

PACKARD Service

PARTS ★ ACCESSORIES ★ PRODUCT ★ PROFITS

INSTITUTIONAL



PROMOTIONAL

VOL. 19, NO. 10

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NEW OWNER'S SERVICE POLICY

ASK THE MAN



WHO OWNS ONE

PACKARD OWNER'S SERVICE POLICY

1. Owner's Service Card. At the time of delivery the owner is provided with an Owner's Service Policy and Card, which will introduce him to any authorized Packard Service Station and entitle him to receive service in accordance with this policy.

2. Parts and Labor: For 90 days after the original delivery of such motor car to the owner, provided the car has not been driven to exceed 4,000 miles, any parts, including all standard equipment, except tires, that may be adjudged by Packard Motor Car Company to be defective under its warranty will be replaced or repaired by any Packard dealer in the United States and Canada without charge to the owner for material or labor.

3. Adjustments: The owner is entitled during the warranty period to receive inspections and adjustments of his new car by the selling Packard dealer as indicated on the coupons attached to the Service Policy.

4. Inspections: Throughout the life of the car, the owner is entitled to have it tested and inspected without charge every 30 days or 1,000 miles by an authorized Packard Service Station.

5. Tourist Privileges: When touring, the owner is entitled, upon presentation of the Packard Service Policy to all the benefits of this policy during the warranty period at any authorized Packard Service Station in the United States and Canada.

6. Change of Residence: In case the owner changes his residence from one location to another before the warranty period has expired, the Packard Service Station serving the locality into which the owner moves will, upon presentation of the Owner's Service Policy, render any no-charge service to which the owner may be entitled.

7. Service Charges: Every authorized Packard Service Station has made a list of correct charges for service work. In order that maintenance costs may be kept as low as possible, these charges are based on careful studies to determine the shortest time for doing service operations consistent with quality workmanship. Guaranteed Packard Parts can be obtained from any authorized Packard Service Station and should be used for replacement purposes.

Please Note: Your warranty inspection coupons and Owner's Service Identification Card are attached. No charge will be made by the Dealer selling the car, for the 1000 and 3000 mile inspections as listed on the back of the coupons. If, however, you change your residence or require the services while touring, any authorized Packard Dealer in the United States or Canada will render the service listed and accept the coupon as payment. It is understood that any lubricants, anti-freeze or Rust Preventive will be paid for by the customer. The coupons are to be used during the warranty period at approximately the intervals indicated.

Nº 00026

PACKARD 1000 MILE COUPON

Vehicle No. _____ Engine No. _____
Delivery Date _____
Owner _____
Selling Dealer _____
City _____
Servicing Dealer _____
City _____

Nº 000026

PACKARD 3000 MILE COUPON

Vehicle No. _____ Engine No. _____
Delivery Date _____
Owner _____
Selling Dealer _____
City _____
Servicing Dealer _____
City _____

Nº 000026

Packard

OWNER'S SERVICE CARD

NAME _____
ADDRESS _____
CITY _____
OWNER'S SIGNATURE _____

MECHANICAL SPECIFICATIONS AND ADJUSTMENTS

21ST SERIES

MODELS	2100	2101-2111	2103-2106
ENGINE			
Make	Packard	Packard	Packard
Type	L-Head—Vertical En Bloc	L-Head—Vertical En Bloc	L-Head—Vertical En Bloc
A.M.A. Horsepower	29.4	33.8	39.2
Maximum Brake Horsepower	105 @ 3600 rpm	125 @ 3600 rpm	165 @ 3600 rpm
Suspension	Rubber Mounted	Rubber Mounted	Rubber Mounted
Firing Order	1-5-3-6-2-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4
Torque	192 ft-lb @ 2000 rpm	230 ft-lb @ 2000 rpm	292 ft-lb @ 2000 rpm
Bore	3½"	3¾"	3½"
Stroke	4¼"	4¼"	4⅝"
Piston Displacement	245 cu in	282 cu in	356 cu in
Cylinders	6 in Line	8 in Line	8 in Line
Compression Ratio—Standard	6.71 to 1	6.85 to 1	6.85 to 1
Weight with Clutch and Transmission	697 lb	791 lb	925 lb
Weight with Overdrive	757 lb	851 lb	985 lb
Cylinder Head Material	Cast Iron	Cast Iron	Cast Iron
Engine rpm per Mile—Standard Ratio	3229	3079	2830
CRANKCASE			
Type	Integral with Cylinders	Integral with Cylinders	Integral with Cylinders
Upper Half Material	Cast Iron	Cast Iron	Cast Iron
Lower Half Material	Steel Stamping	Steel Stamping	Steel Stamping
Oil Capacity	5 qt	5½ qt	7 qt
Crankcase Oil Gauge	Dip Stick, Left Side	Dip Stick, Left Side	Dip Stick, Left Side
Crankcase Drain Plug	⅝"-18	⅝"-18	⅝"-18
Main Bearing Diameter	2¾"	2¾"	2¾"
Main Bearing Length No. 1	1⅜"	1½"	1⅜"
Main Bearing Length No. 2	1½"	1⅞"	1⅞"
Main Bearing Length No. 3	1½"	1⅜"	1⅞"
Main Bearing Length No. 4	2⅞"	1⅞"	1⅞"
Main Bearing Length No. 5	None	2⅞"	1⅞"
Main Bearing Length No. 6	None	None	1⅞"
Main Bearing Length No. 7	None	None	1⅞"
Main Bearing Length No. 8	None	None	1⅞"
Main Bearing Length No. 9	None	None	2⅜"
Total Main Bearing Area	45.1 sq in	56.6 sq in	86.8 sq in
VALVES			
Valve Lift	Exhaust .3175 Intake .318	Exhaust .3175 Intake .318	Exhaust .340 Intake .340
Valve Arrangement	L Head	L Head	L Head
Valve Head Diameter—Inlet	1⅜"	1⅜"	1.670"
Valve Head Diameter—Exhaust	1⅝"	1⅝"	1⅞"
Valve Stem Diameter—Inlet	.33975"	.33975"	.34025"
Valve Stem Diameter—Exhaust	.33975"	.33975"	.34025"
Valve Over-All Length	5.619"	5.619"	6.224"
Valve Material—Inlet	Chrome Nickel	Chrome Nickel	Chrome Nickel
Valve Material—Exhaust	Austenitic	Austenitic	Austenitic
Valve Spring Keeper Type	Split Cone	Split Cone	Split Cone
Valve Stem Clearance—Inlet	.0025"	.0025"	.002"
Valve Stem Clearance—Exhaust	.0045"	.0045"	.004"
Valve Tappet Clearance Inlet—Warm	.007"	.007"	Automatic Take-Up
Valve Tappet Clearance Exhaust—Warm	.010"	.010"	Automatic Take-Up
Inlet Valve Opens	1° bt/dc	1° bt/dc	4° bt/dc
Inlet Valve Closes	39° al/dc	39° al/dc	51° al/dc
Exhaust Valve Closes	5° at/dc	5° at/dc	10° at/dc
Exhaust Valve Opens	45° bl/dc	45° bl/dc	49° bl/dc
Tappet Clearance for Timing Inlet	.0125"	.0125"	Not Used
Tappet Clearance for Timing Exhaust	.015"	.015"	Not Used
Valve Seat Angle—Inlet	30°	30°	30°
Valve Seat Angle—Exhaust	45°	45°	45°
Valve Spring	Single	Single	Single
Valve Spring Load Valve Closed	52-57 lb (1⅝")	52-57 lb (1⅝")	60-66 lb (1¾")
Valve Spring Load Valve Open	119-129 lb (1⅞")	119-129 lb (1⅞")	135-145 lb (1⅜")
Exhaust Pipe Diameter	2"	2¼"	2½"
Muffler Size	5⅞" x 37⅞"	5⅞" x 38¼"	6.075 x 41⅝"

MODELS	2100	2101-2111	2103-2106
FRONT END			
Gear Cover	Steel Stamping	Steel Stamping	Steel Stamping
Camshaft Drive	Silent Chain	Silent Chain	Silent Chain
Make of Cloth	Morse or Ramsey	Morse or Ramsey	Morse
Length, Width and Pitch of Chain	58 Links; 1 1/4"; .375"	58 Links; 1 1/4"; .375"	62 Links; 1 1/4"; .375"
Number of Camshaft Bearings	4	5	8
Clearance of Camshaft Bearings	.001"-.003"	.001"-.003"	.001"-.003"
Camshaft End Play	.0025"-.006"	.0025"-.006"	.0025"-.006"
Camshaft Sprocket—Material and Size	Cast Iron—42 Teeth	Cast Iron—42 Teeth	Cast Iron—42 Teeth—Hardened

PISTON

Type and Material	Autothermic Aluminum Alloy	Autothermic Aluminum Alloy	Autothermic Aluminum Alloy
Weight	20 1/4 oz	17 1/4 oz	20 1/4 oz
Weight with Rings and Pin	26 3/4 oz	23 1/2 oz	26 3/4 oz
Overall Height	3 3/8"	3 3/8"	3 3/8"
Height Centerline of Pin to Top Skirt Clearance	2 1/8"	2 1/8"	2 1/8"
Assemble Slot Toward	.0005"-.001"	.0005"-.001"	.0005"-.001"
Piston Pin—Size	Camshaft	Camshaft	Camshaft
Type	3 3/4" x 1/8"	2 3/4" x 1/8"	3 3/4" x 1/8"
Lubrication of Pin	Floating	Floating	Floating
Piston Pin Fit in Piston	Pressure	Pressure	Pressure
	Push Fit at Room Temp.	Push Fit at Room Temp.	Palm Push at 160° F in Water
	(80 to 130 lb per sq in)	(80 to 130 lb per sq in)	
Piston Pin Fit in Rod	Size to Size	Size to Size	Size to Size
Piston Pin Oversizes	.003"-.006"	.003"-.006"	.003"-.006"
Number of Rings per Piston	3	3	3
Number of Oil Rings per Piston	1	1	1
Type of Compression Rings			
Top Groove	No. 200	No. 200	No. 200
Second Groove	No. 70	No. 70	No. 70
Type of Oil Rings	No. 86	No. 86	No. 86
Width of Compression Rings No. 1	.093"-.0935"	.0925"-.0935"	.0930"-.0935"
Width of Compression Rings No. 2	.1235"-.124"	.1235"-.124"	.1235"-.124"
Width of Oil Rings	.186"-.1865"	.186"-.1865"	.186"-.1865"
Piston Ring Gap—Compression	.007"-.017"	.007"-.017"	.007"-.017"
Piston Ring Gap—Oil	.007"-.015"	.007"-.015"	.007"-.015"
Location of Rings	Above Pin	Above Pin	Above Pin
Piston Oil Drain Holes	12 3/32"	12 3/32"	12 3/32"
Piston Oversizes	.010", .020", .030", .040"	.010", .020", .030", .040"	.010", .020", .030", .040"

CONNECTING ROD

	1 lb 15.6 oz	1 lb 15.6 oz	2 lb 7 oz
Material	Steel Forging	Steel Forging	Steel Forging
Bearing Type	Detachable Shell	Detachable Shell	Detachable Shell
Center to Center Length	7 11/16"	7 11/16"	9 1/4"
Diameter of Crankpin Bearing	2 3/8"	2 3/8"	2 1/4"
Length of Crank Pin	1 1/4"	1 1/4"	1 3/8"
Clearance Bearing to Crankpin	.0005"-.0015"	.0005"-.0015"	.0005"-.0015"
End Play on Crankshaft	.004"-.010"	.004"-.010"	.004"-.010"
Oil Lead to Piston Pin	Rifle Drilled	Rifle Drilled	Rifle Drilled
Bearing Material	Special Composite Construction	Special Composite Construction	Special Composite Construction
Assembled in Engine	Oil Hole Toward Camshaft	Oil Hole Toward Camshaft	Oil Hole Toward Camshaft
Cap Attached	Bolts, Nuts and Lock Nuts	Bolts, Nuts and Lock Nuts	Bolts, Nuts and Couters
Bearing Adjustment	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells

CRANKSHAFT

Type	Counterbalanced	Counterbalanced	Counterbalanced
Material	Steel Forging	Steel Forging	Steel Forging
Number of Counterweights	6 Forged Integral	8 Forged Integral	8 Bolted
Number of Main Bearings	4	5	9
Main Bearing Diameter	2 3/4"	2 3/4"	2 3/4"
Thrust Taken On	Front	Center	Center
Vibration Damper	Rubber Friction Disc, Waterproof	Rubber Friction Disc, Waterproof	Rubber Friction Disc, Waterproof
Weight	81 1/2 lb	95 lb	104 lb
End Play	.003"-.008"	.003"-.008"	.003"-.008"
Main Bearing Material	Special Composite Construction	Special Composite Construction	Special Composite Construction
Clearance—All Main Bearings	.0005"-.0015"	.0005"-.0015"	.0005"-.0015"
Crankshaft Sprocket—Material and Size	Steel—21 Teeth	Steel—21 Teeth	Steel—21 Teeth
Bearing Adjustment	Replace Bearing Shells	Replace Bearing Shells	Replace Bearing Shells

MODELS	2100	2101-2111	2103-2106
ENGINE OILING SYSTEM			
Type	Full Pressure	Full Pressure	Full Pressure
Oil Pump Type	Gear	Gear	Gear
Crankcase Capacity	5 qt	5½ qt	7 qt
Oil Filler Location	Left Side	Left Side	Left Side
Oil Filter Location	Special Equipment	Special Equipment	Left Side
Oil Measuring Stick	Left Crankcase	Left Crankcase	Left Crankcase
Oil Pump Intake	Floating Screen	Floating Screen	Floating Screen
Crankcase Ventilator	R.H. at Rear of Block	R.H. at Rear of Block	R.H. at Rear of Block
Oil Pressure—Normal Driving	40 lb	40 lb	50 lb
Oil Drain	Hex. Head Flange Plug ⅝"-18	Hex. Head Flange Plug ⅝"-18	Hex. Head Flange Plug ⅝"-18
CLUTCH			
Type	Single Dry Plate	Single Dry Plate	Single Dry Plate
Pedal Free Play	1½"-2"	1½"-2"	1¾"-2¼"
Facing Material	U. S. Asbestos, Woven	U. S. Asbestos, Woven	U. S. Asbestos, Woven
Size Facing	6" x 9½" x .125"	6" x 10" x .125"	6⅝" x 11" x .125"
Throw-Out Bearing	Prelubricated Ball	Prelubricated Ball	Prelubricated Ball
Clutch Spring Pressure	163 lb at 1⅞"	127½ lb at 1⅞"	163 lb at 1⅞"
Number of Springs	6	9	9
Vibration Neutralizer	Springs	Springs	Springs
TRANSMISSION			
Type	Selective—Silent—Synchronized	Selective—Silent—Synchronized	Selective—Silent—Synchronized
Number of Forward Speeds	3	3	3
Engine to Rear Wheel Ratio	Std OD	Std OD	Std OD
Overdrive			
Direct	4.3 3.28	4.1 3.10	
Second	6.57 6.96	6.27 6.57	3.92 4.09
First	10.44 11.04	9.95 10.44	5.99 6.25
Reverse	13.6 14.40	12.97 13.6	9.51 9.93
Oil Capacity—Standard Transmission	2 pints	2 pints	2 pints
Oil Capacity—O.D. Unit	1¼ pints	1¼ pints	1¼ pints
Oil Level Plugs	½"-14 Pipe	½"-14 Pipe	½"-14 Pipe
Gear Teeth	Helical	Helical	Helical
Steering Post Shift	Mechanical Type Std Equip.	Mechanical Type Std Equip.	Mechanical Type Std Equip.
FRAME			
Type	Taper Pressed Steel Double Drop. Side Rail Box Sectioned at Front and Rear	Taper Pressed Steel Double Drop. Side Rail Box Sectioned at Front and Rear	Taper Pressed Steel Double Drop. Side Rail Box Sectioned at Front and Rear
Thickness	⅛"	⅛"	⅝"
Cross Members	Five Channel X-Type in Center	Five Channel X-Type in Center	Five Channel X-Type in Center
STEERING GEAR			
Make	Packard-Gemmer	Packard-Gemmer	Packard-Gemmer
Type	Worm & 3 Tooth Roller	Worm & 3 Tooth Roller	Worm & 3 Tooth Roller
Ratio	20.4 to 1	20.4 to 1	20.4 to 1
Steering Wheel	18"—3 Spoke "T"	18"—3 Spoke "T"	18"—3 Spoke "T"
Minimum Turning Radius	21 ft	21 ft	22 ft
FRONT SUSPENSION			
Make	Packard Safe-T-Flex	Packard Safe-T-Flex	Packard Safe-T-Flex
Type	Independent Parallelogram	Independent Parallelogram	Independent Parallelogram
Steering Knuckle	Reverse Elliot	Reverse Elliot	Reverse Elliot
Steering Knuckle Pin Bearings			
Lower	.866 x 1.1875 Long x 1.189 OD	.866 x 1.1875 Long x 1.189 OD	.866 x 1.1875 Long x 1.189 OD
Upper	Needle Bearing	Needle Bearing	Needle Bearing
Thrust Bearings	Steel Ball Bearing	Steel Ball Bearing	Steel Ball Bearing
Caster	Neg. 1° Plus or Minus ½°	Neg. 1° Plus or Minus ½°	Neg. 1° Plus or Minus ½°
Front Wheel Toe-In	0 Plus ⅛ Minus 0	0 Plus ⅛ Minus 0	0 Plus ⅛ Minus 0
Knuckle Pin Angle	5°35'	5°35'	5°35'
Tread	59¼"	59¼"	59¼"
Camber	0° Plus or Minus ¼°	0° Plus or Minus ¼°	0° Plus or Minus ¼°
Wheel Bearings—Inner and Outer	Tapered Roller	Tapered Roller	Tapered Roller
Wheel Bearing Adjustment	Tighten Nut and Back Off ½ Turn and Lock	Tighten Nut and Back Off ½ Turn and Lock	Tighten Nut and Back Off ½ Turn and Lock

MODELS	2100	2101-2111	2103-2106
ELECTRICAL			
Battery Make	Willard-SW-ID-100 Autolite-P-15-ZR	Willard-SW-ID-100 Autolite-P-15-ZR	Autolite-17-ZR
Capacity	100 hr	100 hr	120 hr
Plates	15	15	17
Ignition Timing	4° btdc	5° btdc	4° btdc
Breaker Point Gap	.018"-.022"	.0125"-.0175"	.0125"-.0175"
Breaker Arm Spring Tension	19-23oz,	19-23 oz,	19-23oz,
Spark Control	Full Automatic	Full Automatic	Full Automatic
Spark Advance Begins at	600 Engine rpm	650 Engine rpm	500 Engine rpm
Distributor (Vacuum Controlled)	Autolite IGC-4505 Delco-1110092	Autolite IGP-4502A	Autolite IGT-4102
Spark Plug—Size	10 mm.	10 mm.	10 mm.
Spark Plug—Make and Type	104 AC or Champion Y4A	104 AC or Champion Y4A	104 AC or Champion Y4A
Spark Plug Gap	.025"-.030"	.025"-.030"	.025"-.030"
Generator Make and Type	Autolite GDZ-4801F Delco 1102682	Autolite GDZ-4801F	Autolite GEA-4802A
Generator Drive	Belt	Belt	Belt
Generator Cut-In-Speed—Gold	920 rpm Autolite 800 rpm Delco	920 rpm	780 rpm
Generator Maximum Charging Rate	35 Amperes	35 Amperes	35 Amperes
Generator Voltage Regulator	Autolite VRP-4002C Delco 1118202	Autolite VRP-4002C	Autolite VRP-4002C
Generator Voltage to Close Cut-Out	6½ to 7 Volts	6½ to 7 Volts	6½ to 7 Volts
Generator Ventilated	Yes	Yes	Yes
Starter Motor—Make and Type	Autolite MAW-4027 Delco 1107056	Autolite MAW-4027	Autolite MAX-4052
Starter Drive	Bendix Shift	Bendix Shift	Solenoid Actuated
Number of Flywheel Teeth	140	140	140
Number of Teeth in Bendix Pinion	9	9	9
Pinion Meshes	From Front	From Front	From Front
Light Control	On Instrument Board and Foot Switch	On Instrument Board and Foot Switch	On Instrument Board and Foot Switch
Headlight Current Protection	Thermostatic Relay	Thermostatic Relay	Thermostatic Relay
Auxiliary Fuse	SFE 20 Ampere	SFE 20 Ampere	SFE 20 Ampere
Body Fuse	SFE 20 Ampere	SFE 20 Ampere	SFE 20 Ampere
Tail Light Fuse	SFE 20 Ampere	SFE 20 Ampere	SFE 20 Ampere
Stop Light Fuse	SFE 20 Ampere	SFE 20 Ampere	SFE 20 Ampere
Windshield Wiper Protection	Thermostatic Relay	Thermostatic Relay	Thermostatic Relay
Clock Fuse	SFE 4 Ampere	SFE 4 Ampere	SFE 4 Ampere
Overdrive Relay	SFE 30 Ampere	SFE 30 Ampere	SFE 30 Ampere
Headlight Bulb—Sealed Beam	40-30 Watt	40-30 Watt	40-30 Watt
Horn—Make	Sparton	Sparton	Sparton
Horn—Location	Mounted on Engine	Mounted on Engine	Mounted on Engine
Battery Terminal Grounded	Positive	Positive	Positive
Ampere Draw of Horns	22-25 Amperes	22-25 Amperes	33-36 Amperes
Ampere Draw of Car Heater Motor	6 Amperes at 7 Volts	6 Amperes at 7 Volts	6 Amperes at 7 Volts
Ampere Draw of Car Defroster	4½ Amperes at 7 Volts	4½ Amperes at 7 Volts	4½ Amperes at 7 Volts
Ampere Draw of Windshield Wiper	4½ Amperes at 6 Volts	4½ Amperes at 6 Volts	4½ Amperes at 6 Volts
Ampere Draw of Headlights (each)	30-40 Watts	30-40 Watts	30-40 Watts
Ampere Draw of Coil—Idling Cold	2.75 Amperes	2.4 Amperes	2.4 Amperes
Ampere Draw of Coil—Stopped Cold	5. Amperes	5. Amperes	5. Amperes
Clock—Make and Type	Electric—Borg	Electric—Borg	Electric—Borg
Cigar Lighter	Automatic	Automatic	Automatic
Starter Stall Torque	18 ft lb @ 4 Volts-670 Amperes	18 ft lb @ 4 Volts-670 Amperes	45.9 ft lb @ 4 Volts-906 Amperes
Ignition Coil—L.H.D.	Autolite CE-3224US Delco D-1115001	Autolite CE-3224US	Autolite CE-3224ABS
Turn Signal		Std Equipment (2111 only)	Std Equipment

COOLING SYSTEM

Water Pump	Centrifugal-Self-Adjusting	Centrifugal-Self-Adjusting	Centrifugal-Self-Adjusting
Water Pump Drive	Fan Belt	Fan Belt	Fan Belt
Radiator Core	Tubular	Tubular	Tubular
Capacity of System	3½ gal	4¼ gal	5 gal
Fan	4 Blade 18"	4 Blade 18"	5 Blade 18½"
Driving Pulley	On Crankshaft	On Crankshaft	On Crankshaft
Ratio	.963 to 1	.963 to 1	.973 to 1
Thermostat Starts to Open			
Standard	145°-150°	145°-150°	145°-150°
High Reading	160°-165°	160°-165°	160°-165°
Fan Belt	49¼" x ¾" x 42°	49¼" x ¾" x 42°	52¼" x 1" x 42°
Radiator Hose—Inlet	12 ⅝" x 2 ⅛" OD x 1¾" ID	12 ⅝" x 2 ⅛" OD x 1¾" ID	11½" x 2 ⅛" OD x 1¾" ID
	120° Angle-Moulded	120° Angle-Moulded	130° Angle-Moulded
Radiator Hose—Outlet	3¾" x 1¾" ID	3¾" x 1¾" ID	3¾" x 1¾" ID
Heat Indicator	Pressure Bulb Type	Pressure Bulb Type	Pressure Bulb Type
Fan Belt Adjustment	At Generator	At Generator	At Generator
Gravity Flow of Radiator	30 gal per min	35 gal per min	45 gal per min
Radiator Cap	Pressure Type (4½ lb per sq in)	Pressure Type (4½ lb per sq in)	Pressure Type (7 lb per sq in)

MODELS	2100	2101-2111	2103-2106
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GASOLINE SYSTEM			
Carburetor—Make and Size	Carter WAI-530-S Down-draft 1 1/4" Single Barrel	Carter WDO-512-S Down-draft 1 1/4" Duplex	Carter WDO-531-S Down-draft 1 1/4" Duplex
Gasoline Feed Pump Drive	Mechanical Pump	Mechanical Pump	Mechanical Pump
Gasoline Filter	Off Camshaft	Off Camshaft	Off Camshaft
Gasoline Gauge	Incorporated in Fuel Pump	Incorporated in Fuel Pump	Incorporated in Fuel Pump
Gasoline Tank Capacity	Electric	Electric	Electric
Air Cleaner and Silencer	17 gal	17 gal	20 gal
	Oil Coated Mesh Std.	Oil Coated Mesh Std.	Oil Bath Standard
	Oil Bath Special Equip.	Oil Bath Special Equip.	Equipment
Carburetor Heat Control	Thermostatic	Thermostatic	Thermostatic
Automatic Choke	Thermostatically Controlled	Thermostatically Controlled	Thermostatically Controlled
Carburetor Fuel Level	3/8" Below Top of Bowl	3/2" Below Top of Bowl	3/2" Below Top of Bowl

REAR AXLE			
Type	Semi-Floating	Semi-Floating	Semi-Floating
Make	Packard	Packard	Packard
Final Drive	Hypoid Gears	Hypoid Gears	Hypoid Gears
Propulsion	Through Rear Springs	Through Rear Springs	Through Rear Springs
Axle Housing	Pressed Steel Banjo Type	Pressed Steel Banjo Type	Pressed Steel Banjo Type
Oil Capacity	4 pt	4 pt	6 3/4 pt
Wheel Bearings	Tapered Roller	Tapered Roller	Tapered Roller
Tread	60 11/16"	60 11/16"	60 11/16"
Standard Gear Ratio	4.3 to 1	4.1 to 1	3.92 to 1
Pinion Backlash	.003"-.005"	.003"-.005"	.003"-.005"
Number Teeth—Gear and Pinion	43-10	41-10	47-12
Oil Drain Plugs	1/2"-14 Pipe	1/2"-14 Pipe	1/2"-14 Pipe
Universal Joints	"Mechanics"	"Mechanics"	"Mechanics"
	Roller Bearing Type	Roller Bearing Type	Roller Bearing Type
Number Required	2	2	2

SPRINGS			
Front—6 Pass. Sedan	1740 x 76 Coil	1890 x 81 Coil	2030 x 90 Coil
Rear—6 Pass. Sedan	870 x 105 Leaf	870 x 105 Leaf	980 x 110 Leaf
Front Size	5.58 OD, 4 1/4 ID	5.61 OD, 4 1/4 ID	5.65 OD, 4 1/4 ID
Number of Coils—Effective	9.10	9.35	9.33
Rear Length and Width	54 3/8" x 2"	54 3/8" x 2"	54 3/8" x 2"
Shackles	Rubber Mounted	Rubber Mounted	Rubber Mounted
Spring Covers	No	No	No
Shock Absorbers—Front	Hydraulic Two-Way	Hydraulic Two-Way	Hydraulic Two-Way
Shock Absorbers—Rear	Hydraulic Direct Acting	Hydraulic Direct Acting	Hydraulic Direct Acting
Stabilizer—Front	Torsional	Torsional	Torsional
Stabilizer—Rear	Hydraulic Direct Acting	Hydraulic Direct Acting	Hydraulic Direct Acting
Spring Material—Front and Rear	Silico-Manganese	Silico-Manganese	Silico-Manganese

BRAKES			
Type	Hydraulic—2 Shoe	Hydraulic—2 Shoe	Hydraulic—2 Shoe
Effective Area	165 sq in	171.5 sq in	208.25 sq in
Effective Area Hand Brake	79.25 sq in	85.75 sq in	98 sq in
Drum Diameter—Front	12" Centrifuse	12" Centrifuse	12" Centrifuse
—Rear	11" Centrifuse	12" Centrifuse	12" Centrifuse
Lining Size and Material			
Primary—Marshall 2201H-8			
Front	1 3/4" x 1 1/8" x 11 1/2"	1 3/4" x 1 1/8" x 11 1/2"	2 1/4" x 1 1/8" x 11 1/2"
Rear	1 3/4" x 1 1/8" x 10 5/8"	1 3/4" x 1 1/8" x 11 1/2"	2" x 1 1/8" x 11 1/2"
Secondary—Marshall B-50			
Front	1 3/4" x 1 1/8" x 13"	1 3/4" x 1 1/8" x 13"	2 1/4" x 1 1/8" x 13"
Rear	1 3/4" x 1 1/8" x 12"	1 3/4" x 1 1/8" x 13"	2" x 1 1/8" x 13"

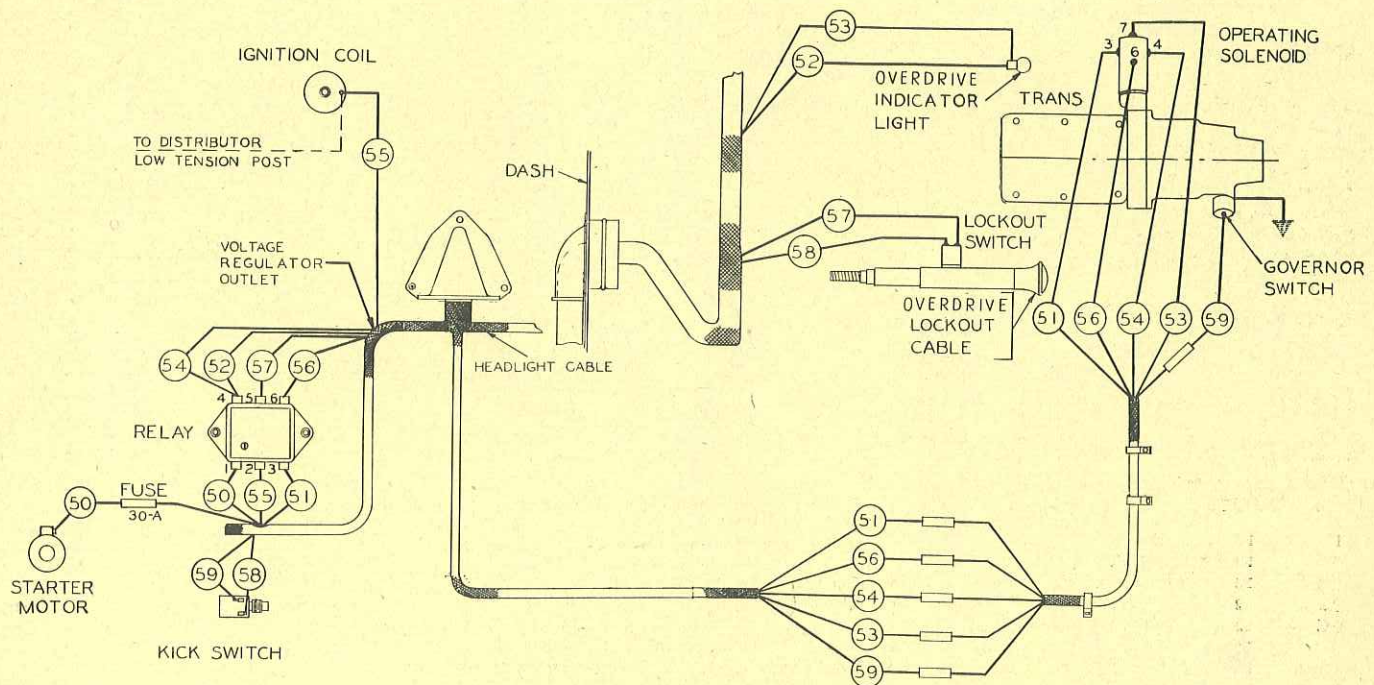
WHEELS			
Type	Demountable Disc	Demountable Disc	Demountable Disc
Size of Tire	15 x 6.50—4 Ply	15 x 6.50—4 Ply	15 x 7.00—4 Ply
Recommended Tire Pressure (Warm)—Front	26 lb	28 lb	28 lb
—Rear	28 lb	28 lb	28 lb

CAR DIMENSIONS					
	2100	2101 2111	2103	2123 2126	2106
Wheelbase	120"	120"	127"	148"	127"
Overall Length Bumper to Bumper	208 1/2"	208 1/2"	215 1/2"	236 1/2"	215 1/2"
Overall Height Loaded	63 1/2"	63 1/2"	64"	64"	64"
Overall Width	76 1/8"	76 1/8"	76 1/8"	76 1/8"	76 1/8"

SHIPPING WEIGHTS

Model	Chassis Weight	Body Model	Body Type	Shipping Weight
Clipper "6"				
2100	2340	1682	6-Passenger Sedan	3465
2100	2340	1685	6-Passenger Club Sedan	3465
Clipper "8"				
2101	2480	1692	6-Passenger Sedan	3575
2101	2480	1695	6-Passenger Club Sedan	3575
DeLuxe Clipper "8"				
2111	2480	1612	6-Passenger Sedan	3635
2111	2480	1615	6-Passenger Club Sedan	3635
Super Clipper				
2103	2790	1672	6-Passenger Sedan	3990
2103	2790	1675	6-Passenger Club Sedan	3990
2123		1670	8-Passenger Limousine	
2123		1671	8-Passenger Sedan	
Custom Super Clipper				
2106	2790	1622	6-Passenger Sedan	4065
2106	2790	1625	6-Passenger Club Sedan	4065
2126		1650	8-Passenger Limousine	
2126		1651	8-Passenger Sedan	

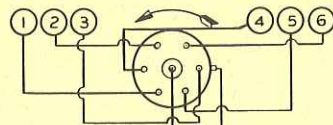
TRANSMISSION OVERDRIVE WIRING DIAGRAM



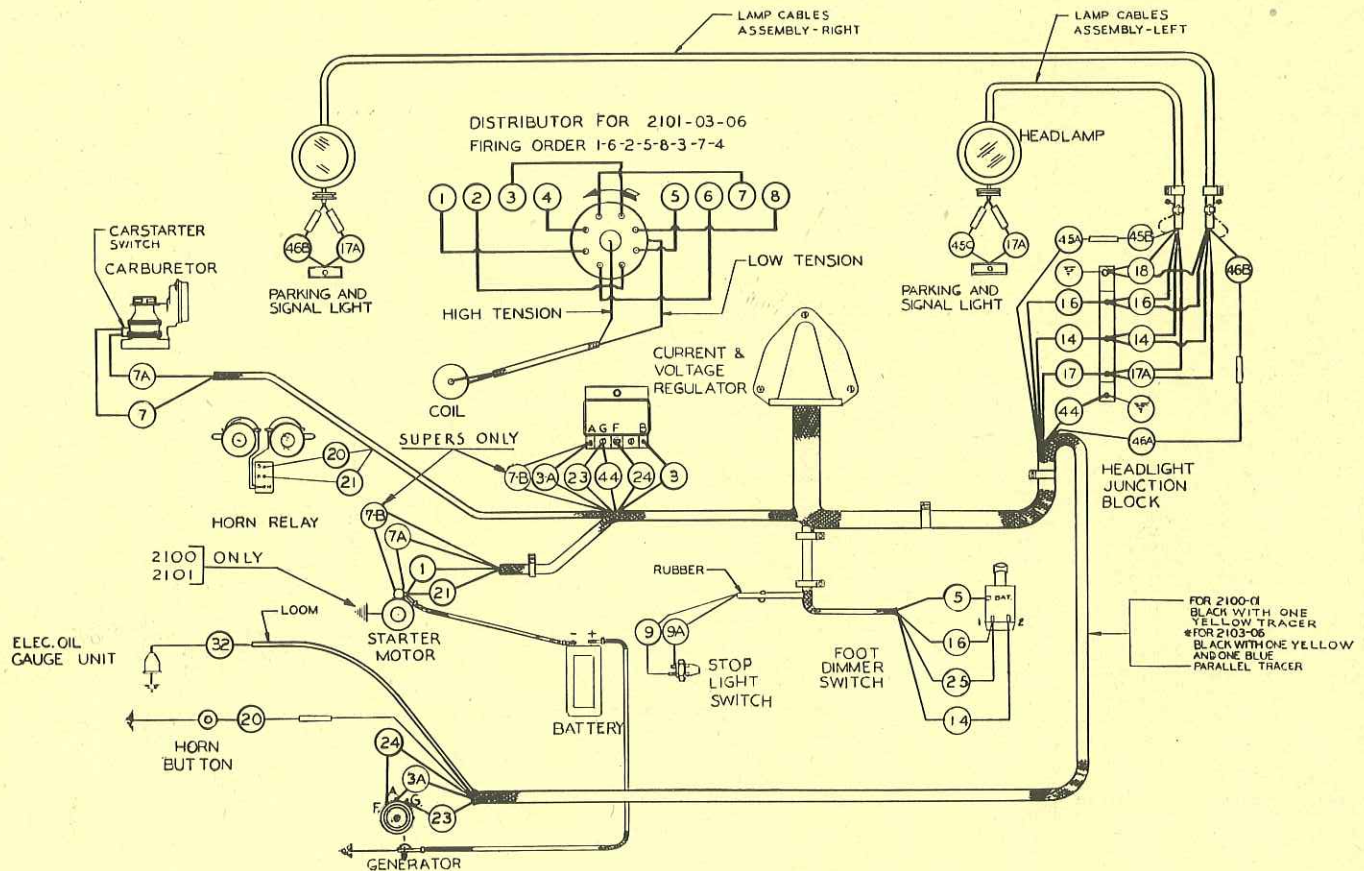
NO.	GAUGE	COLOR	LOCATION
50	12	Black	From Starter Motor Switch to Relay Post No. 1
51	14	Yellow	From Relay Post No. 3 to Solenoid Post No. 3
52	18	Brown	From Relay Post No. 4 to Overdrive Indicator Light
53	18	Brown	From Solenoid Post No. 7 to Indicator Light
54	12	Black	From Relay Post No. 4 to Solenoid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

CHASSIS WIRING DIAGRAM

DISTRIBUTOR FOR 2100
FIRING ORDER 1-5-3-6-2-4

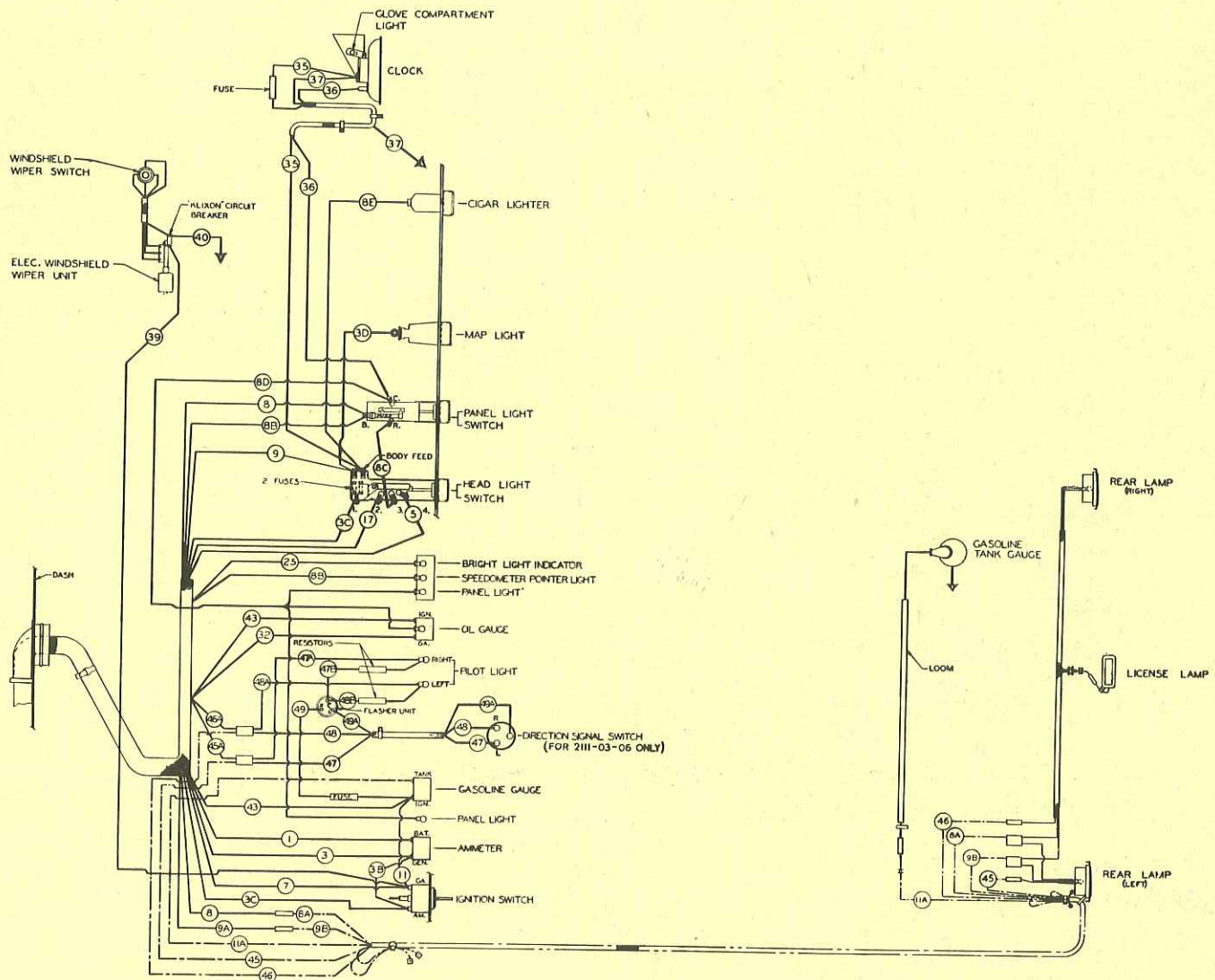


HIGH TENSION LOW TENSION



NO.	GAUGE	COLOR	LOCATION
1	10	Red	Starter Motor Switch to Ammeter
3	10	Black	Ammeter to Regulator
3A	10	Red	Generator to Regulator
3B	12	Black	Ammeter to Ignition Switch
3C	12	Black	Ignition Switch to Headlight Switch
3D	16	Black	Headlight Switch to Map Light
5	14	Black	Headlight Switch to Foot Dimmer Switch
7	16	Black	Ignition Switch to Car Starter Switch
7A	16	Black	Car Starter Switch to Starter Solenoid Switch
7B	16	Black	Starter Solenoid Switch to Voltage Regulator
8	16	Black	Panel Light Switch to Rear Wiring Harness
8A	16	Black	Front Harness to Rear Tail Lights
8B	16	Black	Panel Light Switch to Speedometer Pointer Light
8C	16	Black	Headlight Switch to Panel Light Switch
8D	16	Black	Panel Light Switch to Panel Lights
8E	14	Black	Cigar Lighter to Headlight Switch
9	16	Green	Headlight Switch to Stoplight Switch
9A	16	Green	Stoplight Switch to Rear Wiring Harness
9B	16	Green	Front Harness to Stoplights
11	16	Black	Ignition Switch to Gasoline Gauge (Instr.)
11A	18	Tan—with Black and Red Tracer	Gasoline Gauge (Instr.) to Gasoline Gauge (Tank)
14	14	Red	Foot Dimmer Switch to Headlight (City)
16	14	Green	Foot Dimmer Switch to Headlights (Drive)
17	16	Black with Red Tracer	Headlight Switch to Junction Block
17A	16	Blue	Junction Block to Parking Lights

BODY WIRING DIAGRAM



NO.	GAUGE	COLOR	LOCATION
18	14	Black	Headlights to Junction Block (Ground)
20	16	Brown	Horn Button to Horns
21	12	Black	Horns to Starter Motor Switch
23	14	Black	Generator to Voltage Regulator Ground
24	18	Brown	Generator to Voltage Regulator Field
25	18	White	Foot Dimmer Switch to Indicator Light
32	16	Yellow with Black Tracer	Oil Gauge Unit to Gauge
35	18	Red	Headlight Switch to Clock
36	18	Black	Panel Light Switch to Clock
37	18	White	Clock to Center Panel Screw (Lower Right)
39	16	Red	Ignition Switch to Electric Windshield Wiper Unit
40	16	Green	Electric Windshield Wiper Motor to Ground
43	16	Black	Gasoline Gauge to Oil Gauge
44	14	Black	Voltage Regulator to Junction Block (Ground)
45	16	Green with Black Tracer	Electrical Junction Connector to Rear Direction Signal Light (Left)
45A	16	Green with Black Tracer	Electrical Junction Connector to Lamp (Front Cable Assembly) (Left)
45B	16	White	Front Harness to Signal Lamp Cable (Left)
45C	16	Yellow	Lamp Front Cable to Signal Lamp (Left)
46	16	Yellow	Electrical Junction Connector to Rear Direction Signal Light (Right)
46A	16	Yellow	Electrical Junction Connector to Lamp (Front Cable Assembly) (Right)
46B	16	Yellow	Front Harness to Signal Light (Right)
47	18	Green with Black Tracer	Direction Signal Switch to Electrical Junction Connector
47A	18	Green with Black Tracer	Electrical Junction Connector to Pilot Light (Right)
47B	18	Green with Black Tracer	Pilot Light (Right) to Post "P" on Flasher Unit
48	18	Yellow	Direction Signal Switch to Electrical Junction Connector
48A	18	Yellow	Electrical Junction Connector to Pilot Light (Left)
48B	18	Yellow	Pilot Light (Left) to Post "P" on Flasher Unit
49	16	Black	Flasher Unit (Post "X") to Gasoline Gauge (Feed)
49A	18	Black	Flasher Unit (Post "L") to Direction Signal Switch

CLIPPER LUBRICATION DIAGRAM

1000 MILES

**SUPPORT ARMS
UPPER AND LOWER**
10 Connectors
Pressure Gun Grease

**STEERING RODS
AND KNUCKLES**
7 Connectors
Pressure Gun Grease

**GENERATOR
AND STARTER**
3 Oils, S.A.E. 30
Engine Oil

AIR CLEANER
Clean as needed

**GEAR SHIFTER
IDLER BRACKET**
1 Connector
Pressure Gun Grease

DISTRIBUTOR
1 Cup, No. 3
Cup Grease

**CLUTCH AND
BRAKE PEDAL
SHAFT**
1 Connector
Pressure Gun Grease

**UNIVERSAL
JOINT SPLINE**
(Overdrive Only)
1 Connector
Pressure Gun Grease

**FRONT WHEEL
BEARINGS**
No. 3 Fibre Grease
Repack Every 10,000
Miles

ENGINE OIL
Change 1,000 —
2,000 Miles

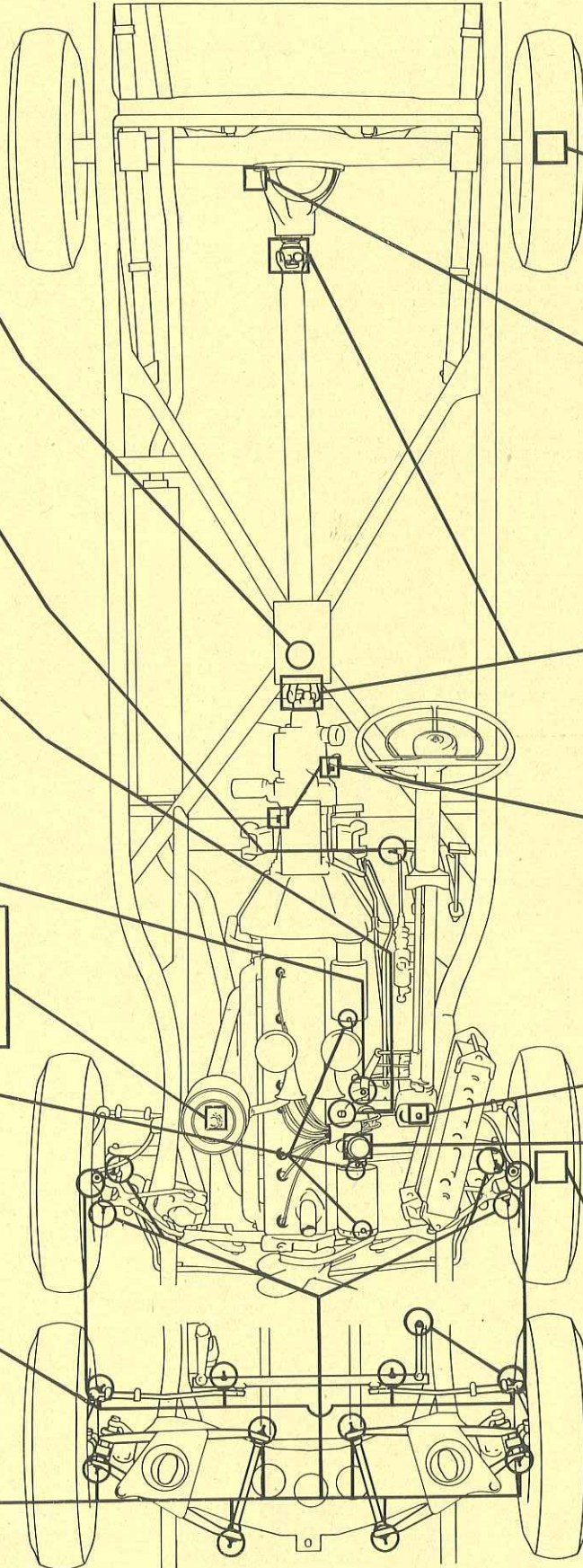
STEERING GEAR
Straight Transmission
Oil
Maintain level

**TRANSMISSION
and OVERDRIVE**
Drain and Refill in Spring.
Use S.A.E. 140 Straight
Mineral Gear Oil.

**UNIVERSAL
JOINTS**
Pressure Gun Grease
Repack every 30,000
miles

REAR AXLE
Drain and Refill in Fall,
S.A.E. 90 Hypoid Gear Oil.

**REAR WHEEL
BEARINGS**
No. 3 Fibre Grease
Repack every 30,000
miles



MODELS	2100	2101-2111	2103-2106
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ENGINE LUBRICATION

Every 1000 to 2000 Miles

Crankcase Capacity	5 qt	5½ qt	7 qt
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Not lower than 32° F. above zero—S.A.E. 30

As low as 10° F. above zero—20W

As low as 10° F. below zero—10W

Below 10° F. below zero—10W Plus 10% kerosene

If average daylight temperature is above 90° F—S.A.E. 40

CHASSIS LUBRICATION

Every 1000 to 2000 Miles

Knuckle Pins—Pressure Gun Grease	2 Lub. Connectors	2 Lub. Connectors	2 Lub. Connectors
Steering Connecting Rod—Pressure Gun Grease	2 Lub. Connectors	2 Lub. Connectors	2 Lub. Connectors
Steering Tie Rods—Pressure Gun Grease	2 Lub. Connectors	2 Lub. Connectors	2 Lub. Connectors
Universal Joint Spline Gun Grease— Overdrive Only	1 Lub. Connector	1 Lub. Connector	1 Lub. Connector
Generator—20W	2 Oilers	2 Oilers	2 Oilers
Starter Motor—20W	1 Oiler	1 Oiler	2 Oilers
Distributor—No. 3 Cup Grease	1 Cup	1 Cup	1 Cup
Clutch and Brake Pedal—Pressure Gun Grease	1 Lub. Connector	1 Lub. Connector	1 Lub. Connector
Gear Shift Idler Levers Bracket—Gun Grease	1 Lub. Connector	1 Lub. Connector	1 Lub. Connector
Steering Idler Lever—Gun Grease	1 Lub. Connector	1 Lub. Connector	1 Lub. Connector
Support Arm Pin, Inner—Gun Grease	4 Lub. Connectors	4 Lub. Connectors	4 Lub. Connectors
Support Arm Pin, Outer—Gun Grease	2 Lub. Connectors	2 Lub. Connectors	2 Lub. Connectors
Wheel Support Pin Upper—Gun Grease	4 Lub. Connectors	4 Lub. Connectors	4 Lub. Connectors

Every 10,000 Miles

Front Wheel Bearing—Fibre Grease	Repack 4 oz per Wheel	Repack 4 oz per Wheel	Repack 4 oz per Wheel
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Every 30,000 Miles

Rear Wheel Bearing—Fibre Grease	Repack 2 oz per Wheel	Repack 2 oz per Wheel	Repack 2 oz per Wheel
Universal Joints—Gun Grease	Repack	Repack	Repack

SEASONAL LUBRICATION

Transmission

Summer—S.A.E. 140 Straight Mineral Gear Oil	Drain and Refill—2 pt	Drain and Refill—2 pt	Drain and Refill—2 pt
Winter—S.A.E. 90 Straight Mineral Gear Oil	Drain and Refill—2 pt	Drain and Refill—2 pt	Drain and Refill—2 pt
Transmission Overdrive Case			
Summer—S.A.E. 140 Straight Mineral Gear Oil	Drain and Refill—1¼ pt	Drain and Refill—1¼ pt	Drain and Refill—1¼ pt
Winter—S.A.E. 90 Straight Mineral Gear Oil	Drain and Refill—1¼ pt	Drain and Refill—1¼ pt	Drain and Refill—1¼ pt
Steering Gear			
Summer—S.A.E. 140 Straight Mineral Gear Oil	Drain and Refill—11 oz	Drain and Refill—11 oz	Drain and Refill—11 oz
Winter—S.A.E. 90 Straight Mineral Gear Oil	Drain and Refill—11 oz	Drain and Refill—11 oz	Drain and Refill—11 oz
Rear Axle—Hypoid Gear Lubricant	Drain and Refill—4 pt	Drain and Refill—4 pt	Drain and Refill—6¾ pt

