

Mechanical Specifications for Hudson Super Six Model 1927.
 Car Serial Nos. 750,001 to -----; (Revised March 1927.)

Engine

Make	Hudson	Piston Displacement	288
Model	Super Six	Suspension	4 Point
No. of Cylinders	6	Type of Head	F
Cylinder Arrangement	Vertical	Cylinder Head	Detachable
Bore	3½	Cylinders Cast	En Bloc
Stroke	5"	Crankcase	Separate
Rated H. P.	29.4	Upper half	Aluminum
Firing Order	1-5-3-6-2-4	Lower Half	Pressed Steel

Camshaft Drive

Type of drive	Chain	No. of Links	63
Make	Morse	Pitch	½"
Type	No. 28	Adjustment	Adjust. Eccentric
Width of chain	1-5/8"	Sprocket Material	Cast Iron
Camshaft Sprocket	42 teeth		

Camshaft Bearings

Number of bearings	4		
No. 1 (Frt.) diameter	2-19/32"	No. 3 diameter	2-5/16"
" " length	1-5/8"	" " length	1-1/16"
No. 2 diameter	2-11/32"	No. 4 diameter	1-1/2"
" " length	1-1/16"	" " length	1-3/4"

Valve Timing

Inlet opens	7 degrees after TDC	Exhaust opens	55 degrees before BDC
" closes	42 degrees " BDC	" closes	8 degrees after TDC

Valves

	<u>Inlet Valve</u>	<u>Exhaust Valve</u>
Head Material	Tungsten steel	Silicon Steel
Head diameter (outside)	1-31/32"	1-31/32"
“ “ (opening)	1-3/4"	
Stem length	5-29/32"	6-15/16"
“ diameter	.371	.371
“ type of end	Grooved	Grooved
Tappet (type)	Roller	Roller
“ clearance	.004 - .006"	.006 - .008"
Valve lift	9/32"	19/64"
“ stem guides	Removable	Removable
Spring pressure	96 lbs.	75 lbs.

Crankcase and Crankshaft

No. of main bearings	4	Crankpin Diameter	2¼"
No. 1 (Front) Diameter	2-1/4"	Main Bearing. Material	Bronze and Babied
“ Length	2-3/8"	“ “ end play	.008 - .012
No. 2 Diameter	2-9/32"	“ “ clearance	.0015 - .002
“ Length	1-7/8"	End thrust on	Rear center bearing
No. 3 Diameter	2-5/16"	Sprocket	21 teeth
“ Length	2-1/8"	Material	Steel
No. 4 Diameter	2-11/32"		
“ Length	3-1/8"		

Connecting Rod

Material	D. F. Steel	Lower end bearing clearance	.0015 - .002
Weight	3-1/2 lbs.	Length	2"
Length C. to C.	11.325	Clearance (endwise)	.006 - .010
Lower end bearing		Type	Separate
Diameter	2.25"	Material	Bronze & Babied

Piston

Type	Slotted Skirt	Distance between bosses	1-3/8"
Material	Aluminum alloy	Skirt clearance	.0045
Weight	16 ounces	Depth of grooves	.164
Length	4-1/16"	Lower groove	Not drilled
Pin center to top	2-1/4"		

Piston Rings

Material	Cast iron	No. of rings above pin	3
No. per piston	3	Type of joint	Miter
Width	1/8"	Gap clearance	.006 - .008
No. of compression rings	2		
No. of oil control rings	1		

Piston Pin

Type	Floating	Bushing. Outside diameter	1.283
Diameter	1.0937	“ Inside “	1.0937
Length	2-11/16”	“ Length	1-1/8”

Lubricating System

Type	Circulating Splash
Oil Pump Type	Plunger
Stroke of pump-plunger idling	Min. 3/16”
“ “ “ “ high speed	Max. 5/16”
Capacity - oil reservoir only	7 Quarts
“ “ “ and troughs	9 “
Mesh of screen	50
Oil recommended	Medium heavy - use low cold test in winter

Fuel System

Carburetor - make	Marvel B-10-661
“ size	1-1/4
Fuel feed - type	Vacuum tank
Make of vacuum tank	Stewart
Air Cleaner - Type	A. C.
Gasoline tank capacity	18-3/4 gallons
Method of heating mixture	Hot spot

Exhaust System

Muffler make - Hudson	Exhaust pipe diameter - 2-1/4”
-----------------------	--------------------------------

Ignition System

Make	Auto-Lite Corporation
Current source	Battery and Generator
Spark control type	Semiautomatic
Firing order	1-5-3-6-2-4
Timing	10 degrees before D. C. fully advanced
Breaker point gap	.020
Ignition coil - make	Auto-Lite Corp. - CE-4001
Spark plug - Make	A. C. Titan
“ “ - Type	Short
“ “ - Size	Metric 18 MM
“ “ - Gap	.025 - .028

Note: Any other information must be obtained from the manufacturer.

Starter Motor

Make - Auto-Lite Corporation MUA-4002
Drive type Manual - sliding gear
No. of teeth on flywheel 118
Width of tooth face 3/4"
Pinion Meshes from Front of flywheel

Note: Any other information must be obtained from the Manufacturer.

Generator

Make - Auto-Lite Corporation GAB-4001
Normal charging rate - hot 13 amperes
" " " - cold 17 "

Note: Any other information must be obtained from the Manufacturer.

Battery

Make	Prest-O-Lite	Terminal grounded Negative	
Type	6-15-J.F.K.H.	Length - overall	10-1/4"
Voltage	6	Width - "	7-3/8"
No. of plates	15	Height of box	8" (Incl handle 9-1/4")
Amp. Hours capacity	120	" over terminal	8-1/4"

Lighting System

Head, side and tail lamps - Make	John Brown Lamp Co.
" " Reflector - Make	" " " "
" and Side Lamp type	Bullet
Headlamp lens - Make	Spreadlight
" " diameter	9"
" " Dimmer method	Resistance
Dash and tail lights connected	Separate
Ammeter - Make	National Gauge and Equip. Co.
Lighting switch - Make	Auto-Lite Corporation

Lamp Bulb Specifications

	<u>Make</u>	<u>Mazda No.</u>	<u>CP</u>	<u>Contact</u>	<u>Voltage</u>
Headlight	Mazda	1129	21	Single	6-8
Side	"	63	3	"	6-8
Tail	"	63	3	"	6-8
Dash	"	63	3	"	6-8
Stop	"	87	15	"	6-8
Dome	"	63	3	"	6-8

Horn

E. A. Horn Motor Type

Chassis

Wheelbase	127-3/8"
Lubricating System	Oil cup - wick
Overall length with bumper	15' 8"
Location of Serial Number	Frame rear cross member R.H. end

Transmission

Make	Hudson	Pocket bearing	Bronze Bushing
Location	Unit	Reverse Idler	Hyatt No. 16820
Speeds	3 fwd, 1 rev	Main Shaft - front	New Departure 1308
Gear Ratio - Low	3.04 to 1	“ “ - rear	Hyatt No. 16684
Gear Ratio - Second	1.81 to 1	Countershaft - front	Hyatt No. 16506
Gear Ratio - High	1 to 1	Countershaft - rear	Hyatt No. 16506
Gear Ratio - Reverse	3.69 to 1	“ - Rotates	
Type of lubricant		Light transmission oil	
Oil capacity (approx.)		1-1/2 quarts	
Pilot bearing in crankshaft		New Departure No. 1204	

Clutch

Make	Hudson	Facing Material	Cork inserts
Type	Single disk in oil	Throwout bearing	Nice No. 0210
No. of Cork inserts	132	Throwout	5/32"
Lubrication	1/4 pint	Clearance at floor board	3/4"
(Mixture 1/8 pint motor oil and 1/8 pint kerosene)			

Universals

Front - Make	Spicer	Rear - Make	Spicer
“ - Type	Metal	“ - Type	Metal

Type of Drive

Propulsion through Rear springs.

Rear Axle

Make	Hudson	No. of teeth in pinion	11
Type	Semi-floating	“ “ “ “ gear	49
Gear ratio	4-5/11 to 1		
Type of drive	Spiral bevel	Pinion	Adjustable
Min. road clearance	8-1/4"	Pinion bearing	Adjustable
Clearance for jack	10-1/4"	Oil capacity (approx.)	2-1/2 quarts
Differential - Make	Hudson	Type of lubricant	Differential Oil
Pinon bearing	Front	Timken 3196 and 3120	
“ “	Rear	Timken 439T and 432	
Differential bearing	Right	“ 377 and 3720	
“ “	Left	“ 377 and 3720	

Front Axle

Make	Hudson	Toe in - None, or not over 1/8"	
Section type	I	Castor Angle	1 degrees. backward
End - Type	Rev. Elliot	Min. Road Clearance	8-1/4"
King pin thrust bearing	Special Thrust	Clearance for jack	8-3/4"
King pin transverse inclination			6-1/2 degrees.
Spindle	" "		2-1/2 degrees.

Standard Brakes

Type of standard brake	Bendix 4-Wheel brakes
------------------------	-----------------------

Service Brake

Location	Front & Rear Wheels	Lining length per wheel	3 pieces 38-7/32"
Make	Bendix	Width of lining	2"
Type	Internal	Thickness of lining	3/16"
Total braking area	305-3/4 square inches	Clearance of lining	.010
Drum diameter	Front and Rear 14"	Method of Application	Foot pedal

Hand Brake

The hand lever operates the rear wheel brakes independently of the foot pedal, and should be used for parking, especially when the car is standing on an incline.

Wheels

Type	Wood-Steel Felloe
Make	Motor Wheel Corp.
Front wheel inner bearing	Timken No. 415 and 412A
" " outer "	" " 315 and 312

Rims

Type	Split	Diameter	19"
Make	Firestone	Width	4-1/2"

Tires

Size	31 x 6 - Balloon Straight Side
Make	Goodyear and U. S.
Number of plies	4
" " "	6 on rear of Brougham, 5-Pass. Sedan (Custom) and 7-Pass. Sedan
Recommended pressure	Front 35 lbs., Rear 38 lbs.

Steering Gear

Make	Gemmer
Type	Worm and roller disc
Ratio	18 to 1
Steering wheel turns	2-1/2 (full swing left to right)
Turning diameter	Right 41', Left 39'
Lubricant	Heavy Bodied Gear Oil

Springs

Front Spring

Type	Semi-Elliptic
Length	39"
Width	2-1/4"
No. of leaves	10
Material	Spring Steel
Front Bushing	11/16" diameter
Rear Bushing	11/16" diameter
Bushing material	Phosphor Bronze
Spring Lubrication	Motor Oil
Shackles - Type	Adjustable

Rear Spring

Type	Semi-elliptic
Length	57-11/16"
Width	2-1/4"
No. of leaves (for Phaeton, Coach, Brougham, 5 and 7 Pass. Sedans	15
Material	Vanadium Steel
Front Bushing	3/4" diameter
Rear Bushing	11/16" diameter
Bushing Material	Phosphor Bronze

Frame

Make	Hudson	Depth	7"
Material	Steel	Thickness	3/16"
		Width of Flange	2-1/4"

1927 Hudson Super-Six
 Car Serial #750,001 to -----
 Gear Ratios and rules for comparing

TO OBTAIN MOTOR RPM FOR ANY DESIRED SPEED IN MILES PER HOUR:

Note: The following rule #1 is good only for a gear ratio of 4-5/11 to 1 and with a wheel diameter of 31 inches.

Rule #1: MPH Multiplied by 48 = Motor RPM (approximately)

Example: What is the RPM at 40 miles per hour?

Answer: 40 multiplied by 48 = 1920 RPM (approx.)

Rule #2: MPH multiplied by 44 = Motor RPM (approx.)

TO OBTAIN SPEED IN MILES PER HOUR FOR ANY DESIRED MOTOR RPM:

Note: The following rule #3 is good only for a gear ratio of 4-5/11 to 1 and with a wheel diameter of 31 inches.

Rule #3: RPM divided by 48 = Speed in miles per hour (approx.)

Example: What is the speed at 2400 RPM?

Answer: 2400 divided by 48 = 50 MPH (approx.)

Note: The following rule #4 is good only for a gear ratio of 4-1/12 to 1 and with a wheel diameter of 31 inches.

Rule #4: RPM divided by 44 = Speed in miles per hour (approx.)

GEAR RATIO

To obtain the number of revolutions of the motor required for one revolution of the rear wheel, multiply the transmission ratio by the rear axle ratio.

Example: 3.04 (low gear ratio) x 4.45 (rear axle ratio) = 13.528 revolutions of the motor to one revolution of the rear wheel.

The following list shows the various motor to wheel ratios worked out as above for Super-Six cars:

	Trans. Ratio	Rear Axle Ratio	Motor Revs.	Wheel Revs.
With transmission in Low	3.04	4.45	13.528	1
“ “ “ Second	1.81	4.45	8.05	1
“ “ “ High	1.	4.45	4.45	1
“ “ “ Reverse	3.69	4.45	16.420	1

1927 Hudson Super-Six Standard Equipment
 Car Serial No. 750,001 to -----

	<u>Phaeton</u>	<u>Coach</u>	<u>Brougham</u>	<u>Std 5-Pass. Sedan</u>	<u>Custom 5-Pass. Sedan</u>	<u>7-Pass. Sedan</u>
W/S Cleaner - Make	No.	Trico	Trico	Trico	Trico	Trico
W/S Cleaner - Type	-	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum
Trunk Rack	No	Yes	Yes	No	No	No
Cowl Ventilator	- All Models					
Engine Heat Indicator	- Boyce Motometer (All Models)					
Gasoline gage location	- Instrument board (All Models)					
Gasoline gage type	- King-Seeley Hydrostatc (All Models)					
Wheels - Type	- Wood (All Models)					
Sun Visor	No	Yes	Yes	Yes	Yes	Yes
Radiator Shutters	- (All Models)					
Rear Traffic Signal	- (All Models)					
Comb. Tail/Stop Light	- John Brown Lamp Company (All Models)					
Cowl Lights	- (All Models)					
Rear Vision Mirror	No	Yes	Yes	Yes	Yes	Yes
Transmission Lock	- (All Models)					
Speedometer - Make	- Stewart-Warner (All Models)					
Spare Rim	- One (All Models)					
Horn - Make	- E. A. (All Models)					
Headlamps - Make	- John Brown Lamp Company (All Models)					
Tire Carrier - Make	- Hudson (All Models)					

Hudson Super-Six Body Details
 Car Serial No. 750,001 to -----
 (Rev. March 1927)

	Phaeton	Coach	Brougham	Std 5-Pass. Sedan	Custom 5-Pass. Sedan	7-Pass. Sedan
Model -	1927					
Wheelbase	- 127-3/8" (All Models)					
Weight		3505	3660	3620	3755	3870
No. of Doors	4	2	4	4	4	4
No. of Passengers	7	5	4	5	5	7
Seat Arrangement	Std	Folding Type	Std.	Std.	Std.	Std.
Gear Ratio	- 4-5/11 (All Models)					
Make of Body	Biddle & Smart	Briggs	Biddle & Smart	Briggs	Biddle & Smart	Biddle & Smart
Frame Work Material	Wood	Steel	Wood	Steel	Wood	Wood
Body Panel Material	Alum.	Steel	Alum.	Steel	Alum.	Alum.
Wheels - Type	- Wood (All Models)					
Tire Size	- 31 x 6 (All Models)					
Tire type - Front	- 4 ply (All Models)					
Tire type - Rear	4 ply	4 ply	4 ply	4 ply	6 ply	6 ply
Smoking Set	No	No	Yes	No	Yes	Yes