Caster	1/2° + — 1/2°	1/2° + — 1/2°	1903-4-5-6-7-8— Neg. 1/2° 15′ + — 1/2° 1903A 2 1/2° + — 1/2°
Front Wheel Toe-In	0 + 1/16 — 0	0 + 1/16 — 0	0 + 1/16 — 0
Knuckle Pin Angle	2 1/2°	2 1/2°	2 1/2°
Tread	59 3/16″	59 3/16″—1901A only	59 3/16″
Camber	1/2° + 3/4° — 0	1/2° + 3/4° — 0	1/2° + 3/4° — 0
Wheel Bearing—Inner	Timken 14130 Cone 19276 Cup	Timken 2585 Cone 2523 Cup	Timken 2585 Cone 2523 Cup
Wheel Bearing—Outer	Timken 09074 Cone 09194 Cup	Timken 1380 Cone 1329 Cup	Timken 1380 Cone 1329 Cup
Wheel Bearing Adjustment	Tighten Nut and Back Off 1/2 turn and lock	Tighten Nut and Back Off 1/2 turn and lock	Tighten Nut and Back Off 1/2 turn and lock
ELECTRICAL			
Battery—Make	Willard SW-1-95 15 Plate	Autolite PN-17P 17 Plate	Autolite PN-17P 17 Plate
Battery—Capacity	95 Ampere Hours	114 Ampere Hours	114 Ampere Hours
Battery—Size	9″ x 7″ x 8 3/4″	10 1/4″ x 8 11/16″	10 1/4″ x 8 11/16″
Ignition Timing	6° BTDC	7° BTDC	5° BTDC
Breaker Point Gap	.018″ — .022″	.0125″ — .0175″	.0125″ — .0175″
Spark Control	Full Automatic	Full Automatic	Full Automatic
Spark Advance Begins at	600 r.p.m. Engine	600 r.p.m. Engine	500 r.p.m. Engine
Distributor (Vacuum Control)	Autolite IGC-4505 Delco—1110092	Autolite IGP-4502	Autolite IGT-4102
Spark Plug—Size	10 mm.	10 mm.	10 mm.
Spark Plug—Make and Type (2)	104 AC or Champion Y4	104 AC or Champion Y4	104 AC or Champion Y4
Spark Plug Gap	.0255″ — .0305″	.0255″ — .0305″	.0255″ — .0305″
Generator—Make and Type	Autolite GDE-4801-F Delco 1102682	Autolite GDE-4801-F	Autolite GEA-4802A
Generator Drive	Belt	Belt	Belt
Generator Cut-In Speed—Cold	920 R.P.M. Autolite 900 R.P.M. Delco	920 r.p.m. Autolite	780 r.p.m.
Generator Maximum Charging Rate—(cold—8 volt)	35 Ampere	35 Ampere	35 Ampere
Generator Maximum Charging Rate—(hot—8 volt)	35 Ampere	35 Ampere	35 Ampere
Generator Voltage Regulator	Autolite VRP-4002C Delco 1118202	Autolite VRP-4002C	Autolite VRP-4002C
Generator Voltage to Close Cut-Out	6 1/2 to 7 Volts	6 1/2 to 7 Volts	6 1/2 to 7 Volts
Generator Ventilated	Yes	Yes	Yes
Starter Motor—Make and Type	Autolite MAW-4021 Delco 1107037	Autolite MAW-4021	Autolite MAX-4041
Starter Drive	Bendix Shift	Bendix Shift	Solenoid Actuated
Number of Flywheel Teeth	140	140	140
Number of Teeth in Bendix Pinion	9	9	9
Pinion Meshes	From Front	From Front	From Front
Light Control	On Instrument Board and Foot Switch	On Instrument Board and Foot Switch	On Instrument Board and Foot Switch
Headlamp Current Protection	Thermostat Relay	Thermostat Relay	Thermostat Relay
Auxiliary Fuse	SFE, 20 Ampere	SFE, 20 Ampere	SFE, 20 Ampere
Body Fuse	SFE, 20 Ampere	SFE, 20 Ampere	SFE, 20 Ampere

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NAME	1900	1901-1901A	1903-3A-4-5-6-7-8
ELECTRICAL—Continued			
Tail Lamp Fuse	SFE, 20 Ampere	SFE, 20 Ampere	SFE, 20 Ampere
Stop Light Fuse	SFE, 20 Ampere	SFE, 20 Ampere	SFE, 20 Ampere
W. S. Wiper Protection	Thermostat Relay	Thermostat Relay	None
Clock Fuse	SFE, 4 Ampere	SFE, 4 Ampere	SFE, 4 Ampere
Overdrive Relay	SFE, 30 Ampere	SFE, 30 Ampere	SFE, 30 Ampere
Headlamp Lens—Diameter at Bezel	6½"	6½"	6½"
Headlamp Bulb—Sealed Beam	40-30 Watt	40-30 Watt	40-30 Watt
Export—6 Volt	50-21 C.P. C. M. Hall	50-21 C.P. C. M. Hall	50-21 C.P. C. M. Hall
Horn—Make and Type	Sparton	Sparton	Sparton
Horn—Location	Mounted on Engine	Mounted on Engine	Mounted on Engine
Battery Terminal Grounded	Positive	Positive	Positive
Ampere Draw of Horns (2)	22-25 Ampere	22-25 Ampere	33-36 Ampere
Ampere Draw of Car Heater Motor	6 Ampere at 7 Volts	6 Ampere at 7 Volts	6 Ampere at 7 Volts
Ampere Draw of Car Defroster	4½ Amps. at 7 Volts	4½ Amps. at 7 Volts	4½ Amps. at 7 Volts
Ampere Draw of W. S. Wiper	4½ Ampere at 6 Volts	4½ Ampere at 6 Volts	Vacuum Wiper
Ampere Draw of Lights	30-40 Watts	30-40 Watts	30-40 Watts
Ampere Draw of Coil—Idling Cold	2.75 Amperes	2.4 Amperes	2.4 Amperes
Ampere Draw of Coil—Stopped Cold	5 Amperes	5 Amperes	5 Amperes
Clock—Make and Type	Electric—Borg	Electric—Borg	Electric—Borg
Cigar Lighter—Type	Automatic	Automatic	Automatic
Starter Stall Torque	18 ft. lbs., 4 volt 670 Ampere	18 ft. lbs., 4 volt 670 Ampere	45.9 ft. lbs., 4 volt 906 Ampere
Ignition Coil	Autolite CE-4644, Delco 1116307 on Cylinder Head	Autolite CE-4644 on Cylinder Head	Autolite CE-4645 on Cylinder Head
Spring Tension on Contacts—Distributor	19-23 oz.	19-23 oz.	19-23 oz.
COOLING SYSTEM			
Water Pump	Centrifugal Self-adjusting	Centrifugal Self-adjusting	Centrifugal Self-adjusting
Water Pump Drive	Fan Belt	Fan Belt	Fan Belt
Radiator Core	Cellular	Tubular	Tubular
Capacity of System	3¾ gallons	4¼ gallons	5 gallons
Fan	4 blade 18"	4 blade 18"	5 blade 18½"
Driving Pulley	On Crankshaft	On Crankshaft	On Crankshaft
Ratio	.963 to 1	.963 to 1	1.027 to 1
Thermostat Starts to Open	147½° (in cylinder)	147½° (in cylinder)	162½° (in cylinder) 135° (in shutters)
Radiator Shutter	No	No —1901 Yes—1901A	Yes
Fan Belt	49¼ O.D. x ¾" x 42°	49¼ O.D. x ¾" x 42°	52¼ O.D. x 1" x 42°
Radiator Hose—Inlet	13 x 2⅛ x 1¾ I.D. 120° Angle—Moulded	13 x 2⅛ x 1¾ I.D. 120° Angle—Moulded	11½ x 2⅛ x 1¾ I.D. 130° Angle—Moulded
Radiator Hose—Outlet	3" x 1¾" I.D.	3" x 1¾" I.D.	3" x 1¾" I.D.
Heat Indicator	On Instrument Board	On Instrument Board	On Instrument Board
Fan Belt Adjustment	At Generator	At Generator	At Generator
Gravity Flow of Radiator	24 gal. per min.	38 gal. per min.	42 gal. per min.
Radiator Cap	Pressure Type (4½ lbs. per sq. in.) (12 lbs. per sq. in. for air cond.)	Pressure Type (4½ lbs. per sq. in.) (12 lbs. per sq. in. for air cond.)	Pressure Type (7 lbs. per sq. in.) (12 lbs. per sq. in. for air cond.)
GASOLINE SYSTEM			
Carburetor—Make and Size	Stromberg 1⅜" Down-draft, Single Barrel	Carter WA1—1" Duplex Down-draft	Stromberg 1¼" Duplex Down-draft
Gasoline Feed	Mechanical Pump A.C.	Mechanical Pump A.C.	Mechanical Pump A.C. in Combination with Vacuum Pump
Pump Drive	Off Camshaft	Off Camshaft	Off Camshaft
Gasoline Filter	Incorporated in Fuel Pump	Incorporated in Fuel Pump	Incorporated in Fuel Pump
Gasoline Gauge	Electric	Electric	Electric
Gasoline Tank Capacity	17 Gal.	20 Gal.	20 Gal.
Air Cleaner and Silencer	A.C. Standard—oil bath type—spl. equip.	A.C. Standard—oil bath type—spl. equip. for 1901 Std. for 1901A	A.C.—oil bath type—Std. equip.
Carburetor Heat Control	Thermostat	Thermostat	Thermostat
Automatic Choke	Thermostatically Controlled	Thermostatically Controlled	Thermostatically Controlled
Carburetor Fuel Level	⅝" below top of bowl	1/32" below top of bowl	⅝" below top of bowl

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NAME	1900	1901-1901A	1903-3A-4-5-6-7-8
REAR AXLE			
Type	Semi-floating	Semi-floating	Semi-floating
Make	Packard	Packard	Packard
Final Drive	Hypoid Gears	Hypoid Gears	Hypoid Gears
Propulsion	Through Springs	Through Springs	Through Springs
Axle Housing	Pressed Steel—Banjo type	Pressed Steel—Banjo type	Pressed Steel—Banjo type
Universal Joints	"Universal Products" Roller Bearing Type	"Mechanics" Roller Bearing Type	"Mechanics" Roller Bearing Type
No. Required	2	2	2
Oil Capacity	5 Pts.	6 ¾ Pts.	6 ¾ Pts.
Wheel Bearings	Timken Cone 25877 (2) Cup 25821 (2)	Timken Cone 26878-1901 Cup 26830-1901 Timken Cone 3576-1901A Cup 3525-1901A	Timken Cone 26878 1903-6 Cup 26830—1904-7 Timken Cone 3576 1903A Cup 3525—1905-8
Tread	60⅝"	60 1/16"—1901 62 3/16"—1901A	59 13/16"—1903-4-6-7 62 3/16"—1905-8 63 1/16"—1903A
Standard Gear Ratio (without overdrive)	4.3 to 1	4.09 to 1—1901 4.7 to 1—1901A	3.92 to 1—1903-1906 4.54 to 1—1903A 4.09 to 1—1904-1907 4.36 to 1—1905-1908
Pinion Back Lash	.003"—.005"	.003"—.005"	.003"—.005"
No. Teeth—Gear and Pinion	43—10	45—11—1901 47—10—1901A	47—12—1903-1906 50—11—1903A 45—11—1904-1907 48—11—1905-1908
Oil Drain Plugs	½"—14 pipe	½"—14 pipe	½"—14 pipe
SPRINGS			
Front—5 passenger Sedan—Standard	1430 x 69—Coil	1525 x 74—Coil 1901 2200 x 130—Coil 1901A	1750 x 77 Rate Coil 1903-6 1870 x 95 Rate Coil 1904-7 2050 x 100 Rate Coil 1905-8 2500 x 130 Rate Coil 1903A
Rear—5 passenger Sedan—Standard	880 x 105—Leaf	970 x 110—Leaf 1901 1800 x 170—Leaf 1901A	1040 x 110 Leaf 1903-6 1080 x 110 Leaf 1904-7
7 passenger Sedan—Standard			1250 x 122 Leaf 1905-8 1800 x 170 Leaf 1903A
Front—Size	5.21 O.D.—4" I.D.	5.23 O.D.—4" I.D. 1901 5.98 O.D.—4½" I.D. 1901A	5.81 O.D.—4½" I.D. 1903-6 5.89 O.D.—4½" I.D. 1905-8 5.87 O.D.—4½" I.D. 1904-7 5.98 O.D.—4½" I.D. 1903A
Number of Coils	9.4 Effective	9.22 Effective—1901 7.64 Effective—1901A	8.41 Effective—1903-6 7.94 Effective—1905-8 7.96 Effective—1904-7 7.64 Effective—1903A
Rear Length and Width	54⅜ x 2	54⅜ x 2—1901 54⅜ x 2—1901A	54⅜ x 2—1903-6 54⅜ x 2—1904-5-7-8
Shackles	Rubber Bushed	Rubber Bushed	Rubber Bushed
Spring Covers	No	No	No
Shock Absorbers—Front	Delco Hydraulic Two-Way	Delco Hydraulic Two-Way	Delco Hydraulic Two-Way
Shock Absorbers—Rear	Monroe Direct Acting	Delco Direct Acting	Monroe Direct Acting— 1903-3A-6 Delco Direct Acting— Std.—1904-5-7-8-3A
Shock Absorber (Lateral Stabilizer)	None	Houde Two-Way	Houde Two-Way
Shock Absorber Stabilizer	Front only	Front—1901-1901A Rear—1901A only	Front only 1903-6 Front and Rear— 1904-5-6-7-8-3A Front Only—1903A— Special equip.
Spring Material—Front and Rear	Silico Manganese	Silico Manganese	Silico Manganese
BRAKES			
Type	Internal Expanding on all 4 wheels	Internal Expanding on all 4 wheels	Internal Expanding on all 4 wheels
Operation	Hydraulic—2 shoe 158.5 sq. in.	Hydraulic—2 shoe 171.5 sq. in.—1901 234 sq. in.—1901A	Hydraulic—2 shoe 196 sq. in.—1903-6 260 sq. in.—1903A 234 sq. in.—1904-5-7-8
Effective Area Hand Brake	79.25 sq. in.	85.7 sq. in.—1901 117 sq. in.—1901A	98 sq. in.—1903-6 130 sq. in.—1903A 117 sq. in.—1904-5-7-8
Lining Size and Material Primary	1¾" x 3/16" x 10⅝" Marshall 2201	1¾" x 3/16" x 11½" (1901) Marshall 2201 2¼" x 3/16" x 13" 1901A Marshall 2201	2" x 3/16" x 11½"—1903-6 2½" x 3/16" x 13—1903A 2¼" x 3/16" x 13"—1904-5-7-8 Marshall 2201

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NAME	1900	1901-1901A	1903-3A-4-5-6-7-8
BRAKES—Continued			
Secondary	1 3/4" x 3/16" x 12" Marshall 2201	1 3/4" x 3/16" x 13" (1901) Marshall 2201 2 1/4" x 3/16" x 13" 1901A Marshall 2201	2" x 3/16" x 13"—1903-6 2 1/2" x 3/16" x 13"—1903A 2 1/4" x 3/16" x 13"—1904-5-7-8 Marshall 2201
Drum Diameter	11" centrifuse	12" centrifuse	12" centrifuse
WHEELS			
Make and Type	Motor Wheel Demountable Disc	Motor Wheel Demountable Disc	Motor Wheel Demountable Disc
Size of Tire	15" x 6.50"—4 ply	15" x 7.00"—4 ply 1901 16" x 7.00"—6 ply—1901A	16" x 7.00"—4 ply—1903-6 16" x 7.00"—6 ply—1903A-4-5-7-8
Recommended Tire Pressure—Front (Warm) —Rear	26 28	26-1901; 28-1901A 28-1901; 36-1901A	Front—1903A—30 Rear—1903A—36 Front—1903-6—26 Rear—1903-6—28 Front—1904-7—27 Rear—1904-7—29 Front—1905-8—28 Rear—1905-8—32
BODY			
Make	Packard	Packard	Packard
Panel Material	Steel	Steel	Steel
Upholstery Material: Closed Cars Convertible Cars	Broadcloth *Antique Grain Leather †Natural Grain Leather ‡Colonial Grain Leather	Broadcloth and Bedford Cord *Antique Grain Leather †Natural Grain Leather ‡Colonial Grain Leather	Broadcloth and Bedford Cord *Antique Grain Leather †Natural Grain Leather ‡Colonial Grain Leather
Glass	Safety	Safety	Safety
Windshield Wiper	Electric—Tandem	Electric—Tandem	Vacuum Tandem with Booster
Radio Antenna	Left Side Cowl, Center Windshield or Running Board (all accessories)	Left Side Cowl, Center Windshield or Running Board (all accessories)	Left Side Cowl, Center Windshield or Running Board (all accessories)
Built-in Trunk	Yes	Yes	Yes
Spare Wheel Location	Rear Compartment	Rear Compartment	Rear Compartment
Top Type	Metal	Metal	Metal

*Antique Grain—Gray—Tan—Green
†Natural Grain—Red—Blue
‡Colonial Grain—Black

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WEIGHTS

BODY TYPE	1900 Type	1900 Wt.	1901 Type	1901 Wt.	1903 Type	1903 Wt.	1904 Type	1904 Wt.	1905 Type	1905 Wt.	1906 Type	1906 Wt.	1907 Type	1907 Wt.	1908 Type	1908 Wt.
4-Door Touring Sedan	1482	3260	1492	3535	1472	3995	1462	4305					1442	4350		
DE		3280														
4 Door Sport Sedan (LeBaron)													1452	4450		
4-Door Formal Sedan													1432	4350		
4-Door Sport Sedan (Darrin)													1422	4490		
2-Door Touring Sedan	1484	3250	1494	3525												
DE		3270														
7-Pass. Touring Sedan									1471	4495					1451	4590
7-Pass. Sedan (LeBaron)															1421	4740
7-Pass. Touring Limousine									1470	4570					1450	4650
5-Pass. Conv. Victoria (Darrin)											1429	4040				
7-Pass. Limousine (LeBaron)															1420	4850
2-4 Club Coupe	1485	3230	1495	3470	1475	3900										
DE		3250														
2-4 Conv. Coupe	1489	3260	1499	3570	1479	3965										
DE		3280			1479	3985										
5-Pass. Conv. Sedan			1497	3725	1477	4140										
DE					1477	4160										
2-Pass. Bus. Coupe	1488	3190	1498	3360	1478	3875										
Station Wagon	1483	3460	1493	3720												
Chassis		2430		2630		2885		3000		3150		2910		3025		3175

1901A Chassis—160" W.B. 2915 lbs.; 1903A Chassis—160" W.B. 3215 lbs.; T 1900 Taxi—T 1462—3950 lbs.

MODELS	1900	1901	1901A	1903	1903A	1904	1905	1906	1907	1908
Wheelbase	122"	127"	160"	127"	160"	138"	148"	127"	138"	148"
Over-all Length Bumper to Bumper	201 1/16"	206 1/4"	241 11/16"	206 3/16"	241 3/16"	217 11/32"	227 3/16"	212 11/32"	217 11/32"	227 3/16"
Over-all Height Loaded	66 11/32"	67 3/32"		67 11/32"		68 1/4"	68 1/4"	61 1/2"	68 1/4"	68 1/4"
Over-all Width	73 3/4"	73 3/4"	74 3/4"	73 3/4"	74 3/4"	73 3/4"	75"	73 3/4"	73 3/4"	75"