SERVICE MANUAL

SECTION XXI

SPECIFICATIONS

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Packard Motor Car Company
Detroit 32, Michigan

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Section XXI
MECHANICAL SPECIFICATIONS AND ADJUSTMENTS
24th SERIES

PACKARD MODELS.....“200”	“300”	PATRICIAN “400”	“COMMERCIAL”
CHASSIS SYMBOLS.... 2401	2402	2406	300-2413

BRAKES

Type	Hydraulic 2-shoe	Hydraulic 2-shoe	Hydraulic 2-shoe	Hydraulic 2-shoe
Effective Area	171.5 sq. inches	208.25 sq. inches	208.25 sq. inches	292.25 sq. inches
Effective Area Hand Brake	85.75 sq. inches	98 sq. inches	98 sq. inches	162.25 sq. inches
Drum Diameter..Front & Rear	12″ Centrifuse	12″ Centrifuse	12″ Centrifuse	12″ Centrifuse (Front) 14″ Centrifuse (Rear)
Lining Size and Material				
Primary—Marshall-4112				
Front	1¾″ x 3/16″ x 11½″	2¼″ x 3/16″ x 11½″	2¼″ x 3/16″ x 11½″	2½″ x 3/16″ x 13″
Rear	1¾″ x 3/16″ x 11½″	2″ x 3/16″ x 11½″	2″ x 3/16″ x 11½″	2¾″ x ¼″ x 14¾″
Secondary—Marshall-9051				
Front	1¾″ x 3/16″ x 13″	2¼″ x 3/16″ x 13″	2¼″ x 3/16″ x 13″	2½″ x 3/16″ x 13″
Rear	1¾″ x 3/16″ x 13″	2″ x 3/16″ x 13″	2″ x 3/16″ x 13″	2¾″ x ¼″ x 14¾″
Wheel Cylinder Size				
Front	1⅛″ Dia.	1⅛″ Dia.	1⅛″ Dia.	1⅛″ Dia.
Rear	1″ Dia.	1″ Dia.	1″ Dia.	1¼″ Dia.
Master Cylinder Size	1″ Dia.	1″ Dia.	1″ Dia.	1⅛″ Dia.

CLUTCH

Type	Single Dry Plate	Single Dry Plate		Single Dry Plate
Pedal Free Play	1¼″ to 1½″	1¼″ to 1½″		1¼″ to 1½″
Facing Material	U.S. Asbestos Woven	U.S. Asbestos Woven		U.S. Asbestos Woven
Size of Facing	6¾″ x 10″ x .125″	7″ x 10½″ x .125″		7″ x 10½″ x .125″
Throw-Out Bearing	Prelubricated Ball	Prelubricated Ball		Prelubricated Ball
Clutch Spring Pressure	*154 lbs. at 1.566″*	163 lbs. at 1.562″		163 lbs. at 1.562″
Number of Springs	9	9		9
Vibration Neutralizer	Yes	Yes		Yes

COOLING SYSTEM

Type	Pressure	Pressure	Pressure	Pressure
Water Pump	Centrifugal Self-Adj.	Centrifugal Self-Adj.	Centrifugal Self-Adj.	Centrifugal Self-Adj.
Water Pump Drive	Fan Belt	Fan Belt	Fan Belt	Fan Belt
Capacity of System	19.9 Qts.	19.9 Qts.	19.9 Qts.	20 Qts.
Heater Capacity	.65 Qts.	.65 Qts.	.65 Qts.	.65 Qts.
Fan	4 Blade—18 inch	4 Blade—18 inch	4 Blade—18 inch	4 Blade—18 inch
Driving Pulley	On Crankshaft	On Crankshaft	On Crankshaft	On Crankshaft
Ratio	.919 to 1	.919 to 1	.919 to 1	.919 to 1
Thermostat Starts to Open				
Standard	148° to 156°	148° to 156°	148° to 156°	148° to 156°
High Reading	157° to 165° 175° to 184°	157° to 165° 175° to 184°	157° to 165° 175° to 184°	157° to 165° 175° to 184°
Fan Belt	41.2″ x .375″	41.2″ x .375″	41.2″ x .375″	41.2″ x .375″
Heat Indicator	Electric	Electric	Electric	Electric
Fan Belt Adjustment	At Generator	At Generator	At Generator	At Generator
Gravity Flow of Radiator	39.1 Gal. Per Min.	39.1 Gal. Per Min.	39.1 Gal. Per Min.	39½ Gal. Per Min.
Radiator Cap Pressure Type	7 p.s.i.	7 p.s.i.	7 p.s.i.	7 p.s.i.

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ELECTRICAL

Battery

Make and Type	Willard SW-2L-100 Auto-Lite 2L-100	Willard SW-2L-100 Auto-Lite 2L-100	Willard HW-2F-120 Auto-Lite 2FH-120	Willard HW-2F-120 Auto-Lite 2FH-120
Capacity	100 Amp. Hr.	100 Amp. Hr.	120 Amp. Hr.	120 Amp. Hr.
Number of Plates	17	17	17	17
Terminal Grounded	Positive	Positive	Positive	Positive

Starting Motor

Make	Auto-Lite	Delco-Remy	Auto-Lite	Delco-Remy	Auto-Lite	Auto-Lite	Delco-Remy
Type	MCL-6113	1107943	MCL-6113	1107943	MCL-6114	MCL-6113	1107943
Stalled Torque	25 Ft. Lbs.	16 Ft. Lbs.	25 Ft. Lbs.	16 Ft. Lbs.	25 Ft. Lbs.	25 Ft. Lbs.	16 Ft. Lbs.
Current Draw—Stalled Torque	875 Amp. 4V.	600 Amp. 3V.	875 Amp. 4V.	600 Amp. 3V.	875 Amp. 4V.	875 Amp. 4V.	600 Amp. 3V.
Running Free	65 Amp.	65 Amp.	65 Amp.	65 Amp.	65 Amp.	65 Amp.	65 Amp.
Cranking Engine	175-225 Amp.	175-225 Amp.	175-225 Amp.	175-225 Amp.	175-225 Amp.	175-225 Amp.	175-225 Amp.
Brush Spring Tension	42-53 oz.	24-28 oz.	42-53 oz.	24-28 oz.	42-53 oz.	42-53 oz.	24-28 oz.
Starter Drive	Bendix	Bendix	Bendix	Bendix	Over-Running Clutch	Bendix	Bendix
No. of Starter Pinion Teeth	9	9	9	9	9	9	9
No. of Flywheel Teeth	140	140	140	140	140	140	140
Pinion Meshes	From Front	From Front	From Front	From Front	From Front	From Front	From Front

Generator

Make	Auto-Lite	Delco-Remy	Auto-Lite	Delco-Remy	Auto-Lite	Auto-Lite	Delco-Remy
Type	GGW 6003A	1102745	GGW 6003A	1102745	GGW 6003A	GGW 6003A	1102745
Maximum Output @ 8 volts	40 Amp.	40 Amp.	40 Amp.	40 Amp.	40 Amp.	40 Amp.	40 Amp.
Gen. Cut in Speed (Cold)	920 r.p.m.	900 r.p.m.	920 r.p.m.	900 r.p.m.	920 r.p.m.	920 r.p.m.	900 r.p.m.
Field Current—Amps.	1.6—1.8	1.75—1.9	1.6—1.8	1.75—1.9	1.6—1.8	1.6—1.8	1.75—1.9
Brush Spring Tension	35-53 oz	25 oz.	35-53 oz.	25 oz.	35-53 oz.	35-53 oz.	25 oz.

Regulator

Make	Auto-Lite	Delco-Remy	Auto-Lite	Delco-Remy	Auto-Lite	Auto-Lite	Delco-Remy
Type	VRP-4402C	1118360	VRP-4402C	1118360	VRP-4402C	VRP-4402C	1118360
Maximum Output	40 Amp.	40 Amp.	40 Amp.	40 Amp.	40 Amp.	40 Amp.	40 Amp.
Circuit Breaker							
Air Gap	.031"—.034"	.020	.031"—.034"	.020"	.031"—.034"	.031"—.034"	.020"
Contact Gap	.015"	.020"	.015"	.020"	.015"	.015"	.020"
Close Volts	6.5—7.0	6.5—7.0	6.5—7.0	6.5—7.0	6.5—7.0	6.5—7.0	6.5—7.0
Current Regulator							
Air Gap	.048"—.052"	.080"	.048"—.052"	.080"	.048"—.052"	.048"—.052"	.080"
Contact Gap	.012"	—	.012"	—	.012"	.012"	—
Amperes	39-41	39-41	39-41	39-41	39-41	39-41	39-41
Voltage Regulator							
Air Gap	.048"—.052"	.075"	.048"—.052"	.075"	.048"—.052"	.048"—.052"	.075"
Contact Gap	.012"	—	.012"	—	.012"	.012"	—
Voltage (70° F)	7.4	7.4	7.4	7.4	7.4	7.4	7.4

Distributor

Make	Auto-Lite	Delco-Remy	Auto-Lite	Delco-Remy	Auto-Lite	Auto-Lite	Delco-Remy
Type	IGP-4502C	1110825	IGP-4502C	1110825	IGP-4502C	IGP-4502C	1110825
Breaker Contact Gap	.017"	.016"	.017"	.016"	.017"	.017"	.016"
Cam Dwell Angle	27°	21°—30°	27°	21°—30°	27°	27°	21°—30°
Breaker Spring Tension	19—23 oz.	17—21 oz.	19—23 oz.	17—21 oz.	19—23 oz.	19—23 oz.	17—21 oz.
Condenser Capacity (Mfds.)	.20—.25	.18—.23	.20—.25	.18—.23	.20—.25	.20—.25	.18—.23
Ignition Timing Setting	6°	6°	6°	6°	6°	6°	6°
Vac. Adv. Dist. Degrees (Max.)	10½°	10½°	10½°	10½°	10½°	10½°	10½°
Gov. Adv. Dist. Degrees (Max.)	8°	9°	8°	9°	8°	8°	9°
Gov. Adv. Begins (Eng. r.p.m.)	600	600	600	600	600	600	600

Ignition Coil

Make	Auto-Lite	Delco-Remy	Auto-Lite	Delco-Remy	Auto-Lite	Auto-Lite	Delco-Remy
Type	CR-4001A	1115376	CR-4001A	1115376	CR-4001A	CR-4001A	1115376
Current Draw (Idling Cold)	2.75 Amp.	2.75 Amp.	2.75 Amp.	2.75 Amp.	2.75 Amp.	2.75 Amp.	2.75 Amp.

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ELECTRICAL (Cont'd.)

Spark Plugs

Make and Type	Auto-Lite	A5	A5	A5	A5	A5	A5	A5	A5
	AC	46-5	46-5	46-5	46-5	46-5	46-5	46-5	46-5
	Champion	J8	J8	J8	J8	J8	J8	J8	J8
Size		14 mm	14 mm	14 mm	14 mm	14 mm	14 mm	14 mm	14 mm
Gap		.028"	.028"	.028"	.028"	.028"	.028"	.028"	.028"

Current Protection

Body	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker
Head, Tail and Stop Lights	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker
Direction Signal	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker
Clock	SFE 3 Ampere Fuse	SFE 3 Ampere Fuse	SFE 3 Ampere Fuse	SFE 3 Ampere Fuse
Heater	SFE 20 Ampere Fuse	SFE 20 Ampere Fuse	SFE 20 Ampere Fuse	SFE 20 Ampere Fuse
Radio	SFE 14 Ampere Fuse	SFE 14 Ampere Fuse	SFE 14 Ampere Fuse	SFE 14 Ampere Fuse
Overdrive	SFE 30 Ampere Fuse	SFE 30 Ampere Fuse		SFE 30 Ampere Fuse

Lighting and Accessories

Headlight—Sealed Beam	45—35 Watts	45—35 Watts	45—35 Watts	45—35 Watts
Horn Make	Sparks-Withington	Sparks-Withington	Sparks-Withington	Sparks-Withington
Horn Location	On Radiator Cradle	On Radiator Cradle	On Radiator Cradle	On Radiator Cradle
Clock Make and Type	Borg Electric	Borg Electric	Borg Electric	Borg Electric
Current Draw Headlights (Ea.)	7—5.5 Amperes	7—5.5 Amperes	7—5.5 Amperes	7—5.5 Amperes
Current Draw Horns	22—25 Amperes	22—25 Amperes	22—25 Amperes	22—25 Amperes
Current Draw Heater Blower	10 Amperes @ 6 Volts	10 Amperes @ 6 Volts	10 Amperes @ 6 Volts	10 Amperes @ 6 Volts

ENGINE

General Information

Make	Packard	Packard	Packard	Packard
Type	"L" Head—Vertical	"L" Head—Vertical	"L" Head—Vertical	"L" Head—Vertical
A.M.A. Horsepower	39.2	39.2	39.2	39.2
Max. Brake h.p.—Std. Comp.	135 @ 3600 R.P.M.	150 @ 3600 R.P.M.	155 @ 3600 R.P.M.	150 @ 3600 R.P.M.
—High Comp.	138 @ 3600 R.P.M.	155 @ 3600 R.P.M.		155 @ 3600 R.P.M.
Suspension	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted
Firing Order	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4
Torque—Std. Comp.	230 ft. lbs. @ 2000 R.P.M.	270 ft. lbs. @ 2000 R.P.M.	275 ft. lbs. @ 2000 R.P.M.	270 ft. lbs. @ 2000 R.P.M.
—High Comp.	235 ft. lbs. @ 2000 R.P.M.	275 ft. lbs. @ 2000 R.P.M.		275 ft. lbs. @ 2000 R.P.M.
Bore	3½"	3½"	3½"	3½"
Stroke	3¾"	4¼"	4¼"	4¼"
Piston Displacement	288	327	327	327
Cylinder Arrangement	8 in line	8 in line	8 in line	8 in line
Compression Ratio—Std.	7.00 to 1	7.00 to 1	7.80 to 1	7.00 to 1
—High	7.50 to 1	7.80 to 1		7.80 to 1
Weight with Clutch and Trans.	860 lbs.	875 lbs.		875 lbs.
Weight with Overdrive	895 lbs.	910 lbs.		910 lbs.
Weight with Automatic Trans.	995 lbs.	1010 lbs.	1040 lbs.	1010 lbs.
Cylinder Head Material	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Engine Rev. Per Mile—Std. Ratio	2824	2824	2521	2824

Connecting Rod

Weight	2 lbs. 3.8 ozs.	2 lbs. 3.4 ozs.	2 lbs. 3.4 ozs.	2 lbs. 3.4 ozs.
Material	Steel Forging	Steel Forging	Steel Forging	Steel Forging
Bearing Type	Detachable Shell	Detachable Shell	Detachable Shell	Detachable Shell
Center to Center Length	7 15/16"	7 11/16"	7 11/16"	7 11/16"
Length of Crankpin	1 5/16"	1 5/16"	1 5/16"	1 5/16"
Clearance Bearing to Crankpin	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"
End Play on Crankshaft	.003" to .011"	.003" to .011"	.003" to .011"	.003" to .011"
Oil Lead to Piston Pin	Rifle Drilled	Rifle Drilled	Rifle Drilled	Rifle Drilled

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ENGINE (Cont'd.)

Bearing Material	Special Composite	Special Composite	Special Composite	Special Composite
Assemble in Engine	Oil Hole to Camshaft	Oil Hole to Camshaft	Oil Hole to Camshaft	Oil Hole to Camshaft
Bearing Adjustment	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells

Crankshaft

Type	Counterbalanced	Counterbalanced	Counterbalanced	Counterbalanced
Material	Steel Forging	Steel Forging	Steel Forging	Steel Forging
Number of Counterweights	8 Forged Integral	8 Forged Integral	8 Forged Integral	8 Forged Integral
Number of Main Bearings	5	5	9	5
Main Bearing Journal Diameter	2.7465"	2.7465"	2.7465"	2.7465"
Connecting Rod Journal Dia.	2.250"	2.250"	2.250"	2.250"
Main Bearing Length No. 1	1 7/32"	1 7/32"	1 7/32"	1 7/32"
No. 2	1 1/16"	1 1/16"	1 1/16"	1 1/16"
No. 3	1 19/32"	1 19/32"	1 1/16"	1 19/32"
No. 4	1 1/16"	1 1/16"	1 1/16"	1 1/16"
No. 5	2 1/16"	2 1/16"	1 19/32"	2 1/16"
No. 6	None	None	1 1/16"	None
No. 7	None	None	1 1/16"	None
No. 8	None	None	1 1/16"	None
No. 9	None	None	2 1/16"	None
Projected Main Bearing Area	19.3 sq. inches	19.3 sq. inches	30.7 sq. inches	19.3 sq. inches
Thrust Taken On	Center Bearing	Center Bearing	Center Bearing	Center Bearing
Vibration Damper	Fluid Suspension	Fluid Suspension	Fluid Suspension	Fluid Suspension
Weight	95 lbs.	103½ lbs.	105 lbs.	103½ lbs.
End Play	.0035" to .0085"	.0035" to .0085"	.0035" to .0085"	.0035" to .0085"
Main Bearing Material	Special Composite	Special Composite	Special Composite	Special Composite
Clearance—All Main Bearings	.001" to .003"	.001" to .003"	.001" to .003"	.001" to .003"
Crankshaft Sprocket—				
Material and Size	Steel—21 teeth	Steel—21 teeth	Steel—21 teeth	Steel—21 teeth
Bearing Adjustment	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells

Camshaft and Chain

Gear Cover	Steel Stamping	Steel Stamping	Steel Stamping	Steel Stamping
Camshaft Drive	Silent Chain	Silent Chain	Silent Chain	Silent Chain
Make of Chain	Morse	Morse	Morse	Morse
Length, Width, & Pitch of Chain	58 links, 1", .375"	58 links, 1", .375"	58 links, 1", .375"	58 links, 1", .375"
Number of Camshaft Bearings	5	5	5	5
Clearance of Camshaft Bearings	.001" to .003"	.001" to .003"	.001" to .003"	.001" to .003"
Camshaft End Play	.004" to .006"	.004" to .006"	.004" to .006"	.004" to .006"
Camshaft Sprocket—				
Material and Size	Cast Iron—42 teeth	Cast Iron—42 teeth	Cast Iron—42 teeth	Cast Iron—42 teeth

Oiling System

Type	Full Pressure	Full Pressure	Full Pressure	Full Pressure
Oil Pump Type	Gear	Gear	Gear	Gear
Crankcase Capacity	7 qts.	7 qts.	7 qts.	7 qts.
Oil filler location	Left side	Left side	Left side	Left side
Oil filter location	Special equipment	Left side	Left side	Left side
Oil measuring stick	Left crankcase	Left crankcase	Left crankcase	Left crankcase
Oil Pump Intake	Floating screen	Floating screen	Floating screen	Floating screen
Crankcase ventilator	Yes	Yes	Yes	Yes
Oil Pressure—Normal Driving	40 lbs.	40 lbs.	40 lbs.	40 lbs.
Oil Drain	Hex. Head Flange Plug ⅜"—18	Hex. Head Flange Plug ⅜"—18	Hex. Head Flange Plug ⅜"—18	Hex. Head Flange Plug ⅜"—18

Pistons

Material	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy
Type	Auto-Thermic	Auto-Thermic	Auto-Thermic	Autho-Thermic
Weight	19½ ozs.	19½ ozs.	19½ ozs.	19½ ozs.
Weight with Rings, Pin & Lock	25½ ozs.	25½ ozs.	25½ ozs.	25½ ozs.
Overall Height	3⅞"	3⅞"	3⅞"	3⅞"

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ENGINE (Cont'd.)

Height Centerline Pin to Top	2⅛"	2⅛"	2⅛"	2⅛"
Skirt Clearance	.0005" to .001"	.0005" to .001"	.0005" to .001"	.0005" to .001"
Assemble Slot Toward	Camshaft	Camshaft	Camshaft	Camshaft
Piston Pin Size	3¼" x ⅞"	3¼" x ⅞"	3¼" x ⅞"	3¼" x ⅞"
Type Pin	Floating	Floating	Floating	Floating
Lubrication of Pin	Pressure	Pressure	Pressure	Pressure
Piston Pin Fit in Piston	Palm Push Fit at 160° F	Palm Push Fit at 160° F	Palm Push Fit at 160° F	Palm Push Fit at 160° F
Piston Pin Fit in Rod	Finger Push Fit	Finger Push Fit	Finger Push Fit	Finger Push Fit
Piston Pin Oversizes	.003" and .006"	.003" and .006"	.003" and .006"	.003" and .006"
Number of Rings Per Piston	3	3	3	3
No. of Oil Rings Per Piston	1	1	1	1
Number of Compression Rings Per Piston	2	2	2	2
Width of Compression Rings	.0930" to .0935"	.0930" to .0935"	.0930" to .0935"	.0930" to .0935"
Width of Oil Rings	.1860" to .1865"	.1860" to .1865"	.1860" to .1865"	.1860" to .1865"
Piston Ring Gap—Compression	.007" to .017"	.007" to .017"	.007" to .017"	.007" to .017"
Piston Ring Gap—Oil	.007" to .015"	.007" to .015"	.007" to .015"	.007" to .015"
Location of Rings	Above Pin	Above Pin	Above Pin	Above Pin
Piston Oil Drain Holes	12—5/32 Dia. Holes	12—5/32 Dia. Holes	12—5/32 Dia. Holes	12—5/32 Dia. Holes
Piston Oversizes Available	.005", .020", .030", .040"	.005", .020", .030", .040"	.005", .020", .030", .040"	.005", .020", .030", .040"

Valves

Valve Lift—Intake and Exhaust	.342"	.342"	.342"	.342"
Valve Arrangement	"L" Head	"L" Head	"L" Head	"L" Head
Valve Head Diameter—Inlet	1 43/64"	1 43/64"	1 43/64"	1 43/64"
—Exhaust	1 7/16"	1 7/16"	1 7/16"	1 7/16"
Valve Stem Diameter—Inlet	.3417"	.3417"	.3417"	.3417"
—Exhaust	.3398"	.3398"	.3398"	.3398"
Valve Overall Length	5⅞"	5⅞"	5⅞"	5⅞"
Valve Material—Inlet	Chrome Nickel	Chrome Nickel	Chrome Nickel	Chrome Nickel
—Exhaust	Austentitic	Austentitic	Austentitic	Austentitic
Valve Spring Keeper Type	Split Cone	Split Cone	Split Cone	Split Cone
Valve Stem Clearance—Inlet	.002"	.002"	.002"	.002"
—Exhaust	.004"	.004"	.004"	.004"
Valve Tappet Clearance—Inlet Warm	.007"	Automatic Take-up	Automatic Take-up	Automatic Take-up
—Exhaust Warm	.010"	Automatic Take-up	Automatic Take-up	Automatic Take-up
Inlet Valve Opens	15° BTDC	15° BTDC	15° BTDC	15° BTDC
Inlet Valve Closes	45° ALDC	43° ALDC	43° ALDC	43° ALDC
Exhaust Valve Opens	50° BLDC	53° BLDC	53° BLDC	53° BLDC
Exhaust Valve Closes	9° ATDC	4° ATDC	4° ATDC	4° ATDC
Tappet Clearance for Timing —Inlet	.0125"	Not Used	Not Used	Not Used
—Exhaust	.015"	Not Used	Not Used	Not Used
Valve Seat Angle—Inlet	30°	30°	30°	30°
—Exhaust	45°	45°	45°	45°
Valve Spring	Single	Single	Single	Single
Valve Spring Load—Valve Closed	60-66 lbs. @ 1¾"	60-66 lbs. @ 1¾"	60-66 lbs. @ 1¾"	60-66 lbs. @ 1¾"
—Valve Open	135-145 lbs. @ 1 13/32"	135-145 lbs. @ 1 13/32"	135-145 lbs. @ 1 13/32"	135-145 lbs. @ 1 13/32"

Exhaust System

Exhaust Pipe Diameter	2¼"	2¼"	2¼"	2¼"
Muffler Size	5 5/16" Dia. x 35⅜"	5 5/16" Dia. x 35⅜"	5 5/16" Dia. x 35⅜"	5 5/16" Dia. x 35⅜"

FRAME

Depth (Maximum)	5 31/32" (6" Conv.)	6"	6"	6"
Thickness (Maximum)	⅛" (9/64" Conv.)	9/64"	9/64"	9/64"
Flange Width (Maximum)	2¼" (2 5/32" Conv.)	2 5/32"	2 5/32"	2 5/32"

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PACKARD MODELS.....	"200"	"300"	PATRICIAN "400"	"COMMERCIAL"
CHASSIS SYMBOLS....	2401	2402	2406	300-2413

FRONT SUSPENSION

Make	Packard	Packard	Packard	Packard
Type	Independent Parallelogram	Independent Parallelogram	Independent Parallelogram	Independent Parallelogram
Steering Knuckle	Reverse Elliot	Reverse Elliot	Reverse Elliot	Reverse Elliot
Steering Knuckle Pin Bearings—Lower.	.866" x 1.187" x 1.189" OD	.866" x 1.187" x 1.189" OD	.866" x 1.187" x 1.189" OD	.866" x 1.875" x 1.250" OD
—Upper.	Needle Bearing	Needle Bearing	Needle Bearing	Needle Bearing
Thrust Bearing	Steel Ball Bearing	Steel Ball Bearing	Steel Ball Bearing	Steel Ball Bearing
Caster	Neg. 1° ± ½°	Neg. 1° ± ½°	Neg. 1° ± ½°	Neg. 2° ± ½°
Front Wheel Toe-In	0 plus 1/16" minus 0	0 plus 1/16" minus 0	0 plus 1/16" minus 0	0 plus 1/16" minus 0
Knuckle Pin Angle	5° 50'	5° 50'	5° 50'	2° 30'
Camber	0° plus or minus ¼°	0° plus or minus ¼°	0° plus or minus ¼°	0° plus or minus ½°
Wheel Bearings—Inner & Outer	Tapered Roller	Tapered Roller	Tapered Roller	Tapered Roller
Wheel Bearing Adjustment	Tighten nut to 20 ft. lbs. and back off 1 hex. and lock.	Tighten nut to 20 ft. lbs. and back off 1 hex. and lock.	Tighten nut to 20 ft. lbs. and back off 1 hex. and lock.	Tighten inner nut to 20 ft. lbs. and back off 2 to 3 holes on locking washer and lock.
Tread	59½"	60"	60"	59½"

FUEL SYSTEM

Carburetor

Make and Type	Carter WGD-784S	Carter WGD-767S	Carter WGD-767S	Carter WGD-767S
Flange Size	1¼" Duplex	1¼" Duplex	1¼" Duplex	1¼" Duplex
Main Venturi I.D.	1 3/16"	1 3/16"	1 3/16"	1 3/16"
Float Level	13/64"	13/64"	13/64"	13/64"
Measured From	Top	Top	Top	Top
Metering Rod No.	75-722	75-707	75-707	75-707
Economy Step	.0685"	.0675"	.0675"	.0675"
Center Step Tapers To	.066"	.0625"	.0625"	.0625"
Power Step	.0595"	.047"	.047"	.047"
Main Metering Jet	.089" (No. 43 Drill)	.089" (No. 43 Drill)	.089" (No. 43 Drill)	.089" (No. 43 Drill)
Low Speed Jet	.033" (No. 66 Drill)	.033" (No. 66 Drill)	.033" (No. 66 Drill)	.033" (No. 66 Drill)
By-Pass Jet	.052" (No. 55 Drill)	.052" (No. 55 Drill)	.052" (No. 55 Drill)	.052" (No. 55 Drill)
Economizer Jet	.045" (1.15 MM Drill)	.045" (1.15 MM Drill)	.0465" (No. 56 Drill)	.0465" (No. 56 Drill)
Idle Bleed	.0465" (No. 56 Drill)	.0465" (No. 56 Drill)	.0465" (No. 56 Drill)	.0465" (No. 56 Drill)
Anti-Percolator Jet	.033" (No. 66 Drill)	.033" (No. 66 Drill)	.033" (No. 66 Drill)	.033" (No. 66 Drill)
Pump Discharge Jet	.0225" (No. 74 Drill)	.0225" (No. 74 Drill)	.0225" (No. 74 Drill)	.0225" (No. 74 Drill)
Pump Adjustment	13/32" From Flange	13/32" From Flange	13/32" From Flange	13/32" From Flange
Pump Stroke	5/16" ± 1/64"	5/16" ± 1/64"	5/16" ± 1/64"	5/16" ± 1/64"
Metering Rod Adj.	Bottom	Bottom	Bottom	Bottom
Fast Idle Adj.	.026"	.026"	.026"	.026"
Unloader Adj.	1/8" ± 1/64"	1/8" ± 1/64"	1/8" ± 1/64"	¼" ± 1/64"
Idle Adj. Turns Out	1 to 1½	1 to 1½	1 to 1½	1 to 1½
Automatic Choke	Climatic Control	Climatic Control	Climatic Control	Climatic Control
Choke Adjustment	1 Notch Rich.	1 Notch Rich.	1 Notch Rich.	1 Notch Rich.
Air Cleaner & Silencer	Oil Coated Mesh	Oil Bath-Type	Oil Bath-Type	Oil Bath-Type

Fuel Pump

Make	AC	AC	AC	AC
Type Booster	Single Acting	Double Acting	Double Acting	Double Acting
Model	1523867	GP-19058	GP-19058	GP-19058
Capacity—45 sec.	1 Pint	1 Pint	1 Pint	1 Pint
Pressure—PSI	4 to 5	4 to 5	4 to 5	4 to 5
Booster Vac. (@ 240 Eng. r.p.m.)	8½ in. Hg.	10 in. Hg.	10 in. Hg.	10 in. Hg.
Inlet Side	Rear	Rear	Rear	Rear
Outlet Side	Front	Front	Front	Front
Fuel Tank Cap.—Gals.	20	20	20	20
Fuel Filter	In Fuel Pump	In Fuel Pump	In Fuel Pump	In Fuel Pump
Fuel Gauge	Electric	Electric	Electric	Electric

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PACKARD MODELS.....CHASSIS SYMBOLS....	"200" 2401	"300" 2402	PATRICIAN "400" 2406	"COMMERCIAL" 300-2413
REAR AXLE				
Type	Semi-Floating	Semi-Floating	Semi-Floating	Semi-Floating
Make	Packard	Packard	Packard	Packard
Final Drive	Hypoid Gears	Hypoid Gears	Hypoid Gears	Hypoid Gears
Propulsion	Through Rear Springs	Through Rear Springs	Through Rear Springs	Through Rear Springs
Axle Housing	Swedged Tube Banjo Type	Swedged Tube Banjo Type	Swedged Tube Banjo Type	Swedged Tube Banjo Type
Oil Capacity	4 pts.	4 pts.	4 pts.	6 pts.
Wheel Bearings	Tapered Rollers	Tapered Rollers	Tapered Rollers	Tapered Rollers
Tread	60 23/32"	61 7/32"	61 7/32"	65 15/16"
Gear Ratio—Std. Trans.	3.9 to 1	3.9 to 1		4.54 to 1
—Overdrive	4.1 to 1	4.1 to 1		4.7 to 1
—Ultramatic	3.9 to 1	3.54 to 1	3.54 to 1	4.36 to 1
Pinion Backlash	.003" to .005"	.003" to .005"	.003" to .005"	.003" to .005"
No. teeth—Gear & Pinion Std.	39-10	39-10	39-11	50-11
Oil Drain Plugs	½"—14 Pipe Thd.	½"—14 Pipe Thd.	½"—14 Pipe Thd.	½"—14 Pipe Thd.
UNIVERSAL JOINTS				
Make	Universal Products Mechanics or Spicer	Universal Products Mechanics or Spicer	Universal Products Only	Mechanics
Type	Roller Bearing	Roller Bearing	Roller Bearing	Roller Bearing
Number Used	2	2	2	3—Double Shaft
SPRINGS				
Front—Coil, Load and Rate	2040 x 90	2180 x 90	2180 x 90	2700 x 172
Front Size	4¼" Inside Dia.	4¼" Inside Dia.	4¼" Inside Dia.	4¼" Inside Dia.
Rear—Leaf, Load and Rate	1000 x 110	1080 x 110	1080 x 110	Left 2100 x 225 Right 2000 x 225
Rear Length and Width	54⅜" x 2½"	54⅜" x 2½"	54⅜" x 2½"	54⅜" x 2"
Shackles	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted
Shock Absorbers	Hydraulic Direct-Acting	Hydraulic Direct-Acting	Hydraulic Direct-Acting	Hydraulic Direct-Acting
Stabilizer—Front	Torsional	Torsional	Torsional	Torsional
Spring Material	Silico-Manganese	Silico-Manganese	Silico-Manganese	Silico-Manganese
Springs, Late Production,				
Front—Coil, Load and Rate	2040 x 90	2180 x 90	2180 x 90	
Rear—Leaf, Load and Rate	950 x 110	1030 x 110	1030 x 110	
STEERING GEAR				
Make	Packard-Gemmer	Packard-Gemmer	Packard-Gemmer	Packard-Gemmer
Type	Worm and 3 tooth Roller	Worm and 3 tooth Roller	Worm and 3 tooth Roller	Worm and 3 tooth Roller
Ratio—Gear	20.4	22.3	22.3	30.9
Ratio—Overall	28.3	30.9	30.9	22.3
Steering Wheel	18"—2 spokes	18"—2 spokes	18"—2 spokes	18"—2 spokes
Minimum Turning Radius	21½ ft.	22½ ft.	22½ ft.	28 ft.

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont.

PACKARD MODELS.....	"200"	"300"	PATRICIAN "400"	"COMMERCIAL"
CHASSIS SYMBOLS....	2401	2402	2406	300-2413

TRANSMISSION

Type—Automatic	Ultramatic Drive		Ultramatic Drive		Ultramatic Drive		Ultramatic Drive	
Type—Standard	Selective—Silent Synchronized		Selective—Silent Synchronized				Selective—Silent Synchronized	
Gear Teeth	Helical		Helical				Helical	
Number of Forward Speeds	3		3				3	
Engine to Rear Wheel Ratio	Std.	O.D.	Std.	O.D.			Std.	O.D.
Overdrive		2.96		2.96				3.39
Direct	3.9	4.1	3.9	4.1			4.54	4.7
Second	5.96	6.27	5.96	6.27			6.94	7.18
First	9.47	9.96	9.47	9.96			11.03	11.41
Reverse	12.34		12.34				14.36	
Oil Capacity—Std. Trans.	2 Pints		2 Pints				2 Pints	
Oil Capacity—O.D. Unit	1¼ Pints		1¼ Pints				1¼ Pints	
Oil Capacity—Automatic	12 Qts.		12 Qts.		12 Qts.		12 Qts.	
Oil Level Plugs—Std. Trans.	½"—14 Pipe		½"—14 Pipe				½"—14 Pipe	
Oil Level Indicator					Dip stick on Filler Cap—Left Side of Case			

WHEELS

Type	Demountable Disc.	Demountable Disc.	Demountable Disc.	Demountable Disc.
Rim Size	15" x 5½" "K" Rim	15" x 6" "L" Rim	15" x 6" "L" Rim	(16" x 5½" "F" Rim)
Size of Tire	15" x 7.60—4 Ply	15" x 8.00—4 Ply	15" x 8.00—4 Ply	16" x 7.50—6 Ply
Recommended Tire Pressure Front and Rear	24 lbs. (cold)	24 lbs. (cold)	24 lbs. (cold)	30 lbs. (Front) 40 lbs. (Rear)

CAR DIMENSIONS

Wheelbase	122"	127"	127"	156"
Overall Length—Bumper to Bumper	209⅜"	217¾"	217¾"	251½"
Overall Height—Loaded	Club Sedan—62¹¹⁄₁₆" 6 Pass. Sedan—61¹³⁄₁₆" Sports Coupe—62¹¹⁄₁₆" Business Coupe—61¹³⁄₁₆" Convertible—61¹³⁄₁₆"	6 Pass. Sedan—62²⁵⁄₃₂"	6 Pass. Sedan—62²⁵⁄₃₂"	
Overall Width	77⅞"	77⅞"	78⅛"	

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TORQUE SPECIFICATIONS

Important—The torque set forth in this chart occasionally varies on the same thread size and pitch diameter, for example: 3/8-16 may show three different torque specifications. The difference in specification means that the material is made from a different steel, or heavy torque is not required because of the particular location. In such cases the chart will be marked with an asterisk (*) which indicates anything other than the standard torque.

CHASSIS TORQUE SPECIFICATIONS

FUNCTION	SIZE & THREAD	TORQUE FT. LBS.	TORQUE IN. LBS.
BRAKES			
Brake equalizer lever link nut	3/8-24	25-30	
Brake master cylinder screw	3/8-24	25-30	
Brake master cylinder to pedal connecting rod nut	7/16-20*	*25-30	
Brake pedal pad screw	5/16-24	15-18	
Brake parking rear wheel cable to support plate screw	5/16-24	15-18	
Brake support plate (front) screw nut	1/2-20	65-75	
Brake support plate (rear) screw nut	3/8-24	35-40	
Brake support plate (front) screw nut	7/16-20	45-50	
Brake shoe anchor pin nut	5/8-18	85-90	
Brake cylinder screw	3/16-18	15-18	
Brake parking rear wheel cable bracket clamping bolt	5/16-24	*12-15	
Brake tube front end junction screw	5/16-18	15-18	
Brake tube rear axle junction vent screw	7/16-20*	30-45	
Brake master cylinder shield screw RHD	5/16-18	15-18	
Brake toe board plate to toe board screw	#14-10		*30-40
Brake handle to instrument panel screw (Shakeproof)	1/4-20	8-9	
Brake parking rear wheel cable to brake support plate clip screw	5/16-12	*12-14	
Brake parking rear wheel cable to frame clip bolt	5/16-24	15-18	
Brake parking relay lever bracket bolt	1/4-20	8-9	
Brake toggle assembly bolt	5/16-18	15-18	
Brake pedal reaction strap bolt	5/16-24	15-18	
BUMPERS			
Bumper assembly to frame bolt nut	1/2-20	65-75	
Bumper guard to impact bar bolt nut	7/16-14	*40-45	
Bumper impact bar nut (Marsden)	1/2-20	45-50	
CLUTCH			
Clutch release lever ball nut	7/16-20	45-50	
Clutch relay shaft bearing retainer—screw	1/4-28	8-9	
Clutch relay shaft outer clamp bolt	3/8-24	25-30	
Clutch relay shaft to release lever link nut	5/16-24	15-18	
Clutch pedal booster spring bracket bolt	3/8-16	25-30	
Clutch pedal pad screw nut	5/16-24	15-18	
Clutch pedal to relay shaft lever link	5/16-24	15-18	
Clutch relay lever pivot screw	5/16-18	15-18	
Clutch relay lever frame pivot bracket screw	3/8-24	25-30	
Clutch relay pivot screw	1/4-28	8-9	
Clutch relay lever to release lever rod nut (lock nut)	5/16-24	15-18	
Clutch pedal to relay shaft lever link lock nut	5/16-24	15-18	
Clutch pedal retracting spring bracket screw	3/8-16	25-30	

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CHASSIS TORQUE SPECIFICATIONS (Cont'd)

FUNCTION	SIZE & THREAD	TORQUE FT. LBS.	TORQUE IN. LBS.
CONTROLS			
All control rods, nuts and jam nuts	#10-32		20-30
All control shafts bracket screws	¼-28	8-9	
Kick down spring stop nut	9/16-18	*20-25	
ELECTRICAL			
Electrical wiring harness to gasoline tank gauge cable terminal screw	#10-32		15-20
ENGINE			
Engine camshaft sprocket nut	1"-14	140-160	
Engine camshaft thrust plate screw	5/16-18	15-18	
Engine carburetor assembly stud nut	5/16-24	15-18	
Engine carburetor air cleaner and silencer support bracket screw	¾-16	25-30	
Engine connecting rod bolt nut	7/16-28*	60-65	
Engine crankshaft bearing cap screw	½-13*	90-95	
Engine cylinder head to water outlet flange screw	⅜-16	25-30	
Engine cylinder to manifold stud	⅜-16	25-30	
Engine cylinder head stud nut	7/16-20*	60-62	
(See "Cylinder Head Installation" for tightening sequence.)			
Engine distributor retaining screw	5/16-18	15-18	
Engine distributor primary wire terminal screw	#10-32		15-20
Engine cylinder head temperature sending unit terminal screw	#8-32		15-20
Engine cylinder oil pressure gauge sending unit terminal screw	#8-32		15-20
Engine cylinder oil passage pipe plugs	⅜-18 pipe	10-12	
Engine fan screw	¼-28	8-9	
Engine flywheel assembly screw	7/16-20	55-60	
Engine flywheel housing screw	7/16-14	55-60	
Engine flywheel housing cover lower screw	5/16-18	15-18	
Engine flywheel housing cover lower felt retainer support screw	5/16-18	15-18	
Engine front end plate screw	5/16-18	15-18	
Engine fuel pump assembly screw	⅜-16	25-30	
Engine fuel and vacuum pump to windshield tube clip nut	¼-28	8-9	
Engine fuel pump heat shield bracket screw	#10-24		20-30
Engine gear cover screw	5/16-18	15-18	
Engine gear cover screw nut	5/16-18	15-18	
Generator adjusting strap screw	⅜-16	25-30	
Generator adjusting strap to generator screw	5/16-18	15-18	
Generator bracket screw	5/16-18	15-18	
Generator bracket to generator screw	5/16-24	15-18	
Generator (Auto-Lite) output terminal nut	#14-24		30-40
Generator (Auto-Lite) field terminal nut	#10-32		20-30
Generator (Auto-Lite) ground wire screw	#10-32		20-30
Generator (Delco) output terminal screw	#12-24		20-30
Generator (Delco) field terminal nut	#12-24		20-30
Generator (Delco) ground wire screw	¼-20		30-40
Engine ignition coil primary terminal nut	#10-32		20-30
Ignition coil support bracket screw	¾-16	25-30	
Ignition spark plug	14mm.	25-35	
Engine exhaust and intake manifold assy. screw	⅜-16	25-30	
Engine intake manifold to carburetor stud	5/16-18	15-18	
Engine manifold exhaust and intake screw	⅜-16	25-30	
Engine manifold exhaust and intake stud (long)	⅜-16	25-30	
Engine manifold exhaust and intake stud (short)	⅜-16	25-30	
Engine manifold exhaust and intake stud nut	⅜-16	25-30	

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CHASSIS TORQUE SPECIFICATIONS (Cont'd)

FUNCTION	SIZE & THREAD	TORQUE FT. LBS.	TORQUE IN. LBS.
ENGINE (Cont'd)			
Engine oil filter assembly screw	5/16-18	15-18	
Engine oil pan screw	5/16-18	15-18	
Engine oil pan assembly stud nut	5/16-24	15-18	
Engine oil pan assembly stud	5/16-18	15-18	
Engine oil pan assembly screw and lockwasher	5/16-18	15-18	
Engine oil pan drain plug	3/8-18	25-30	
Engine oil pressure gauge sending unit terminal screw	#8-32		15-20
Engine oil pump assembly screw	3/8-16	25-30	
Engine oil pump cover screw	1/4-20	8-9	
Engine oil strainer to cylinder screw	5/16-18	15-18	
Starting motor assembly screw	7/16-14	55-60	
Starting motor (Auto-Lite) battery cable to solenoid retainer nut—copper stud	5/16-24	5-6	
Starting motor cable to battery clamp bolt nut and ground cable terminal bolt nut	5/16-18	8-10	
Starting motor (Auto-Lite) switch cable to solenoid terminal nut	#10-32		20-30
Starting motor battery cable to solenoid retainer nut—copper stud	3/8-16	6-7	
Starting motor (Delco) switch cable to solenoid terminal screw	#10-32		20-30
Engine valve cover screw	5/16-18		25-35
Engine vibration damper assembly screw	3/4-16	130-150	
Engine water pump assembly—screw	3/8-16	25-30	
Engine water pump cover screw nut	5/16-24	15-18	
Engine water pump cover screw	5/16-24	15-18	
Engine water pump body assembly plug	3/8-18 Pipe	10-12	
Engine front mount to bracket nut	3/8-24	25-30	
Engine front mount to cylinder bracket	3/8-16	25-30	
Engine rear mount to transmission bolt	1/2-13	65-75	
Engine rear mount to bracket (old style)	7/16-20	35-40	
Engine rear mount to bracket (new style)	7/16-20	55-60	
EXHAUST			
Exhaust muffler support "U" bolt	5/16-18*	12-15	
Exhaust pipe to manifold screw	3/8-16	18-20	
Exhaust pipe to flywheel housing support bolt	3/8-16	25-30	
Exhaust muffler outlet tube extension assembly bolt nut	1/4-20	8-9	
Exhaust muffler and outlet tube support clamp and insulator assembly to frame bracket bolt nut	3/8-16	25-30	
Exhaust muffler outlet tube support clamp intermediate bolt nut	5/16-24*	12-15	
Exhaust pipe-clamp—"U" bolt nut	5/16-18*	12-15	
Exhaust pipe to flywheel housing bracket bolt	1/4-28	8-9	
Exhaust muffler support to insulator bolt	3/8-16	25-30	
Exhaust tail pipe support to frame screw	5/16-18	15-18	
FRONT SUSPENSION			
Front support arm bracket bolt nut	7/16-20	55-60	
Front suspension support pivot clamping bolt	3/8-24	25-30	
Front suspension support upper pivot pin bushing assembly (rear)	1 1/16-11	90-100	
Front suspension support lower pivot pin bushing	1 1/4-11 Special	145-155	
Front suspension support lower pivot pin nut	7/8-11 Special	85-95	
Front suspension lower support arm bushing (inner)	1 1/4-11 Special	145-155	
Torque required to rotate lower support arm bracket in bushings		Not to exceed 15 in. lbs.	
Front Wheel Bearing Nut should be tightened to		20	
Nut should then be backed off 1 hex	3/4-16		
Front suspension upper support arm bushing	1 1/8-11	115-125	
Front suspension upper support arm shaft bolt	1/2-20	75-80	
Front suspension upper support pivot pin bushing assembly (front)	1 1/16-11	90-100	

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CHASSIS TORQUE SPECIFICATIONS (Cont'd)

FUNCTION	SIZE & THREAD	TORQUE FT. LBS.	TORQUE IN. LBS.
FUEL			
Fuel tank drain plug	¼ Pipe	10-15	
Fuel tank gauge terminal screw	#8-32		15-20
Fuel tank support strap tee bolt	⅜-24		30-40
RADIATOR			
Radiator core cradle to frame screw	⅜-24	25-30	
Radiator hose clamp screw			20-25
Radiator core to cradle—screw	¼-20	8-9	
REAR AXLE			
Rear axle differential carrier cap screw	½-20	65-75	
Rear axle differential carrier oil plug	¾ Pipe	18-20	
Rear axle differential driving gear idler locking plate screw	5/16-18	15-18	
Rear axle differential driving gear idler shaft nut	9/16-18	70-75	
Rear axle differential driving gear screw	⅜-24	50-55	
Rear axle differential driving gear screw	7/16-20	75-80	
Rear axle differential carrier to case nut	⅜-24	35-40	
Rear axle shaft nut	⅞-14	200-270	
Rear axle shaft nut	¾-16	200-270	
Rear axle differential driving pinion universal joint flange nut	¾-16	300-325	
Adjust preload on bearing in assembly to show			30-35
SHOCK ABSORBERS			
Shock absorbers assembly stud nut	⅜-24	*12-18	
Shock absorber assembly stud lock nut	⅜-24	25-30	
Shock absorber lower plate nut	5/16-18	15-18	
SPRING			
Spring (rear) bushing bolt and shackle lock nut	½-20	65-75	
Spring (rear) bushing bolt and shackle lock nut	9/16-18	70-75	
Spring rear clip nut	½-20*	45-52	
Spring rear rubber bumper screw	5/16-18*	12-14	
STABILIZER			
Stabilizer (front) assembly to frame bolt	7/16-20	55-60	
Stabilizer (lateral) rod nut	½-20	65-70	
Stabilizer (rear lateral) to spring seat arm bolt	⅜-24	25-30	
Stabilizer (rear roll) grommet nut	⅜-24	14-18	
Stabilizer (rear roll) rod bearing bracket bolt	⅜-24	25-30	
STEERING			
Steering column clamp screw R.H.D.	5/16-24	15-18	
Steering column gearshift idler lever shaft nut	½-20*		15-20
Steering column gearshift shaft bracket clamp nut	¼-28	8-9	
Steering column gearshift idler lever shaft bushing clamp screw	¼-28	8-9	
Steering column to instrument panel bracket cap screw	5/16-24	15-18	

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CHASSIS TORQUE SPECIFICATIONS (Cont'd)

FUNCTION	SIZE & THREAD	TORQUE FT. LBS.	TORQUE IN. LBS.
STEERING (Cont'd)			
Steering connecting rod idler lever support screw	3/8-24	25-30	
Steering wheel horn ring contact plate screw	#10-24		20-30
Steering gear assembly to frame bolt	7/16-14	55	
Steering linkage taper ball joint nut	1/2-20	45-50	
Steering column gearshift idler lever shaft support screw	3/8-24	25-30	
Steering linkage clamp bolt	5/16-24	15-18	
Steering connecting rod idler lever bushing nut	7/8-11	100-110	
Steering wheel to post nut	3/4-20*	50-55	
Steering direction signal switch lever hub nut	1/4-20	8-9	
Steering wheel to horn button contact plate screw	#8-32		15-2
Steering connecting rod idler lever bushing retaining nut	7/16-20	55-60	
Steering column to dash grommet screw	#10-12		20-30
Steering column gearshift idler lever bracket to flywheel housing screw	5/16-18	15-18	
Steering column gearshift idler lever assembly bolt—R.H.D.	3/8-16	25-30	
Steering idler lever sleeve nut	3/8-24	25-30	
TRANSMISSION (UNI-MESH)			
Transmission case cover assembly screw	5/16-18	15-18	
Transmission case oil plug	3/4 Pipe	18-20	
Transmission clutch shaft rear bearing cover screw	5/16-18	15-18	
Transmission direct and second speed shifter lever clamp screw	5/16-24	15-18	
Transmission driving shaft rear bearing cover screw	3/8-16	25-30	
Transmission first speed and reverse shifter lever clamp screw	5/16-24	15-18	
Transmission reversing pinion shaft retaining screw	3/8-16	25-30	
Transmission shifter forks interlock bracket screw	3/8-24	25-30	
Transmission overdrive driving shaft nut	3/4-16	200-225	
Transmission overdrive support insulator to case nut	5/16-24	15-18	
Transmission overdrive unit assembly to transmission case screw	3/8-16	25-30	
Transmission overdrive unit case to adaptor screw	3/8-16	25-30	
Transmission overdrive unit case oil plugs	3/4 Pipe	18-20	
Transmission overdrive unit solenoid terminal screw	#10-32		20-30
Transmission overdrive cable bracket screw	1/4-28	8-9	
Transmission assembly to flywheel housing screw	1/2-13	65-75	
Transmission case cover assembly retaining screw (breather type)	5/16-18	15-18	
Transmission driving shaft nut	3/4-16	200-225	
Transmission driving shaft bearing rear cover stud	7/16-24	55-60	
Transmission flange cap screw—2413	1/2-20	90-95	
ULTRAMATIC DRIVE			
Transmission assembly screw	3/8-16	25-30	
Transmission bell housing assembly screw	7/16-14	55-60	
Transmission bell housing assembly plug	3/8-18 Pipe	10-12	
Transmission bell housing assembly plug	1/8-27 Pipe	8-10	
Transmission brake band adjusting screw Tighten with a torque load of 20 lbs. ft. Back off 1.75 turns. Tighten jam nut.	5/8-18		
Transmission brake band adjusting screw jam nut	5/8-18	*25-30	
Transmission brake piston cover screw	10-24		20-30
Transmission brake piston cover screw	5/16-18	15-18	
Transmission brake piston cover screw	1/8-27 Pipe	8-10	
Transmission control assembly screw	5/16-18	9	
Transmission control valve starter safety switch	3/4-16	50	
Transmission control converter relief valve retainer screw	5/16-18	9	
Transmission control oil pump selector valve cover screw	10-24		20-30
Transmission control direct drive valve cover screw	10-24		20-30

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CHASSIS TORQUE SPECIFICATIONS (Cont'd)

ULTRAMATIC DRIVE (Cont'd)

FUNCTION	SIZE & THREAD	TORQUE FT. LBS.	TORQUE IN. LBS.
Transmission control throttle valve spring seat screw	10-24		20-30
Transmission control timing valve cover screw	10-24		20-30
Transmission control valve body (upper to lower) screw	¼-20 x 1⅜	5	
Transmission control valve body (upper to lower) screw	¼-20 x 1⅛	5	
Transmission control valve body (upper to lower) screw	¼-20	5	
Transmission control valve body (upper to lower) screw	¼-20 x 1¾	5	
Transmission control valve body (upper to case) screw	5/16-18	9	
Transmission control valve body plug	⅜-18 Pipe	10-12	
Transmission control valve body separator screw	¼-20	5	
Transmission control valve detent lever set screw nut	5/16-24	15-18	
Transmission control valve lever (inner) set screw nut	5/16-24	15-18	
Transmission control valve link screw	10-32		20-30
Transmission control valve link nut	10-32		20-30
Transmission control valve starter safety switch terminal screw	8-32		15-20
Converter clutch housing screw	⅜-16	25-30	
Converter oil drain plug	⅛-27 Pipe	8-10	
Converter outlet valve assembly	¾-16	*50	
Converter pump screw	5/16-18	*25-30	
Converter pump shaft screw	5/16-24	*25-30	
Converter reactor shaft screw	5/16-24	*25-30	
Converter (first) turbine screw	5/16-24	*25-30	
Converter (second) turbine screw	¼-20	*12-15	
Transmission front oil pump assembly screw	¼-28	8-9	
Transmission governor assembly screw	¼-28	6	
Transmission governor adaptor screw	¼-20	8-9	
Transmission governor cover screw	¼-20	8-9	
Transmission governor pressure take-off plug	⅛-27 Pipe	8-10	
Transmission oil cooler hose assembly	⅜-18	30	
Transmission oil cooler tube assembly clip bolt	⅜-24	25-30	
Transmission oil cooler tube assembly clip nut	⅜-24	25-30	
Transmission oil cooler tube assembly clip screw	⅜-16	25-30	
Transmission oil cooler assembly elbow (pipe thread)	¼-18	*20-25	
Transmission oil filler plug (breather type)	¾-14 Pipe	18-20	
Transmission oil cooler tube assembly nut	⅝-18	20-25	
Transmission oil pan screw	5/16-18	*10-12	
Transmission oil pan drain plug	⅝-18	*25-30	
Transmission oil strainer assembly screw	5/16-18	15-18	
Transmission planetary cage screw	5/16-24	15-18	
Transmission reactor clutch housing assembly lock nut	¼-28	8-9	
Transmission reactor clutch housing assembly screw	5/16-18	15-18	
Transmission rear housing assembly screw	5/16-18	15-18	
Transmission rear oil pump body assembly screw	5/16-18	15-18	
Transmission rear oil pump body assembly screw	5/16-18	15-18	
Transmission rear oil pump body cover plate retaining screw	¼-20	8-9	
Transmission speedometer pinion adaptor screw	¼-20	8-9	
Transmission universal joint flange nut	¾-16	200-225	

UNIVERSAL JOINT

Universal joint shaft assy. to flange "U" bolt nut	5/16-24*	*18-22	
Universal joint flange nut	¾-16	200-225	
Universal joint shaft trunnion bearing bracket support bolt nut	5/16-24	15-18	
Universal joint shaft assy. to front flange bolt	7/16-20	50-60	
Universal joint shaft assy. to front flange bolt	⅜-24	40-50	

WHEELS

Wheel bolts	9/16-18	85-95	

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BODY TORQUE SPECIFICATIONS

FUNCTION	SIZE & THREAD	TORQUE FT. LBS.	TORQUE IN. LBS.
BODY AND SHEET METAL ATTACHING PARTS			
Body hold down bolt (hard top cars)	3/8-16*	20-23	
Body hold down bolt (convertible)	3/8-16*	20-23	
Front fender molding bolt nut	#10-32		30-40
Front center and lower molding to reinforcement screw	5/16-18	15-18	
Radiator front fender front center and lower molding screw	5/16-18	15-18	
Radiator front fender molding screw—(self tapping)	5/16-18	15-18	
Radiator grille and fin assy. screw—(self tapping)	#10		30-40
Radiator sub. grille division spacer bolt	5/16-10	10-12	
INSTRUMENT PANEL ATTACHING PARTS			
Instrument panel ash tray center trim panel hex nut	#10-32		20-30
Instrument panel ash tray center trim panel screw	#10-32		20-30
Instrument panel center panel and radio cover—screw	1/4-20	8-9	
Instrument panel cigar lighter stud hex nut	#10-24		20-30
Instrument panel courtesy lamp comb. screw	#8-32		15-20
Instrument panel cluster circuit breaker—screw	#8-32		15-20
Instrument panel folding top control nut	1/4-28	8-9	
Instrument panel folding top control link bracket screw	1/4-28	8-9	
Instrument panel ventilator control cable screw	#6-32		15-20
Instrument panel ventilator control cable hex nut	#6-32		15-20
Instrument panel door latch striker special screw	#10-32		20-30
Instrument panel glove box doorlock handle latch to handle screw	#10-32		20-30
Instrument panel glove drawer to track comb. screw	#8-32		15-20
Instrument panel to steering column hex head screw	5/16-24		40-60
Instrument panel to steering column hex nut	5/16-24		40-60
Instrument panel to cowl comb. lock screw	5/16-24		40-60
Instrument panel to windshield frame screw	#12-24		40-60
Instrument panel ignition switch terminal nut	#10-32		20-30
Instrument panel instrument cluster terminal nut	#8-32		15-20
FRONT AND REAR DOOR ATTACHING PARTS			
Front door window glass stop comb. screw	1/4-20	8-9	
Door pull to handle	#12-24		20-30
Rear door window glass stop bracket comb. screw	#12-24		20-30
Front door lower frame assy. to belt panel stud	#10-32		20-30
Front door lower frame assy. to belt panel hex nut	#10-32		20-30
Front door lower hinge assy. to body external lockwasher screw	5/16-24*	18-22	
Front door lower hinge to door bolt	3/8-24*	45-55	
Front door lock assy. to door comb. screw	#12-24		40-60.
Front door lock handle to door comb. screw	#10-24		40-60
Front door lock remote control assy. to inner panel comb. screw	#12-24		40-60
Front door striker plate assy. screw to external lockwasher comb. screw	#12-24		40-60
Front door window channel to frame bracket screw	#8-32		15-20
Front door window regulator arm to bracket screw	1/4-20	8-9	
Front door window regulator arm to bracket nut	1/4-20	8-9	
Front door window regulator mounting plate to inside panel comb. screw	#12-24		40-60
Front door window regulator to regulator panel pivot hex nut	3/8-24	15-18	
Rear door hinge assy. to center pillar comb. screw	5/16-24	18-22	
Rear door lock locking control plate and lever assy. comb. screw	#12-24		40-60
Rear door lock remote and link assy. comb. screw	#12-24		40-60
Arm rest to door trim panel	1/4-28	8-9	

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BODY TORQUE SPECIFICATIONS (Cont'd)

FUNCTION	SIZE & THREAD	TORQUE FT. LBS.	TORQUE IN. LBS
FRONT SEAT ATTACHING PARTS			
Front seat adjusting handle screw	#10-32		20-30
Front seat adjusting handle screw	#10-24		20-30
Front seat adjusting handle lever bracket assy. hex screw	5/16-18	15-18	
Front seat adjusting track assy. hex nut	5/16-24	15-18	
Front seat adjusting track assy. to floor screw	5/16-18	15-18	
Front seat adjusting track to floor comb. screw	5/16-18	15-18	
Front seat adjusting track assy. to seat comb. screw	5/16-24	15-18	
Front seat back frame tube to bracket assy. screw	5/16-18	15-18	
Front seat back frame tube to bracket assy. hex. nut	5/16-18	15-18	
Front seat back panel inner lower support screw	1/4-28	8-9	
Front seat back spring assy. to front seat comb. screw	1/4-20	8-9	
Unless otherwise specified:			
All #10-32 and #10-24 nuts and screws			20-30
All 1/4 x 20 and 1/4 x 28 nuts and screws		8-9	
All 5/16-24 nuts and screws		15-18	
All 3/8-24 nuts and screws		25-30	

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SECTION XXI

MECHANICAL SPECIFICATIONS AND ADJUSTMENTS

25TH SERIES SUPPLEMENT

MODELS CHASSIS SYMBOLS	200 2501	250 2531	300 2502	Patrician "400" 2506	Commercial 2513
BRAKES					
Type	Hydraulic 2-shoe	Hydraulic 2-shoe	Hydraulic 2-shoe	Hydraulic 2-shoe	Hydraulic 2-shoe
Effective Area	171.5 sq. inches	208.25 sq. inches	208.25 sq. inches	208.25 sq. inches	292.25 sq. inches
Effective Area Hand Brake	85.75 sq. inches	98 sq. inches	98 sq. inches	98 sq. inches	162.25 sq. inches
Drum Diameter..Front & Rear	12" Centrifuse	12" Centrifuse	12" Centrifuse	12" Centrifuse	12" Centrifuse (Front) 14" Centrifuse (Rear)
Lining Size and Material					
Primary—Marshall-4112					Marshall-9051
Front	1¾" x 3/16" x 11½"	2¼" x 3/16" x 11½"	2¼" x 3/16" x 11½"	2¼" x 3/16" x 11½"	2½" x 3/16" x 13"
Rear	1¾" x 3/16" x 11½"	2" x 3/16" x 11½"	2" x 3/16" x 11½"	2" x 3/16" x 11½"	2¾" x ¼" x 14¾"
Secondary—Marshall-9051					Marshall-9032
Front	1¾" x 3/16" x 13"	2¼" x 3/16" x 13"	2¼" x 3/16" x 13"	2¼" x 3/16" x 13"	2½" x 3/16" x 13"
Rear	1¾" x 3/16" x 13"	2" x 3/16" x 13"	2" x 3/16" x 13"	2" x 3/16" x 13"	2¾" x ¼" x 14¾"
Wheel Cylinder Size					
Front	1⅛" Dia.	1⅛" Dia.	1⅛" Dia.	1⅛" Dia.	1⅛" Dia.
Rear	1" Dia.	1" Dia.	1" Dia.	1" Dia.	1¼" Dia.
Master Cylinder Size	1" Dia.	1" Dia.	1" Dia.	1" Dia.	1⅛" Dia.
Brake (Power Unit)	Special Equipment	Special Equipment	Special Equipment	Special Equipment	Special Equipment
CLUTCH					
Type	Single Dry Plate	Single Dry Plate	Single Dry Plate		Single Dry Plate
Pedal Free Play	1¼" to 1½"	1¼" to 1½"	1¼" to 1½"		1¼" to 1½"
Facing Material	U.S. Asbestos Woven	U.S. Asbestos Woven	U.S. Asbestos Woven		U.S. Asbestos Woven
Size of Facing	6¾" x 10" x .125"	7" x 10½" x .125"	7" x 10½" x .125"		7" x 10½" x .125"
Throw-Out Bearing	Prelubricated Ball	Prelubricated Ball	Prelubricated Ball		Prelubricated Ball
Clutch Spring Pressure	154 lbs. at 1.566"	163 lbs. at 1.562"	163 lbs. at 1.562"		163 lbs. at 1.562"
Number of Springs	9	9	9		9
Vibration Neutralizer	Yes	Yes	Yes		Yes
COOLING SYSTEM					
Type	Pressure	Pressure	Pressure	Pressure	Pressure
Water Pump	Centrifugal Self-Adj.	Centrifugal Self-Adj.	Centrifugal Self-Adj.	Centrifugal Self-Adj.	Centrifugal Self-Adj.
Water Pump Drive	Fan Belt	Fan Belt	Fan Belt	Fan Belt	Fan Belt
Capacity of System	19.9 Qts.	19.9 Qts.	19.9 Qts.	19.9 Qts.	19.9 Qts.
Heater Capacity	.65 Qts.	.65 Qts.	.65 Qts.	.65 Qts.	.65 Qts.
Fan	4 Blade—19⅜ inch	4 Blade—19⅜ inch	4 Blade—19⅜ inch	4 Blade—19⅜ inch	4 Blade—19⅜ inch
Driving Pulley	On Crankshaft	On Crankshaft	On Crankshaft	On Crankshaft	On Crankshaft
Ratio	.919 to 1	.919 to 1	.919 to 1	.919 to 1	.919 to 1
Thermostat Starts to Open					
Low Reading	148° to 154°	148° to 154°	148° to 154°	148° to 154°	148° to 154°
Standard	157° to 163°	157° to 163°	157° to 163°	157° to 163°	157° to 163°
High Reading	177° to 183°	177° to 183°	177° to 183°	177° to 183°	177° to 183°
Fan Belt	41.2" x .375"	41.2" x .375"	41.2" x .375"	41.2" x .375"	41.2" x .375"
Heat Indicator	Electric	Electric	Electric	Electric	Electric
Fan Belt Adjustment	At Generator	At Generator	At Generator	At Generator	At Generator
Gravity Flow of Radiator	39.1 Gal. Per Min.	39.1 Gal. Per Min.	39.1 Gal. Per Min.	39.1 Gal. Per Min.	39.1 Gal. Per Min.
Radiator Cap Pressure Type	7 p.s.i.	7 p.s.i.	7 p.s.i.	7 p.s.i.	7 p.s.i.

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont.

MODELS CHASSIS SYMBOLS	200 2501	250 2531	300 2502	Patrician "400" 2506	Commercial 2513

ELECTRICAL

Battery

Make and Type	Willard SW-2L-100 Auto-Lite 2L-100	Willard SW-2L-100 Auto-Lite 2L-100	Willard SW-2L-100 Auto-Lite 2L-100	Willard HW-2F-120 Auto-Lite 2FH-120	Willard HW-2F-120 Auto-Lite 2FH-120
Capacity	100 Amp. Hr.	100 Amp. Hr.	100 Amp. Hr.	120 Amp. Hr.	120 Amp. Hr.
Number of Plates	17	17	17	17	17
Terminal Grounded	Positive	Positive	Positive	Positive	Positive

Starting Motor

Make	Auto-Lite	Auto-Lite	Auto-Lite	Auto-Lite	Auto-Lite
Type	MCL-6113	MCL-6113	MCL-6113	MCL-6114	MCL-6113
Stalled Torque	25 Ft. Lbs.	25 Ft. Lbs.	25 Ft. Lbs.	25 Ft. Lbs.	25 Ft. Lbs.
Current Draw—Stalled Torque	875 Amp. 4V.	875 Amp. 4V.	875 Amp. 4V.	875 Amp. 4V.	875 Amp. 4V.
Running Free	65 Amp.	65 Amp.	65 Amp.	65 Amp.	65 Amp.
Cranking Engine	175-225 Amp.	175-225 Amp.	175-225 Amp.	175 -225 Amp.	175-225 Amp.
Brush Spring Tension	42-53 oz.	42-53 oz.	42-53 oz.	42-53 oz.	42-53 oz.
Starter Drive	Bendix	Bendix	Bendix	Over-Running Clutch	Bendix
No. of Starter Pinion Teeth	9	9	9	9	9
No. of Flywheel Teeth	140 STD & OD 158 Ultramatic	140 STD & OD 158 Ultramatic	140 STD & OD 158 Ultramatic	158 Ultra	140 STD & OD 158 Ultramatic
Pinion Meshes	From Front	From Front	From Front	From Front	From Front

Starting Motor

Make	Delco-Remy	Delco-Remy	Delco-Remy		Delco-Remy
Type	1107943	1107943	1107943		1107943
Stalled Torque	16 Ft. Lbs.	16 Ft. Lbs.	16 Ft. Lbs.		16 Ft. Lbs.
Current Draw—Stalled Torque	600 Amp. 3V.	600 Amp. 3V.	600 Amp. 3V.		600 Amp. 3V.
Running Free	65 Amp.	65 Amp.	65 Amp.		65 Amp.
Cranking Engine	175-225 Amp.	175-225 Amp.	175-225 Amp.		175-225 Amp.
Brush Spring Tension	24-28 oz.	24-28 oz.	24-28 oz.		24-28 oz.
Starter Drive	Bendix	Bendix	Bendix		Bendix
No. of Starter Pinion Teeth	9	9	9		9
No. of Flywheel Teeth	140 STD & OD 158 Ultramatic	140 STD & OD 158 Ultramatic	140 STD & OD 158 Ultramatic		140 STD & OD 158 Ultramatic
Pinion Meshes	From Front	From Front	From Front		From Front

Generator

Make	Auto-Lite	Auto-Lite	Auto-Lite	Auto-Lite	Auto-Lite
Type	GGW 6003A	GGW 6003A	GGW 6003A	GGW 6003A	GGW 6003A
Maximum Output @ 7.4 volts	45 Amp.	45 Amp.	45 Amp.	45 Amp.	45 Amp.
Gen. Cut in Speed (Cold)	920 r.p.m.	920 r.p.m.	920 r.p.m.	920 r.p.m.	920 r.p.m.
Field Current—Amps	1.6—1.8	1.6—1.8	1.6—1.8	1.6—1.8	1.6—1.8
Brush Spring Tension	35-53 oz.	35-53 oz.	35-53 oz.	35-53 oz.	35-53 oz.

Generator

Make	Delco-Remy	Delco-Remy	Delco-Remy		Delco-Remy
Type	1102778	1102778	1102778		1102778
Maximum Output @ 7.4 volts	45 Amp.	45 Amp.	45 Amp.		45 Amp.
Gen. Cut in Speed (Cold)	900 r.p.m.	900 r.p.m.	900 r.p.m.		900 r.p.m.
Field Current—Amps	1.75—1.9	1.75—1.9	1.75—1.9		1.75—1.9
Brush Spring Tension	25 oz.	25 oz.	25 oz.		25 oz.
Generator Drive	Belt	Belt	Belt	Belt	Belt

Regulator

Make	Auto-Lite	Auto-Lite	Auto-Lite	Auto-Lite	Auto-Lite
Type	VBE-6102A	VBE-6102A	VBE-6102A	VBE-6102A	VBE-6102A
Maximum Output	45 Amp.	45 Amp.	45 Amp.	45 Amp.	45 Amp.
Circuit Breaker					
Air Gap	.031"—.034"	.031"—.034"	.031"—.034"	.031"—.034"	.031"—.034"
Contact Gap	.015"	.015"	.015"	.015"	.015"
Close Volts	6.5—7.0	6.5—7.0	6.5—7.0	6.5—7.0	6.5—7.0
Current Regulator					
Air Gap	.048"—.052"	.048"—.052"	.048"—.052"	.048"—.052"	.048"—.052"
Contact Gap	.012"	.012"	.012"	.012"	.012"
Amperes	45	45	45	45	45
Voltage Regulator					
Air Gap	.048"—.052"	.048"—.052"	.048"—.052"	.048"—.052"	.048"—.052"
Contact Gap	.012"	.012"	.012"	.012"	.012"
Voltage (70° F)	7.4	7.4	7.4	7.4	7.4

Regulator

Make	Delco-Remy	Delco-Remy	Delco-Remy		Delco-Remy
Type	1118726	1118726	1118726		1118726
Current Range	45-51 Amp.	45-51 Amp.	45-51 Amp.		45-51 Amp.

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont.

MODELS	200	250	300	Patrician "400"	Commercial
CHASSIS SYMBOLS	2501	2531	2502	2506	2513

ELECTRICAL (Cont'd.)

Circuit Breaker

Air Gap	.020"	.020"	.020"		.020"
Contact Gap	.020"	.020"	.020"		.020"
Close Volts	5.9—6.7	5.9—6.7	5.9—6.7		5.9—6.7
Adjust to	6.4	6.4	6.4		6.4

Current Regulator

Air Gap	.075"	.075"	.075"		.075"
Contact Gap	—	—	—		—
Amperes (On Car)	47	47	47		47

Voltage Regulator

Air Gap	.075"	.075"	.075"		.075"
Contact Gap	.020"	.020"	.020"		.020"
Voltage (70° F)	7.4	7.4	7.4		7.4
Voltage Range	7.0—7.7	7.0—7.7	7.0—7.7		7.0—7.7

Distributor

Make	Auto-Lite	Auto-Lite	Auto-Lite	Auto-Lite	Auto-Lite
Type	IGP-4502C	IGP-4502C	IGP-4502C	IGP-4502C	IGP-4502C
Breaker Contact Gap	.017"	.017"	.017"	.017"	.017"
Cam Dwell Angle	27°	27°	27°	27°	27°
Breaker Spring Tension	17—20 oz.	17—20 oz.	17—20 oz.	17—20 oz.	17—20 oz.
Condenser Capacity (Mfds.)	.20—.25	.20—.25	.20—.25	.20—.25	.20—.25
Ignition Timing Setting	6°	6°	6°	6°	6°
Vac. Adv. Dist. Degrees (Max.)	10½°	10½°	10½°	10½°	10½°
Gov. Adv. Dist. Degrees (Max.)	8°	8°	8°	8°	8°
Gov. Adv. Begins (Eng. r.p.m.)	600	600	600	600	600

Distributor

Make	Delco-Remy	Delco-Remy	Delco-Remy		Delco-Remy
Type	1110825	1110825	1110825		1110825
Breaker Contact Gap	.016"	.016"	.016"		.016"
Cam Dwell Angle	21°—30°	21°—30°	21°—30°		21°—30°
Breaker Spring Tension	17—21 oz.	17—21 oz.	17—21 oz.		17—21 oz.
Condenser Capacity (Mfds.)	.18—.23	.18—.23	.18—.23		.18—.23
Ignition Timing Setting	6°	6°	6°		6°
Vac. Adv. Dist. Degrees (Max.)	10½°	10½°	10½°		10½°
Gov. Adv. Dist. Degrees (Max.)	9°	9°	9°		9°
Gov. Adv. Begins (Eng. r.p.m.)	600	600	600		600

Ignition Coil

Make	Auto-Lite	Auto-Lite	Auto-Lite	Auto-Lite	Auto-Lite
Type	CR-4001A	CR-4001A	CR-4001A	CR-4001A	CR-4001A
Current Draw (Idling Hot)	1.5 Amp.	1.5 Amp.	1.5 Amp.	1.5 Amp.	1.5 Amp.

Ignition Coil

Make	Delco-Remy	Delco-Remy	Delco-Remy		Delco-Remy
Type	1115376	1115376	1115376		1115376
Current Draw (Idling Hot)	1.5 Amp.	1.5 Amp.	1.5 Amp.		1.5 Amp.

Spark Plugs

Make } Auto-Lite	A5	A5	A5	A5	A5
and } AC	46-5	46-5	46-5	46-5	46-5
Type } Champion	J8	J8	J8	J8	J8
Size	14 mm	14 mm	14 mm	14 mm	14 mm
Gap	.025"	.025"	.025"	.025"	.025"

Current Protection

Body	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker
Head, Tail and Stop Lights	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker
Direction Signal	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker
Clock	AGA 3 Ampere Fuse	AGA 3 Ampere Fuse	AGA 3 Ampere Fuse	AGA 3 Ampere Fuse	AGA 3 Ampere Fuse
Heater	SFE 20 Ampere Fuse	SFE 20 Ampere Fuse	SFE 20 Ampere Fuse	SFE 20 Ampere Fuse	SFE 20 Ampere Fuse
Radio	SFE 14 Ampere Fuse	SFE 14 Ampere Fuse	SFE 14 Ampere Fuse	SFE 14 Ampere Fuse	SFE 14 Ampere Fuse
Overdrive	SFE 30 Ampere Fuse	SFE 30 Ampere Fuse	SFE 30 Ampere Fuse		SFE 30 Ampere Fuse

Lighting and Accessories

Headlight—Sealed Beam	45—35 Watts	45—35 Watts	45—35 Watts	45—35 Watts	45—35 Watts
Horn Make	Sparks-Withington	Sparks-Withington	Sparks-Withington	Sparks-Withington	Sparks-Withington
Horn Location	On Radiator Cradle	On Radiator Cradle	On Radiator Cradle	On Radiator Cradle	On Radiator Cradle
Clock Make and Type	Borg Electric	Borg Electric	Borg Electric	Borg Electric	Borg Electric
Current Draw Headlights (Ea.)	7—5.5 Amperes	7—5.5 Amperes	7—5.5 Amperes	7—5.5 Amperes	7—5.5 Amperes
Current Draw Horns	22—25 Amperes	22—25 Amperes	22—25 Amperes	22—25 Amperes	22—25 Amperes
Current Draw Heater Blower	10 Amperes @ 6 Volts	10 Amperes @ 6 Volts	10 Amperes @ 6 Volts	10 Amperes @ 6 Volts	10 Amperes @ 6 Volts

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont.

MODELS	200	250	300	Patrician "400"	Commercial
CHASSIS SYMBOLS	2501	2531	2502	2506	2513

ENGINE

General Information

Make	Packard	Packard	Packard	Packard	Packard
Type	"L" Head—Vertical	"L" Head—Vertical	"L" Head—Vertical	"L" Head—Vertical	"L" Head—Vertical
A.M.A. Horsepower	39.2	39.2	39.2	39.2	39.2
Max. Brake h.p.—Std. Comp.	135 @ 3600 R.P.M.	150 @ 3600 R.P.M.	150 @ 3600 R.P.M.	155 @ 3600 R.P.M.	150 @ 3600 R.P.M.
—High Comp.	138 @ 3600 R.P.M.	155 @ 3600 R.P.M.	155 @ 3600 R.P.M.		155 @ 3600 R.P.M.
Suspension	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted
Firing Order	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4
Torque—Std. Comp.	230 ft. lbs. @ 2000 R.P.M.	270 ft. lbs. @ 2000 R.P.M.	270 ft. lbs. @ 2000 R.P.M.	275 ft. lbs. @ 2000 R.P.M.	270 ft. lbs. @ 2000 R.P.M.
—High Comp.	235 ft. lbs. @ 2000 R.P.M.	275 ft. lbs. @ 2000 R.P.M.	275 ft. lbs. @ 2000 R.P.M.		275 ft. lbs. @ 2000 R.P.M.
Bore	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"
Stroke	3 3/4"	4 1/4"	4 3/4"	4 1/4"	4 1/4"
Piston Displacement	288	327	327	327	327
Cylinder Arrangement	8 in line	8 in line	8 in line	8 in line	8 in line
Compression Ratio—Std.	7.00 to 1	7.00 to 1	7.00 to 1	7.80 to 1	7.00 to 1
—High	7.50 to 1	7.80 to 1	7.80 to 1		7.80 to 1
Weight with Clutch and Trans.	860 lbs.	875 lbs.	875 lbs.		875 lbs.
Weight with Overdrive	895 lbs.	910 lbs.	910 lbs.		910 lbs.
Weight with Automatic Trans.	995 lbs.	1010 lbs.	1010 lbs.	1040 lbs.	1010 lbs.
Cylinder Head Material	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Engine Rev. Per Mile—Std. Ratio	2847	2792	2792	2539	3068

Connecting Rod

Weight	2 lbs. 4.5 ozs.	2 lbs. 4 ozs.	2 lbs. 4 ozs.	2 lbs. 4 ozs.	2 lbs. 4 ozs.
Material	Steel Forging	Steel Forging	Steel Forging	Steel Forging	Steel Forging
Bearing Type	Detachable Shell	Detachable Shell	Detachable Shell	Detachable Shell	Detachable Shell
Center to Center Length	7 13/16"	7 11/16"	7 11/16"	7 11/16"	7 11/16"
Length of Crankpin	1 5/16"	1 3/16"	1 3/16"	1 5/16"	1 5/16"
Clearance Bearing to Crankpin	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"
End Play on Crankshaft	.003" to .011"	.003" to .011"	.003" to .011"	.003" to .011"	.003" to .011"
Oil Lead to Piston Pin	Rifle Drilled	Rifle Drilled	Rifle Drilled	Rifle Drilled	Rifle Drilled
Bearing Material	Special Composite	Special Composite	Special Composite	Special Composite	Special Composite
Assemble in Engine	Oil Hole to Camshaft	Oil Hole to Camshaft	Oil Hole to Camshaft	Oil Hole to Camshaft	Oil Hole to Camshaft
Bearing Adjustment	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells

Crankshaft

Type	Counterbalanced	Counterbalanced	Counterbalanced	Counterbalanced	Counterbalanced
Material	Steel Forging	Steel Forging	Steel Forging	Steel Forging	Steel Forging
Number of Counterweights	8 Forged Integral	8 Forged Integral	8 Forged Integral	8 Forged Integral	8 Forged Integral
Number of Main Bearings	5	5	5	9	5
Main Bearing Journal Diameter	2.7465"	2.7465"	2.7465"	2.7465"	2.7465"
Connecting Rod Journal Dia.	2.250"	2.250"	2.250"	2.250"	2.250"
Main Bearing Length No. 1	1 7/32"	1 7/32"	1 7/32"	1 7/32"	1 1/32"
No. 2	1 1/16"	1 1/16"	1 1/16"	1 5/8"	1 1/16"
No. 3	1 19/32"	1 19/32"	1 19/32"	1 5/16"	1 19/32"
No. 4	1 1/16"	1 1/16"	1 1/16"	1 5/16"	1 1/16"
No. 5	2 1/16"	2 1/16"	2 1/16"	1 15/32"	2 1/16"
No. 6	None	None	None	1 1/16"	None
No. 7	None	None	None	1 1/16"	None
No. 8	None	None	None	1 1/16"	None
No. 9	None	None	None	2 1/16"	None
Projected Main Bearing Area	19.3 sq. inches	19.3 sq. inches	19.3 sq. inches	30.7 sq. inches	19.3 sq. inches
Thrust Taken On	Center Bearing	Center Bearing	Center Bearing	Center Bearing	Center Bearing
Vibration Damper	Fluid Suspension	Fluid Suspension	Fluid Suspension	Fluid Suspension	Fluid Suspension
Weight	96 lbs.	104 lbs.	104 lbs.	106 lbs.	104 lbs.
End Play	.0035" to .0085"	.0035" to .0085"	.0035" to .0085"	.0035" to .0085"	.0035" to .0085"
Main Bearing Material	Special Composite	Special Composite	Special Composite	Special Composite	Special Composite
Clearance—All Main Bearings	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"
Crankshaft Sprocket—					
Material and Size	Steel—21 teeth	Steel—21 teeth	Steel—21 teeth	Steel—21 teeth	Steel—21 teeth
Bearing Adjustment	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells

Camshaft and Chain

Gear Cover	Steel Stamping	Steel Stamping	Steel Stamping	Steel Stamping	Steel Stamping
Camshaft Drive	Silent Chain	Silent Chain	Silent Chain	Silent Chain	Silent Chain
Make of Chain	Morse	Morse	Morse	Morse	Morse
Length, Width, & Pitch of Chain	58 links, 1", .375"	58 links, 1", .375"	58 links, 1", .375"	58 links, 1", .375"	58 links, 1", .375"
Number of Camshaft Bearings	5	5	5	5	5
Clearance of Camshaft Bearings	.001" to .003"	.001" to .003"	.001" to .003"	.001" to .003"	.001" to .003"
Camshaft End Play	.004" to .006"	.004" to .006"	.004" to .006"	.004" to .006"	.004" to .006"
Camshaft Sprocket—					
Material and Size	Cast Iron—42 teeth	Cast Iron—42 teeth	Cast Iron—42 teeth	Cast Iron—42 teeth	Cast Iron—42 teeth

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont.

MODELS CHASSIS SYMBOLS	200 2501	250 2531	300 2502	Patrician "400" 2506	Commercial 2513

ENGINE (Cont'd.)

Oiling System

Type	Full Pressure	Full Pressure	Full Pressure	Full Pressure	Full Pressure
Oil Pump Type	Gear	Gear	Gear	Gear	Gear
Crankcase Capacity	7 qts.	7 qts.	7 qts.	7 qts.	7 qts.
Oil filler location	Left side	Left side	Left side	Left side	Left side
Oil filter location	Special equipment	Left side	Left side	Left side	Left side
Oil measuring stick	Left crankcase	Left crankcase	Left crankcase	Left crankcase	Left crankcase
Oil Pump Intake	Floating screen	Floating screen	Floating screen	Floating screen	Floating screen
Crankcase ventilator	Yes	Yes	Yes	Yes	Yes
Oil Pressure—Normal Driving	40 lbs.	40 lbs.	40 lbs.	40 lbs.	40 lbs.
Oil Drain	Hex. Head Flange Plug ⅜"—18	Hex. Head Flange Plug ⅜"—18	Hex. Head Flange Plug ⅜"—18	Hex. Head Flange Plug ⅜"—18	Hex. Head Flange Plug ⅜"—18

Pistons

Material	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy
Type	Auto-Thermic	Auto-Thermic	Auto-Thermic	Auto-Thermic	Auto-Thermic
Weight	19.575 ozs.	19.575 ozs.	19.575 ozs.	19.575 ozs.	19.575 ozs.
Weight with Rings, Pin & Lock	25½ ozs.	25½ ozs.	25½ ozs.	25½ ozs.	25½ ozs.
Overall Height	3⅛"	3⅛"	3⅛"	3⅛"	3⅛"
Height Centerline Pin to Top	2⅛"	2⅛"	2⅛"	2⅛"	2⅛"
Skirt Clearance	.0005" to .001"	.0005" to .001"	.0005" to .001"	.0005" to .001"	.0005" to .001"
Assemble Slot Toward	Camshaft	Camshaft	Camshaft	Camshaft	Camshaft
Piston Pin Size	3/16" x ⅞"	3/16" x ⅞"	3/16" x ⅞"	3/16" x ⅞"	3/16" x ⅞"
Type Pin	Floating	Floating	Floating	Floating	Floating
Lubrication of Pin	Pressure	Pressure	Pressure	Pressure	Pressure
Piston Pin Fit in Piston	Palm Push Fit at 160° F	Palm Push Fit at 160° F	Palm Push Fit at 160° F	Palm Push Fit at 160° F	Palm Push Fit at 160° F
Piston Pin Fit in Rod	Finger Push Fit	Finger Push Fit	Finger Push Fit	Finger Push Fit	Finger Push Fit
Piston Pin Oversizes	.003" and .006"	.003" and .006"	.003" and .006"	.003" and .006"	.003" and .006"
Number of Rings Per Piston	3	3	3	3	3
No. of Oil Rings Per Piston	1	1	1	1	1
Number of Compression Rings Per Piston	2	2	2	2	2
Width of Compression Rings	.0925" to .0935"	.0925" to .0935"	.0925" to .0935"	.0925" to .0935"	.0925" to .0935"
Width of Oil Rings	.1860" to .1865"	.1860" to .1865"	.1860" to .1865"	.1860" to .1865"	.1860" to .1865"
Piston Ring Gap—Compression	.007" to .017"	.007" to .017"	.007" to .017"	.007" to .017"	.007" to .017"
Piston Ring Gap—Oil	.007" to .015"	.007" to .015"	.007" to .015"	.007" to .015"	.007" to .015"
Location of Rings	Above Pin	Above Pin	Above Pin	Above Pin	Above Pin
Piston Oil Drain Holes	12—⅛ Dia. Holes	12—⅛ Dia. Holes	12—⅛ Dia. Holes	12—⅛ Dia. Holes	12—⅛ Dia. Holes
Piston Oversizes Available	.005", .020", .030", .040"	.005", .020", .030", .040"	.005", .020", .030", .040"	.005", .020", .030", .040"	.005", .020", .030", .040"

Valves

Valve Lift—Intake	.342"	.342"	.342"	.342"	.342"
—Exhaust	.342"	.337"	.337"	.337"	.337"
Valve Arrangement	"L" Head	"L" Head	"L" Head	"L" Head	"L" Head
Valve Head Diameter—Inlet	1 13/16"	1 13/16"	1 13/16"	1 13/16"	1 13/16"
—Exhaust	1 7/16"	1 7/16"	1 7/16"	1 7/16"	1 7/16"
Valve Stem Diameter—Inlet	.3417"	.3417"	.3417"	.3417"	.3417"
—Exhaust	.3398"	.3398"	.3398"	.3398"	.3398"
Valve Overall Length	5⅜"	5⅜"	5⅜"	5⅜"	5⅜"
Valve Material—Inlet	Chrome Nickel	Chrome Nickel	Chrome Nickel	Chrome Nickel	Chrome Nickel
—Exhaust	Austenitic	Austenitic	Austenitic	Austenitic	Austenitic
Valve Spring Keeper Type	Split Cone	Split Cone	Split Cone	Split Cone	Split Cone
Valve Stem Clearance—Inlet	.002"	.002"	.002"	.002"	.002"
—Exhaust	.004"	.004"	.004"	.004"	.004"
Valve Tappet Clearance—Inlet Warm	.007"	Automatic Take-up	Automatic Take-up	Automatic Take-up	Automatic Take-up
—Exhaust Warm	.010"	Automatic Take-up	Automatic Take-up	Automatic Take-up	Automatic Take-up
Inlet Valve Opens	15° BTDC	15° BTDC	15° BTDC	15° BTDC	15° BTDC
Inlet Valve Closes	45° ALDC	43° ALDC	43° ALDC	43° ALDC	43° ALDC
Exhaust Valve Opens	50° BLDC	53° BLDC	53° BLDC	53° BLDC	53° BLDC
Exhaust Valve Closes	9° ATDC	4° ATDC	4° ATDC	4° ATDC	4° ATDC
Tappet Clearance for Timing —Inlet	.0125"	Not Used	Not Used	Not Used	Not Used
—Exhaust	.015"	Not Used	Not Used	Not Used	Not Used
Valve Seat Angle—Inlet	30°	30°	30°	30°	30°
—Exhaust	45°	45°	45°	45°	45°
Valve Spring	Single	Single	Single	Single	Single
Valve Spring Load—Valve Closed	60-66 lbs. @ 1¾"	60-66 lbs. @ 1¾"	60-66 lbs. @ 1¾"	60-66 lbs. @ 1¾"	60-66 lbs. @ 1¾"
—Valve Open	135-145 lbs. @ 1 13/16"	135-145 lbs. @ 1 13/16"	135-145 lbs. @ 1 13/16"	135-145 lbs. @ 1 13/16"	135-145 lbs. @ 1 13/16"

Exhaust System

Exhaust Pipe Diameter	2¼"	2¼"	2¼"	2¼"	2¼"
Muffler Size	5⅛" Dia. x 35⅜"	5⅛" Dia. x 35⅜"	5⅛" Dia. x 35⅜"	5⅛" Dia. x 35⅜"	5⅛" Dia. x 35⅜"

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont.

MODELS CHASSIS SYMBOLS	200 2501	250 2531	300 2502	Patrician "400" 2506	Commercial 2513
FRAME					
Depth (Maximum)	5 21/32"	6" (Conv.)	5 21/32" Sport 6" Coupe	6"	6"
Thickness (Maximum)	1/8"	9/64" (Conv.)	1/8" Sport 9/64" Coupe	9/64"	9/64"
Flange Width (Maximum)	2 1/4"	2 9/32" (Conv.)	2 1/4" Sport 2 9/32" Coupe	2 9/32"	2 9/32"
FRONT SUSPENSION					
Make	Packard	Packard	Packard	Packard	Packard
Type	Independent Parallelogram	Independent Parallelogram	Independent Parallelogram	Independent Parallelogram	Independent Parallelogram
Steering Knuckle	Reverse Elliot	Reverse Elliot	Reverse Elliot	Reverse Elliot	Reverse Elliot
Steering Knuckle Pin Bearings —Lower	.866" x 1.187" x 1.189" OD	.866" x 1.187" x 1.189" OD	.866" x 1.187" x 1.189" OD	.866" x 1.187" x 1.189" OD	1.063" x 1.187" x 1.250" OD
—Upper	Needle Bearing	Needle Bearing	Needle Bearing	Needle Bearing	1.063" x 1.187" x 1.250" OD
Thrust Bearing	Steel Ball Bearing	Steel Ball Bearing	Steel Ball Bearing	Steel Ball Bearing	Steel Ball Bearing
Caster	Neg. 1° ± 1/2°	Neg. 1° ± 1/2°	Neg. 1° ± 1/2°	Neg. 1° ± 1/2°	Neg. 2° ± 1/2°
Front Wheel Toe-In	0 plus 1/16" minus 0	0 plus 1/16" minus 0	0 plus 1/16" minus 0	0 plus 1/16" minus 0	0 plus 1/16" minus 0
Knuckle Pin Angle	5° 50'	5° 50'	5° 50'	5° 50'	2° 30'
Camber	0° plus 3/4° minus 1/4°	0° plus 3/4° minus 1/4°	0° plus 3/4° minus 1/4°	0° plus 3/4° minus 1/4°	0° plus 3/4° minus 1/4°
Wheel Bearings—Inner & Outer	Tapered Roller	Tapered Roller	Tapered Roller	Tapered Roller	Tapered Roller
Wheel Bearing Adjustment	Tighten nut to 20 ft. lbs. and back off 1 hex. and lock.	Tighten nut to 20 ft. lbs. and back off 1 hex. and lock.	Tighten nut to 20 ft. lbs. and back off 1 hex. and lock.	Tighten nut to 20 ft. lbs. and back off 1 hex. and lock.	Tighten inner nut to 20 ft. lbs. and back off 2 to 3 holes on locking washer and lock.
Tread	59 1/2"	60"	60"	60"	59 1/2"
FUEL SYSTEM					
Carburetor					
Make and Type	Carter WGD-784S	Carter WGD-928S	Carter WGD-928S	Carter WGD-928S	Carter WGD-928S
Flange Size	1 1/4" Duplex	1 1/4" Duplex	1 1/4" Duplex	1 1/4" Duplex	1 1/4" Duplex
Main Venturi I.D.	1 5/16"	1 5/16"	1 5/16"	1 5/16"	1 5/16"
Float Level	13/64"	13/64"	13/64"	13/64"	13/64"
Measured From	Float to Cover	Float to Cover	Float to Cover	Float to Cover	Float to Cover
Metering Rod No.	75-722	75-767	75-767	75-767	75-767
Economy Step	.0685"	.0695"	.0695"	.0695"	.0695"
Center Step Tapers To	.066"	.067"	.067"	.067"	.067"
Power Step	.0595"	.061"	.061"	.061"	.061"
Main Metering Jet	.089" (No. 43 Drill)	.089" (No. 43 Drill)	.089" (No. 43 Drill)	.089" (No. 43 Drill)	.089" (No. 43 Drill)
Low Speed Jet	.032" (No. 67 Drill)	.032" (No. 67 Drill)	.032" (No. 67 Drill)	.032" (No. 67 Drill)	.032" (No. 67 Drill)
By-Pass Jet	.052" (No. 55 Drill)	.052" (No. 55 Drill)	.052" (No. 55 Drill)	.052" (No. 55 Drill)	.052" (No. 55 Drill)
Economizer Jet	.045" (1.15 MM Drill)	.045" (1.15 MM Drill)	.045" (1.15 MM Drill)	.045" (1.15 MM Drill)	.045" (1.15 MM Drill)
Idle Bleed	.0465" (No. 56 Drill)	.0465" (No. 56 Drill)	.0465" (No. 56 Drill)	.0465" (No. 56 Drill)	.0465" (No. 56 Drill)
Anti-Percolator Jet	.033" (No. 66 Drill)	.033" (No. 66 Drill)	.033" (No. 66 Drill)	.033" (No. 66 Drill)	.033" (No. 66 Drill)
Pump Discharge Jet	.0225" (No. 74 Drill)	.0225" (No. 74 Drill)	.0225" (No. 74 Drill)	.0225" (No. 74 Drill)	.0225" (No. 74 Drill)
Pump Adjustment	15/32" From Flange	15/32" From Flange	15/32" From Flange	15/32" From Flange	15/32" From Flange
Pump Stroke	5/16" ± 1/64"	5/16" ± 1/64"	5/16" ± 1/64"	5/16" ± 1/64"	5/16" ± 1/64"
Metering Rod Adj.	Bottom	Bottom	Bottom	Bottom	Bottom
Fast Idle Adj.	.023"	.023"	.023"	.023"	.023"
Unloader Adj.	1/8" ± 1/64"	1/8" ± 1/64"	1/8" ± 1/64"	1/8" ± 1/64"	1/8" ± 1/64"
Idle Adj. Turns Out	1 to 1 1/2	1 to 1 1/2	1 to 1 1/2	1 to 1 1/2	1 to 1 1/2
Automatic Choke	Climatic Control	Climatic Control	Climatic Control	Climatic Control	Climatic Control
Choke Adjustment	1 Notch Rich.	1 Notch Rich.	1 Notch Rich.	1 Notch Rich.	1 Notch Rich.
Air Cleaner & Silencer	Oil Coated Mesh	Oil Bath-Type	Oil Bath-Type	Oil Bath-Type	Oil Bath-Type
Fuel Pump					
Make	AC	AC	AC	AC	AC
Type Booster	Double Acting	Double Acting	Double Acting	Double Acting	Double Acting
Model	1539606	1539606	1539606	1539606	1539606
Capacity—45 sec.	1 Pint	1 Pint	1 Pint	1 Pint	1 Pint
Pressure—PSI	4 to 5	4 to 5	4 to 5	4 to 5	4 to 5
Booster Vac. (@ 240 Eng. r.p.m.)	10 in. Hg.	10 in. Hg.	10 in. Hg.	10 in. Hg.	10 in. Hg.
Inlet Side	Rear	Rear	Rear	Rear	Rear
Outlet Side	Front	Front	Front	Front	Front
Fuel Tank Cap.—Gals.	20	20	20	20	20
Fuel Filter	In Fuel Pump	In Fuel Pump	In Fuel Pump	In Fuel Pump	In Fuel Pump
Fuel Gauge	Electric	Electric	Electric	Electric	Electric

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont.

MODELS CHASSIS SYMBOLS	200 2501	250 2531	300 2502	Patrician "400" 2506	Commercial 2513

REAR AXLE

Type	Semi-Floating	Semi-Floating	Semi-Floating	Semi-Floating	Semi-Floating
Make	Packard	Packard	Packard	Packard	Packard
Final Drive	Hypoid Gears	Hypoid Gears	Hypoid Gears	Hypoid Gears	Hypoid Gears
Propulsion	Through Rear Springs	Through Rear Springs	Through Rear Springs	Through Rear Springs	Through Rear Springs
Axle Housing	Swedged Tube Banjo Type	Swedged Tube Banjo Type	Swedged Tube Banjo Type	Swedged Tube Banjo Type	Pressed Steel Banjo Type
Oil Capacity	4 pts.	4 pts.	4 pts.	4 pts.	6 pts.
Wheel Bearings	Tapered Rollers	Tapered Rollers	Tapered Rollers	Tapered Rollers	Tapered Rollers
Tread	60 15/16"	61 7/16"	61 7/16"	61 7/16"	65 15/16"
Gear Ratio—Std. Trans.	3.9 to 1	3.9 to 1	3.9 to 1		4.54 to 1
—Overdrive	4.1 to 1	4.1 to 1	4.1 to 1		4.7 to 1
—Ultramatic	3.54 to 1	3.54 to 1	3.54 to 1	3.54 to 1	4.36 to 1
Pinion Backlash	.003" to .005"	.003" to .005"	.003" to .005"	.003" to .005"	.003" to .005"
No. teeth—Gear & Pinion Std.	39-10	39-10	39-10	39-11	50-11
Oil Drain Plugs	½"—14 Pipe Thd.	½"—14 Pipe Thd.	½"—14 Pipe Thd.	½"—14 Pipe Thd.	½"—14 Pipe Thd.

UNIVERSAL JOINTS

Make	Universal Products Mechanics or Spicer	Universal Products Mechanics or Spicer	Universal Products Mechanics or Spicer	Universal Products Only	Mechanics Only
Type	Roller Bearing	Roller Bearing	Roller Bearing	Roller Bearing	Roller Bearing
Number Used	2	2	2	2	3—Double Shaft

SPRINGS

Front—Coil, Load and Rate	1950x90 (STD & OD) 2040x90 (Ultramatic)	1950x90 (STD & OD For Sport Coupe) 2040x90 (Ultramatic for Sport Coupe) 2040x90 (STD & OD for Conv. Coupe) 2180x90 (Ultramatic for Conv. Coupe)	2040x90 STD & OD 2180x90 Ultramatic	2180x90	2900x172
Front Size	4¼" Inside Dia.	4¼" Inside Dia.	4¼" Inside Dia.	4¼" Inside Dia.	4¼" Inside Dia.
Rear—Leaf, Load and Rate	950x110	950x110 (Sport Coupe) 1030x110 (Conv. Coupe)	1030x110	1030x110	1800x225 (Ambulance and end loader hearse) Left 2100 x 225 Right 2000 x 225 (3 way loader hearse)
Rear Length and Width	54⅜" x 2½"	54⅜" x 2¼"	54⅜" x 2½"	54⅜" x 2½"	54⅝" x 2"
Shackles	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted
Shock Absorbers	Hydraulic Direct-Acting	Hydraulic Direct-Acting	Hydraulic Direct-Acting	Hydraulic Direct-Acting	Hydraul. Direct-Acting
Stabilizer—Front	Torsional	Torsional	Torsional	Torsional	Torsional
Spring Material	Silico-Manganese	Silico-Manganese	Silico-Manganese	Silico-Manganese	Silico-Manganese

STEERING GEAR

Make	Packard-Gemmer	Packard-Gemmer	Packard-Gemmer	Packard-Gemmer	Packard-Gemmer
Type	Worm and 3 tooth Roller	Worm and 3 tooth Roller	Worm and 3 tooth Roller	Worm and 3 tooth Roller	Worm and 3 tooth Roller
Ratio—Gear	20.4	22.3	22.3	22.3	22.3
Ratio—Overall	28.3	30.9	30.9	30.9	30.9
Steering Wheel	18"—2 spokes	18"—2 spokes	18"—2 spokes	18"—2 spokes	18"—2 spokes
Minimum Turning Radius	21½ ft.	21½ ft.	22½ ft.	22½ ft.	28 ft.

TRANSMISSION

Type—Automatic	Ultramatic Drive			Ultramatic Drive			Ultramatic Drive			Ultramatic Drive		Ultramatic Drive		
Type—Standard	Selective—Silent Synchronized			Selective—Silent Synchronized			Selective—Silent Synchronized					Selective—Silent Synchronized		
Gear Teeth	Helical			Helical			Helical					Helical		
Number of Forward Speeds	3			3			3					3		
Engine to Rear Wheel Ratio	Std.	O.D.	Ultra	Std.	O.D.	Ultra	Std.	O.D.	Ultra	Ultra		Std.	O.D.	Ultra
Overdrive		2.96			2.96			2.96					3.39	
Direct	3.9	4.1	3.54	3.9	4.1	3.54	3.9	4.1	3.54	3.54		4.54	4.7	4.36
Second	5.96	6.27		5.96	6.27		5.96	6.27				6.94	7.18	
First	9.47	9.96	6.44	9.47	9.96	6.44	9.47	9.96	6.44	6.44		11.03	11.41	7.94
Reverse	12.34	12.96	5.81	12.34	12.96	5.81	12.34	12.96	5.81	5.81		14.36	14.85	7.15
Oil Capacity—Std. Trans.	2 Pints			2 Pints			2 Pints					2 Pints		
Oil Capacity—O.D. Unit	1¼ Pints			1¼ Pints			1¼ Pints					1¼ Pints		
Oil Capacity—Automatic	12 Qts.			12 Qts.			12 Qts.			12 Qts.		12 Qts.		
Oil Level Plugs—Std. Trans.	½"—14 Pipe			½"—14 Pipe			½"—14 Pipe					½"—14 Pipe		
Oil Level Indicator										Dip stick on Filler Cap—Left Side of Case				

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont.

MODELS CHASSIS SYMBOLS	200 2501	250 2531	300 2502	Patrician "400" 2506	Commercial 2513
WHEELS					
Type	Demountable Disc.	Demountable Disc.	Demountable Disc.	Demountable Disc.	Demountable Disc.
Rim Size	15" x 5½" "K" Rim	15" x 6" "L" Rim	15" x 6" "L" Rim	15" x 6" "L" Rim	16" x 5½" "F" Rim
Size of Tire	15" x 7.60—4 Ply	15" x 8.00—4 Ply	15" x 8.00—4 Ply	15" x 8.00—4 Ply	16" x 7.50—6 Ply
Recommended Tire Pressure— Front and Rear	24 lbs. (cold)	24 lbs. (cold)	24 lbs. (cold)	24 lbs. (cold)	30 lbs. (Front) 40 lbs. (Rear)
CAR DIMENSIONS					
Wheelbase	122"	122"	127"	127"	156"
Overall Length— Bumper to Bumper	212¾"	212¾"	217¾"	217¾"	251⅛"
Overall Height—Loaded	62⅛"	62"	62⅜"	62⅜"	
Overall Width	77⅛"	77⅛"	77⅛"	77⅛"	

25th SERIES CHASSIS AND BODY SYMBOLS

		PACKARD 200 288 Cu. In.		PACKARD 250	PACKARD 300	PACKARD PATRICIAN 400	PACKARD 300 Commercial
		PACKARD 200	PACKARD 200 DELUXE	327 Cu. In.	327 Cu. In.	327 Cu. In.	327 Cu. In.
CHASSIS SYMBOLS		2501 2501R	2501 2501R	2531	2502	2506	2513
BODY TYPES	Pass.						
SEDAN	6	2592	2562		2572	2552	
CLUB SEDAN	6	2595	2565				
SPORTS COUPE	6			2577			
CONVERTIBLE COUPE	6			2579			
COMMERCIAL CHASSIS							XXX
WHEEL BASE		122"	122"	122"	127"	127"	156"

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SECTION XXI

MECHANICAL SPECIFICATIONS AND ADJUSTMENTS

26TH SERIES

CHASSIS SYMBOLS	2601	2611	2602—2631	2606—2626	2633—2613
BRAKES					
Type	Hydraulic 2-Shoe	Hydraulic 2-Shoe	Hydraulic 2-Shoe	Hydraulic 2-Shoe	Hydraulic 2-Shoe
Effective Area	171.5 sq. inches	171.5 sq. inches	208.25 sq. inches	208.25 sq. inches	292.25 sq. inches
Effective Area Hand Brake	85.75 sq. inches	85.75 sq. inches	98 sq. inches	98 sq. inches	162.25 sq. inches
Drum Diameter					
Front	12" Centrifuse	12" Centrifuse	12" Centrifuse	12" Centrifuse	12" Centrifuse
Rear	12" Centrifuse	12" Centrifuse	12" Centrifuse	12" Centrifuse	14" Centrifuse
Lining Size and Material					
Primary Shoes					
Front	1¾" x 5/16" x 11½"	1¾" x 5/16" x 11½"	2¼" x 5/16" x 11½"	2¼" x 5/16" x 11½"	2¼" x 5/16" x 13
Rear	1¾" x 5/16" x 11½"	1¾" x 5/16" x 11½"	2" x 5/16" x 11½"	2" x 5/16" x 11½"	2¾" x ¼" x 14¾"
Material	Marshall—4112	Marshall—4112	Marshall—4112	Marshall—4112	Marshall—9051
Secondary Shoes					
Front	1¾" x 5/16" x 13"	1¾" x 5/16" x 13"	2¼" x 5/16" x 13"	2¼" x 5/16" x 13"	2½" x 5/16" x 13"
Rear	1¾" x 5/16" x 13"	1¾" x 5/16" x 13"	2" x 5/16" x 13"	2" x 5/16" x 13"	2¾" x ¼" x 14¾"
Material	Marshall—9051	Marshall—9051	Marshall—9051	Marshall—9051	Marshall—9032
Wheel Cylinder Size					
Front	1⅜" Dia.	1⅜" Dia.	1⅜" Dia.	1⅜" Dia.	1⅜" Dia.
Rear	1" Dia.	1" Dia.	1" Dia.	1" Dia.	1¼" Dia.
Master Cylinder Size	1" Dia.	1" Dia.	1" Dia.	1" Dia.	1⅜" Dia.
Brake (Power Unit)	Special Equipment	Special Equipment	Special Equipment	Special Equipment	Special Equipment
CLUTCH					
Type	Single Dry Plate	Single Dry Plate	Single Dry Plate	Single Dry Plate	Single Dry Plate
Pedal	1¼" to 1½"	1¼" to 1½"	1¼" to 1½"	1¼" to 1½" (2626)	1¼" to 1½"
Facing Material	U. S. Asbestos Woven	U. S. Asbestos Woven	U. S. Asbestos Woven	U. S. Asbestos Woven (2626)	U. S. Asbestos Woven
Size of Facing	6¾" x 10" x .125"	7" x 10½" x .125"	7" x 10½" x .125"	7"x10½"x.125"(2626)	6¾" x 10" x .125"(2633) 7" x 10½" x .125" (2613)
Throw-Out Bearing	Prelubricated Ball	Prelubricated Ball	Prelubricated Ball	Prelubricated Ball(2626)	Prelubricated Ball
Clutch Spring Pressure	154 lbs. at 1.566"	163 lbs. at 1.562"	163 lbs. at 1.562"	163 lbs. at 1.562"(2626)	154 lbs. at 1.566" (2633) 163 lbs. at 1.562" (2613)
Number of Springs	9	9	9	9 (2626)	9
Vibration Neutralizer	Yes	Yes	Yes	Yes (2626)	Yes
COOLING SYSTEM					
Type	Pressure	Pressure	Pressure	Pressure	Pressure
Water Pump	Centrifugal Self-Adjusting	Centrifugal Self-Adjusting	Centrifugal Self-Adjusting	Centrifugal Self-Adjusting	Centrifugal Self-Adjusting
Water Pump Drive	Fan Belt	Fan Belt	Fan Belt	Fan Belt	Fan Belt
Capacity of System	19.9 Qts.	19.9 Qts.	19.9 Qts.	19.9 Qts.	19.9 Qts.
Heater Capacity	.65 Qts.	.65 Qts.	.65 Qts.	.65 Qts.	.65 Qts.
Fan	4 Blade—19⅞" Dia.	4 Blade—19⅞" Dia.	4 Blade—19⅞" Dia.	4 Blade—19⅞" Dia.	4 Blade—19⅞" Dia.
Drive Pulley	On Crankshaft	On Crankshaft	On Crankshaft	On Crankshaft	On Crankshaft
Ratio	.919 to 1	.919 to 1	.919 to 1	.919 to 1	.919 to 1
Thermostat Starts to Open					
Low Reading	148° to 154°	148° to 154°	148° to 154°	148° to 154°	148° to 154°
Standard	157° to 163°	157° to 163°	157° to 163°	157° to 163°	157° to 163°
High Reading	177° to 183°	177° to 183°	177° to 183°	177° to 183°	177° to 183°
Fan Belt	41.2" x .375"	41.2" x .375"	41.2" x .375"	41.2" x .375"	41.2" x .375"
Heat Indicator	Electric	Electric	Electric	Electric	Electric
Fan Belt Adjustment	At Generator	At Generator	At Generator	At Generator	At Generator
Gravity Flow of Radiator	39.1 Gal. per Min.	39.1 Gal. per Min.	39.1 Gal. per Min.	39.1 Gal. per Min.	39.1 Gal. per Min.
Radiator Cap	Pressure Type 7 Lbs. per sq. inch	Pressure Type 7 Lbs. per sq. inch	Pressure Type 12 Lbs. per sq. inch	Pressure Type 12 Lbs. per sq. inch	Pressure Type 7 Lbs. per sq. inch 12 Lbs. per sq. inch (2613)

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

CHASSIS SYMBOLS	2601	2611	2602—2631	2606—2626	2633—2613
ELECTRICAL					
Battery Make	Auto-Lite 2L-100 Willard SW-2L-100	Auto-Lite 2L-100 Willard SW-2L-100	Auto-Lite 2L-100 Willard SW-2L-100	Auto-Lite 2FH-120 (2606) Auto-Lite 2L-100 (2626) Willard HW-2F-120 (2606) Willard SW-2L-100 (2626)	Auto-Lite 2L-100 (2633) Auto-Lite 2FH-120 (2613) Willard SW-2L-100 (2633) Willard HW-2F-120 (2613)
Capacity	100 Amp. Hr.	100 Amp. Hr.	100 Amp. Hr.	120 Amp. Hr. (2606) 100 Amp. Hr. (2626)	100 Amp. Hr. (2633) 120 Amp. Hr. (2613)
Plates	17	17	17	17	17
Terminal Grounded	Positive	Positive	Positive	Positive	Positive
Starting Motor					
Make	Delco	Delco	Delco	Auto-Lite	Delco
Type	1108008	1108008	1108008	MCL-6122	1108008
Starter Drive	Bendix Shift	Bendix Shift	Bendix Shift	Bendix Shift	Bendix Shift
No. of Flywheel Teeth	140 Std. & O.D. 158 Ultramatic	140 Std. & O.D. 158 Ultramatic	140 Std. & O.D. 158 Ultramatic	140 Std. & O.D. (2626) 158 Ultramatic	140 Std. & O.D. 158 Ultramatic
No. of Teeth in Starter Pinion	9	9	9	9	9
Pinion Meshes	From Front	From Front	From Front	From Front	From Front
Stalled Torque	16 Ft. Lbs.	16 Ft. Lbs.	16 Ft. Lbs.	25 Ft. Lbs.	16 Ft. Lbs.
Curr. Draw—Stalled Torque	600 Amp. 3 V.	600 Amp. 3 V.	600 Amp. 3 V.	875 Amp. 4 V.	600 Amp. 3 V.
Running Free	65 Amp.	65 Amp.	65 Amp.	65 Amp.	65 Amp.
Cranking Engine	175-225 Amp.	175-225 Amp.	175-225 Amp.	175-225 Amp.	175-225 Amp.
Brush Spring Tension	24-28 oz.	24-28 oz.	24-28 oz.	42-53 oz.	24-28 oz.
Generator					
Make	Delco	Delco	Delco	Auto-Lite	Delco
Type	1102778	1102778	1102778	GGW-6003A	1102778
Generator Drive	Belt	Belt	Belt	Belt	Belt
Gen. Cut-In Speed—Hot	1215 R.P.M.	1215 R.P.M.	1215 R.P.M.	1000 R.P.M.	1215 R.P.M.
Gen. Output @ 7.4 Volts	45 Amps.	45 Amps.	45 Amps.	45 Amps.	45 Amps.
Field Current—Amps.	1.75—1.9	1.75—1.9	1.75—1.9	1.6—1.8	1.75—1.9
Brush Spring Tension	25 oz.	25 oz.	25 oz.	35-53 oz.	25 oz.
Regulator					
Make	Delco	Delco	Delco	Auto-Lite	Delco
Type	1118726	1118726	1118726	VBE-6102A	1118726
Maximum Output	45 Amps.	45 Amps.	45 Amps.	45 Amps.	45 Amps.
Circuit Breaker					
Air Gap	.020"	.020"	.020"	.031"—.034"	.020"
Contact Gap	.020"	.020"	.020"	.015"	.020"
Close Volts	6.5—7.0	6.5—7.0	6.5—7.0	6.5—7.0	6.5—7.0
Current Regulator					
Air Gap	.075"	.075"	.075"	.048"—.052"	.075"
Contact Gap				.012"	
Amperes	47	47	47	45	47
Voltage					
Air Gap	.075"	.075"	.075"	.048"—.052"	.075"
Contact Gap	.020"	.020"	.020"	.012"	.020"
Voltage (70°F)	7.4 Volts	7.4 Volts	7.4 Volts	7.4 Volts	7.4 Volts
Distributor					
Make	Delco	Delco	Delco	Auto-Lite	Delco
Type	1110836	1110836	1110836	IGP-4502-D	1110836
Ignition Timing	6° BTDC	6° BTDC	6° BTDC	6° BTDC	6° BTDC
Breaker Point Gap	0.016"	0.016"	0.016"	0.017"	0.016"
Breaker Arm Spring Tension	17-21 oz.	17-21 oz.	17-21 oz.	17-20 oz.	17-21 oz.
Spark Control	Full Automatic	Full Automatic	Full Automatic	Full Automatic	Full Automatic
Spark Advance Begins At	600 Engine R.P.M.	600 Engine R.P.M.	600 Engine R.P.M.	500 Engine R.P.M.	600 Engine R.P.M.
Vac. Adv. Crk/s. Deg. (Max.)	10°	10°	10°	13°	10°
Gov. Adv. Crk/s. Deg. (Max.)	16° @ 3000 R.P.M.	16° @ 3000 R.P.M.	16° @ 3000 R.P.M.	15° @ 2800 R.P.M.	16° @ 3000 R.P.M.
Cam Dwell Angle	31°	31°	31°	27°	31°
Condenser Capacity (Mfds.)	.18—.23	.18—.23	.18—.23	.20—.25	.18—.23
Ignition Coil					
Make	Delco	Delco	Delco	Auto-Lite	Delco
Type	1115376	1115376	1115376	CR-4001A	1115376
Ampere Draw Idling Hot	1.5 Amps.	1.5 Amps.	1.5 Amps.	1.5 Amps.	1.5 Amps.

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

CHASSIS SYMBOLS	2601	2611	2602—2631	2606—2626	2633—2613
ELECTRICAL (Cont'd)					
Spark Plugs					
Spark Plug Size	14 MM	14 MM	14 MM	14 MM	14 MM
Spark Plug—Make and Type	Auto-Lite—A5 Champion—J8 AC-46-5	Auto-Lite—A5 Champion—J8 AC-46-5	Auto-Lite—A5 Champion—J8 AC-46-5	Auto-Lite—A5 Champion—J8 AC-46-5	Auto-Lite—A5 Champion—J8 AC-46-5
Spark Plug Gap	.023"—.028"	.023"—.028"	.023"—.028"	.023"—.028"	.023"—.028"
Current Protection					
Head, Tail and Stop Light Current Protection	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker
Body Current Protection	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker
Directional Signal Current Protection	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker
Clock Fuse	AGA 3 Ampere	AGA 3 Ampere	AGA 3 Ampere	AGA 3 Ampere	AGA 3 Ampere
Overdrive Fuse	SFE 30 Ampere	SFE 30 Ampere	SFE 30 Ampere	SFE 30 Ampere (2626)	SFE 30 Ampere
Heater Fuse	SFE 20 Ampere	SFE 20 Ampere	SFE 20 Ampere	SFE 20 Ampere	SFE 20 Ampere
Radio Fuse	SFE 14 Ampere	SFE 14 Ampere	SFE 14 Ampere	SFE 14 Ampere	SFE 14 Ampere
Lighting and Accessories					
Headlight Bulb—Sld. Beam	45—35 Watts	45—35 Watts	45—35 Watts	45—35 Watts	45—35 Watts
Horn—Make	Sparks-Withington	Sparks-Withington	Sparks-Withington	Sparks-Withington	Sparks-Withington
Horn Location	Radiator Cradle Support	Radiator Cradle Support	Radiator Cradle Support	Radiator Cradle Support	Radiator Cradle Support
Clock—Type and Make	Electric—Borg	Electric—Borg	Electric—Borg	Electric—Borg	Electric—Borg
Amp. Draw of Headlights—Each	7 Amps. High Beam 5.5 Amps. Low Beam @ 6.4 Volts	7 Amps. High Beam 5.5 Amps. Low Beam @ 6.4 Volts	7 Amps. High Beam 5.5 Amps. Low Beam @ 6.4 Volts	7 Amps. High Beam 5.5 Amps. Low Beam @ 6.4 Volts	7 Amps. High Beam 5.5 Amps. Low Beam @ 6.4 Volts
Ampere Draw of Horns	22—25 Amperes	22—25 Amperes	22—25 Amperes	22—25 Amperes	22—25 Amperes
Ampere Draw of Heater Blower Motor	10 Amps. at 6 Volts @ 3000 R.P.M.	10 Amps. at 6 Volts @ 3000 R.P.M.	10 Amps. at 6 Volts @ 3000 R.P.M.	10 Amps. at 6 Volts @ 3000 R.P.M.	10 Amps. at 6 Volts @ 3000 R.P.M.
ENGINE					
General Information					
Make	Packard	Packard	Packard	Packard	Packard
Type	"L" Head—Vertical	"L" Head—Vertical	"L" Head—Vertical	"L" Head—Vertical	"L" Head—Vertical
A.M.A. Horsepower	39.2	39.2	39.2	39.2	39.2
Max. Brake Horsepower	150 @ 4000 R.P.M.	160 @ 3600 R.P.M.	180 @ 4000 R.P.M.	180 @ 4000 R.P.M.	150 @ 4000 R.P.M. (2633) 160 @ 3600 R.P.M. (2613)
Suspension	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted
Firing Order	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4
Torque	260 ft. lbs. @ 2200 R.P.M.	295 ft. lbs. @ 2000 R.P.M.	300 ft. lbs. @ 2000 R.P.M.	300 ft. lbs. @ 2000 R.P.M.	260 ft. lbs. @ 2000 R.P.M. (2633) 295 ft. lbs. @ 2000 R.P.M. (2613)
Bore	3½"	3½"	3½"	3½"	3½"
Stroke	3¾"	4¼"	4¼"	4¼"	3¾" (2633) 4¼" (2613)
Piston Displacement	288 Cu. in.	327 Cu. in.	327 Cu. in.	327 Cu. in.	288 Cu. in. (2633) 327 (Cu. in. (2613)
Cylinders	8 in line	8 in line	8 in line	8 in line	8 in line
Compression Ratio	7.7 to 1	8.0 to 1	8.0 to 1	8.0 to 1	7.7 to 1 (2633) 8.0 to 1 (2613)
Weight With Clutch & Trans.	860 lbs.	875 lbs.	885 lbs.	915 lbs. (2626)	860 lbs. (2633) 875 lbs. (2613)
Weight With Overdrive	895 lbs.	910 lbs.	920 lbs.	950 lbs. (2626)	895 lbs. (2633) 910 lbs. (2613)
Weight With Auto. Trans.	995 lbs.	1010 lbs.	1020 lbs.	1050 lbs.	995 lbs. (2633) 1010 lbs. (2613)
Cylinder Head Material	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Engine Rev. Per Mile—Std. Ratio	2847—Std. Trans. 2155—O.D. (Direct 2993) 2584—Ultramatic	2847—Std. Trans. 2155—O.D. (Direct 2993) 2358—Ultramatic	2792—Std. Trans. 2114—O.D. (Direct 2936) 2535—Ultramatic	2535—Ultramatic (2606) 2874—Std. Trans. (2626) 2303—O.D. (Direct 3190) (2626) 2734—Ultramatic (2626)	3353—Std. Trans. (2633) 3065—Std. Trans. (2613) 2421—O.D. (Direct 3065) (2633) 2285—O.D. (Direct 3173) (2613) 3018—Ultramatic (2633) 2943—Ultramatic (2613)

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

CHASSIS SYMBOLS	2601	2611	2602—2631	2606—2626	2633—2613
ENGINE (Cont'd)					
Connecting Rod					
Weight	2 lbs. 4.5 ozs.	2 lbs. 4 ozs.	2 lbs. 4 ozs.	2 lbs. 4 ozs.	2 lbs. 4.5 ozs. (2633) 2 lbs. 4 ozs. (2613)
Material	Steel Forging	Steel Forging	Steel Forging	Steel Forging	Steel Forging
Bearing Type	Detachable Shell	Detachable Shell	Detachable Shell	Detachable Shell	Detachable Shell
Center to Center Length	7 15/16"	7 11/16"	7 11/16"	7 11/16"	7 15/16" (2633) 7 11/16" (2613)
Length of Crankpin	1 5/16"	1 3/16"	1 5/16"	1 3/16"	1 5/16"
Clearance Brg. to Crankpin	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"
End Play on Crankshaft	.003" to .011"	.003" to .011"	.003" to .011"	.003" to .011"	.003" to .011"
Oil Lead to Piston Pin	Rifle Drilled	Rifle Drilled	Rifle Drilled	Rifle Drilled	Rifle Drilled
Bearing Material	Special Composite Construction	Special Composite Construction	Special Composite Construction	Special Composite Construction	Special Composite Construction
Assembled in Engine	Oil Hole to Camshaft	Oil Hole to Camshaft	Oil Hole to Camshaft	Oil Hole to Camshaft	Oil Hole to Camshaft
Bearing Adjustment	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells
Crankshaft					
Type	Counterbalanced	Counterbalanced	Counterbalanced	Counterbalanced	Counterbalanced
Material	Steel Forging	Steel Forging	Steel Forging	Steel Forging	Steel Forging
Number of Counterweights	8 Forged Integral	8 Forged Integral	8 Forged Integral	8 Forged Integral	8 Forged Integral
Number of Main Bearings	5	5	5	9	5
Main Bearing Journal Dia	2.7465"	2.7465"	2.7465"	2.7465"	2.7465"
Connecting Rod Jrnl Dia	2.250"	2.250"	2.250"	2.250"	2.250"
Main Brg. Length No. 1	1 7/32"	1 7/32"	1 7/32"	1 7/32"	1 7/32"
No. 2	1 1/16"	1 1/16"	1 1/16"	1 1/16"	1 1/16"
No. 3	1 19/32"	1 19/32"	1 19/32"	1 1/16"	1 19/32"
No. 4	1 1/16"	1 1/16"	1 1/16"	1 1/16"	1 1/16"
No. 5	2 1/16"	2 1/16"	2 1/16"	1 19/32"	2 1/16"
No. 6	None	None	None	1 1/16"	None
No. 7	None	None	None	1 1/16"	None
No. 8	None	None	None	1 1/16"	None
No. 9	None	None	None	2 1/16"	None
Projected Main Brg. Area	19.3 sq. inches	19.3 sq. inches	19.3 sq. inches	30.7 sq. inches	19.3 sq. inches
Thrust Taken On	Center Bearing	Center Bearing	Center Bearing	Center Bearing	Center Bearing
Vibration Damper	Fluid Suspension	Fluid Suspension	Fluid Suspension	Fluid Suspension	Fluid Suspension
Weight	96 lbs.	104 lbs.	104 lbs.	106 lbs.	104 lbs.
End Play	.0035" to .0085"	.0035" to .0085"	.0035" to .0085"	.0035" to .0085"	.0035" to .0085"
Main Bearing Material	Special Composite	Special Composite	Special Composite	Special Composite	Special Composite
Clearance—All Main Brgs	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"
Crankshaft Sprocket— Material and Size	Steel—21 Teeth	Steel—21 Teeth	Steel—21 Teeth	Steel—21 Teeth	Steel—21 Teeth
Bearing Adjustment	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells
Camshaft and Chain					
Gear Cover	Steel Stamping	Steel Stamping	Steel Stamping	Steel Stamping	Steel Stamping
Camshaft Drive	Silent Chain	Silent Chain	Silent Chain	Silent Chain	Silent Chain
Make of Chain	Morse	Morse	Morse	Morse	Morse
Length, Width and Pitch of Chain	58 Links, 1", .375"	58 Links, 1", .375"	58 Links, 1", .375"	58 Links, 1", .375"	58 Links, 1", .375"
No. of Camshaft Bearings	5	5	5	5	5
Clearance of Camshaft Brgs.	.001" to .003"	.001" to .003"	.001" to .003"	.001" to .003"	.001" to .003"
Camshaft End Play	.004" to .006"	.004" to .006"	.004" to .006"	.004" to .006"	.004" to .006"
Camshaft Sprocket— Material and Size	Cast Iron—42 Teeth Hardened	Cast Iron—42 Teeth Hardened	Cast Iron—42 Teeth Hardened	Cast Iron—42 Teeth Hardened	Cast Iron—42 Teeth Hardened
Oiling System					
Type	Full Pressure	Full Pressure	Full Pressure	Full Pressure	Full Pressure
Oil Pump Type	Gear	Gear	Gear	Gear	Gear
Crankcase Capacity	7 qts.	7 qts.	7 qts.	7 qts.	7 qts.
Oil Filler Location	Left Side	Left Side	Left Side	Left Side	Left Side
Oil Filter Location	Special Equipment	Special Equipment	Left Side	Left Side	Special Equipment (2633) Left Side (2613)
Oil Measuring Stick	Left Crankcase	Left Crankcase	Left Crankcase	Left Crankcase	Left Crankcase
Oil Pump Intake	Floating Screen	Floating Screen	Floating Screen	Floating Screen	Floating Screen
Crankcase Ventilator	Yes	Yes	Yes	Yes	Yes
Oil Pressure—Normal Driv.	40 lbs.	40 lbs.	40 lbs.	40 lbs.	40 lbs.
Oil Drain	Hex. Head Flange Plug 3/8"—18 Thd.	Hex. Head Flange Plug 3/8"—18 Thd.	Hex. Head Flange Plug 3/8"—18 Thd.	Hex. Head Flange Plug 3/8"—18 Thd.	Hex. Head Flange Plug 3/8"—18Thd.
Pistons					
Type	Auto-Thermic	Auto-Thermic	Auto-Thermic	Auto-Thermic	Auto-Thermic
Material	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy
Weight	19.575 ozs.	19.575 ozs.	19.575 ozs.	19.575 ozs.	19.575 ozs.
Wt. With Rings, Pin & Lock	25 1/2 ozs.	25 1/2 ozs.	25 1/2 ozs.	25 1/2 ozs.	25 1/2 ozs.
Overall Height	3 3/8"	3 3/8"	3 3/8"	3 3/8"	3 3/8"
Ht., Centerline of Pin to Top	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

CHASSIS SYMBOLS	2601	2611	2602—2631	2606—2626	2633—2613
ENGINE (Cont'd)					
Piston (Cont'd)					
Skirt Clearance	.0005" to .001"	.0005" to .001"	.0005" to .001"	.0005" to .001"	.0005" to .001"
Assemble Slot Toward	Camshaft	Camshaft	Camshaft	Camshaft	Camshaft
Piston Pin Size	3¼" x ⅞"	3¼" x ⅞"	3¼" x ⅞"	3¼" x ⅞"	3¼" x ⅞"
Type Pin	Floating	Floating	Floating	Floating	Floating
Lubrication of Pin	Pressure	Pressure	Pressure	Pressure	Pressure
Piston Pin Fit in Piston	Palm Push Fit at 160°	Palm Push Fit at 160°	Palm Push Fit at 160°	Palm Push Fit at 160°	Palm Push Fit at 160°
Piston Pin Fit in Rod	Finger Push Fit	Finger Push Fit	Finger Push Fit	Finger Push Fit	Finger Push Fit
Piston Pin Oversizes	.003" and .006"	.003" and .006"	.003" and .006"	.003" and .006"	.003" and .006"
No. of Rings Per Piston	3	3	3	3	3
No. of Oil Rings Per Piston	1	1	1	1	1
No. of Compression Rings Per Piston	2	2	2 (Top Ring Chrome)	2 (Top Ring Chrome)	2
Wth. of Compression Rings	.0925" to .0935"	.0925" to .0935"	.0925" to .0935"	.0925" to .0935"	.0925" to .0935"
Width of Oil Rings	.1860" to .1865"	.1860" to .1865"	.1860" to .1865"	.1860" to .1865"	.1860" to .1865"
Piston Ring Gap—Compression	.007" to .017"	.007" to .017"	.007" to .015" (Tp. Rg.) .007" to .017" (Second Ring)	.007" to .015" (Tp. Rg.) .007" to .017" (Second Ring)	.007" to .017"
Piston Ring Gap—Oil	.007" to .015"	.007" to .015"	.007" to .015"	.007" to .015"	.007" to .015"
Location of Rings	Above Pin	Above Pin	Above Pin	Above Pin	Above Pin
Piston Oil Drain Hole	12—5/32" Dia. Holes	12—5/32" Dia. Holes	12—5/32" Dia. Holes	12—5/32" Dia. Holes	12—1/8" Dia. Holes
Piston Oversizes	.005", .020", .030" & .040"	.005", .020", .030" & .040"	.005", .020", .030" & .040"	.005", .020", .030" & .040"	.005", .020", .030" & .040"
Valves					
Valve Lift—Inlet	.342	.342	.342	.342	.342
—Exhaust	.342	.342	.337	.337	.342 (2633) .337 (2613)
Valve Arrangement	"L" Head	"L" Head	"L" Head	"L" Head	"L" Head
Valve Head Dia.—Inlet	1 13/64"	1 13/64"	1 13/64"	1 13/64"	1 13/64"
—Exhaust	1 7/16"	1 7/16"	1 7/16"	1 7/16"	1 7/16"
Valve Stem Dia.—Inlet	.3417"	.3417"	.3417"	.3417"	.3417"
—Exhaust	.3398"	.3398"	.3398"	.3398"	.3398"
Valve Overall Length	5 3/8"	5 3/8"	5 3/8"	5 3/8"	5 3/8"
Valve Material—Inlet	Chrome Nickel	Chrome Nickel	Chrome Nickel	Chrome Nickel	Chrome Nickel
—Exhaust	Austenitic	Austenitic	Austenitic	Austenitic	Austenitic
Valve Spring Keeper—Type	Split Cone	Split Cone	Split Cone	Split Cone	Split Cone
Vlv. Stm. Clearance—Inlet	.002"	.002"	.002"	.002"	.002"
—Exh.	.004"	.004"	.004"	.004"	.004"
Valve Tappet Clearance —Inlet Warm	.007"	.007"	Automatic Take-up	Automatic Take-up	.007" (2633) Automatic Take-up (2613)
—Exhaust Warm	.010"	.010"	Automatic Take-up	Automatic Take-up	.010" (2633) Automatic Take-up (2613)
Inlet Valve Opens	15° BTDC	15° BTDC	15° BTDC	15° BTDC	15° BTDC
Inlet Valve Closes	45° ALDC	45° ALDC	43° ALDC	43° ALDC	45° ALDC (2633) 43° ALDC (2613)
Exhaust Valve Opens	50° BLDC	40° BLDC	53° BLDC	53° BLDC	50° BLDC (2633) 53° BLDC (2613)
Exhaust Valve Closes	9° ATDC	9° ATDC	4° ATDC	4° ATDC	9° ATDC (2633) 4° ATDC (2613)
Tappet Clearance for Timing —Inlet	.0125"	.0125"	Not Used	Not Used	.0125" (2633) (Not Used (2613)
—Exhaust	.015"	.015"	Not Used	Not Used	.015 (2633) Not Used (2613)
Valve Seat Angle—Inlet	30°	30°	30°	30°	30°
—Exhaust	45°	45°	45°	45°	45°
Valve Spring	Single	Single	Single	Single	Single
Valve Spring Load —Valve Closed	60-66 lbs. @ 1¾"	60-66 lbs. @ 1¾"	60-66 lbs. @ 1¾"	60-66 lbs. @ 1¾"	60-66 lbs. @ 1¾"
—Valve Open	135-145 lbs. @ 1 11/16"	135-145 lbs. @ 1 11/16"	135-145 lbs. @ 1 11/16"	135-145 lbs. @ 1 11/16"	135-145 lbs. @ 1 11/16"
Exhaust System					
Exhaust Pipe Diameter	2¼"	2¼"	2¼"	2¼"	2¼"
Muffler Size	5 11/16" dia. x 35 3/8"	5 11/16" dia. x 35 3/8"	5 11/16" dia. x 35 3/8"	5 3/16" dia. x 8 3/8"	5 3/16" dia. x 35 3/8" (2633) 5 11/16" dia. x 35 3/8" (2613)
Muffler Silencer	None	None	5 3/16" dia x 8 3/8"	5 3/16" dia. x 8 3/8"	None
FRAME					
Depth (Maximum)	5 11/16"	5 11/16"	6" (Conv. & Sedan) 5 11/16" (Mayfair)	6"	6"
Thickness (Maximum)	⅛"	⅛"	9/64" (Conv. & Sedan) ⅜" (Mayfair)	9/64"	9/64"
Flange Width (Max.)	2 17/64"	2 17/64"	2 1/16" (Conv. & Sedan) 2 17/64" (Mayfair)	2 1/16"	2 1/16"

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

CHASSIS SYMBOLS	2601	2611	2602—2631	2606—2626	2633—2613
FRONT SUSPENSION					
Make	Packard	Packard	Packard	Packard	Packard
Type	Independent—Parallelogram	Independent—Parallelogram	Independent—Parallelogram	Independent—Parallelogram	Independent—Parallelogram
Steering Knuckle	Reverse Elliot	Reverse Elliot	Reverse Elliot	Reverse Elliot	Reverse Elliot
Steering Knuckle Pin Brgs.					
—Lower	.866" x 1.187" x 1.189" O.D.	.866" x 1.187" x 1.189" O.D.	.866" x 1.187" x 1.189" O.D.	.866" x 1.187" x 1.189" O.D.	1.063" x 1.187" x 1.250" O.D.
—Upper	Needle Bearing	Needle Bearing	Needle Bearing	Needle Bearing	1.063" x 1.187" x 1.250" O.D.
Thrust Bearings	Steel Ball Bearing	Steel Ball Bearing	Steel Ball Bearing	Steel Ball Bearing	Steel Ball Bearing
Caster	Neg. 1° plus minus ½°	Neg. 1° plus minus ½°	Neg. 1° plus minus ½°	Neg. 1° plus minus ½°	Neg. 2° plus minus ½°
Front Wheel Toe-In	0 plus 1/16" minus 0	0 plus 1/16" minus 0	0 plus 1/16" minus 0	0 plus 1/16" minus 0	0 plus 1/16" minus 0
Knuckle Pin Angle	5°-50'	5°-50'	5°-50'	5°-50'	2°-30'
Camber	0° plus 3/4° minus 1/4°	0° plus 3/4° minus 1/4°	0° plus 3/4° minus 1/4°	0° plus 3/4° minus 1/4°	0° plus 3/4° minus 1/4°
Wheel Brgs.—Inner & Outer	Tapered Roller	Tapered Roller	Tapered Roller	Tapered Roller	Tapered Roller
Wheel Bearing Adjustment	Tighten nut to 20 ft. lbs. and back off 1 hex. and lock	Tighten nut to 20 ft. lbs. and back off 1 hex. and lock	Tighten nut to 20 ft. lbs. and back off 1 hex. and lock	Tighten nut to 20 ft. lbs. and back off 1 hex. and lock	Tighten inner nut to 20 ft. lbs. and back off 2 to 3 holes in locking washer and lock
Tread	59½"	59½"	60"	60"	59½"
FUEL SYSTEM					
Carburetor					
Make and Type	Carter WGD-784S	Carter WGD-928-S	Carter WCFB-985-S		Carter WGD-784-S (2633) Carter WGD-928-S (2613)
Flange Size	1¼" Duplex	1¼" Duplex	Down Draft 1 5/16" Four Barrel		1¼" Duplex
			Primary (Front)	Secondary (Rear)	
Main Venturi	1 5/16"	1 5/16"	1 1/16"	1 1/16"	1 5/16"
Float Level	13/64"	13/64"	5/32"	5/32"	13/64"
Measured From	Float to Cover	Float to Cover	Float to Cover	Float to Cover	Float to Cover
Metering Rod No.	75-722	75-767	75-824		75-767 (2613) 75-722 (2633)
Economy Step	.0685"	.0695"	.066"		.0695"(2613).0685"(2633)
Center Step Tapers To	.066"	.067"	.066"		.067" (2613) .066" (2633)
Power Step	.0595"	.061"	.052"		.061"(2613).0595"(2633)
Main Metering Jet	.089" (No. 43 Drill)	.089" (No. 43 Drill)	.086" (No. 44 Drill)	.067" (No. 51 Drill)	.089" (No. 43 Drill)
Low Speed Jet	.032" (No. 67 Drill)	.032" (No. 67 Drill)	.032" (No. 66 Drill)	.032" (No. 66 Drill)	.032" (No. 67 Drill)
By-Pass Jet	.052" (No. 55 Drill)	.052" (No. 55 Drill)	.0595" (No. 53 Drill)	.0595" (No. 53 Drill)	.052" (No. 55 Drill)
Economizer Jet	.045" (1.15 MM Drill)	.045" (1.15 MM Drill)	.045" (1.15 MM Drill)	.045" (1.15 MM Drill)	.045" (1.15 MM Drill)
Idle Bleed	.0465" (No. 56 Drill)	.0465" (No. 56 Drill)	.067" (No. 51 Drill)	.067" (No. 51 Drill)	.0465" (No. 56 Drill)
Anti-Percolator Jet	.033" (No. 66 Drill)	.033" (No. 66 Drill)	.036" (No. 64 Drill)		.033" (No. 66 Drill)
Pump Discharge Jet	.0225" (No. 74 Drill)	.0225" (No. 74 Drill)	.0225" (No. 74 Drill)		.0225" (No. 74 Drill)
Pump Adjustment	15/32" From Flange	15/32" From Flange	9/32" From Flange		15/32" From Flange
Pump Stroke	5/16" ± 1/64"	5/16" ± 1/64"	21/64"		5/16" ± 1/64"
Metering Rod Adj.	Bottom	Bottom	Bottom		Bottom
Fast Idle Adj.	.023"	.023"	.020" to .023"		.023"
Unloader Adj.	3/8" ± 1/64"	1/8" ± 1/64"	9/32" ± 1/64"		1/4" ± 1/64"
Idle Adj. Turns Out	1 to 1½	1 to 1½	1½ to 2		1 to 1½
Automatic Choke	Climatic Control	Climatic Control	Climatic Control		Climatic Control
Choke Adjustment	1 Notch Rich.	1 Notch Rich.	Set on Index		1 Notch Rich.
Air Cleaner & Silencer	Oil Coated Mesh	Oil Coated Mesh	Oil Bath-Type		Oil Bath-Type
Fuel Pump					
Make	AC	AC	AC	AC	AC
Type Booster	Double Acting	Double Acting	Double Acting	Double Acting	Double Acting
Model	1539606	1539606	1539606	1539606	1539606
Capacity—45 sec.	1 Pint	1 Pint	1 Pint	1 Pint	1 Pint
Pressure—PSI	4 to 5	4 to 5	4 to 5	4 to 5	4 to 5
Booster Vac. (@ 240 Eng. r.p.m.)	10 in. Hg.	10 in. Hg.	10 in. Hg.	10 in. Hg.	10 in. Hg.
Inlet Side	Rear	Rear	Rear	Rear	Rear
Outlet Side	Front	Front	Front	Front	Front
Fuel Tank Cap.—Gals.	20	20	20	20	20
Fuel Filter	In Fuel Pump	In Fuel Pump	In Fuel Pump	In Fuel Pump	In Fuel Pump
Fuel Gauge	Electric	Electric	Electric	Electric	Electric
REAR AXLE					
Type	Semi-Floating	Semi-Floating	Semi-Floating	Semi-Floating	Semi-Floating
Make	Packard	Packard	Packard	Packard	Packard
Final Drive	Hypoid Gears	Hypoid Gears	Hypoid Gears	Hypoid Gears	Hypoid Gears
Propulsion	Through Rear Springs	Through Rear Springs	Through Rear Springs	Through Rear Springs	Through Rear Springs

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

CHASSIS SYMBOLS	2601	2611	2602—2631	2606—2626	2633—2613
REAR AXLE (Cont'd)					
Axle Housing	Swedged Tube Banjo Type	Swedged Tube Banjo Type	Swedged Tube Banjo Type	Swedged Tube Banjo Type	Swedged Steel Banjo Type (2633) Pressed Steel Banjo Type (2613)
Oil Capacity	3¾ Pints	3¾ Pints	3¾ Pints	3¾ Pints	3¾ Pints (2633) 6 Pints (2613)
Wheel Bearings	Tapered Rollers	Tapered Rollers	Tapered Rollers	Tapered Rollers	Tapered Rollers
Tread	60²¹⁄₃₂"	60²¹⁄₃₂"	61⁷⁄₃₂"	61⁷⁄₃₂"	65¹³⁄₁₆" (2633) 65¹³⁄₁₆" (2613)
Gear Ratio—Std. Trans.	3.9 to 1	3.9 to 1	3.9 to 1	4.1 to 1 (2626)	4.55 to 1 (2633) 4.54 to 1 (2613)
—Overdrive	4.1 to 1	4.1 to 1	4.1 to 1	4.55 to 1 (2626)	4.55 to 1 (2633) 4.7 to 1 (2613)
—Ultramatic	3.54 to 1	3.23 to 1	3.54 to 1	3.54 to 1 (2606) 3.9 to 1 (2626)	4.1 to 1 (2633) 4.36 to 1 (2613)
Pinion Backlash	.004" to .008"	.004" to .008"	.004" to .008"	.004" to .008"	.004" to .008"
Number of Teeth—Gear and Pinion—Std.	39-10	39-10	39-10	39-11 (2606) 41-9 (2626)	41-9 (2633) 50-11 (2613)
Oil Drain Plugs	Hex. Head Flange Plug ⅝"—18 Thd.	Hex. Head Flange Plug ⅝"—18 Thd.	Hex. Head Flange Plug ⅝"—18 Thd.	Hex. Head Flange Plug ⅝"—18 Thd.	Hex. Head Flange Plug ⅝"—18 Thd. (2633) ½"—14 Pipe Thd. (2613)
UNIVERSAL JOINT					
Make	Spicer for Std. and O.D. Cars Universal Products for Ultramatic Cars	Spicer for Std. and O.D. Cars Universal Products for Ultramatic Cars	Spicer for Std. and O.D. Cars Universal Products for Ultramatic Cars	Universal Products (2606) Mechanics—Front (2626) Spicer—Rear (2626)	Spicer for Std. and O.D. (2633) Universal Products for Ultramatic (2633) Mechanics for (2613)
Type	Roller Bearings	Roller Bearings	Roller Bearings	Roller Bearings	Roller Bearings
Number Required	2	2	2	2 (2606) 3—Double Shaft (2626)	2 (2633) 3—Double Shaft (2613)
SPRINGS					
Front—Coil, Load and Rate.	2040 x 90 (Std. & O.D.) 2120 x 90 (Ultramatic)	2040 x 90 (Std. & O.D.) 2120 x 90 (Ultramatic)	2120 x 90 (Std. & O.D.) (2602) 2120 x 90 (Std. & O.D. for Conv. (2631) 2040 x 90 (Std. & O.D. for Mayfair) (2631) 2200 x 90 (Ultramatic) (2602) 2200 x 90 (Ultramatic for Conv.) (2631) 2120 x 90 (Ultramatic for Mayfair) (2631)	2280 x 90 (2606) 2450 x 120 (2626)	2180 x 121 (2633) 2900 x 172 (2613) 2250 x 120 (Ultramatic) (2633)
Rear—Leaf, Load and Rate..	990 x 110	990 x 110	1090 x 110 (2602) 1040 x 110 (Mayfair) (2631) 1090 x 110 (Conv.) (2631)	1090 x 110 (2606) 1500 x 155 (2626)	1500 x 155 (2633) 2100 x 225 Left Rear 2000 x 225 Right Rear (3 Way Loader Hearse) (2613) 1600 x 225 (Ambulance and End Loader Hearse) (2613)
Front Size	4¼" Inside Dia.	4¼" Inside Dia.	4¼" Inside Dia.	4¼" Inside Dia.	4½" Inside Dia. (2613) 4¼" Inside Dia. (2633)
Rear Length and Width	54⅜" x 2½"	54⅜" x 2½"	54⅜" x 2½	54⅜" x 2½"	54⅜" x 2½" (2633) 54⅜" x 2" (2613)
Shackles	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted
Shock Absorbers—Hyd.	Direct-Acting 1" Dia.	Direct-Acting 1" Dia.	Direct-Acting 1" Dia.	Direct-Acting 1" Dia.	Direct-Acting 1" Dia. (2633) Direct-Acting 1⅜" Dia. (2613)
Stabilizer—Front	Torsional	Torsional	Torsional	Torsional	Torsional
Stabilizer—Rear	None	None	Bar Type (2602) Bar Type (Conv.) (2631) None (Mayfair) (2631)	Bar Type	Torsional
Spring Material	Silico-Manganese	Silico-Manganese	Silico-Manganese	Silico-Manganese	Silico-Manganese

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

CHASSIS SYMBOLS	2601	2611	2602—2631	2606—2626	2633—2613
STEERING GEAR					
Make	Packard	Packard	Packard	Packard	Packard
Type	Worm and 3 Tooth Roller	Worm and 3 Tooth Roller	Worm and 3 Tooth Roller	Worm and 3 Tooth Roller	Worm and 3 Tooth Roller
Steering Wheel	18"—2 Spokes	18"—2 Spokes	18"—2 Spokes	18"—2 Spokes	18"—2 Spokes
—Conventional Steering—					
Ratio—Gear	20.4	20.4	22.3	22.3	22.3
Ratio—Overall	27.8	27.8	30.9	30.9	30.9
Minimum Turning Radius	21½ ft.	21½ ft.	22½ ft. (2602) 21½ ft. (2631)	22½ ft. (2606) 26½ ft. (2626)	22½ ft. (2633) 28 ft. (2613)
—Power Steering—					
Ratio—Gear	18.6	18.6	18.6	18.6	18.6
Ratio—Overall	22.5	22.5	22.5	22.5	22.5
Minimum Turning Radius	20½ ft.	20½ ft.	21½ ft. (2602) 20½ ft. (2631)	21½ ft. (2606) 25½ ft. (2626)	21½ ft. (2633) 27 ft. (2613)
TRANSMISSION					
Type—Standard	Selective—Silent Synchronized	Selective—Silent Synchronized	Selective—Silent Synchronized	Selective—Silent Synchronized (2626)	Selective—Silent Synchronized
—Overdrive	Special Equipment	Special Equipment	Special Equipment	Special Equipment (2626)	Special Equipment
—Automatic	Ultramatic—Special Equipment	Ultramatic—Special Equipment	Ultramatic—Special Equipment	Ultramatic (Std. 2606) Special Equipment (2626)	Ultramatic—Special Equipment
Engine to Rear Wheel Ratio	Std. O.D. Ultra.	Std. O.D. Ultra.	Std. O.D. Ultra.	Std. O.D. Ultra.	Std. O.D. Ultra.
Overdrive	2.96	2.96	2.96	3.29 (2626)	3.29 (2633) 3.39 (2613)
Direct	3.9 4.1 3.54	3.9 4.1 3.23	3.9 4.1 3.54	4.1 (2626) 4.55 (2626) 3.54 (2606) 3.9 (2626)	4.55 (2633) 4.55 (2633) 4.1 (2633) 4.54 (2613) 4.7 (2613) 4.36 (2613)
Second	5.96 6.27	5.96 6.27	5.96 6.27	6.27 (2626) 6.96 (2626)	6.96 (2633) 6.96 (2633) 6.94 (2613) 7.18 (2613)
Low	9.47 9.96 6.44	9.47 9.96 5.88	9.47 9.96 6.44	9.96 (2626) 11.05 (2626) 6.44 (2606) 7.10 (2626)	11.05 (2633) 11.05 (2633) 7.46 (2633) 11.03 (2613) 11.41 (2613) 7.94 (2613)
Reverse	12.34 12.96 5.81	12.34 12.96 5.30	12.34 12.96 5.81	12.96 (2626) 14.38 (2626) 5.81 (2606) 6.40 (2626)	14.38 (2633) 14.38 (2633) 6.72 (2633) 14.36 (2613) 14.85 (2613) 7.15 (2613)
Oil Capacity—Std. Trans.	2 Pints	2 Pints	2 Pints	2 Pints (2626)	2 Pints
Oil Capacity—Overdr. Unit	1¼ Pints	1¼ Pints	1¼ Pints	1¼ Pints (2626)	1¼ Pints
Oil Capacity—Automatic	12 Qts.	12 Qts.	12 Qts.	12 Qts.	12 Qts.
Gear Teeth	Helical	Helical	Helical	Helical (2626)	Helical
Oil Level Plugs—Std. & O.D.	½"—14 Pipe	½"—14 Pipe	½"—14 Pipe	½"—14 Pipe (2626)	½"—14 Pipe
Oil Level Indicator—Auto.	Dip stick on filler cap—Left side of case	Dip stick on filler cap—Left side of case	Dip stick on filler cap—Left side of case	Dip stick on filler cap—Left side of case	Dip stick on filler cap—Left side of case
WHEELS					
Type	Demountable Disc	Demountable Disc	Demountable Disc	Demountable Disc	Demountable Disc
Rim Size	(15" x 5½" "K" Rim)	(15" x 5½" "K" Rim)	(15" x 6" "L" Rim)	(15" x 6" "L" Rim)	(16" x 5½" "F" Rim)
Size of Tire	15" x 7.60"—4 Ply	15" x 7.60"—4 Ply	15" x 8.00"—4 Ply	15" x 8.00"—4 Ply (2606) 15" x 8.20"—6 Ply (2626)	16" x 6.50"—6 Ply (2633) 16" x 7.50"—6 Ply (2613)
Recommended Tire Press.					
Cold—Front	24 lbs.	24 lbs.	24 lbs.	24 lbs. (2606) 26 lbs. (2626)	36 lbs. (2633) 30 lbs. (2613)
—Rear	24 lbs.	24 lbs.	24 lbs.	24 lbs. (2606) 26 lbs. (2626)	36 lbs. (2633) 40 lbs. (2613)
CAR DIMENSIONS					
Wheelbase	122"	122"	127" (2602) 122" (2631)	127" (2606) 149" (2626)	127" (2633) 156" (2613)
Overall Length—Bumper to Bumper	213 1/16"	213 1/16"	218 5/16" (2602) 213 1/16" (2631)	218 5/16" (2606) 240 5/16" (2626)	222 1/16" Less Rear Guards (2633) 251 1/16" Less Rear Guards (2613)
Overall Height—Loaded	62 11/16"	62 11/16"	62 11/16" (2602) 62" (2631)	69 11/16" (2606) 62 11/16" (2626)	
Overall Width	77 3/8"	77 3/8"	77 3/8"	77 3/8"	

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26th SERIES CHASSIS AND BODY SYMBOLS

		PACKARD CLIPPER 288 cu. in. 150 HP	PACKARD CLIPPER DELUXE 327 cu. in. 160 HP	PACKARD MAYFAIR & CONVERTIBLE 327 cu. in. 180 HP	PACKARD CAVALIER 327 cu. in. 180 HP	PACKARD PATRICIAN 327 cu. in. 180 HP	PACKARD 327 cu. in. 180 HP	PACKARD COMMERCIAL 288 cu. in. 150 HP	PACKARD COMMERCIAL 327 cu. in. 160 HP
CHASSIS SYMBOLS		2601 2601R	2611 2611R	2631	2602	2606	2626	2633	2613
BODY TYPES	Pass.								
SEDAN	6	2692	2662		2672	2652			
CLUB SEDAN	6	2695	2665						
MAYFAIR	6			2677					
CARIBBEAN	6			2678					
CONVERTIBLE COUPE	6			2679					
EXECUTIVE SEDAN	8						2651		
CORPORATION LIMOUSINE	8						2650		
COMMERCIAL CHASSIS								xxx	xxx
WHEELBASE		122″			127″		149″	127″	156″

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SECTION XXI

MECHANICAL SPECIFICATIONS AND ADJUSTMENTS

54TH SERIES

CHASSIS SYMBOLS	5400	5401-5411	5408-5431	5406-5426	5413-5433
BRAKES					
Type	Hydraulic 2-Shoe	Hydraulic 2-Shoe	Hydraulic 2-Shoe	Hydraulic 2-Shoe	Hydraulic 2-Shoe
Effective Area	191.8 sq. in.	191.8 sq. in.	208.25 sq. in.	208.25 sq. in.	292.25 sq. in.
Effective Area Hand Brake	85.25 sq. in.	85.25 sq. in.	98 sq. in.	98 sq. in.	162.25 sq. in.
Drum Diameter					
Front	11" Centrifuse	11" Centrifuse	12" Centrifuse	12" Centrifuse	12" Centrifuse
Rear	11" Centrifuse	11" Centrifuse	12" Centrifuse	12" Centrifuse	14" Centrifuse
Lining Size and Material					
Primary Shoes					
Front	2½" x 3/16" x 9⅝"	2½" x 3/16" x 9⅝"	2¼" x 3/16" x 11½"	2¼" x 3/16" x 11½"	2½" x 5/16" x 13"
Rear	2" x 3/16" x 9⅝"	2" x 3/16" x 9⅝"	2" x 3/16" x 11½"	2" x 3/16" x 11½"	2¾" x ¼" x 14¾"
Material	Marshall—4112	Marshall—4112	Marshall—4112	Marshall—4112	Marshall—9051
Secondary Shoes					
Front	2½" x 3/16" x 12"	2½" x 3/16" x 12"	2¼" x 3/16" x 13"	2¼" x 3/16" x 13"	2½" x 3/16" x 13"
Rear	2" x 3/16" x 12"	2" x 3/16" x 12"	2" x 5/16" x 13"	2" x 3/16" x 13"	2¾" x ¼" x 14¾"
Material	Marshall—9051	Marshall—9051	Marshall—9051	Marshall—9051	Marshall—9032
Wheel Cylinder Size					
Front	1⅛" Dia.	1⅛" Dia.	1¼" Dia.	1⅛" Dia.	1⅛" Dia.
Rear	1⅛" Dia.	1⅛" Dia.	1" Dia.	1" Dia.	1¼" Dia.
Master Cylinder Size	1" Dia.	1" Dia.	1" Dia.	1" Dia.	1⅛" Dia.
Brake (Power Unit)	Sp. Equip.	Sp. Equip.	Sp. Equip. Std. Equip. (Caribbean)	Sp. Equip.	
CLUTCH					
Type	Single Dry Plate	Single Dry Plate	Single Dry Plate (**)	Single Dry Plate (5426)	Single Dry Plate
Pedal Free Play	1¼" to 1½"	1¼" to 1½"	1¼" to 1½" (**)	1¼" to 1½" (5426)	1¼" to 1½"
Facing Material	U. S. Asbestos Woven	U. S. Asbestos Woven	U. S. Asbestos Woven (**)	U. S. Asbestos Woven (5426)	U. S. Asbestos Woven
Size of Facing	6¾" x 10" x .125"	7" x 10½" x .125"	7" x 10½" x .125" (**)	7" x 10½" x .125" (5426)	6¾" x 10" x .125" (5433) 7" x 10½" x .125" (5413)
Throw Out Bearing	Prelubricated Ball	Prelubricated Ball	Prelubricated Ball (**)	Prelubricated Ball (5426)	Prelubricated Ball
Clutch Spring Pressure	154 lb. at 1.566"	163 lb. at 1.562"	163 lb. at 1.562" (**)	163 lb. at 1.562" (5426)	163 lbs. at 1.562" (5413) 154 lbs. at 1.566" (5433)
Number of Springs	9	9	9 (**)	9 (5426)	9
Vibration Neutralizer	Yes	Yes	Yes (**) NOTE (**)—Not used 5431	Yes (5426)	Yes
COOLING SYSTEM					
Type	Pressure	Pressure	Pressure	Pressure	Pressure
Water Pump	Centrifugal Self-Adjusting	Centrifugal Self-Adjusting	Centrifugal Self-Adjusting	Centrifugal Self-Adjusting	Centrifugal Self-Adjusting
Water Pump Drive	Fan Belt	Fan Belt	Fan Belt	Fan Belt	Fan Belt
Capacity of System	19.9 Qts.	19.9 Qts.	19.9 Qts.	19.9 Qts.	19.9 Qts.
Heater Capacity	.65 Qts.	.65 Qts.	1.15 Qts.	1.15 Qts.	.65 Qts.
Fan	4 Blade—19⅛" Dia.	4 Blade—19⅛" Dia.	4 Blade—19⅛" Dia.	4 Blade—19⅛" Dia.	4 Blade—19⅛" Dia.
Drive Pulley	On Crankshaft	On Crankshaft	On Crankshaft	On Crankshaft	On Crankshaft
Ratio	.919 to 1	.919 to 1	.919 to 1	.919 to 1	.919 to 1
Thermostat Starts to Open					
Standard	167° to 173°	167° to 173°	167° to 173°	167° to 173°	167° to 173°
High Reading	177° to 182°	177° to 182°	177° to 182°	177° to 182°	177° to 182°
Fan Belt	41.3" x .375"	41.3" x .375"	41.3" x .375"	41.3" x .375"	41.3" x .375"
Fan Belt Adjustment	At Generator	At Generator	At Generator	At Generator	At Generator
Heat Indicator	Electric	Electric	Electric	Electric	Electric
Gravity Flow of Radiator (Minimum)	36.6 Gal. per Min.	31.5 Gal. per Min.	30.1 Gal. per Min.(**) 31.25 Gal. per Min.	31.25 Gal. per Min.	30.1 Gal. per Min. (5433) 31.25 Gal. per Min. (5413)
Radiator Cap	Pressure Type—12 psi	Pressure Type—12 psi	Pressure Type—12 psi NOTE (**)—Not used 5431	Pressure Type—12 psi	Pressure Type—12 psi

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CHASSIS SYMBOLS	5400	5401-5411	5402-5431	5406-5426	5413-5433

ELECTRICAL

Battery

Make and Type	Auto-Lite 2L-100 National 2L-S-100 Willard SW-2L-100	Auto-Lite 2L-100 National 2L-S-100 Willard SW-2L-100	Auto-Lite 2L-100 (**) National 2L-S-100 (**) Willard SW-2L-100 (**) Auto-Lite 2FH-120 National 2F-S-120 Willard HW-2F-120	Auto-Lite 2FH-120 National 2F-S-120 Willard HW-2F-120	Auto-Lite—2FH-120(5413) National 2F-S-120 (5413) Willard HW-2F-120(5413) Auto-Lite 2L-100 (5433) National 2L-S-100 (5433) Willard SW-2L-100 (5433)
Capacity	100 Ampere Hour	100 Ampere Hour	100 Ampere Hour (**) 120 Ampere Hour	120 Ampere Hour	100 Ampere Hour (5433) 120 Ampere Hour (5413)
Number of Plates	17	17	17	17	17
Terminal Grounded	Positive	Positive	Positive	Positive	Positive

NOTE (**)—Not used 5431

Starting Motor

Make and Type	Auto-Lite MCL6129	Delco 1108027 (5411)	Delco 1108027	Delco 1108027	Delco 1108027 (5413)
Starter Drive	Bendix Drive	Solenoid Actuated Shift (5411) Auto-Lite MCL6129(5401) Bendix Drive (5401)	Solenoid Actuated Shift	Solenoid Actuated Shift	Solenoid Actuated Shift (5413) Auto-Lite MCL6129 (5433) Bendix Drive (5433)
Number of Flywheel Teeth	140-Std. & O.D. 158-Ultramatic	140-Std. & O.D. 158-Ultramatic	140-Std. & O.D. 158-Ultramatic	140-Std. & O.D. 158-Ultramatic	140-Std. & O.D. 158-Ultramatic
Number of Teeth in Starter Pinion	9	9	9	9	9
Pinion Meshes	From Front	From Front	From Front	From Front	From Front
Stall Torque	15.4 Ft. Lbs.	15.4 Ft. Lbs.	15.4 Ft. Lbs.	15.4 Ft. Lbs.	15.4 Ft. Lbs.
Current Draw—At Stall	650 Amps. @ 3 Volts	650 Amps. @ 3 Volts	650 Amps. @ 3 Volts	650 Amps. @ 3 Volts	650 Amps. @ 3 Volts
Current Draw—Free Running	65 Amp.	65 Amp.	65 Amp.	65 Amp.	65 Amp.
Current Draw—Cranking Engine (70° F.)	175-225 Amp.	175-225 Amp.	175-225 Amp. (**) 175-250 Amp.	175-250 Amp.	175-225 Amp. (5433) 175-250 Amp. (5413)
Brush Spring Tension	24-28 oz.	24-28 oz.	24-28 oz.	24-28 oz.	24-28 oz.

NOTE (**)—Not used 5431

Generator—

Make and Type	Auto-Lite GGW-6003A	Delco-Remy No. 1102778 (5411) Auto-Lite GGW-6003A (5401)	Delco-Remy No. 1102778	Delco-Remy No. 1102778	Delco-Remy No. 1102778 (5413) Auto-Lite GGW-6003A (5433)
Generator Drive	Belt	Belt	Belt	Belt	Belt
Generator Cut-In Speed—Hot	1000 R.P.M.	1215 R.P.M. (5411) 1000 R.P.M. (5401)	1215 R.P.M.	1215 R.P.M.	1215 R.P.M. (5413) 1000 R.P.M. (5433)
Generator Output @ 7.4 Volts	45 Amps.	45 Amps.	45 Amps.	45 Amps.	45 Amps.
Field Current—Amps	1.6—1.8	1.75—1.9 (5411) 1.6—1.8 (5401)	1.75—1.9	1.75—1.9	1.75—1.9 (5413) 1.6—1.8 (5433)
Brush Spring Tension	25 oz.	25 oz.	25 oz.	25 oz.	25 oz.

Regulator

Make and Type	Auto-Lite VBE-6102-A	Delco-Remy No. 1118829 (5411) Auto-Lite VBE-6102-A (5401)	Delco-Remy No. 1118829	Delco-Remy No. 1118829	Delco-Remy No. 1118829 (5413) Auto-Lite VBE-6102-A (5433)
Maximum Output	45 Amps.	45 Amps.	45 Amps.	45 Amps.	45 Amps.
Circuit Breaker					
Air Gap	.031"—.034"	.028" (5411) .031"—.034" (5401)	.028"	.028"	.028" (5413) .031"—.034" (5433)
Contact Gap	.015"	.020" (5411) .015" (5401)	.020"	.020"	.020" (5413) .015" (5433)
Close Volts	6.5—7.0	6.5—7.0	6.5—7.0	6.5—7.0	6.5—7.0
Current Regulator					
Air Gap	.048"—.052"	.075" (5411) .048"—.052" (5401)	.075"	.075"	.075" (5413) .048"—.052" (5433)
Contact Gap	.012"	.012" (5401)			.012" (5433)
Amperes	45	45	45	45	45

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

CHASSIS SYMBOLS	5400	5401-5411	5402-5431	5406-5426	5413-5433

ELECTRICAL (Cont'd.)

Voltage

Air Gap	.048"—.052"	.075" (5411) .048"—.052" (5401)	.075"	.075"	.075" (5413) .048"—.052" (5433)
Contact Gap	.012"	.012" (5401)			.012" (5433)
Voltage (70° F.)	7.4 Volts	7.4 Volts	7.4 Volts	7.4 Volts	7.4 Volts

Distributor

Make and Type	Auto-Lite IGP4502-E	Delco-Remy No. 1110841 (5411) Auto-Lite IGP4502-E (5401)	Delco-Remy No. 1110841 (**) Delco-Remy No. 1110848	Delco-Remy No. 1110848	Delco-Remy No. 1110848 (5413) Auto-Lite IGP4502-E (5433)
Ignition Timing	6° BTDC	6° BTDC	6° BTDC (**) TDC	TDC	6° BTDC (5433) TDC (5413)
Breaker Point Gap (Initial Setting)	.017"	.016" (5411) .017" (5401)	.016"	.016"	.016" (5413) .017" (5433)
Breaker Arm Spring Tension	17—20 oz.	19—23 oz. (5411) 17—20 oz. (5401)	19—23 oz.	19—23 oz.	19—23 oz. (5413) 17—20 oz. (5433)
Spark Control	Full Automatic	Full Automatic	Full Automatic	Full Automatic	Full Automatic
Spark Advance Begins At	600 Engine R.P.M.	600 Engine R.P.M.	600 Engine R.P.M.	600 Engine R.P.M.	600 Engine R.P.M.
Vacuum Advance (Maximum)—(Crankshaft Degrees)	10°	10° (5401) 12° (5411)	12° (**) 18°	18°	18° (5413) 10° (5433)
Governor Advance (Maximum)—(Crankshaft Degrees)	16° @ 3200 Engine R.P.M.	16° @ 3200 Engine R.P.M.	16° @ 3200 Engine R.P.M. (**) 20° @ 1925 Engine R.P.M.	20° @ 1925 Engine R.P.M.	20° @ 1925 Engine R.P.M. (5413) 16° @ 3200 Engine R.P.M. (5433)
Cam Dwell Angle	27°	31° (5411) 27° (5401)	31°	31°	31° (5413) 27° (5433)
Condenser Capacity (Mfds.)	.20—.25	.18—.23 (5411) .20—.25 (5401)	.18—.23	.18—.23	.18—.23 (5413) .20—.25 (5433)

NOTE (**)—Not used 5431

Ignition Coil

Make and Type	Auto-Lite CR4001-A	Delco-Remy No. 1115376 (5411) Auto-Lite CR4001-A (5401)	Delco-Remy No. 1115376	Delco-Remy No. 1115376	Delco-Remy No. 1115376 (5413) Auto-Lite CR4001-A (5433)
Ampere Draw—Idling Hot	1.5 Amps.	1.5 Amps.	1.5 Amps.	1.5 Amps.	1.5 Amps.

Spark Plugs

Make and Type	Champion—J8	Champion—J8	Champion—J8	Champion—J8	Champion—J8
Size	14 MM	14 MM	14 MM	14 MM	14 MM
Gap Setting	.023"—.028"	.023"—.028"	.023"—.028"	.023"—.028"	.023"—.028"

Current Protection

Head, Tail, & Stop Light	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker
Body	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker
Directional Signal	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker	Therm. Circuit Breaker
Clock Fuse	AGA 3 Amp.	AGA 3 Amp.	AGA 3 Amp.	AGA 3 Amp.	AGA 3 Amp.
Overdrive Fuse	SFE 30 Amp.	SFE 30 Amp.	SFE 30 Amp. (Not Used 5431)	SFE 30 Amp. (5426)	SFE 30 Amp.
Heater Fuse	SFE 20 Amp.	SFE 20 Amp.	SFE 20 Amp.	SFE 20 Amp.	SFE 20 Amp.
Radio Fuse	SFE 14 Amp.	SFE 14 Amp.	SFE 14 Amp.	SFE 14 Amp.	SFE 14 Amp.

Lighting & Accessories

Headlight Bulb—Sealed Beam	45—35 Watts	45—35 Watts	45—35 Watts	45—35 Watts	45—35 Watts
Horn—Make	Sparks-Withington	Sparks-Withington	Sparks-Withington	Sparks-Withington	Sparks-Withington
Horn Location	Radiator Cradle Support	Radiator Cradle Support	Radiator Cradle Support	Radiator Cradle Support	Radiator Cradle Support
Clock—Type & Make	Electric-Borg (Sp. Equip)	Electric-Borg	Electric-Borg	Electric-Borg	Electric-Borg
Radio—Make & Model					
Push Button Type	Delco No. 7264717	Delco No. 7264717	Delco No. 7264707	Delco No. 7264707	Delco No. 7264707 (5 Delco No. 7264717 (5
Universal Tuning Type	Delco No. 439492	Delco No. 439492	Delco No. 439493	Delco No. 439493	Delco No. 439493 (5 Delco No. 439492 (

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CHASSIS SYMBOLS	5400	5401-5411	5402-5431	5406-5426	5413-5433

ELECTRICAL (Cont'd.)

Ampere Draw of Headlights—Each	High Beam 7 Amps. @ 6.4 Volts Low Beam 5.5 Amps. @ 6.4 Volts	High Beam 7 Amps. @ 6.4 Volts Low Beam 5.5 Amps. @ 6.4 Volts	High Beam 7 Amps. @ 6.4 Volts Low Beam 5.5 Amps. @ 6.4 Volts	High Beam 7 Amps. @ 6.4 Volts Low Beam 5.5 Amps. @ 6.4 Volts	High Beam 7 Amps. @ 6.4 Volts Low Beam 5.5 Amps. @ 6.4 Volts
Ampere Draw of Horns	22—25 Amps.	22—25 Amps.	22—25 Amps.	22—25 Amps.	22—25 Amps.
Ampere Draw of Heater Blower Motor	10 Amps. @ 6 Volts @ 3000 R.P.M.	10 Amps. @ 6 Volts @ 3000 R.P.M.	10 Amps. @ 6 Volts @ 3000 R.P.M. (Fresh Air) 5.7 Amps. @ 7 Volts @ 2400 R.P.M. (Underseat)	10 Amps. @ 6 Volts @ 3000 R.P.M. (Fresh Air) 5.7 Amps. @ 7 Volts @ 2400 R.P.M. (Underseat)	10 Amps. @ 6 Volts @ 3000 R.P.M.
Ampere Draw of Radio	8 Amps.	8 Amps.	8 Amps.	8 Amps.	8 Amps.

ENGINE

General Information

Make	Packard	Packard	Packard	Packard	Packard
Type	'L' Head Vertical	'L' Head Vertical	'L' Head Vertical	'L' Head Vertical	'L' Head Vertical
A.M.A. Horsepower	39.2	39.2	39.2 (**) 40.6	40.6	39.2 (5433) 40.6 (5413)
Maximum Brake Horsepower	150 @ 4000 R.P.M.	165 @ 3600 R.P.M.	185 @ 4000 R.P.M.(**) 212 @ 4000 R.P.M.	212 @ 4000 R.P.M.	150 @ 4000 R.P.M.(5433) 212 @ 4000 R.P.M.(5413)
Suspension	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted
Firing Order	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4
Torque	260 ft. lbs. @ 2200 R.P.M.	295 ft. lbs. @ 2200 R.P.M.	310 ft. lbs. @ 2200 R.P.M. (**) 330 ft. lbs. @ 2200 R.P.M.	330 ft. lbs. @ 2200 R.P.M.	260 ft. lbs. @ 2200 R.P.M. (5433) 330 ft. lbs. @ 2200 R.P.M. (5413)
Bore	3½"	3½"	3½" (**) 3⅝"	3⅝"	3½"(5433) 3⅝" (5413)
Stroke	3¾"	4¼"	4¼" (**) 4½"	4½"	3¾" (5433) 4½" (5413)
Piston Displacement	288 cu. in.	327 cu. in.	327 cu. in. (**) 359 cu. in.	359 cu. in.	288 cu. in. (5433) 359 cu. in. (5413)
Cylinders	8 In Line	8 In Line	8 In Line	8 In Line	8 In Line
Compression Ratio	7.7 to 1	8.0 to 1	8.0 to 1(**) 8.7 to 1	8.7 to 1	7.7 to 1(5433) 8.7 to 1 (5413)
Weight with Clutch & Trans.	860 lbs.	875 lbs.	885 lbs.	876 lbs. (5426)	860 lbs. (5433) 876 lbs. (5413)
Weight with Overdrive	895 lbs.	910 lbs.	920 lbs.	911 lbs. (5426)	895 lbs. (5433) 911 lbs. (5413)
Weight with Automatic Trans.	995 lbs.	1010 lbs.	1020 lbs. (**) 1011 lbs.	1011 lbs.	995 lbs. (5433) 1011 lbs. (5413)
Cylinder Head Material	Cast Iron	Cast Iron	Cast Iron (**) Aluminum	Aluminum	Cast Iron (5433) Aluminum (5413)
Engine Revolutions per Mile—Standard Ratio	2851 Std. Transmission 2164 O.D. (Direct—2997) 2592 Ultramatic	2851 Std. Transmission 2164 O.D. (Direct—2997) 2362 Ultramatic	2796 Std. Transmission 2123 O.D. (Direct—2940) 2542 Ultramatic	2542 Ultramatic (5406) 2907 Std. Transmission (5426) 2332 O.D. (Direct—3230)(5426) 2765 Ultramtaic (5426)	3330 Std. Trans. 2484 O.D. (Direct—3330) 2997 Ultramatic } 5433 3068 Std. Trans. 2291 O.D. (Direct—3173) 2945 Ultramatic } 5413

NOTE (**)—Not used 5431

Connecting Rod

Weight	2 lbs. 4.5 oz.	2 lbs. 4 oz.	2 lbs. 4 oz.	2 lbs. 4 oz.	2 lbs. 4.5 oz. (5433) 2 lbs. 4 oz. (5413)
Material	Steel Forging	Steel Forging	Steel Forging	Steel Forging	Steel Forging
Bearing Type	Detachable Shell	Detachable Shell	Detachable Shell	Detachable Shell	Detachable Shell
Center to Center Length	7 15/16"	7 11/16"	7 11/16"	7 11/16"	7 15/16" (5433) 7 11/16" (5413)
Length of Crankpin	1 5/16"	1 5/16"	1 5/16"	1 5/16"	1 5/16"
Clearance Bearing to Crankpin	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"
End Play on Crankshaft	.003" to .011"	.003" to .011"	.003" to .011"	.003" to .011"	.003" to .011"
Oil Lead to Piston Pin	Rifle Drilled	Rifle Drilled	Rifle Drilled	Rifle Drilled	Rifle Drilled
Bearing Material	Sp. Composite Construction	Sp. Composite Construction	Sp. Composite Construction	Sp. Composite Construction	Sp. Composite Construction
Assembled in Engine	Oil Hole Toward Camshaft	Oil Hole Toward Camshaft	Oil Hole Toward Camshaft	Oil Hole Toward Camshaft	Oil Hole Toward Camshaft
Bearing Adjustment	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

CHASSIS SYMBOLS	5400	5401-5411	5402-5431	5406-5426	5413-5433

ENGINE (Cont'd.)

Crankshaft

Type	Counterbalanced	Counterbalanced	Counterbalanced	Counterbalanced	Counterbalanced
Material	Steel Forging	Steel Forging	Steel Forging	Steel Forging	Steel Forging
Number of Counterweights	8 Forged Integral	8 Forged Integral	8 Forged Integral	8 Forged Integral	8 Forged Integral
Number of Main Bearings	5	5	5 (**) 9	9	5 (5433) 9 (5413)
Main Bearing Journal Diameter	2.7465"	2.7465"	2.7465"	2.7465"	2.7465"
Connecting Rod Journal Diameter	2.250"	2.250"	2.250"	2.250"	2.250"
Main Bearing Length No. 1	1 7/32"	1 7/32"	1 7/32"	1 7/32"	1 7/32"
No. 2	1 1/16"	1 1/16"	1 1/16"	1 1/16"	1 1/16"
No. 3	1 19/32"	1 19/32"	1 19/32" (**) 1 1/16"	1 1/16"	1 19/32" (5433) 1 1/16" (5413)
No. 4	1 1/16"	1 1/16"	1 1/16"	1 1/16"	1 1/16"
No. 5	2 1/16"	2 1/16"	2 1/16" (**) 1 19/32"	1 19/32"	2 1/16" (5433) 1 19/32" (5413)
No. 6	None	None	None (**) 1 1/16"	1 1/16"	1 1/16" (5413) None (5433)
No. 7	None	None	None (**) 1 1/16"	1 1/16"	1 1/16" (5413) None (5433)
No. 8	None	None	None (**) 1 1/16"	1 1/16"	1 1/16" (5413) None (5433)
No. 9	None	None	None (**) 2 1/16"	2 1/16"	2 1/16" (5413) None (5433)
Projected Main Bearing Area	19.3 sq. in.	19.3 sq. in.	19.3 sq. in. (**) 30.7 sq. in.	30.7 sq. in.	19.3 sq. in. (5433) 30.7 sq. in. (5413)
Thrust Taken On	Center Bearing	Center Bearing	Center Bearing	Center Bearing	Center Bearing
Vibration Damper	Fluid Suspension	Fluid Suspension	Fluid Suspension	Fluid Suspension	Fluid Suspension
Weight	96 lbs.	104 lbs.	104 lbs. (**) 107 lbs.	107 lbs.	96 lbs. (5433) 107 lbs. (5413)
End Play	.0035" to .0085"	.0035" to .0085"	.0035" to .0085"	.0035" to .0085"	.0035" to .0085"
Main Bearing Material	Sp. Composite Construction	Sp. Composite Construction	Sp. Composite Construction	Sp. Composite Construction	Sp. Composite Construction
Clearance—All Main Bearings	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"	.0005" to .0025"
Crankshaft Sprocket—Material and Size	Steel—21 Teeth	Steel—21 Teeth	Steel—21 Teeth	Steel—21 Teeth	Steel—21 Teeth
Bearing Adjustment	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells

NOTE (**)—Not used 5431

Camshaft and Chain

Gear Cover	Steel Stamping	Steel Stamping	Steel Stamping	Steel Stamping	Steel Stamping
Camshaft Drive	Silent Chain	Silent Chain	Silent Chain	Silent Chain	Silent Chain
Make of Chain	Morse	Morse	Morse	Morse	Morse
Length, Width, & Pitch of Chain	58 Links, 1", .375"	58 Links, 1", .375"	58 Links, 1", .375"	58 Links, 1", .375"	58 Links, 1", .375"
Number of Camshaft Bearings	5	5	5	5	5
Clearance of Camshaft Bearings	.001" to .003"	.001" to .003"	.001" to .003" (**) .0005" to .0045"	.0005" to .0045"	.001" to .003" (5433) .0005" to .0045" (5413)
Camshaft End Play	.004" to .006"	.004" to .006"	.004" to .006"	.004" to .006"	.004" to .006"
Camshaft Sprocket—Material and Size	Hardened Cast Iron—42 Teeth	Hardened Cast Iron—42 Teeth	Hardened Cast Iron—42 Teeth	Hardened Cast Iron—42 Teeth	Hardened Cast Iron—42 Teeth

NOTE (**)—Not used 5431

Oiling System

Type	Full Pressure	Full Pressure	Full Pressure	Full Pressure	Full Pressure
Oil Pump Type	Gear	Gear	Gear	Gear	Gear
Crankcase Capacity	7 qts.	7 qts.	7 qts.	7 qts.	7 qts.
Oil Filter Location	Left Side	Left Side	Left Side	Left Side	Left Side
Oil Measuring Stick	Left Crankcase	Left Crankcase	Left Crankcase	Left Crankcase	Left Crankcase
Oil Filter Location	Left Side (Sp. Equip.)	Left Side (Sp. Equip.)	Left Side (Std. Equip.)	Left Side (Std. Equip.)	Left Side (Std. Equip. 5413)
Oil Pump Intake	Floating Screen	Floating Screen	Floating Screen	Floating Screen	Floating Screen
Crankcase Ventilator	Yes	Yes	Yes	Yes	Yes
Oil Pressure—Normal Driving	40 lbs.	40 lbs.	40 lbs.	40 lbs.	40 lbs.
Oil Drain	Hex Head Flange Plug —5/8"—18 Thd.	Hex Head Flange Plug —5/8"—18 Thd.	Hex Head Flange Plug —5/8"—18 Thd.	Hex Head Flange Plug —5/8"—18 Thd.	Hex Head Flange Plug —5/8"—18 Thd.

Piston

Type	Autothermic	Autothermic	Autothermic	Autothermic	Autothermic
Material	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy
Weight	19.577 oz.	19.577 oz.	19.577 oz. (**) 19.753	19.753 oz.	19.577 oz. (5433) 19.753 oz. (5413)
Weight with Rings, Pin & Lock	25.5 oz.	25.5 oz.	25.5 oz. (**) 25.7 oz.	25.7 oz.	25.5 oz. (5433) 25.7 oz. (5413)
Overall Height	3 3/8"	3 3/8"	3 3/8" (**) 3 11/16"	3 11/16"	3 3/8" (5433) 3 11/16" (5413)
Height Centerline of Pin to Top	2 1/8"	2 1/8"	2 1/8" (**) 2"	2"	2 1/8" (5433) 2" (5413)

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ENGINE (Cont'd.)

CHASSIS SYMBOLS	5400	5401-5411	5402-5431	5406-5426	5413-5433
Skirt Clearance	.0005" to .001"	.0005" to .001"	.0005" to .001"	.0005" to .001"	.0005" to .001"
Assemble Slot Toward	Camshaft	Camshaft	Camshaft	Camshaft	Camshaft
Piston Pin Size	3 1/4" x 7/8"	3 1/4" x 7/8"	3 1/4" x 7/8"	3 1/4" x 7/8"	3 1/4" x 7/8"
Type Pin	Floating	Floating	Floating	Floating	Floating
Lubrication of Pin	Pressure	Pressure	Pressure	Pressure	Pressure
Piston Pin Fit in Piston	Palm Push Fit @ 160°	Palm Push Fit @ 160°	Palm Push Fit at 160°	Palm Push Fit @ 160°	Palm Push Fit at 160°
Piston Pin Fit in Rod	Finger Push Fit	Finger Push Fit	Finger Push Fit	Finger Push Fit	Finger Push Fit
Piston Pin Oversizes	.003" & .006"	.003" & .006"	.003" & .006"	.003" & .006"	.003" & .006"
Number of Rings per Piston	3	3	3	3	3
Number of Oil Rings per Piston	1	1	1	1	1
Number of Compression Rings/ Piston	2	2	2 (Chrome Top Ring)	2 (Chrome Top Ring)	2 (5433) 2 (Chrome Top Ring 5413)
Width of Compression Rings	.093"	.093"	.093" (**) Top .0775" to .078" 2nd .0775" to .0785"	Top .0775" to .078" 2nd .0775" to .0785"	.093" (5433) Top .0775" to .078" 2nd .0775" to .0785"
Width of Oil Ring	.1860" to .1865"	.1860" to .1865"	.1860" to .1865"	.1860" to .1865"	.1860" to .1865"
Piston Ring Gap—Compression	.0054" to .0217"	.0054" to .0207"	.0054" to .0207" (**) .0084" to .0247"	.0084" to .0247"	.0054" to .0217" (5433) .0084" to .0247" (5413)
Piston Ring Gap—Oil	.0054" to .0207"	.0054" to .0207"	.0054" to .0207" (**) .0084" to .0247"	.0084" to .0247"	.0054" to .0207" (5433) .0084" to .0247" (5413)
Location of Rings	Above Pin	Above Pin	Above Pin	Above Pin	Above Pin
Piston Oil Drain Hole	(12)—5/64" Dia. Holes	(12)—5/64" Dia. Holes	(12)—5/64" Dia. Holes (**) (8)—3/32" Dia. Holes	(8)—3/32" Dia. Holes	(12)—5/64" Dia. Holes (5433) (8)—5/64" Dia. Holes (5413)
Piston Oversizes	.005", .020", .030", .040"	.005", .020", .030", .040"	.005", .020", .030", .040"	.005", .020", .030", .040"	.005", .020", .030", .040"

NOTE (**)—Not used 5431

Valves

Valve Lift—Inlet	.342"	.342"	.342"	.342"	.342"
—Exhaust	.342"	.342"	.337" (**) .342"	.342"	.342"
Valve Arrangement	'L' Head	'L' Head	'L' Head	'L' Head	'L' Head
Valve Head Diameter—Inlet	1 15/64"	1 15/64"	1 15/64" (**) 1 31/64"	1 31/64"	1 15/64" (5433) 1 31/64" (5413)
—Exhaust	1 1/16"	1 1/16"	1 1/16"	1 1/16"	1 1/16"
Valve Stem Diameter—Inlet	.3417"	.3417"	.3417"	.3417"	.3417"
—Exhaust	.3398"	.3398"	.3398"	.3398"	.3398"
Valve Overall Length	5 3/8"	5 3/8"	5 3/8"	5 3/8"	5 3/8"
Valve Material—Inlet	Chrome-Nickel Steel	Chrome-Nickel Steel	Chrome-Nickel Steel (**) Silichrome Steel	Silichrome Steel	Chrome-Nickel Steel (5433) Silichrome Steel (5413)
—Exhaust	Austenitic Steel	Austenitic Steel	Austenitic Steel	Austenitic Steel	Austenitic Steel
Valve Spring Keeper—Type	Split Cone	Split Cone	Split Cone	Split Cone	Split Cone
Valve Stem Clearance—Inlet	.0005" to .0031"	.0005" to .0031"	.0005" to .0031"	.0005" to .0031"	.0005" to .0031"
—Exhaust	.0024" to .005"	.0024" to .005"	.0024" to .005"	.0024" to .005"	.0024" to .005"
Valve Tappet Clearance— Inlet Warm	.007"	.007"	Automatic Take-Up	Automatic Take-Up	.007" (5433) Automatic Take-Up (5413)
Exhaust Warm	.010"	.010"	Automatic Take-Up	Automatic Take-Up	.010" (5433) Automatic Take-Up (5413)
Inlet Valve Opens	15° BTDC	10° BTDC	10° BTDC	10° BTDC	15° BTDC (5433) 10° BTDC (5413)
Inlet Valve Closes	45° ALDC	50° ALDC	48° ALDC	48° ALDC	45° ALDC (5433) 48° ALDC (5413)
Exhaust Valve Opens	50° BLDC	45° BLDC	48° BLDC	48° BLDC	50° BLDC (5433) 48° BLDC (5413)
Exhaust Valve Closes	9° ATDC	14° ATDC	9° ATDC	9° ATDC	9° ATDC (5433) 9° ATDC (5413)
Tappet Clearance for Timing Inlet	.012"	.012"	Not Used	Not Used	.012" (5433) Not Used (5413)
Exhaust	.015"	.015"	Not Used	Not Used	.015" (5433) Not Used (5413)
Valve Seat Angle—Inlet	30°	30°	30°	30°	30°
—Exhaust	45°	45°	45°	45°	45°
Valve Spring	Single	Single	Single	Single	Single
Valve Spring Load— Valved Closed	60 to 66 lbs. @ 1 3/4"	60 to 66 lbs. @ 1 3/4"	60 to 66 lbs. @ 1 3/4"	60 to 66 lbs. @ 1 3/4"	60 to 66 lbs. @ 1 3/4"
Valve Open	135 to 145 lb. @ 1 13/32"	135 to 145 lbs. @ 1 13/32"	135 to 145 lbs. @ 1 13/32"	135 to 145 lbs. @ 1 13/32"	135 to 145 lbs. @ 1 13/32"

NOTE (**)—Not used 5431

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

CHASSIS SYMBOLS	5400	5401-5411	5402-5431	5406-5426	5413-5433
ENGINE (Cont'd.)					
Exhaust System					
Exhaust Pipe Diameter	2¼"	2¼"	2¼"	2¼"	2¼"
Muffler Size	5⅜" Dia. x 35¾"	5¹¹⁄₁₆" Dia. x 35⅜"	5¹¹⁄₁₆" Dia. x 35⅜"	5¹¹⁄₁₆" Dia. x 35⅜"	5⅜" Dia. x 35¾" (5433) 5¹¹⁄₁₆" Dia. x 35⅜" (5413)
Muffler Silencer	None	None	5¹³⁄₆₄" Dia. x 8⅜"	5¹³⁄₆₄" Dia. x 8⅜"	None
Tail Pipe Diameter	2"	2"	2"	2"	2"
FRAME					
Description	Channel Steel Side Members Full Length of Frame Joined Together by Cross Members, Plus 'X' Member	Channel Steel Side Members Full Length of Frame Joined Together by Cross Members, Plus 'X' Member	Channel Steel Side Members Full Length of Frame Joined Together by Cross Members, Plus 'X' Member	Channel Steel Side Members Full Length of Frame Joined Together by Cross Members, Plus 'X' Member	Channel Steel Side Members Full Length of Frame Joined Together by Cross Members, Plus 'X' Member
Depth (Maximum)	5¹⁵⁄₁₆"	5³¹⁄₃₂" (5411) 5¹⁵⁄₁₆" (5401)	6" (Conv., Caribb., & Sedan) 5³¹⁄₃₂" (Pacific)	6"	6"
Thickness (Maximum)	7⁄64"	⅛" (5411) 7⁄64" (5401)	9⁄64" (Conv., Caribb., & Sedan) ⅛" (Pacific)	9⁄64"	9⁄64"
Flange Width (Maximum)	2¼"	2¹⁷⁄₆₄" (5411) 2¼" (5401)	2¹⁷⁄₆₄" (Pacific) 2³⁄₃₂" (Conv., Carribb., & Sedan)	2³⁄₃₂"	2³⁄₃₂"
FRONT SUSPENSION					
Make	Packard	Packard	Packard	Packard	Packard
Type	Independent Parallelogram	Independent Parallelogram	Independent Parallelogram	Independent Parallelogram	Independent Parallelogram
Steering Knuckle	Reverse Elliot	Reverse Elliot	Reverse Elliot	Reverse Elliot	Reverse Elliot
Steering Knuckle Pin Bearings —Lower	.866" x 1.187" x 1.189" —O.D. Bushing	.866" x 1.187" x 1.189" —O.D. Bushing	.866" x 1.187" x 1.189" —O.D. Bushing (Not used 5478) Needle Bearing (5478 only)	.866 x 1.187" x 1.189" —O.D. Bushing	1.063" x 1.187" x 1.250" —O.D. Bushing
—Upper	Needle Bearing	Needle Bearing	Needle Bearing	Needle Bearing	1.063" x 1.187" x 1.250" —O.D. Bushing
Thrust Bearings	Steel Ball Bearing	Steel Ball Bearing	Steel Ball Bearing	Steel Ball Bearing	Steel Ball Bearing
Caster	NEG 1° Plus-Minus ½°	NEG 1° Plus-Minus ½°	NEG 1° Plus-Minus ½°	NEG 1° Plus-Minus ½°	NEG 2° Plus-Minus ½°
Front Wheel Toe-In	0 Plus 1⁄16" Minus 0	0 Plus 1⁄16" Minus 0	0 Plus 1⁄16" Minus 0	0 Plus 1⁄16" Minus 0	0 Plus 1⁄16" Minus 0
Knuckle Pin Angle	5° 50′	5° 50′	5° 50′	5° 50′	2° 30′
Camber	0° Plus ¾° Minus ¼°	0° Plus ¾° Minus ¼°	0° Plus ¾° Minus ¼°	0° Plus ¾° Minus ¼°	0° Plus ¾° Minus ¼°
Wheel Bearings—Inner & Outer	Tapered Roller	Tapered Roller	Tapered Roller	Tapered Roller	Tapered Roller
Wheel Bearing Adjustment	Tighten Nut to 20 ft. lbs. and Back Off 1 Hex & Lock	Tighten Nut to 20 ft. lbs. and Back Off 1 Hex & Lock	Tighten Nut to 20 ft. lbs. and Back Off 1 Hex & Lock	Tighten Nut to 20 ft. lbs. and Back Off 1 Hex & Lock	Tighten Inner Nut to 20 ft. lbs. and Back Off 2 or 3 Holes in Locking Washer and Lock
Tread	59¾"	59¾"	60"	60"	59¼" (5413) 60" (5433)
FUEL SYSTEM					
Carburetor					
Make and Type	Carter WGD-986S	Carter WGD-2102S	Carter WCFB-2103S(**) Carter WCFB-2112S	Carter WCFB-2112S	Carter WGD-986S (5433) Carter WCFB-2112S(5413)
Bore Size	1⅛" Dual	1⅛" Dual	1⅛" Four Barrel	1⅛" Four Barrel	1⅛" Dual (5433) 1⅛" Four Barrel (5413)
Main Venturi	1⅛"	1⅛"	Pri.—1⅛" Sec.—1⅛"	Pri.—1⅛" Sec.—1⅛"	1⅛" (5433) Pri.—1⅛" (5413) Sec.—1⅛" (5413)
Float Level	13⁄64"	13⁄64"	Pri. ⅛" Pri.—5⁄32" (**) Sec.—5⁄32"	Pri.—⅛" Sec.—5⁄32"	13⁄64" (5433) Pri.—⅛" (5413) Sec.—5⁄32" (5413)
Measured From	Float to Cover	Float to Cover	Float to Cover	Float to Cover	Float to Cover
Metering Rod No.	75-722	75-767	75-942	75-942	75-722 (5433) 75-942 (5413)
Economy Step	.0685"	.0695"	.066"	.066"	.0685" (5433) .066" (5413)
Power Step	.0595"	.061"	.052"	.052"	.0595" (5433) .052" (5413)
Center Step Tapers To	.066"	.067"	.067" (**) .066"	.066"	.066

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

FUEL SYSTEM (Cont'd.)

CHASSIS SYMBOLS	5400	5401-5411	5402-5431	5406-5426	5413-5433
Main Metering Jet	.089" (No. 43 Drill)	.089" (No. 43 Drill)	Pri.—.086" (No. 44 Drill) Sec.—.073" (No. 49 Drill) (**) Sec.—.0785" (No. 47 Drill)	Pri.—.086" (No. 44 Drill) Sec.—.0785" (No. 47 Drill)	.089" (No. 43 Drill) (5433) Pri. .086" (No. 44 Drill) (5413) Sec.—.0785" (No. 47 Drill) (5413)
Low Speed Jet	.032" (No. 67 Drill)	.032" (No. 67 Drill)	Pri.—.032" (No. 67 Drill) Sec.—.028" (No. 70 Drill) (5402) Sec.—.032" (No. 67 Drill) (5431)	Pri.—.032" (No. 67 Drill) Sec.—.032" (No. 67 Drill)	.032" (No. 67 Drill) (5433) Pri.—.032" (No. 67 Drill) (5413) Sec.—.032" (No. 67 Drill) (5413)
By-Pass Jet	.052" (No. 55 Drill)	.052" (No. 55 Drill)	Pri.—.0595" (No. 53 Drill) (**) Pri.—.052" (No. 55 Drill) Sec.—.0595" (No. 53 Drill)	Pri.—.052" (No. 55 Drill) Sec.—.0595" (No. 53 Drill)	.052" (No. 55 Drill)(5433) Pri. .052" (No. 55 Drill) (5413) Sec.—.0595" (No. 53 Drill) (5413)
Economizer Jet	.045" (1.15 MM Drill)	.045" (1.15 MM Drill)	Pri.—.045" (1.15 MM Drill) Sec.—None	Pri.—.045" (1.15 MM Drill) Sec.—None	.045" (1.15 MM Drill) (5433) Pri.—.045" (1.15 MM Drill) (5413) Sec.—None (5413)
Idle Bleed	.0465" (No. 56 Drill)	.0465" (No. 56 Drill)	Pri.—.067" (No. 51 Drill) (**) Sec.—None Pri.—.052" (No. 55 Drill)	Pri.—.052" (No. 55 Drill) Sec.—None	.0465" (No. 56 Drill) (5433) Pri.—.052" (No. 55 Drill) (5413) Sec.—None
Anti-Percolator Jet	.033" (No. 66 Drill)	.033" (No. 66 Drill)	Pri.—None Sec.—.036" (No. 64 Drill)	Pri.—None Sec.—.036" (No. 64 Drill)	.033" (No. 66 Drill)(5433) Pri.—None (5413) Sec.—.036" (No. 64 Drill) (5413)
Pump Discharge Jet	.0225" (No. 74 Drill)	.0225" (No. 74 Drill)	Pri.—.0225" (No. 74 Drill) Sec.—None	Pri.—.0225" (No. 74 Drill) Sec.—None	.0225" (No. 74 Drill) (5433) Pri.—.0225" (No. 74 Drill) (5413) Sec.—None (5413)
Pump Adjustment	15/32" From Flange	15/32" From Flange	9/32" From Flange	9/32" From Flange	15/32" From Flange (5433) 9/32" From Flange (5413)
Pump Stroke	5/16" ± 1/64"	5/16" ± 1/64"	23/64" ± 1/64"	23/64" ± 1/64"	5/16" ± 1/64" (5433) 23/64" ± 1/64" (5413)
Metering Rod Adjustment	Bottom	Bottom	Bottom	Bottom	Bottom
Fast Idle Adjustment	.023"	.023"	.027" to .029" .020" to .023" (**)	.027" to .029" .020" to .023"	.023" (5433) .027" to .029" (5413)
Unloader Adjustment	3/8" ± 1/64"	3/8" ± 1/64"	9/32" ± 1/64"	9/32" ± 1/64"	3/8" ± 1/64" (5433) 9/32" ± 1/64" (5413)
Idle Adjustment Turns Out	1 to 1½	1 to 1½	1½ to 2	1½ to 2	1½ to 2
Idle Adjustment—Engine R.P.M.					
Std. & O.D. Trans.	400 to 450 R.P.M.	400 to 450 R.P.M.	400 to 450 R.P.M.	400 to 450 R.P.M.	400 to 450 R.P.M.
Ultra. (Shift Lever in High)	375 R.P.M.	375 R.P.M.	375 R.P.M.	375 R.P.M.	375 R.P.M.
Automatic Choke	Climatic Control	Climatic Control	Climatic Control	Climatic Control	Climatic Control
Choke Adjustment	1 Notch Rich	1 Notch Rich	1½ Notch Lean Set at Index Mark (**)	1½ Notch Lean	1 Notch Rich (5433) 1½ Notch Lean (5413)
Air Cleaner and Silencer	Oil Coated Mesh—Std. Equip. Oil Bath—Sp. Equip.	Oil Coated Mesh—Std. Equip. Oil Bath—Sp. Equip.	Oil Bath—Std. Equip.	Oil Bath—Std. Equip.	Oil Coated Mesh—Std. Equip. (5433) Oil Bath—Std. Equip.(5413)
Fuel Inlet Filter	Special Equipment	Special Equipment	Standard Equipment *NOTE* (**)—Not used 5431	Standard Equipment	Special Equipment (5433) Standard Equipment(5413)

Fuel Pump

Make and Model	Carter M2049S	Carter M2049S	AC No. 1539920	AC No. 1539920	Carter M2049S (5433) AC No. 1539920 (5413)
Pump Drive	Off Camshaft	Off Camshaft	Off Camshaft	Off Camshaft	Off Camshaft
Pressure—PSI	3½ to 5½	3½ to 5½	4 to 5	4 to 5	3½ to 5½ (5433) 4 to 5 (5413)
Capacity—45 Seconds	1½ Pints	1½ Pints	1½ Pints	1½ Pints	1½ Pints
Type Booster	Double Acting	Double Acting	Double Acting	Double Acting	Double Acting
Booster Vacuum (@ 240 Eng. R.P.M.)	10 in. HG	10 in. HG	10 in. HG	10 in. HG	10 in. HG
Inlet Side	Rear	Rear	Rear	Rear	Rear
Outlet Side	Front	Front	Front	Front	Front
Fuel Tank Capacity—Gallons	20	20	20	20	20
Fuel Filter	In Fuel Pump	In Fuel Pump	In Fuel Pump	In Fuel Pump	In Fuel Pump
Fuel Gauge	Electric	Electric	Electric	Electric	Electric

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

CHASSIS SYMBOLS	5400	5401-5411	5402-5431	5406-5426	5413-5433

REAR AXLE

Make and Type	Packard Semi-Floating	Packard Semi-Floating	Packard Semi-Floating	Packard Semi-Floating	Packard Semi-Floating
Final Drive	Hypoid Gears	Hypoid Gears	Hypoid Gears	Hypoid Gears	Hypoid Gears
Propulsion	Through Rear Springs	Through Rear Springs	Through Rear Springs	Through Rear Springs	Through Rear Springs
Axle Housing	Swedged Tube Banjo Type	Swedged Tube Banjo Type	Swedged Tube Banjo Type	Swedged Tube Banjo Type	Swedged Tube Banjo Type (5433) Pressed Steel Banjo Type (5413)
Oil Capacity	4¼ Pints	4¼ Pints	4¼ Pints	4¼ Pints	4¼ Pints (5433) 6 Pints (5413)
Wheel Bearings	Tapered Rollers	Tapered Rollers	Tapered Rollers	Tapered Rollers	Tapered Rollers
Tread	59⁶³⁄₆₄"	59⁶³⁄₆₄"	60⁵³⁄₆₄"	60³⁵⁄₆₄" (5406) 60³⁷⁄₆₄" (5426)	66¼" (5433) 65¹⁵⁄₁₆" (5413)
Gear Ratio—Std. Transmission	3.9 to 1	3.9 to 1	3.9 to 1	4.1 to 1 (5426)	4.55 to 1 (5433) 4.54 to 1 (5413)
Overdrive	4.1 to 1	4.1 to 1	4.1 to 1	4.55 to 1 (5426)	4.55 to 1 (5433) 4.7 to 1 (5413)
Ultramatic	3.54 to 1	3.23 to 1	3.54 to 1	3.54 to 1 (5406) 3.9 to 1 (5426)	4.1 to 1 (5433) 4.36 to 1 (5413)
Pinion Backlash	.004" to .008"	.004" to .008"	.004" to .008"	.004" to .008"	.004" to .008"
Number of Teeth—Gear & Pinion—Standard	39-10	39-10	39-10	39-11 (5406) 41-9 (5426)	41-9 (5433) 50-11 (5413)
Oil Drain Plugs	Hex Head Flange Plug —⅜"—18 Thd.	Hex Head Flange Plug —⅜"—18 Thd.	Hex Head Flange Plug —⅜"—18 Thd.	Hex Head Flange Plug —⅜"—18 Thd.	Hex Head Flange Plug —⅜"—18 Thd.

UNIVERSAL JOINT

Make	Std. & O.D.—Spicer	Std. & O.D.—Spicer	Std. & O.D.—Spicer	Ultra.—Universal Prod. (5406)	Standard & O.D.—Spicer (5433)
	Ultra.—Universal Prod.	Ultra.—Universal Prod.	Ultra.—Universal Prod.	Front—Mechanics (5426) Rear—Spicer (5426)	Ultra.—Universal Prod. (5433) Mechanics (5413)
Type					
Std. & O.D. Trans.	Cross and Yokes	Cross and Yokes	Cross and Yokes	Cross and Yokes (5426)	Cross and Yokes
Ultra. Drive	Front Joint—Balls & Trunnion Rear Joint—Cross & Yokes	Front Joint—Balls & Trunnion Rear Joint—Cross & Yokes	Front Joint—Balls & Trunnion Rear Joint—Cross & Yokes	Front Joint—Balls & Trunnion (5406) Rear Joint—Cross & Yokes (5406) All Joints—Cross & Yokes (5426)	Front Joint—Balls & Trunnion (5433) All Joints—Cross & Yokes (5413) Rear Joint—Cross & Yokes (5433)
Number Required	2	2	2	3 (Double Shaft) (5426) 2 (5406)	2 (5433) 3 (Double Shaft) (5413)

SPRINGS

Front—Coil	1950 x 90 (Std. & O.D.)	1950 x 90 (Std. & O.D.)	2120 x 90 (Std. & O.D.) (5402)	2280 x 90 (5406)	2180 x 121 (5433) 2900 x 172 (5413)
	2040 x 90 (Ultramatic)	2040 x 90 (Ultramatic)	2200 x 90 (Ultramatic) (5402) 2120 x 90 (Pacific) (5431) (Ultramatic) 2200 x 90 (Caribbean & Conv.) (5431) 2040 x 90 (Std. & O.D.) (Pacific) (5431) 2120 x 90 (Std. & O.D.) (Conv.) (5431)	2650 x 120 (5426)	2250 x 120 (Ultramatic) (5433)
Rear—Leaf	950 x 95	950 x 95	990 x 110 (Pacific) (5431) 1090 x 110 (Caribbean) (5431) 1040 x 110 (Conv) (5431) 1040 x 110 (5402) 1090 x 110 (Air) (5402)	1040 x 110 (5406) 1320 x 155 (5426) 1090 x 110 (5406) (Air)	1500 x 155 (5433) 1650 x 155 (Military—Ambulance) (5433) 2000 x 255 (Right) 3 Way Loader Hearse (5413) 2100 x 255 (Left) 3 Way—Loader Hearse (5413) 1600 x 225 (Ambulance & End Loader Hearse (5413) 1400 x 225 (Flower Car Only) (5413)

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

CHASSIS SYMBOLS	5400	5401-5411	5402-5431	5406-5426	5413-5433
SPRINGS (Cont'd.)					
Front Size	4¼" Inside Diameter	4¼" Inside Diameter	4¼" Inside Diameter	4¼" Inside Diameter	4¼" Inside Dia. (5433) 4⅛" Inside Dia. (5413)
Rear Length & Width	54⅜" x 2½"	54⅜" x 2½"	54⅜" x 2½"	54⅜" x 2½"	54⅜" x 2½" (5433) 54⅜" x 2" (5413)
Shackles	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted	Rubber Mounted
Shock Absorbers—Hydraulic	Direct Acting 1" Dia.	Direct Acting 1" Dia.	Direct Acting 1" Dia.	Direct Acting 1" Dia.	Direct Acting 1" Dia. (5433) Direct Acting 1¾" Dia. (5413)
Stabilizer—Front	Torsional	Torsional	Torsional	Torsional	Torsional
Stabilizer—Rear	None	None	Bar Type (5402) (Conv. & Caribb.)(5431) None (Pacific) (5431)	Bar Type	Torsional
Spring Material	Silico-Manganese Steel	Silico-Manganese Steel	Silico-Manganese Steel	Silico-Manganese Steel	Silico-Manganese Steel
STEERING GEAR					
Make	Packard—Gemmer	Packard—Gemmer	Packard—Gemmer	Packard—Gemmer	Packard—Gemmer
Type	Worm and Three Tooth Roller	Worm and Three Tooth Roller	Worm and Three Tooth Roller	Worm and Three Tooth Roller	Worm and Three Tooth Roller
Steering Wheel	18"—2 Spokes	18"—2 Spokes	18"—2 Spokes	18"—2 SOokes	18"—2 Spokes
Conventional Steering					
Ratio—Gear	20.03 to 1	20.03 to 1	22.3 to 1	22.3 to 1	22.3 to 1
Ratio—Overall	27.3 to 1	27.3 to 1	30.9 to 1	30.9 to 1	30.9 to 1
Minimum Turning Radius	21½ ft.	21½ ft.	22½ ft. (5402) 21½ ft. (5431)	22½ ft. (5406) 27½ ft. (5426)	22½ ft. (5433) 28 ft. (5413)
Power Steering					
Ratio—Gear	18.2 to 1	18.2 to 1	18.6 to 1	18.6 to 1	18.6 to 1
Ratio—Overall	22 to 1	22 to 1	22.5 to 1	22.5 to 1	22.5 to 1
Minimum Turning Radius	20½ ft.	20½ ft.	21½ ft. (5402) 20½ ft. (5431)	21½ ft. (5406) 26½ ft. (5426)	21½ ft. (5433) 27 ft. (5413)
TRANSMISSION					
Type					
Standard	Selective—Silent Synchronized	Selective—Silent Synchronized	Selective—Silent Synchronized	Selective—Silent Synchronized (5426)	Selective—Silent Synchronized
Overdrive	Sp. Equip.	Sp. Equip.	Sp. Equip.	Sp. Equip. (5426)	Sp. Equip.
Ultramatic	Sp. Equip.	Sp. Equip.	Sp. Equip. Std. Equip. (5431)	Sp. Equip. (5426) Std. Equip. (5406)	Sp. Equip.
Engine to Rear Wheel Ratio	Std. O.D. Ultra.	Std. O.D. Ultra.	Std. O.D. Ultra.	Std. O.D. Ultra.	Std. O.D. Ultra.
Overdrive	2.96	2.96	2.96	3.29 (5426)	3.29 (5433) 3.39 (5413)
Direct	3.9 4.1 3.54	3.9 4.1 3.23	3.9 4.1 3.54	4.1 4.55 3.54 (5426) (5426) (5406) 3.9 (5426)	4.53 4.55 4.1 (5433) (5433) (5433) 4.54 4.7 4.36 (5413) (5413) (5413)
Second	5.96 6.27	5.96 6.27	5.96 6.27	6.27 6.96 (5426) (5426)	6.96 6.96 (5433) 6.94 7.18 (5413)
Low	9.47 9.96 6.44	9.47 9.96 5.88	9.47 9.96 6.44	9.96 11.05 6.44 (5426) (5426) (5406) 7.10 (5426)	11.05 11.05 7.46 (5433) (5433) (5433) 11.03 11.41 7.94 (5413) (5413) (5413)
Reverse	12.34 12.96 5.81	12.34 12.96 5.30	12.34 12.96 5.81	12.96 14.38 5.81 (5426) (5426) (5406) 6.40 (5426)	14.38 14.38 6.72 (5433) (5433) (5433) 14.36 14.85 7.15 (5413) (5413) (5413)
Oil Capacity—Std. Trans.	2 Pints	2 Pints	2 Pints	2 Pints	2 Pints
Oil Capacity—Overdrive Unit	1¼ Pints	1¼ Pints	1¼ Pints	1¼ Pints	1¼ Pints
Oil Capacity—Automatic	12 qts.	12 qts.	12 qts.	12 qts.	12 qts.
Gear Teeth	Helical	Helical	Helical	Helical	Helical
Oil Level Plugs—Std. & O.D.	½"—14 Pipe	½"—Pipe 14	½"—14 Pipe	½"—14 Pipe	½"—14 Pipe
Oil Level Indicator	Filler Cap Dip Stick Left Side of Case	Filler Cap Dip Stick Left Side of Case	Filler Cap Dip Stick Left Side of Case	Filler Cap Dip Stick Left Side of Case	Filler Cap Dip Stick Left Side of Case

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS—Cont'd

CHASSIS SYMBOLS	5400	5401-5411	5402-5431	5406-5426	5413-5433

WHEELS

Type	Demountable Disc	Demountable Disc	Demountable Disc Wire Spoke 5478 *ONLY*	Demountable Disc	Demountable Disc
	(15" x 5½" 'K' Rim)	(15" x 5½" 'K' Rim)	(15" x 6" 'L' Rim)	(15" x 6" 'L' Rim)	(16" x 5½" 'F' Rim)
Size of Tire	7.60" x 15"—4 Ply	7.60" x 15"—4 Ply	8.00" x 15"—4 Ply	8.00"x 15"—4 Ply (5406) 8.20" x 15"—6 Ply (5426)	6.50" x 16"—6 Ply (5433) 7.50" x 16"—6 Ply (5413)
Recommended Tire Pressure Conventional Steering					
—Cold—Front	24 lbs.	24 lbs.	24 lbs.	24 lbs. (5406) 26 lbs. (5426)	36 lbs. (5433) 30 lbs. (5413)
—Rear	20 lbs.	20 lbs.	20 lbs.	20 lbs. (5406) 26 lbs. (5426)	36 lbs. (5433) 40 lbs. (5413)
Power Steering					
—Cold—Front	22 lbs.	22 lbs.	22 lbs.	22 lbs. (5406) 26 lbs. (5426)	36 lbs. (5433) 30 lbs. (5413)
—Rear	20 lbs.	20 lbs.	20 lbs.	20 lbs. (5406) 26 lbs. (5426)	36 lbs. (5433) 40 lbs. (5413)

CAR DIMENSIONS

Wheel Base	122"	122"	122" (5431) 127" (5402)	127" (5406) 149" (5426)	127" (5433) 156" (5413)
Overall Length—Bumper to Bumper	215½"	215½"	211½" (5431) 220¼" 5478 *ONLY* 216½" (5402)	216½" (5406) 238½" (5426)	218⅜" (5433) 249¾" (5413)
Overall Height—Loaded	62¾"	62¾" 62⅞" (5467)	62⅞" (5402) 62" (5431)	62⅛" (5406)	
Overall Width	77⅛"	77⅛"	77¼"	77⅛"	

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54th SERIES

54th SERIES CHASSIS AND BODY SYMBOLS

		CLIPPER SPECIAL 288 Cu. In. 150 HP	CLIPPER DE LUXE 327 Cu. In. 165 HP	CLIPPER SUPER 327 Cu. In. 165 HP	PACKARD 359 Cu. In. 212 HP	PACKARD CAVALIER 327 Cu. In. 185 HP	PACKARD PATRICIAN CUSTOM 359 Cu. In. 212 HP		PACKARD COMMERCIAL 288 Cu. In. 150 HP	PACKARD COMMERCIAL 359 Cu. In. 212 HP
CHASSIS SYMBOLS		5400 5400R	5401 5401R	5411 5411R	5431	5402	5406	5426	5433	5413
BODY TYPES	Pass.									
SEDAN	6	5482	5492	5462		5472	5452			
CLUB SEDAN	6	5485	5495	5465						
SPORTSTER	6		5497							
PANAMA	6			5467**						
PACIFIC	6				5477					
CARIBBEAN	6				5478					
CONVERTIBLE COUPE	6				5479					
SEDAN-FORMAL	6						5453			
SEDAN	8							5451		
SEDAN LIMOUSINE	8							5450		
COMMERCIAL CHASSIS									xxx	xxx
WHEEL BASE		122"				127"		149"	127"	156"

**LEFT HAND DRIVE ONLY

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