

1948-1949 Hudson

Mechanical Specifications

- 1948 Hudson -

General Chassis Data

Series	Start Serial Number	CYL.	Bore x Stroke	Disp.	NACC HP	W/B
481 Super 6	481-101	6	3 ⁹ / ₁₆ x 4 ³ / ₈	262	30.4	124
482 Commodore 6	482-101	6	3 ⁹ / ₁₆ x 4 ³ / ₈	262	30.4	124
483 Super 8	483-101	8	3 x 4 ¹ / ₂	254	28.8	124
484 Commodore 8	484-101	8	3 x 4 ¹ / ₂	254	28.8	124

General Body Data

Body Style	481	482	483	484
3-Pass. Business Coupe	\$2069	---	---	---
6-Pass. Brougham	2172	---	---	---
6-Pass. Club Coupe	2219	\$2374	\$2340	\$2490
6-Pass. Sedan	2222	2399	2343	2514
6-Pass. Convert. Brougham	2836	3057	---	3138

Electrical Equipment: AUTO-LITE

Starter : MCL-6006 - 1948-1950 all exc. Pacemaker
 Generator : GEC-4801A - 1940-1949 all exc. 40, 48, 10, 18, 20, 28
 Regulator : VRR-4001A - 1940-1949 all w/GEC generator
 Distributor : IGW-4213A - 1948-1950 all exc. Pacemaker
 : IGP-4208B-1 - 1948-1952 eight cylinder
 Ignition Coil : CR-6006 - 1948-49 all

Fuel System

Carburetor (Carter) : WDO-607S - 1948-1950 all 6 cylinder exc. Pacemaker
 : WDO-648S - 1948-1950 all 8 cylinder

Shipments

142,454

- 1949 Hudson -

Chassis Data

Series	Serial Number	Cyl.	Bore x Stroke	Disp.	NACC HP	WB
491 Super 6	491-101	6	3-9/16 x 4-3/8	262	30.4	124
492 Commodore 6	492-101	6	3-9/16 x 4-3/8	262	30.4	124
493 Super 8	493-101	8	3 x 4-1/2	254	28.8	124
494 Commodore 8	494-101	8	3 x 4-1/2	254	28.8	124

General Body Data

Body Style	491	492	493	494
3-Pass. Business Coupe	\$2069			
6-Pass. Brougham	2172			
6-Pass. Club Coupe	2219	\$2374	\$2340	\$2490
6-Pass. Sedan	2222	2399	2343	2514
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Electrical Equipment: Auto-Lite

Starter	MCL-6006	- 1948-1950 all exc. Pacemaker
Generator	GEC-4801A	- 1940-1949 all exc. 40, 48, 10, 18, 20, 28
Regulator	VRR-4001A	- 1940-1949 all w/GEC generator
Distributor	IGS-4213A-1	- 1948-1950 all exc. Pacemaker
	IGT-4208B-1	- 1948-1952 eight cylinder
Ignition Coil	CR-6006	- 1948-1949 all

Fuel System

Carburetor - Carter (Single)	WDO-647S	1948-1950 all Hudson 6 exc. Pacemaker
	WDO-648S	1948-1950 all 8 cylinder
Fuel Pump		
Carter	M729SA	1948-1954
AC (Fuel and Vacuum)	583	1948-1952; 1953 early
AC (Fuel and Vacuum)	4057	1953 Later; 1954

Shipments

144,685

HUDSON

1948-1949 Models 480-490 Mechanical Specifications and Adjustments

GENERAL SPECIFICATIONS ALL MODELS

Wheel Base	124"
Overall Length Including Bumpers	207-1/2".
Height - Road to Roof	60"
Width - Fender to Fender	77"
Road Clearance - Front and Rear	8"
Tread	
Front	58-1/2"
Rear	55-1/2"

CAR LICENSE INFORMATION 1948 Models

Series	Models	Start Serial No	Cyl.	Bore & Stroke	Piston Displacement	NACC HP	W/B
Super Six	481	491-101	6	3-9/16" x 4-3/8"	262	30.4	121
Commodore Six	482	492-101	6	3-9/16" x 4-3/8"	262	30.4	121
Super Eight	483	493-101	8	3" x 4-1/2"	254	28.8	128
Commodore Eight	484	494-101	8	3" x 4-1/2"	254	28.8	128

CAR LICENSE INFORMATION 1949 Models

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Super Six	491	491-101	6	3-9/16" x 4-3/8"	262	30.4	121
Commodore Six	492	492-101	6	3-9/16" x 4-3/8"	262	30.4	121
Super Eight	493	493-101	8	3" x 4-1/2"	254	28.8	128
Commodore Eight	494	494-101	8	3" x 4-1/2"	254	28.8	128

SERIAL NUMBERS

The car serial number, which is also the engine number, is stamped on a metal plate attached to the right front door pillar post. In the car numbering system the first three digits of the serial number indicate the series and model, while the remaining digits represent the actual car number. As the cars leave the production line, they are numbered in consecutive order, regardless of model.

The engine number is stamped on the top of the cylinder block between No. 1 and No. 2 exhaust manifold flanges on eight- cylinder en-

gines and on the right side of the cylinder block at the front end on six cylinder engines.

NOTE: DO NOT confuse engine number with casting numbers appearing at different locations on the engine. Be sure this number corresponds with the one shown on your Owner Policy and Identification Card.

A code letter indicating paint color option is stamped on the upper hinge of the right front door.

ENGINE SPECIFICATIONS

	All Models 6 Cylinder	All Models 8 Cylinder
Arrangement	L-Head	L-Head
Bore and Stroke	3-9/16 x 4-3/8	3 x 4-1/2
Piston Displacement	262 Cu. In.	254 Cu. In.
Actual Horse Power 1	21 @ 4000 RPM	128 @ 4200 RPM
Compression Ratio - STD	6:50:1 Cast Iron Head	6:50:1 Cast Iron Head
Compression Ratio - Optional	7:00:1 Alum. Head	7:00:1 Alum. Head.
Engine Mounting	3 Points - (Rubber)	3 Points - (Rubber)
Camshaft Drive	Chain	Gears
Engine Timing		
Inlet opens	7° - 18'	BUDC 10° - 40' BUDC
Inlet closes	53° - 42'	ALDC 60° - ALDC
Exhaust opens 53° - 18' BLDC	50° - BLDC	
Exhaust closes	7° - 42' AUDC	18° - 44' AUDC
Timing marks	On Sprockets & Chain 60 links 3/8 pitch	On Gears

CAMSHAFT BEARINGS

Number - Type	4 steel back babbitt	5 steel back babbitt
Bearing Sizes		
#1	2-3/8 x 1-3/16	2-1/32 x 1-3/8
#2	2 x 15/16	2 x 1-1/16
#3	1-31/32 x 15/16	1-31/32 x 1-1/4
#4	1-1/2 x 1-5/16	1-5/16 x 1-1/16
#5	None	1-1/2 x 1-5/16

CRANKSHAFT

Type	Compensated	Compensated
Number and Type of Bearing	4 steel back babbitt lined	5 steel back babbitt lined
Diameter and Length		
#1	2-1/2 x 1-7/16	2-9/32 x 1-5/8
#2	2-1/2 x 1-3/8	2-5/16 x 1-3/8
#3	2-1/2 x 1-5/8	2-11/32 x 1-7/8
#4	2-1/2 x 1-3/4	2-3/8 x 1-3/8
#5	None	2-13/32 x 2
Thrust	On #3 Main	On #3 Main
End Play	.003 to .009	.006 to .012
Radial Clearance	.0005 to .0015	.001
Adjusting Shims	None	None

CONNECTING RODS

Material	Drop-Forged Steel	Drop-Forged Steel
Weight	34.23 oz.	31.36 oz.
Length - Center to Center	8-1/8	8-3/16
Connecting Rod Bearing	Replaceable	Integral
Type and Material	Babbitt steel back	Spun - Babbitt
Diameter and Length	2-1/8 x 1-5/8	1-15/16 x 1-3/8
End Play	.007 to .013	.007 to .013
Radial Clearance	.0005 to .0015	.0003 to .0006
Connecting Rod Bushing		
Material	One pc. steel back babbitt	Bronze
Diameter and Length	31/32 x 1-1/8	3/4 x 29/32
Radial Clearance	.0000 to .0003 at 70° F.	.0000 to .0003 at 70° F.

PISTON

Type	Cam Ground	Cam Ground
Material	Aluminum Alloy	Aluminum Alloy
Weight and Length	18 ± 1/8 oz. x 3-3/4	101-2 ± 1/4 oz. x 3-3/16
Pin Center to top	2-1/16	1-11/16
Piston Clearance	.0015 to .002	.0015 to .002
Ring groove depth	.195	.148
Piston Pin		
Type and Length	Floating - 2-15/16	Floating - 2-7/16
Diameter	31/32	3/4
Fit in Piston	.0000 to .0003 at 70° F.	.0000 to .0003 at 70° F.
Fit in Rod	Hand push fit at 70° F.	Hand push fit at 70° F.

PISTON RINGS

Material	Cast Iron	Cast Iron
Compression Rings	Two (Pinned)	Two (Pinned)
Width	5/64	3/32
Oil. Rings	Two (Pinned)	Two (Pinned)
	(1-Below piston pin)	(1-Below piston pin)
Width Upper	3/16	3/16
Width Lower	5/32	5/32
Gap Clearance	.007 to .012	.004 to .009

VALVES

Intake		
Head outside diameter	1-53/64	1-1/2
Port Diameter	1-11/16	1-3/8
Lift	11/32	11/32
Length & Stem Diameter	5-47/64 x 11/32	5-3/32 x 11/32
Stem to guide clearance	.0015 to .003	.0015 to .003
Operating clearance - Hot	.010	.006

VALVES (Continued)

Exhaust

Head outside diameter	1-9/16	1-3/8
Port Diameter	1-3/8	1-7/32
Lift	11/32	11/32
Length & Stem Diameter	5-47/64 x 11/32	5-3/32 x 11/32
Stem to guide clearance	.002 to .004	.003 to .005
Operating clearance - Hot		.012 .008
Valve angle	7 degrees	Vertical
Valve guide - Length	Removable - 3-5/32	Removable - 2-9/16
Valve spring pressure	77 lbs. at 2-3/16	46 lbs. at 2 inches
Valve Tappets		
Type	Mushroom	Roller Cam
Guides	Integral with block	Removable

FUEL SYSTEM
GENERAL SPECIFICATION

Carburetor (All Models)	Carter
Manifold Heat Control and Climatic Control	Automatic
Fuel Pump Mechanical (All Models)	Camshaft Drive
Fuel Pump Type – A. H. Standard; A. J. Combination – Optional	
Air Cleaners (Dry)	Standard
Air Cleaners (Oil Bath)	Optional
Gasoline Tank Capacity (All Models)	20 Gallons

CARBURETOR

	6 Cylinder	8 Cylinder
Carter Model Numbers	647-S	648-S
Dual Downdraft	1-1/4" - 4 bolt	1-1/4" - 4 bolt
Main Venturi	1-3/16" - I.D.	1-3/16" - I.D.
Primary Venturi	11/32" - I.D.	11/32" - I.D.
Secondary Venturi	19/32" - I.D.	19/32" - I.D.
Float Level	3/16"	1-3/64"
Idle Adjustment	1-1/4 to 1-3/4 Turns open	1 to 1-1/2 Turns open
Pump Plunger Travel from Closed to Wide Open Throttle . .	9/32"	7/32"
Low Speed Jet Tube	Jet size #67 drill	Jet size #68 drill
By-pass (plug) size	#51 drill	size #54 drill
Economized in body size	#56 drill	size #56 drill
Idle bleed size		#54 drill
Vents	Outside Only. No. 10 drill size. Four holes.	
Gasoline Intake	Square vertical needle. No. 38 drill hole in needle seat.	
Gasoline Connection - (Both)	5/16" Weatherhead nipple.	
Idle Ports - (Both)	Length .200", Width .030".	
Idle Port Opening - (Both)	.157" to .167" above upper edge of valve with valve closed tight.	
Lower Port - (Both) (For Idle Adjustment Screw)	Size .0615" to .0655" diameter.	

CARBURETOR (Cont'd)

Main Nozzle - (6 Cylinder)

In primary venturi, angle 45, closed tip. Inside diameter No. 30 drill. Upper hole: .028" diameter drill on 45° angle. Lower hole: .0635" diameter drill on 60° angle.

Main Nozzle - (8 Cylinder)

Flush type (angle tip) seats in primary venturi. Discharge, size .061 " diameter. .086" diameter.

Metering Rod Jet - (Both)

Metering Rod (Vacumeter Type):
(6 Cylinder)

Economy step, .063" diameter. Middle step tapers to .0565" diameter. Power step, .048" diameter. Length 2-59/64".

(8 Cylinder)

Economy step, .069" diameter. Middle step tapers to .063" diameter. Power step, .057" diameter. Length - 2-59/64".

Metering Rod Specifications		Type	Economy Step – Middle Step			Power Step		
Hudson No.	Carter No.		Diam.	Tapers From	Length of Taper	Diam.	Length of Taper	Length of Step
6 - Cylinder								
301943	75-610	Standard	.063"	.063" to .565"	.172"	.048"	1/64"	.147"
301944	74-623	1 st Leaner	.064"	.069" to .0645"	.172"	.050"	1/64"	.147"
301945	75-624	2 nd Leaner	.065"	.070" to .0655"	.172"	.052"	1/64"	.147"
301946	75-625	3 rd Leaner	.065"	.0705" to .067"	.172"	.054"	1/64"	.147"
8 – Cylinder								
301948	75-607	Standard	.068"	.068" to .063"	.125"	.055"	1/64"	.189"
301949	75-627	1 st Leaner	.069"	.069" to .0645"	.125"	.057"	1/64"	.189"
301950	75-628	2 nd Leaner	.070"	.070" to .0655"	.125"	.059"	1/64"	.189"
3901951	75-629	3 rd Leaner	.0705"	.0705" to .067"	.125"	.061"	1/64"	.189"

Metering Rod Setting (Both)

Use Gauge, part No. .J-1305 (2.280) inches.

Accelerating Pump (Both)

High pressure type (spring operated lever), with adjustable pump stroke. Discharge jets (twin) size #74 drill. Intake ball check, Size #40 drill. Discharge (needle seat), size #50 drill. Relief passage (to outside), through slots in air horn. 9/32" plunger travel (full throttle position) long stroke. Use gauge No. T-109-117S.

Pump Adjustment (Both)

Choke (6 Cylinder)
(8 Cylinder)

Set 1 point lean.

Set on index

Butterfly type, off set valve. Choke heat suction hole (in body), size 34 (.111") drill.

CARBURETOR (Cont'd)

Vacuum Spark Part (Both)
.040" above valve.

.039" to .041" diameter. Top of port .030" to

COOLING SYSTEM

Water Circulation	6-Vane Impeller Pump id
Water Pump Drive	Fan V Belt
Water Pump Output	30 G.P.M. at 50 M.P.H.
Water Pump Bearings	Two Sealed Ball Bearings
Lubrication	Pre-Lubricated
Fan Belt Adjustment	Generator Mounting
Fan Drive	Pump Shaft
Fan	4 Blade - 17"
Fan to Radiator Clearance	13/16"
Cooling System Capacity:	
6 - Cylinder	17 Quarts
8 - Cylinder	18 Quarts

ANTI-FREEZE CHART

Temperature	Ethylene Glycol (Prestone)			Methanol or Alcohol		
	U.S. Quarts	Imp. Quarts	Metric Liters	U.S. Quarts	Imp. Quarts	Metric Liters
+20°	3	2-1/2	2-3/4	3	2-1/2	2-3/4
+10°	4-1/2	3-3/4	4-1/4	4-3/4	4	4-1/2
0°	6	5	5-1/2	6	5	5-1/2
-10°	7	6	6-1/2	7-1/3	6	7
-20°	7-3/4	6-1/3	7-1/4	8-1/2	7	8
-30°	8	6-1/2	7-1/2	9-1/2	8	9

ELECTRICAL SYSTEM
GENERAL SPECIFICATIONS

BATTERY

Make	All Models
Voltage	National
Plates	6 Volt
Capacity in ampere hours	51
Size	120 Amp.
	W-7-1/8
	L-10-9/16
	H-9-1/16
Terminal Grounded	Positive

Field Draw Total, @ 6 Volts	1.60-1.78
Motorizing Draw, @ 6 Volts	4.85-5.40
(Field Terminal Grounded to Frame)	

VOLTAGE REGULATOR

Ground Polarity	Positive
Model	VRR-4001-A
Make	Auto-lite
Voltage Regulator Setting @ 10	
Amperes Rate	120°F. 7.18 to 7.63 Volt
Allowable Variation	± .15 Volts
Carbon Resistors on Base	
Total Resistance	30 Ohms
Armature Air Gap	.048 to .052
Contact Point Gap	.012 Minimum

STARTER MOTOR

Make	Auto-lite
Model	MCL-6006
Voltage	6 Volt
Poles	Four
Brushes	Four
Brush Spring Load	42-53 ozs.
Maximum End Play	.005 Minimum
Drive	Bendix

COIL

Make	Auto-lite
Model	CE-6006-A
Capacity	6 Volt
Amperage Draw	
	Engine Stopped 4.5
Engine Idling	2.5
0.40 volts	

STARTER SWITCH SOLENOID

Contacts Close	3-4 volts
Contacts Open	0.5-1.25 volts
Voltage Drop Per 100	Amperes

GENERATOR

Make	Auto-lite
Model	GEC-4801A
Type	Third brush set
Drive	Fan belt
Chg. Rate - Cold	43 amps @ 8 volts
Chg. Rate - Hot	37 amps @ 8 volts
Number of Brushes	Two
Number of Poles	Two
Ground Polarity	Positive
Rotation, Viewed Drive End	Clockwise
Current Control	3rd Brush
Voltage Control	Vibrating Regulator
Fuse	None
Bearing - Drive End	Ball
Commutator End	Absorbent Bronze
Clearance	.001-.0025

SPARK PLUGS

Make - 6 Cylinder	Champion 14 MM
- 8 Cylinder	Champion 14 MM
Type - 6 Cylinder	J-7 Cast Iron Head
- 8 Cylinder	J-7 Cast Iron Head
Type - 6 Cylinder	H-10 Aluminum Head
- 8 Cylinder	H-10 Aluminum Head
Gap - 6 Cylinder	.032
- 8 Cylinder	.032

HORNS

High Pitch	Short Horn
Low Pitch	Long Horn
High Pitch Diaphragm	.0195

ELECTRICAL

General Specifications (Cont'd)

(Generator)	(Horns)		
Bushing Bore - Installed	.626-.627	Low Pitch Diaphragm	.015
Armature End Play	.003-.010	High Pitch - Air Gap	.027 to .029
Brush Spring Load, Ounces	35 - 53	Low Pitch - Air Gap	.032 to .034

DISTRIBUTOR

Make	6 Cylinder	8 Cylinder
Model	Autolite	Autolite
Rotation	IGS-4213-1	IGT-4204-A-1
Drive	Clockwise	Clockwise
Advance Control	Oil Pump	Camshaft
	Full Automatic	Full Automatic

Automatic Advance Curve

(Stated in Distributor Degrees and R.P.M.)

Start	0° at 400 RPM	0° at 300 RPM
Intermediate	1° at 540 RPM	1° at 330 RPM
Intermediate	6° at 1200 RPM	3° at 400 RPM
Intermediate	11° at 1870 RPM	16° at 1570 RPM
Full Advance	12° at 2000 RPM	17.5° at 1700 RPM

Vacuum Advance

(Distributor Degrees and Inches of Mercury)

Start	0° at 9-1/2"	0° at 9-1/2"
Intermediate	1° at 10"	1° at 10"
Intermediate	4° at 11-1/2"	4° at 11-1/2"
Intermediate	7° at 13-1/4"	7° at 13-1/4"
Full Advance	8.5° at 14"	8° at 14"

Rotor Shaft Side Play	.005"	.005"
Rotor Shaft End Play	.003"-.010"	.003"-.010"
(Measured after distributor gear is assembled)		
Condenser Capacity	.20 to .25 microfads	.20 to .28 microfads
Bearings 2	Absorbent bronze	2 Absorbent bronze
Point Gap - Contacts aligned	.020	.017
Points Open	T.D.C.	T.D.C.
Breaker Arm Spring Tension	17-20 ounces	17 ounces
Cam Dwell Angle	3801100000000018°	27°
Timing Mark Location	At Flywheel	At Flywheel
Flywheel Teeth	134	134
Firing Order	153624	16258374

LIGHT BULBS - 6 VOLT

	No.	C.P.	Base
Headlight (Sealed Beam Type)	4030	Sealed	Sealed
Bonnet Light	55	2	Single
Parking Light with Direction Indicator	1154	21-3	Double
Tail and Stop Light	1154	21-3	Double
License Light	63	3	Single
Dome Light - Front	87	15	Single

ELECTRICAL

General Specifications (Continued)

Light Bulbs

Rear Quarter Lights (2)		81	6 Single
Clock	55	2	Single
Speedometer	55	2	Single
Instrument Cluster	55	2	Single
Direction Indicator	55	2	Single
Radio	55	2	Single
Headlight Beam Indicator	55	2	Single
Ignition Lock	55	2	Single
Courtesy Light	87	15	Single
Fog Light - Sealed Beam	4016A	Sealed	Sealed
Spot Light - Sealed Beam	4535	Sealed	Sealed
Parking Light	63	3	Single
Generator and Oil Indicator	55	2	Single

CLUTCH

Plate diameter	10"	Pedal to Floorboard Clearance	1-1/2"
Type	Single Plate in oil		
Fluid Used	Hudsonite Compound	Engaging Spring Tension lbs.	
Plate Facing	Cork Inserts		
Number of Corks	108	Inner (3) @ 1-5/8	135-145
Pilot Bearing	Ball	Outer (12) @ 1-5/8	180-190
Throwout Bearing	Ball		
Number of Engaging Fingers	3	Clutch Tightening Torque Ft. Lbs.	
Location Lubricating Plug	Front of		
	Flywheel	Throwout Finger Retainer Nuts	40-45
Throwout Bearing Lubricant	Viscous	Cover Cap Screws	20-25
	Chassis lube	Cover Driving Lug Nuts	40-45
Fitting Location	Right Side Clutch	Clutch Housing Cap Screws	40-45
	Housing	Flywheel Bolt Nuts	20-25

TRANSMISSION

GEAR RATIO

All Series Without Drive-Master		All Series With Drive-Master	
2.61 to 1	Low	2.88 to 1	
1.65 to 1	Second	1.82 to 1	
1 to 1	High	1 to 1	
3.17 to 1	Reverse	3.5 to 1	

BEARINGS AND BUSHINGS

Main Drive Gear	Ball
Mainshaft Pilot	Needle Roller
Mainshaft Rear	Ball
Reverse Idler Gear	Steel Back Tin Base
Countershaft Gear	Steel Back Tin Base

TEETH

Countershaft Gear Cluster

2.61 to 1 Ratio	
C/S Drive	25 teeth
C/S Intermediate	21 teeth
C/S Low	17 teeth
C/S Reverse	14 teeth

Countershaft Gear Cluster

	Ratio
2.88 to 1 Ratio	
C/S Drive	26 teeth
CIS Intermediate	21 teeth
C/S Low	17 teeth
CIS Reverse	14 teeth

Main Drive Gear

2.61 to 1 Ratio	18 teeth
2.88 to 1 Ratio	17 teeth

Mainshaft -Intermediate

Helical	25 teeth
Clutch	30 teeth

Mainshaft - Low and Reverse

External	32 teeth
Spline Internal	24 teeth

END PLAY

Countershaft	.006" to .016"
Mainshaft Intermediate Gear & Synchronizer	.003" to .016"

SPEEDOMETER DRIVE GEAR

	Axle Ratio	Tire Sizes	Teeth
Less Overdrive	4-1/10	7.10-15	10
	4-1/10	7.60-15	11
	4-5/9	All	11
With Overdrive	All	All	11

SPEEDOMETER PINIONS

Axle Sizes	Tire Teeth	
4-1/10	7.10-15	15
4-1/10	7.60-15	16
4-5/9	7.10-15	18
4-5/9	7.60-15	18

SPEEDOMETER CABLE

Without Overdrive	58"
With Overdrive	64"

LUBRICATION

Capacity of transmission is 2-1/4 pints or pounds if disassembled and parts washed.
Capacity of transmission is 2 pints or pounds if drained and refilled. S.A.E. 90 E.P. Summer.
S.A.E. 80 E.P. Winter.

REAR AXLE

TYPE	Semi-Floating	WHEEL BEARINGS:	
GEAR TYPE	Hypoid Helical Bevel	Type	Taper Roller
RATIO		Adjustment	Shim
4-1/10	Standard	End Play	.001" to .004"
4-5/9	Optional		
PINION BEARINGS: 2		AXLE DRIVE SHAFT LENGTH	(including thrust button) 28.146"
Type	Taper Roller	RING GEAR AND PINION - (Matched Sets)	(Ratio stamped on outside of differential carrier and cap assembly at right hand side at bolt circle.)
Adjustment Shim			
End Play	Resistance Torque 17 to 32 inch. lbs.	Adjustment	Shims and Adjusting Nuts
DIFFERENTIAL BEARINGS: 2	Gear Lash .004" to .006"		
Type	Taper Roller	LUBRICATION:	Hypoid - Extreme pressure (E.P.) S.A.E. #90
Adjustment	Adjusting Nut .008" to .01200		Summer and Winter Capacity 3-1/2 pints
	Tension between Bearings		

FRONT SUSPENSION

Curb height (Front)	4-1/4"	Wheel Bearing Type	Taper Roller
(Rear)	5-1/4"	Wheel Bearing End Play	.001" to .003"
Caster	1/2° to 1 1/2°	Tie Rod End Type	Plain Bearing
Camber	1/2° to 1 1/2°	Tie Rod Adjustment	
Maximum variation between right And left wheel caster or camber	1/2°	To Increase-Turn counter clockwise	
Toe-In measured at wheel rim	0-1/16"	To Decrease-Turn clockwise	
Pivot Pin Inclination	3°36"	Steering center arm bolt nut – Tighten to 70# torque	
Toe-out variation between wheels	30"	Steering arm nut – tighten to #110 to 120# torque	
Spindle Pivot Pin Thrust Bearing	Ball		

BRAKES

Type	4 Wheel Bendix Hydraulic
Drum Diameter	11"
Material	Centrifuse
Lining Type	Moulded
Width	Front – 2-1/4"
Width	Rear – 1-3/4"
Length per wheel	20.87"
Length primary shoe	Front 11"
Length primary shoe	Rear 11"
Length Secondary Shoe	Front 11 "
Length Secondary Shoe	Rear 11-1/16"
Braking Area.	Total 158.7 square inches

BRAKES
(Continued)

Adjustments	
Anchor pin	Radially
Front & Rear Shoe	Screw
Clearance	
Both ends of shoe	.010"
Mechanical follow-up	1-1/4"
Pedal to floor board clearance (free play)	1/4"

MISCELLEANOUS

Piston, Cylinder, Ring Sizes
Piston Size Code Key

NOTE: Ring Oversizes Apply Only To Production Type Rings

6 Cylinder					8 Cylinder				
Cylinder Size	Code	Piston Code	Piston Size	Piston Ring Size	Cylinder Size	Code	Piston Code	Piston Size	Piston Ring Size
3.5625	B	B	3.560	3.5625	3.000	A	A	2.998	3.000
3.563	C	C	3.5605	3.5625	3.0005	B	B	2.9985	3.000
3.5635	D	D	3.561	3.5625	3.001	C	C	2.999	3.000
3.564	E	E	3.5615		3.0015	D	D	2.9995	3.000
3.5645	F	F	3.562	3.565	3.002	E	E	3.000	3.000
		J	3.564	3.5675	3.0025		F	3.0005	3.000
		L	3.565	3.5675	3.0045		J	3.0025	3.003
		P	3.567	3.572	3.0055		L	3.0035	3.005
3.572	AO	AO	3.5695	3.572	3.0075		P	3.0055	3.005
3.5725	BO	BO	3.570	3.572	3.010	AO	AO	3.008	3.010
3.573	CO	CO	3.5705		3.0105	BO	BO	3.0085	3.010
3.5735	DO	DO	3.571	3.572	3.011	CO	CO	3.009	3.010
3.574	EO	EO	3.5715	3.577	3.0115	DO	DO	3.0095	3.010
3.5745	FO	FO	3.572	3.577	3.012	EO	EO	3.010	3.010
		LO	3.575	3.577	3.0125	FO		3.0105	3.010
3.5825	BB	BB	3.580	3.5825	3.0145		JO	3.0125	3.015
3.5835	DD	DD	3.581	3.5825	3.0175		PO	3.0155	3.015
3.5845	FF	FF	3.582	3.5825	3.0155		LO	3.0135	3.015
					3.0205		BB	3.0185	3.020
					3.0215		DD	3.0195	3.020
					3.0225		FF	3.0205	3.020
					3.0305		BOOO	3.0285	3.030
					3.032		E000	3.030	3.030

Capacities

	<u>6 Cyl.</u>	<u>8 Cyl.</u>
Engine Oil - Dry		
U.S. Quarts	7-1/2	9
Imperial Quarts	6-1/2	7-1/2
Engine Oil-Refill		
U. S. Quarts	7	7
Imperial Quarts	6	6
Clutch		
U. S. Pint	1/3	1/3
Imperial Pint	1/4	1/4
Transmission		
U.S. Lbs.	2	2
Imperial Lbs.	2	2
Transmission & Overdrive		
U.S. Lbs.	3-1/4	3-1/4
Imperial Lbs.	3-1/4	3-1/4
Rear Axle		
U.S. Lbs.	3-1/2	3-1/2
Imperial Lbs.	3	3

WHEELS AND TIRES

Tire Size	
7:10 x 15:00 - 4 Ply	Standard
7:60 x 15:00 - 4 Ply	Optional
Wheel Size	
5:00 x 15:00	Standard
5:50 x 15:00	Optional
Inflation Pressure	
Front and Rear	24 Pounds

Intake & Exhaust Valve Clearances

Intake (Hot)	.008"	.006"
Exhaust (Hot)	.010"	.010"

Distributor Points

Points Setting	.020"	.017"
Dwell Angle	38°	27°

SPRINGS

Front		Rear		
Type	Coil	Type	Light Scale	Semi-Elliptic
Light Scale	All Models		Load Weight	All Models
Load at Passenger Height	2080		Rate	875
Rate	386		Length and Width	120
Height at Passenger Load	9-9/16"		Number of Leaves Including	54" – 1-3/4"
Free Height	15-1/16"		Rebound Leaf	8
		Heavy Scale		Optional
Heavy Scale	Optional All Models	Load Weight		975
Load at Passenger Height	2080	Rate		140
Rate	450	Length and Width		54" – 1-3/4"
Height at Passenger Load	9-9/16"	Number of Leaves Including		
Free Height	14-5/16"	Rebound Leaf		8
		Covers		Metal
		Shackles		Silent "U"
				Threaded
		Spring Eye Dimension		870
		Spring Load Markings and Part Number		
		Head of Center Bolt		

Identification of the coil springs may be determined by part numbers stamped on top coil.

SHOCK ABSORBERS

Part Number	Mfr	Code	Compressed Length	Extended Length
Front – Light Scale				
300350	Monroe	1-8-10-(4)-10-10-HI	7-3/4"	12"
301240	Delco	22-1-10-(4)-10-10	7-3/4"	12"
Front – Heavy Scale				
301767	Monroe	0-10-10-10-(4)-10-10-10-1-5		
301769	Delco	0-10-10-(4)-10-10-HI		
Front – Extra Heavy Scale				
301637	Delco	934-E-IC6/D-2	7-13/16"	11-15/16"
Rear - Light Scale				
300351	Monroe	4-10-10-(4)-10-10-C2	13-13/16"	21-15/16"
301241	Delco		13-13/16"	21-15/16"
Rear - Heavy Scale				
301768	Monroe	2-10-10-10-(4)-10-10-10-C2		
301770	Delco	2-10-10-10-(4)-10-10-10-C2		
Rear - Extra Heavy Scale				
301638	Delco	941Y-2B6-J1	13-11/32"	21-13/16"

Shock Absorbers (Cont'd)

Usage – (Front)

Light Scale – Part numbers 300350 Monroe and 301240 Delco use on models 481P-482-483-484. Less Heavy scale springs – Front and Rear 481CM. Less heavy scale front springs.

Heavy Scale – Part numbers 301767 Monroe and 301760 Delco used on models 481CM, Except Station Wagon with Heavy Scale Front Springs. 481P-48 2-483-484 with Heavy Scale Springs Front and Rear.

Extra Heavy Scale – Part numbers 301637 Delco Optional Model 481CM, Except Station Wagon Optional. 481CM Station Wagon.

Usage (Rear)

Light Scale --Part numbers 300351 Monroe and 301241 Delco used on Models 481-P-482-483-484 Less Heavy Scale Springs -- Front and Rear, and Rear Only.

Heavy Scale--Part numbers 301768 Monroe and 301770 Delco 481 CM Station Wagon, 481-P-482483-484 With Heavy Scale Springs - Front and Rear and Rear Only.

Extra Heavy Scale --Part numbers 301638 Delco optional Model 481 CM Station Wagon. Optional 481P-482-483-484