

# *Hudson*

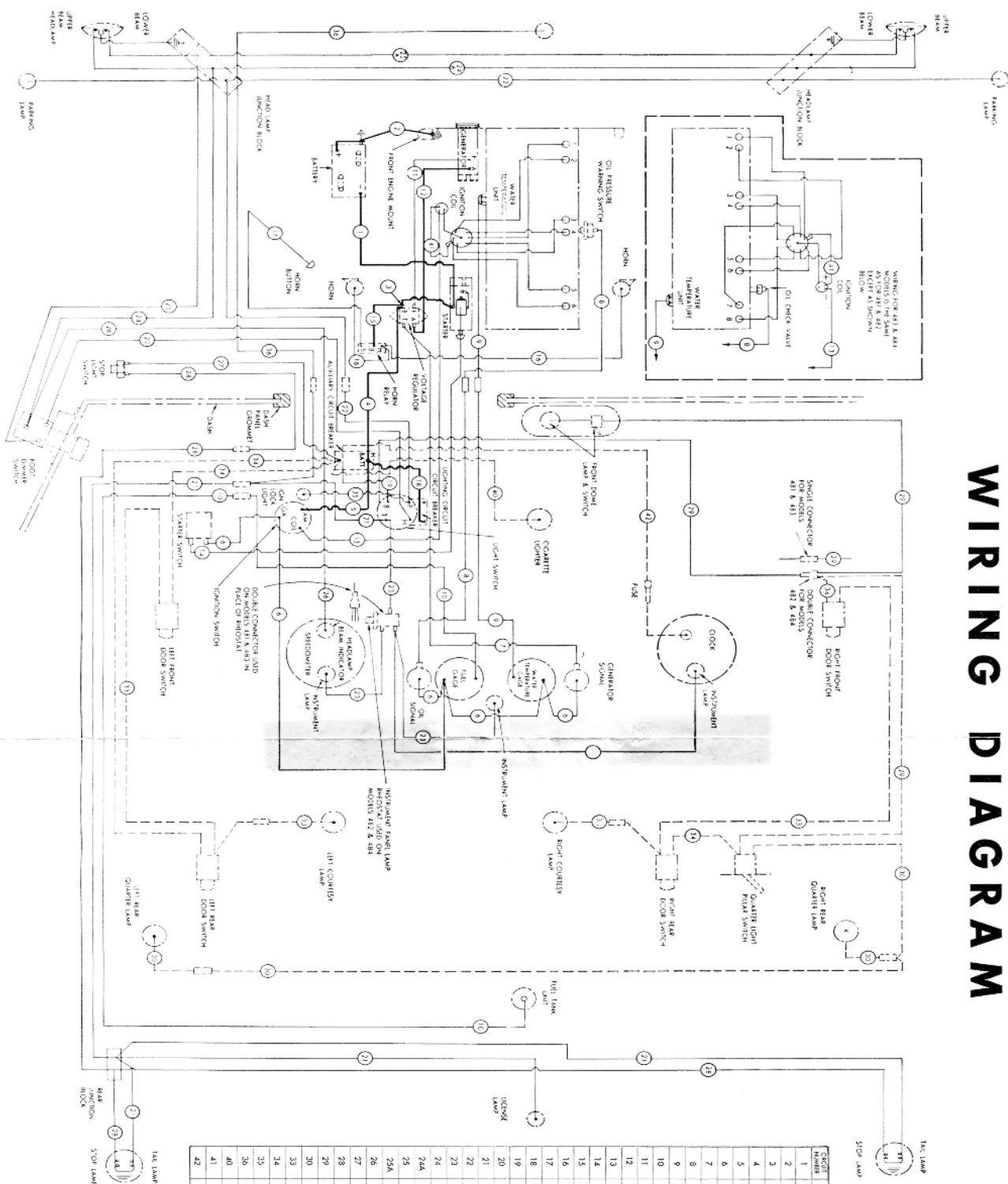


## OWNER MANUAL

**HUDSON MOTOR CAR COMPANY**

DETROIT 14, MICH., U.S.A.

# WIRING DIAGRAM

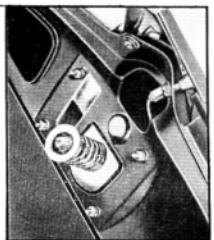


NO.	WIRE NO.	COLOR	CIRCUIT NAME
1	1	BLACK	BATTERY TO STARTER SOLINOID CABLE
2	1	BLACK	BATTERY TO STARTER SOLINOID CABLE
3	10	BLACK	STARTER SOL. TO CHARGE REG. "A" TERM.
4	10	BLACK	MAIN CIRCUIT BREAKER FEED
5	14	BLACK	IGNITION SWITCH FEED
6	16	BLACK & RED	SIGNAL LAMP, GAGES, AND STARTER SW. FEED
7	16	GREEN	GENERATOR SIGNAL
8	16	BLACK	OIL PRESSURE SIGNAL
9	16	CRANOE	WATER TEMPERATURE GAGE
10	16	BROWN	FUEL GAGE
11	16	WHITE	GEN. "P" TO CHARGE REG. "F" TERM.
12	12	BLACK	GEN. "A" TERM. TO CHARGE REG. "A" TERM.
13	14	BLACK	IGNITION SWITCH TO COIL
14	16	BLACK	STARTER SWITCH TO STARTER SOL.
15	12	WHITE	HORN RELAY FEED
16	12	YELLOW	HORN FEED
17	14	BLACK	HORN BUTTON WIRE
18	12	BLACK	LIGHT SWITCH FEED
19	14	WHITE	LIGHT SWITCH FEED (RED)
20	12	YELLOW	FOOT BRAKE SWITCH FEED
21	16	RED	TAIL AND LICENSE LAMP
22	16	WHITE	PARKING LAMP
23	16	RED	INSTRUMENT PANEL LAMP
24	12	GREEN	HEADLAMP FEED, UPPER BEAM
25	14	RED	HEADLAMP FEED, LOWER BEAM
26	16	BLUE	HEADLAMP BEAM INDICATOR
27	16	GREEN	STOP LIGHT SW. FEED
28	16	GREEN	STOP LAMP
29	16	WHITE	DOWN AND QUARTER LIGHT SW. FEED
30	16	BLACK	QUARTER LAMP
31	16	BLACK	COURTESY LAMP
32	16	WHITE	COURTESY LIGHT SW. FEED
33	16	WHITE	IGNITION SW. LAMP
34	16	WHITE	HOOD LAMP
35	16	RED	IGNITION COIL "P" TO DIST. (PRIMARY)
36	16	RED	IGNITION COIL "P" TO DIST. (PRIMARY)
37	16	GREEN	CLOCK WIRE (FURNISHED WITH CLOCK)
38	16	BLACK	CLOCK WIRE (FURNISHED WITH CLOCK)
39	16	BLACK	CLOCK WIRE (FURNISHED WITH CLOCK)
40	16	BLACK	CLOCK WIRE (FURNISHED WITH CLOCK)
41	16	BLACK	CLOCK WIRE (FURNISHED WITH CLOCK)
42	16	BLACK	CLOCK WIRE (FURNISHED WITH CLOCK)

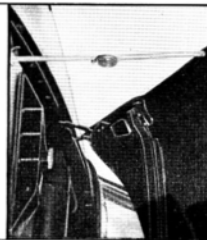
ALL WIRING  
482 AND 484 ONLY  
OUTLINE OF PARTS



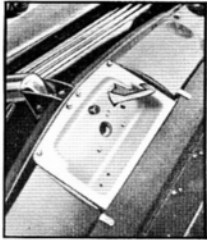
# Hudson Lubrication



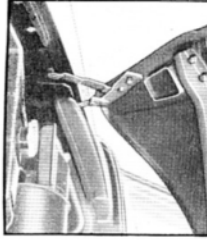
**HOOD LOCK—UPPER**  
WATER RESISTANT GREASE ON DOVE-TAIL AND LIFT SPRING.  
1 POINT.



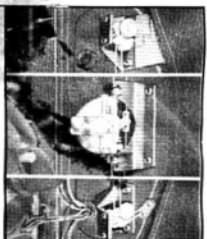
**HOOD PROP**  
WATER RESISTANT GREASE ON SPRING, ENGINE OIL ON PROP ARM ATTACHING BOLTS.  
3 POINTS EACH SIDE.



**HOOD LOCK—LOWER**  
WATER RESISTANT GREASE ON LOCK CATCH AND CONTROL WIRE, ENGINE OIL ON SAFETY HOOK HINGE PIN.  
3 POINTS.



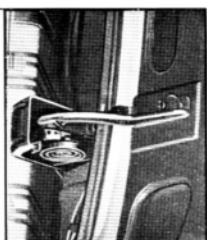
**HOOD HINGE**  
ENGINE OIL ON HINGE LINK PIVOT PINS.  
4 POINTS EACH SIDE.



**WINDSHIELD WIPER PULLEYS, CABLES AND CABLE PIVOTS**  
LIGHT OIL ON WIPER MOTOR PIVOT AND PULLEY BEARINGS, WATER RESISTANT GREASE ON CABLE PIVOTS.  
3 POINTS EACH SIDE.



**COURTESY LIGHT SWITCH**  
WATER RESISTANT GREASE ON SWITCH PLUNGER.  
1 POINT EACH DOOR.



**REAR COMPARTMENT DOOR HINGE**  
WATER RESISTANT GREASE ON HINGE PIVOT PIN AND SPRING.  
2 POINTS EACH SIDE.



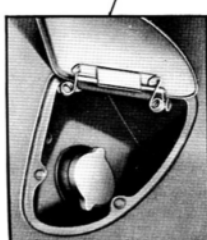
**REAR COMPARTMENT DOOR LATCH CLAMPING LEVER**  
WATER RESISTANT GREASE ON CLAMPING LEVER, ENGINE OIL ON LATCH LINK AND PIVOT PIN.  
3 POINTS EACH SIDE.



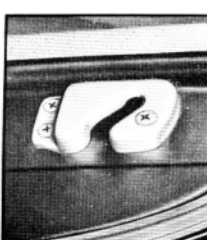
**REAR COMPARTMENT DOOR LATCH OPERATING LEVER**  
ENGINE OIL ON EACH END OF LATCH ROD.  
2 POINTS.



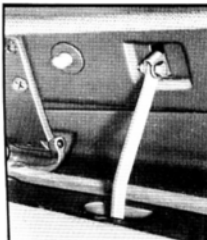
**REAR COMPARTMENT DOOR STRIKER**  
ENGINE OIL ON STRIKER HINGE PIN AND SPRING.  
2 POINTS EACH SIDE.



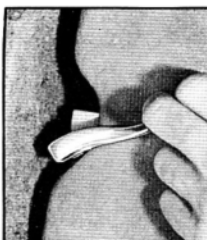
**FUEL TANK FILLER DOOR**  
LIGHT ENGINE OIL ON HINGE PIN.  
3 POINTS.



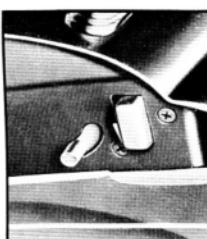
**DOOR STRIKER**  
WATER RESISTANT GREASE ON TOP SURFACE AND IN LOCK BOLT GROOVE.  
1 POINT EACH DOOR.



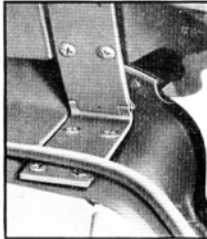
**DOOR CHECK ARM**  
WATER RESISTANT GREASE ON ARM AND PIVOT.  
2 POINTS EACH DOOR.



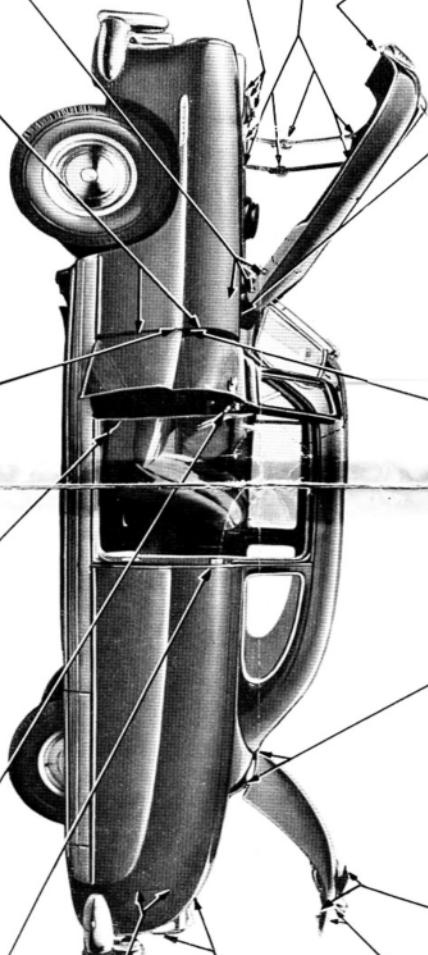
**SEAT ADJUSTER**  
WATER RESISTANT GREASE ON SEAT TRACKS, ENGINE OIL ON BEARING POINTS, TIE RODS AND LATCHES.

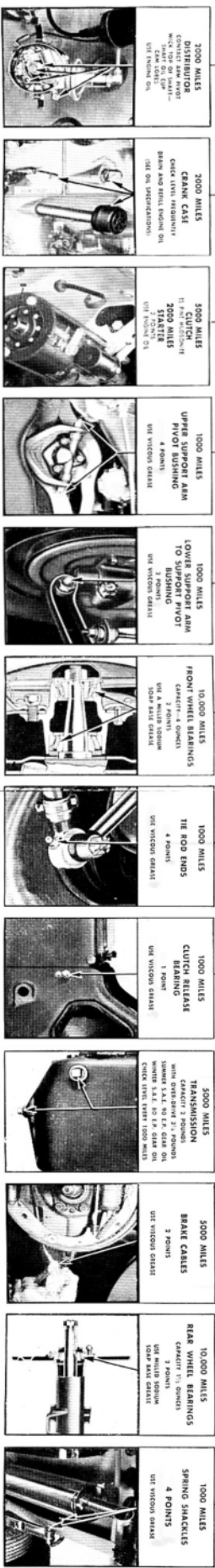
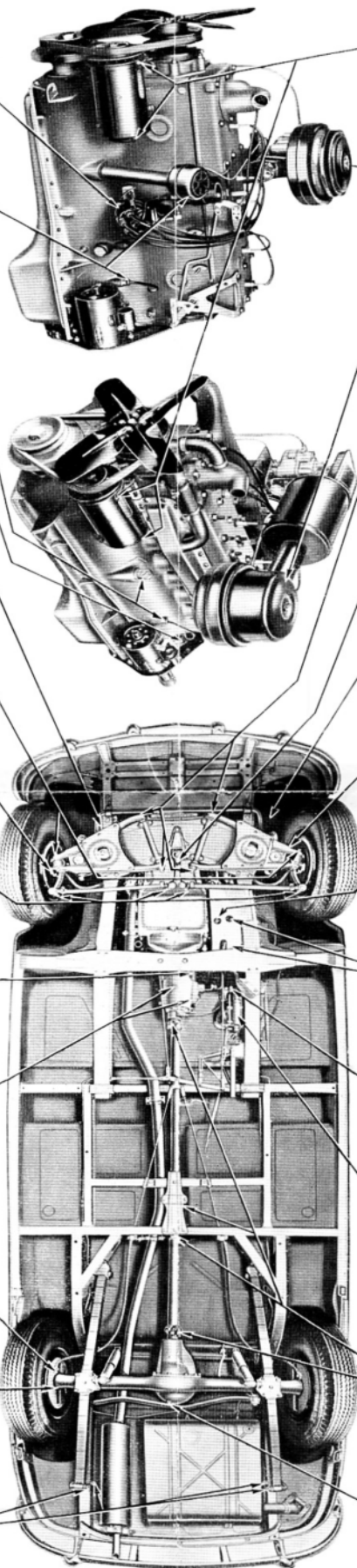
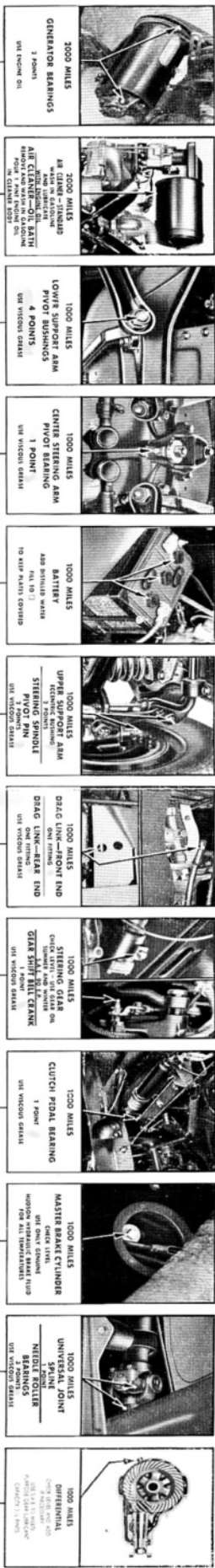


**DOOR LOCK BOLT**  
WATER RESISTANT GREASE ON LOCK BOLT AND SLIDE.  
1 POINT EACH DOOR.



**DOOR HINGE**  
LIGHT ENGINE OIL IN HOLE PROVIDED AT HINGE JOINT.  
2 POINTS EACH DOOR.





## ENGINE LUBRICATION

CA 2000 MILS, EUSTY CONDITIONS WARRANT MORE FRESH C-ANALOG.	
90 AIRFACD TEMPERATURE	USE S.A.E. 70
MEDIUM AIRFACD TEMPERATURE	
32	USE S.A.E. 70
10	USE 20 W.
10	USE 10 W.
NEON-10	USE 10 W. PLUS 10% KEROSENE

## 2000 MILES

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THEOFFICE INVOICE _____ OI ALL JOBS
BRAVE INVOICE _____ OI ALL JOBS
*PILOT MASTER INVOICE _____ OI ALL JOBS
*VACUUMOTIVE DRIVE INVOICE _____ OI ALL JOBS
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## 10,000 MILES

On C-45, with POWER CYLINDER USED AS PART OF "CONTINUOUS" OR "INTERMITTENT" TEST, INLET AND OUTLET OF PNEUMATIC SHOCK ABSORBER FLUID THROUGH PNEUMATIC PORT.

## NOT THROUGH ME

USE VISCOUS CHASSIS LUBRICANT

2014

CHECK PRESSURE AND INFLATE TO FOLLOWING PRESSURES AT LEAST ONCE A WEEK.

SIZE	FRONT	REAR
7.10-15		
7.60-15	COLD _____ 24 lbs.	COLD _____ 24 lbs.

### HEAVY METALS AND TOXICITY

CAPACITY OF COOLING SYSTEMS IS AS FOLLOWS:

6 CYLINDER.....	17 QTS (14.0-16 L)
8 CYLINDER.....	18 QTS (15.0-17 L)

**WHEN YOUR**

# **NEW HUDSON**

**IS DELIVERED TO YOU**

**SEE THAT THESE THINGS ARE DONE**

**OWNER'S SERVICE POLICY** properly filled in and its provisions fully explained to you.

**IDENTIFICATION CARD** completely filled in on both sides. **BE SURE THAT KEY NUMBERS ARE RECORDED.**

**BATTERY** properly registered with National Battery Dealer.

**RADIO WARRANTY REGISTRATION CARD** filled in by dealer and attached to radio if car is so equipped.



# ***Welcome***

Your selection of a new Hudson Motor car is gratifying to us and we are happy to welcome you to the ever growing family of Hudson owners.

We share in your pride of ownership and are sure you will derive the many miles of enjoyable service to which you looked forward when purchasing it.

Your new Hudson has been carefully engineered and built and naturally, you will want to keep it trouble free and protect the investment in your purchase to the utmost.

With this thought in mind, we have prepared this Owner's Manual which contains comprehensive information to assist in giving this fine piece of mechanism the care and attention it deserves. In its pages you will find many suggestions to acquaint you with its construction, operating features and maintenance requirements.

Take a few minutes to study this man-

## WARRANTY

"We warrant each new car manufactured by us to be free from defects in material and workmanship under normal use and service, our obligation under this warranty being limited to making good at our factory any part or parts thereof, including all equipment or trade accessories ( except tires) supplied by the Car Manufacturer, which shall, within ninety (90) days after making delivery of such vehicle to the original purchaser, or before such vehicle has been driven 4,000 miles, whichever event shall first occur, be returned to us with transportation charges prepaid, and which our examination shall disclose to our satisfaction to have been thus defective ; this warranty being expressly in lieu of all other warranties expressed or implied, and of all other obligations or liabilities on our part, and we neither assume nor authorize any other person to assume for us any other liability in connection with the sale of our vehicles.

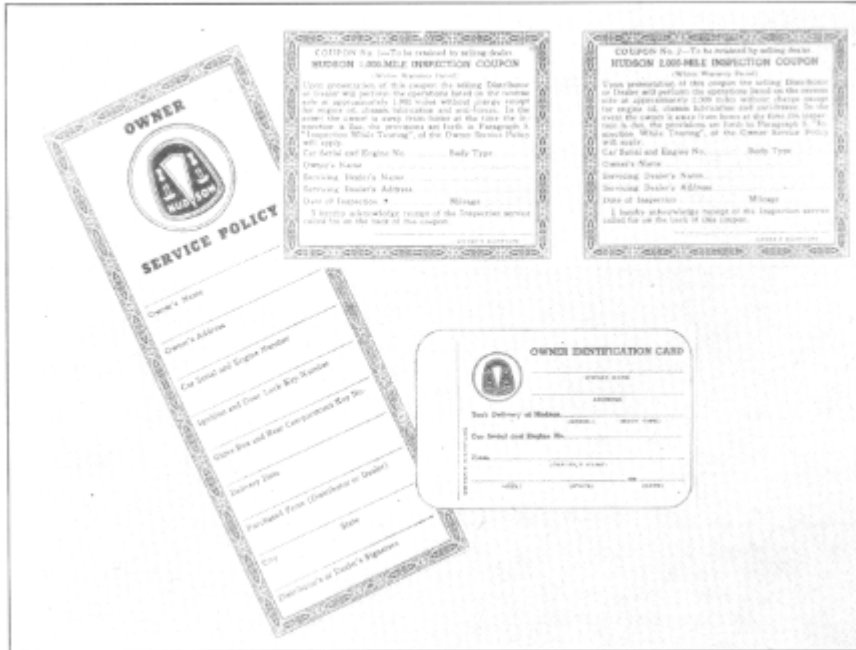
"This warranty shall not apply to any vehicle which shall have been repaired or altered by other than an Authorized Hudson Dealer in any way so as, in the judgment of the Manufacturer, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident."

HUDSON MOTOR CAR COMPANY  
Detroit, Michigan, U.S. A.

*The Hudson Motor Car Company reserves the right to make any changes in or improvements on its products without incurring any liability or obligation whatever, and without being required to make any corresponding changes or improvements on products theretofore manufactured or sold.*

## OWNER'S SERVICE POLICY

When you purchased your new Hudson, the Distributor or Dealer from whom you bought the car presented you with your Hudson Owner's Service Policy. We cannot too greatly impress you with the need for reading it fully and becoming acquainted with its provisions.



This policy includes two coupons which entitles you to the 1000 and 2000 Mile Inspections without charge and outlines our obligations as Manufacturer as well as those of the Car Dealer and the Owner. It also contains other pertinent information regarding the new car inspections and fully explains the provisions of the new car warranty concerning the replacement of parts.

A full knowledge of its contents will preclude the possibility of misunderstandings should it be necessary to consult your own or some other Hudson Dealer in regard to the provisions outlined.



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**AUTHORIZED  
HUDSON SERVICE  
STATIONS**



Your Authorized Hudson Dealer is the logical place to visit for the best available service on your new Hudson car. It is to his best interests to keep your car in good operating condition at the lowest possible cost.

In event the need for service arises when touring or away from home, look for the Authorized Hudson Dealer service sign illustrated above. The Hudson Dealer displaying this sign is your assurance of the same efficient, friendly service you receive at home. It is your further assurance that his Service Department handles genuine Hudson parts, uses factory approved methods and tools and employs capable and courteous mechanics.

**FIRST THINGS TO DO**

When your new Hudson is delivered to you, make sure that:

1. Owner's Service Policy has been properly filled in and its provisions fully explained to you.
2. Identification Card is completely filled in on both sides and key numbers recorded.
3. Radio Warranty Registration Card is filled in and attached to radio.
4. Battery is properly registered with a National Battery Dealer.

## INSPECTION AND ADJUSTMENT SERVICE

Your Hudson Owner's Service Policy entitles you to inspection and adjustment service, which will be performed by the Hudson Dealer who sold the car, without charge, except for supplies and lubricants used. These inspections will be made at the expiration of 1,000 miles and again after 2,000 miles of driving.

If these services become due while you are touring or away from home, they may be performed by any authorized Hudson Dealer, who will make a charge of not more than \$5.00 for either inspection. The dealer who made the inspection will furnish you with a receipted bill and sign the inspection coupons attached to your Warranty, which should then be presented to the dealer (who sold the car) on your return. Your dealer will then credit your account in the above amount for each inspection performed. We suggest that you carefully read the provisions of the Owner's Service Policy so that you will fully understand this procedure.

### 1,000 Mile Inspection

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| 1. Check Operation of All Locks.     | 8. Check Clutch Pedal Clearance.      |
| 2. Check Signals and Instruments.    | 9. Check Rear Wheel Hub Tightness.    |
| 3. Check Operation of Lights.        | 10. Check Wheel Hub Bolts.            |
| 4. Check Battery and Connections.    | 11. Check Rear Spring Mounting Clips. |
| 5. Tighten Cylinder Head Stud Nuts.  | 12. Check Hand and Foot Brakes.       |
| 6. Tighten Manifolds.                | 13. Check Drive-Master.               |
| 7. Check Cooling System and Coolant. | 14. Road Test. Car                    |

### 2,000 Mile Inspection

- |  |                                   |
|--|-----------------------------------|
| 1. Check Operation of Signals and Instruments. | 6. Adjust Tappets—Engine Hot.     |
| 2. Check Operation of All Lights.              | 7. Tune-Up Engine.                |
| 3. Check Operation of Windshield Wipers.       | 8. Check Generator Charging Rate. |
| 4. Inspect Cooling System and Coolant          | 9. Check Wheel Hub Bolts.         |
| 5. Check Battery and Connections               | 10. Check Hand and Foot Brakes.   |
|  | 11. Check Drive-Master.           |
|  | 12. Road Test Car                 |

## MODEL DESIGNATIONS AND SERIAL NUMBERS

The new Hudson models are produced in the Super and Commodore Series and carry the following designations:

Hudson Super Six Series .....	Model 481
Hudson Commodore Six Series .....	Model 482
Hudson Super Eight Series.....	Model 483
Hudson Commodore Eight Series.....	Model 484

### LICENSE INFORMATION

#### HUDSON SUPER SIX MODEL—SERIES 481

Body Types	Wheel-base	Starting Serial No.	No. of Cyls.	Bore	Stroke	A.M.A. H.P. Rating	Dry Weight Pounds
Brougham	124"	481101	6	3-9/16"	4-3/8"	30.4	3470
4 Door Sedan	124"	and up	6	3-9/16"	4-3/8"	30.4	3500
3 Pass. Coupe	124"		6	3-9/16"	4-3/8"	30.4	3460
Club Coupe	124"		6	3-9/16"	4-3/8"	30.4	3480
Conv. Brougham.	124"		6	3-9/16"	4-3/8"	30.4	

#### HUDSON COMMODORE SIX MODEL—SERIES 482

4 Door Sedan	124"	482101	6	3-9/16"	4-3/8"	30.4	3540
Club Coupe	124"	and up	6	3-9/16"	4-3/8"	30.4	3550

#### HUDSON SUPER EIGHT MODEL—SERIES 483

4 Door Sedan	124"	483101	8	3"	4-1/2"	28.8	3525
Club Coupe	124"	and up	8	3"	4-1/2"	28.8	3495

#### HUDSON COMMODORE EIGHT MODEL—SERIES 484

4 Door Sedan	124"	484101	8	3"	4-1/2"	28.8	3600
Club Coupe	124"	and up	8	3"	4-1/2"	28.8	3570
Conv. Brougham	124"		8	3"	4-1/2"	28.8	

The car serial number which is also the engine number, is stamped on a metal plate attached to the right front door hinge 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 series or model. As an example, the car built after 481999 would be numbered 4811000, 4821000, 4831000 or 4841000 instead of 482000.

The engine number is stamped on the top of the cylinder between Nos. 1 and 2 exhaust manifold flanges on eight cylinder engines and on the right side of the cylinder at the upper front end, stamped vertically, on six cylinder engines.

NOTE: Do not confuse engine number with casting or other 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 or letters indicating the car paint color option is stamped on the upper hinge of the right front door.

## TECHNICAL INFORMATION

### ENGINE

	Super Six and Commodore Six	Super Eight and Commodore Eight
Series	481-482-	483-484-
	6 Cylinder	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.
Horsepower—Taxable	30.4	28.8
Actual	121 at 4000 RPM	128 at 4200 RPM
Compression Ratio—Std.	6.50:1	6.50:1
Engine Mounting	3—Rubber	3—Rubber
Camshaft Drive	Morse Chain	Gears
Number bearings	4—Steel backed babbitt	5—Steel backed babbitt
Crankshaft—Type	Compensated	Compensated
Type and number bearings	4—Steel backed babbitt lined	5—Bronze backed babbitt lined
Connecting Rods-		
Length—Center to Center	8-1/8"	8-3/16"
Lower End Bearing	Replaceable	Integral
Type and Material	Precision—Babbitt steel back	Spun—Babbitt
Upper End Bearing—		
Material	1 pc. steel back babbitt	1 pc. bronze
Diameter and Length	31/32 x 1-1/8" "	3/4 x 29/32"
Pistons—Type	Cam ground	Cam ground
Material	Aluminum Alloy	Aluminum Alloy
Clearance	.0005 to .001	.0005 to .001
Piston Pin—Type and Length	Floating-2-15/16"	Floating-2-7/16"
Diameter	31/32"	3/4"
Piston Rings—Material	4—Cast iron—Pinned	4—Cast iron—Pinned
Compression Rings	2	2
Oil Rings	2-1 Below pin	2-1 Below pin
Gap Clearance—All Rings	.007 to .012	.004 to .009
Valves—		
Intake—		
Head Outside Diameter	1-53/64"	1-1/2"
Lift	11/32"	11/32"
Operating Clearance—Hot	.008	.006"
Exhaust—		
Head Outside Diameter	1-9/16"	1-3/8"
Lift	11/32"	11/32"
Operating Clearance—Hot	.010	.008
Lubricating Method Pump Type	Full Pressure	Duo-Flo
Oil Capacity—Qts.	Rotor	Oscillating Plunger
Pump Type	Dry 7 Qts.	Dry 9 Qts.
Oil Capacity—Qts.	Refill 7 Qts.	Refill 7 Qts.

### CLUTCH

Type	10" single plate in oil	10" single plate in oil
Facing	Cork Inserts	Cork Inserts
Pilot Bearing	Ball	Ball
Throw-out Bearing	Ball	Ball
Pedal Lash	1-1/2"	1-1/2"
Clutch Lubricant	1/2 Pt. Hudsonite	1/3 Pt. Hudsonite

**TRANSMISSION**

	Super Six and Commodore Six	Super Six and Commodore Six
Type	Synchro-Mesh	Synchro-Mesh
Speeds	3 Forward- 1 Reverse	3 Forward- 1 Reverse
Gears	All Helical	All Helical
Gear Ratios—Without HDM—Low	2.61:1	2.61:1
Second	1.65:1	1.65:1
High	1:1	1:1
Reverse	3.17:1	3.17:1
Gear Ratios—With HDM—Low	2.88:1	2.88:1
Second	1.82:1	2.82:1
High	1:1	1:1
Reverse	3.5:1	3.5:1
Lubrication—Summer	90 E.P.—Mild	90 E.P.—Mild
Winter	80 E.P.—Mild	80 E.P.—Mild
Capacity—Without Overdrive	2 Pts.	2 Pts.
With Overdrive	3-1/4 Pts.	3-1/4 Pts.

**PROPELLER SHAFT**

Front Shaft—Universals	1	1
Rear Shaft—Universals	2	2
Center Bearing	Annular Ball	Annular Ball
Bearing Lubrication	Prelubricated and Sealed	Prelubricated and Sealed
Spline Lubrication	Zerk Fitting	Zerk Fitting
Universal Lubrication	Zerk Fitting	Zerk Fitting

**REAR AXLE**

Type	Semi-floating	Semi-floating
Gear Type	Hypoid	Hypoid
Ratios	4.1 and 4-5/9	4.1 and 4-5/9
Pinion Bearings	Taper Roller	Taper Roller
Adjustment	Shim	Shim
Differential Bearings	Taper Roller	Taper Roller
Wheel Bearings	Taper Roller	Taper Roller
Adjustment	Shim	Shim
Pinion and Gear Back Lash	.004 to .006	.004 to .006
Lubricant	S.A.E. 90 Hypoid 3-1/2 Pints	S.A.E. 90 Hypoid 3-1/2 Pints

**FRONT SUSPENSION**

Type	Independent Coil Spring	Independent Coil Spring
Camber	1/2° to 1-1/2°	1/2° to 1-1/2°
Caster	1/2° to 1-1/2°	1/2° to 1-1/2°
Toe-in	1/32 plus or minus 1/32	1/32 plus or minus 1/32
Spindle Pin Inclination	3°—36'	3°—36'
Wheel Bearing—Type	Adj. Tapered Roller	Adj. Tapered Roller

**SPRINGS**

Rear—Type	Semi-elliptic	Semi-elliptic
Length and Width	54" — 1-3/4"	54" — 1-3/4"
Shackles	Silent "U" Threaded	Silent "U" Threaded
Lubricant—Shackles and Leaves	Viscous Chassis Lub.	Viscous Chassis Lub.

**STEERING GEAR**

	Super Six and Commodore Six	Super Eight and Commodore Eight
Type	Worm and Triple Tooth Roller	Worm and Triple Tooth Roller
Ratio	20.4:1	20.4:1
Steering Wheel Diameter	17" and 18"	17" and 18"
Lubricant—Summer and Winter	S.A.E. 90 E.P.	S.A.E. 90 E.P.

**BRAKES**

Type	Bendix—Duo Automatic	Bendix—Duo Automatic
Drum Diameter	11"	11"
Lining—Type	Moulded	Moulded
Width	Front-2-1/4" Rear-1-3/4"	Front-2-1/4" Rear-1-3/4"
Clearance—Both Ends of Shoe	.010	.010
Pedal to Floor Board	1/4"	1/4"

**TIRES**

Make	Goodyear Super Cushion	Goodyear Super Cushion
Standard Size	7.10 x 15.00 — 4 Ply	7.10 x 15.00 — 4 Ply
Std. Wheel Rim	5.00 x 15.00	5.00 x 15.00
Optional Tire	7.60 x 15.00 — 4 Ply	7.60 x 15.00 — 4 Ply
Optional Wheel	5.50 x 15.00	5.50 x 15.00
Inflation Pressure	24 Lbs. Front and Rear	24 Lbs. Front and Rear

**COOLING SYSTEM**

Capacity in Quarts	17 Qts.	18 Qts.
Circulation	6 Vane Impeller Pump Thermostat—By Pass	6 Vane Impeller Pump Thermostat—By Pass
Temperature Control	V Belt	V Belt
Pump and Fan Drive	4 Blade	4 Blade
Fan	Generator Mounting	Generator Mounting
Belt Adjustment	2 Sealed Ball —	2 Sealed Ball —
Pump Bearing	Pre-lubricated	Pre-lubricated

**FUEL SYSTEM**

Carburetor—Make	Carter WDO 647-S	Carter WDO 648-S
Type	Dual Down-Draft 1-1/4"	Dual Down-Draft 1-1/4"
Choke and Heat Control	Automatic — Thermostatic	Automatic — Thermostatic
Fuel Delivery	Pressure Pump	Pressure Pump
Air Cleaner and Silencer	Dry Std. Oil Bath Optional	Dry Std. Oil Bath Optional
Fuel Tank Capacity	20 U.S. Gallons	20 U.S. Gallons

**ELECTRICAL EQUIPMENT**

Make	Auto-Lite	Auto-Lite
Distributor—Rotation	Clockwise	Clockwise
Drive	Camshaft	Camshaft
Advance	Automatic — Vacuum	Automatic — Vacuum
Point Gap	.020	.017
Breaker Points Open	T.D.C.	T.D.C.
Firing Order	1-5-3-6-2-4	1-6-2-5-8-3-7-4

**ELECTRICAL EQUIPMENT (CONT'D.)**

	Super Six and Commodore Six	Super Eight and Commodore Eight
Generator—Type	Third Brush Volt. Reg.	Third Brush Volt. Reg.
Drive	V Belt	V Belt
Charging Rate—Cold	43 Amperes at 8 Volts	43 Amperes at 8 Volts
Charging Rate—Hot	37 Amperes at 8 Volts	37 Amperes at 8 Volts
Starting Motor—Drive	Bendix	Bendix
Control Switch	Solenoid	Solenoid
Battery—Make	National 6 Volt 51-120	National 6 Volt 51-120
Plates and Capacity	51—Amp. @ 20 Hr. Rate	51—Amp. @ 20 Hr. Rate
Dimensions	W-7 1/8", L-10-9/16", H-9-1/16"	W-7 1/8", L-10-9/16", H-9-1/16"
Terminal Grounded	Positive	Positive
Location	Under Bonnet Left Side	Under Bonnet Left Side
Spark Plugs—Cast Iron Head	Champion J-9 14 M.M.	Champion J-9 14 M.M.
Spark Plugs—Aluminum Head	Champion H-10	Champion H-10
Gap	.032	.032

**LAMP BULBS**

	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
Rear Quarter Lights (2)	81	7	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	4015A	Sealed	Sealed
Spot Light—Sealed Beam	4535	Sealed	Sealed
Parking Light	63	3	Single
Generator and Oil Indicator	55	2	Single

**CAPACITIES**

Cooling System	U.S.-17 Quarts Imperial-14-1/4 Quarts Metric-16 Liters	18 Quarts 15 Quarts 17 Liters
Gasoline Tank	U.S.-20 Gallons Imperial-16-2/3 Gal. Metric-75-3/4 Liters	20 Gallons 16-2/3 Gallons 75-3/4 Liters
Engine Oil—Dry	U.S.-7-1/2 Quarts Imperial-6-1/2 Quarts Metric-7 Liters	9 Quarts 7-1/2 Quarts 8-1/2 Liters
Engine Oil—Refill	U.S.-7 Quarts Imperial-6 Quarts Metric-6-1/2 Liters	7 Quarts 6 Quarts 6-1/2 Liters



**CAPACITIES (CONT.)**

Clutch	U.S. - 1/3 Pint	1/3 Pint
	Imperial - 1/4 Pint	1/4 Pint
	Metric - 160 C.C.	160 C.C.
Transmission	U.S. - 2 Lbs.	2 Lbs.
	Imperial - 2 Lbs.	2 Lbs.
	Metric - .91 Kgs.	.91 Kgs.
Transmission and Overdrive	U.S. - 3- 1/4 Lbs.	3-1/4Lbs.
	Imperial - 3-1/4 Lbs.	3-1/4 Lbs.
	Metric - 1.47 Kgs.	1.47 Kgs.
Rear Axle	U.S. - 3-1/2 Lbs.	3-1/2 Lbs.
	Imperial - 3 Lbs.	3 Lbs.
	Metric - 1.6 Kgs.	1.6 Kgs.

**DIMENSIONS**

Overall Length—Including Bumpers	207-1/2"	207-1/2"
Overall Width	77-1/16"	77-1/16"
Overall Height	60"	60"
Road Clearance—Front	8"	8"
Road Clearance—Rear	8"	8"
Turning Radius	Right 21' 2"	Right 21' 2"
	Left 20' 5"	Left 20' 5"

**LUBRICATION**

Present day high speed driving, fast acceleration and closely fitted precision machined parts, place engine and chassis lubrication in the category of highly specialized services. A definite plan of application is necessary to provide the various working surfaces with the right amount of the correct lubricant at the proper time. Contrary to general belief, one lubricant will not suffice for all parts of the chassis. The varying load demands and operating conditions which the various parts are subjected to, call for different types of lubricants to minimize friction and reduce wear.

Your Authorized Hudson Dealer has been provided with the correct factory lubrication specifications for your car, as well as the definite plan of application. This is your assurance that the lubrication requirements of your car will be met with the greatest care. Be sure to consult him on this most important matter.

For your guidance, a copy of the Lubrication Chart is attached to the front cover of this manual. Additional information regarding the lubrication requirements of your car are given in the Lubrication Schedule shown below and elsewhere in this manual, under the description of the various units.

The lubricants placed in your car at the time of assembly are of the best quality and need not be changed until the recommended change period shown in the Lubrication Schedule has been reached.

**LUBRICATION SCHEDULE****500 MILES**

Drain engine oil reservoir and refill with new oil of good quality. See "The Proper Engine Oil to Use", Page 14.

**1,000 MILES****Viscous Chassis Lubricant**

	Points		Points
Drag Link	2	Tie Rod End	4
Upper Support Arm Eccentric Bushing	2	Steering Spindle Pivot Pins	2
Upper Support Arm Pivot Bushing	4	Gear Shift Bell Crank Pivot	1
Lower Support Arm Pivot Bushing	4	Clutch Pedal Bearing	1
Lower Support Arm Support Bushing	2	Clutch Throwout Bearing	1
Center Steering Arm Pivot Bearing	1	Universal Joint Spline	1
		Universal Joint Needle Rollers	3
		Rear Spring Shackle Bushing	4

**Engine Oil**

	Points		Points
Engine	Check Oil Level	Rear Compartment Door Striker	4
Door Hinge	4 or 8	Rear Compartment Latch Rod	2
Gasoline Tank Filler Door Hinge and Spring	3	Hood Hinge	8
		Windshield Wiper Pulleys	4

**Water Resistant Lubricant**

	Points		Points
Windshield Cables at Pulleys	4	Rear Compartment Door Clamping Lever	2
Door Check Arms	2 or 4	Hood Prop	2
Courtesy Light Switch	2 or 4	Hood Upper Lock	1
Door Lock Bolt and Slide	2 or 4	Hood Lower Lock	1
Door Striker	2 or 4	Hood Lower Lock and Control Wire	2
Rear Compartment Door Hinge	2		

**E. P. Gear Lubricant—S.A.E. 80 Winter, S.A.E. 90 Summer**

Transmission	Check Level	Steering Gear	Check Level
Overdrive	Check Level		

**Hypoid Lubricant—S.A.E. 90**

Rear Axle	Check Level
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**Distilled Water**

Check Battery Electrolyte level and gravity.

**Water or Anti-Freeze**

Check Coolant level and Anti-Freeze strength.

**Hudson Hydraulic Brake Fluid**

Check Brake Master Cylinder fluid level

**2,000 Miles**

*Perform operations included in 1,000 mile lubrication, in addition to the following:*

**Engine Oil**

Engine—Drain Oil Reservoir and refill. See "Proper Oil to Use," Page 14	Oil Filler Pipe Cap	Wash and re-oil
Generator	Throttle Operating Linkage	All Joints
Starting Motor	Brake Operating Linkage	All Joints
Distributor	Drive-Master Operating Linkage	All Joints
Air Cleaner—Standard.. Wash and re-oil	Vacumotive Drive Operating Linkage	All Joints
Air Cleaner—Oil Bath		
Remove, wash and add new oil		

**5,000 Miles**

*Perform operations included in 1,000 mile and 2,000 mile lubrications, in addition to the following:*

**Hudsonite Clutch Compound**

Clutch	Drain and Refill
--------	------------------

**E. P. Gear Lubricant—S.A.E. 80 Winter, S.A.E. 90 Summer**

Transmission	Drain and Refill	Overdrive	Drain and Refil
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**Hypoid Gear Lubricant—S.A.E. 90**

Rear Axle	Drain and Refill
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**Viscous Chassis Lubricant**

Brake Cables	Clean and Lubricate	Oil Filter	Renew Cartridge
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**10,000 MILES**

*Perform operations included in 1,000 mile, 2,000 mile and 5,000 mile lubrications, in addition to the following:*

**Viscous Chassis Lubricant**

Rear Spring Covers	Inject lubricant with special lubricating clamp
--------------------	---

**Sodium Soap Base Lubricant**

Front Wheel Bearings	Remove, clean and repack
Rear Wheel Bearings	Remove, clean and repack

**Hudson Shock Absorber Oil**

Vacumotive Drive Cylinder	Remove plug and inject 1 ounce oil
Drive-Master Power Cylinder	Disconnect elbow and inject 1 ounce oil

*IMPORTANT: When checking the level of the lubricant in the rear axle and transmission, make sure that the lubricant has stopped foaming. If the car has been run for a considerable length of time, it should be permitted to stand long enough to allow the oil to reach the true level before checking.*

**BREAK-IN OIL**

Special compounds or so-called "break-in" oils are not necessary in Hudson engines. In the event it is decided to use them, make sure the supplier guarantees that they contain no harmful ingredients.

**ENGINE OIL CAPACITIES**

The total engine oil capacity is 7½ quarts for six cylinder and 9 quarts for eight cylinder engines. When the oil is drained in the conventional manner, the refilling quantity is 7 quarts for both six and eight cylinder engines.

When the oil reservoir is removed for cleaning or during service work, two quarts should be placed in the oil reservoir tray of eight cylinder engines before the reservoir is installed. The remaining seven quarts should then be placed in the reservoir through the crankcase filler opening. In six cylinder engines, the entire quantity is poured through the crankcase oil filler pipe.

**CHECKING ENGINE OIL LEVEL**

An engine in normal operating condition is expected to use some oil and it is, therefore, not unusual to add oil between change periods. Its rate of usage is governed by the individual engine and is dependent on operating speeds, temperatures and the viscosity and quality of the oil used.

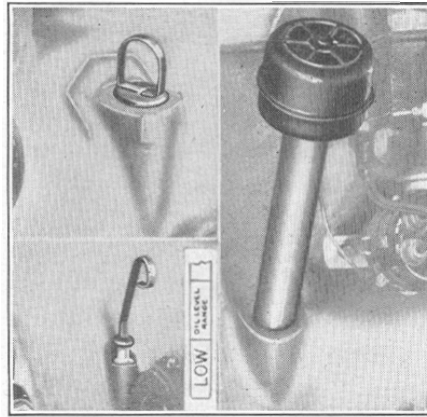


Figure 1

The level should be checked each time fuel is added. The oil level gauge is located on the left side of the engine and is divided at its lower end to show the "Oil Level Range" and the "Low Range".

For normal operation, the oil level is satisfactory when it is within the "Oil Level Range". For high speed operation, the level should be maintained at the full mark, which is the top line on the "Oil Level Range".

To make an accurate check, it is best to wait a minute or two after shutting off the engine to permit the oil to drain back into the reservoir. Approximately three and one-half quarts of oil are required to bring the level from low to full in both

six and eight cylinder engines. If the level happens to be low and the speedometer indicates that the oil change period is near at hand, it is more economical to have the oil changed at that time.

### WHEN TO CHANGE ENGINE OIL

The oil which is placed in the engine at the factory is satisfactory for the first 500 miles of operation.

Thereafter, at intervals of 2,000 miles, the reservoir should be drained and refilled with new oil of good quality. If the car is operated constantly in dusty areas or for short distances at low speeds during cold weather, which permits foreign matter and sludge to accumulate, it should be changed more frequently. However, the actual change period is largely dependent on the individual driving circumstances.

The oil is drained by removing the plug at the rear of the oil reservoir. To insure complete draining, it is important that the operation be performed while the engine is warm.

It is good practice to remove the oil reservoir at least twice a year, preferably in the spring and fall, to permit thorough cleaning of the screens and pan.

*Caution: The use of flushing oil or compounds is not recommended. However, in the event they are used, it will be necessary to remove the oil reservoir and thoroughly clean it out before installing the new oil.*

### THE PROPER ENGINE OIL TO USE

The use of high-grade engine oil of the correct type is of great importance in obtaining maximum performance and satisfaction from your car. Select oils from well-known and dependable brands, of which there are many on the market, and of the proper viscosity to suit your seasonal and driving requirements.

The oil refiners or marketers supplying oils are responsible for the quality of their product and their reputation is the car owner's best assurance of receiving high-grade lubricants.

### TYPES OF OIL

The various types of oil marketed for engine lubrication has been defined by the American Petroleum Institute, as follows:

**REGULAR MOTOR OIL**—This term is used to designate a straight mineral oil. Oils of this type are generally suitable under moderate driving conditions.

**PREMIUM MOTOR OIL**—This term is used to designate an oil having proved oxidation, stability and bearing corrosion preventative properties. Oils of this type are generally suitable for use where operating conditions are such that regular oils do not give satisfactory service.

**HEAVY-DUTY MOTOR OIL**—This term is used to designate an oil having proved oxidation, stability, bearing corrosion preventative properties and detergent-dispersent characteristics. Oils of this type are generally suitable for use in both high-speed diesel and gasoline engines under heavy-duty service conditions.

It is most important that the oil should have the ability to flow at low temperatures to permit easy starting and at the same time, afford adequate lubrication when the engine is at normal operating temperatures. The oil selected should be based on its ability to perform these two functions at the lowest anticipated temperatures expected before the next oil change period. The following table will be helpful in making this selection.

FOR	USE
90° Average temperature	S.A.E. 30
32° Minimum tem	S.A.E. 20
10° Minimum temp.	20 W.
—10° Minimum temp.	10 W.
Below —10° temp	10 W. plus 10% Kerosene

*Note: Kerosene should be added only when temperatures below —10° are expected for long periods.*

Your Authorized Hudson Dealer, who has had long experience with the brands of oil available in your locality, will be glad to help you with your lubrication problems.

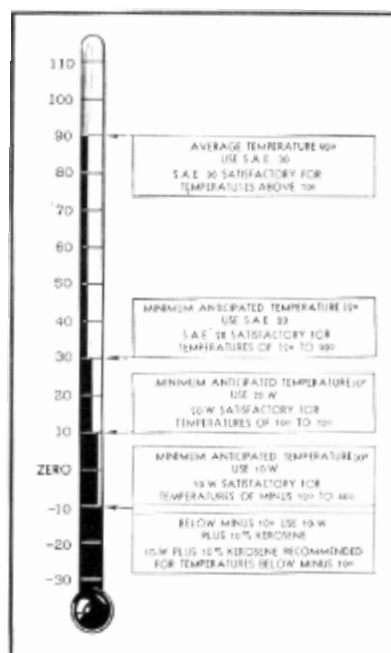


Figure 2

## OIL FILTER

A Hudson Oil Filter is available through your Authorized Hudson Dealer and its installation will assist in removing foreign matter and impurities from the oil, and at the same time, permit a normal oil flow through the engine. This filter will keep the oil cleaner for longer periods and help minimize wear on engine parts.

The cartridge should be replaced at approximately 5,000 mile intervals or when the oil shows definite evidence of becoming dirty. Replacement cartridges can be secured from your Hudson Dealer. When replacing the cartridge, be sure to use the new cover gasket furnished and see that it sets correctly on the filter body to prevent oil leaks.

## OPERATING CONTROLS

Arrangement and functions of the instruments and controls of your new Hudson have been planned for maximum convenience and comfort of the driver, as well as for safety. If you have driven Hudsons previously or are a first time Hudson owner, you will want to know all about the newer controls before driving your new car. We, accordingly, recommend that you read the following instructions carefully.

(1) **SEAT ADJUSTING LEVER**—Raising the lever on the left side of the front seat permits the seat to be moved forward or backward to the position most convenient for the driver. As the seat moves forward, it rises, permitting short persons to sit higher; thus making for better vision. Seat locks in position when lever is released.

(2) **DIRECTION INDICATOR LEVER**—Push lever upward for right turn and downward for left turn. Lever returns to OFF position automatically when turn is completed. Direction Indicator Light (1) on instrument panel flashes with front and rear indicator signal.

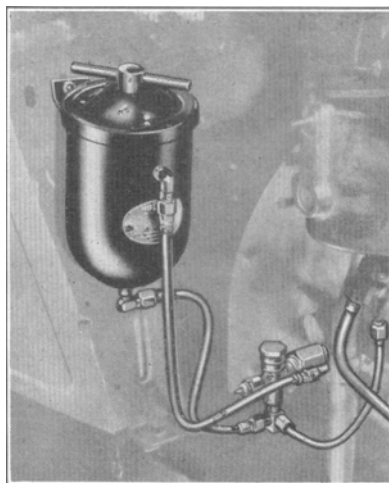


Figure 3

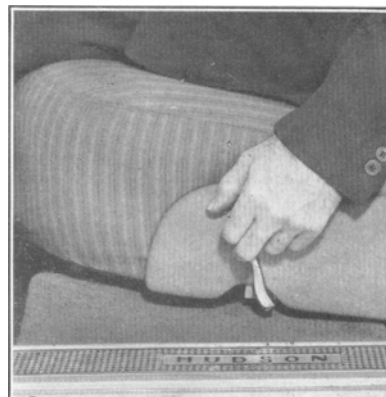


Figure 4

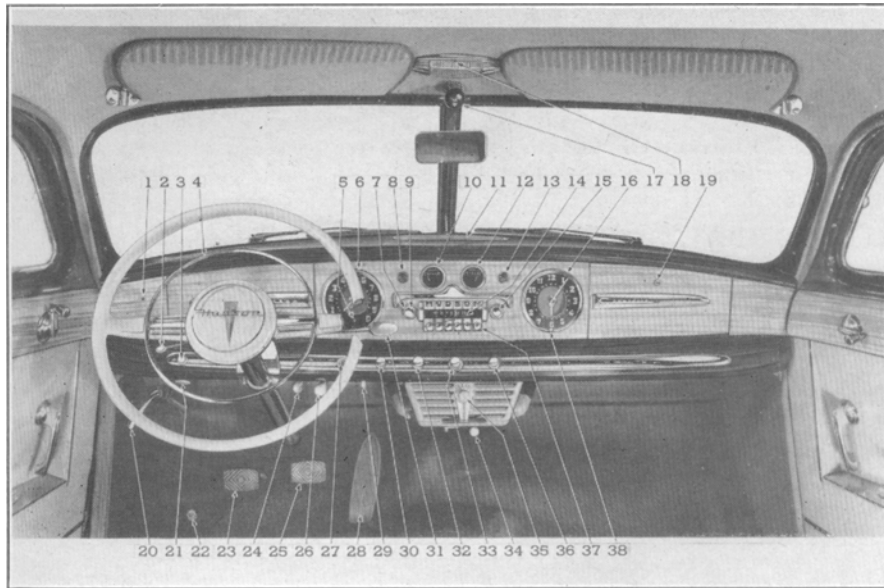


Figure 5

- (3) **STARTER BUTTON**—Pressing button in with ignition switch turned on operates the starter. On cars equipped with Drive-Master, the clutch pedal must be pushed down before the starter will operate. Do not press button when engine is running or car is in gear. Starter will not operate unless ignition is turned on.
- (4) **HORN OPERATING RING**—Press down from any position to operate horns.
- (5) **HEADLIGHT BEAM INDICATOR**—Incorporated in speedometer— shows red when headlight beam is in upper or country driving position.
- (6) **SPEEDOMETER**—Includes mileage indicator showing accumulated mileage.
- (7) **RADIO TONE CONTROL RING**—Turning to right from mid-position brings out the high notes and to left emphasizes the bass notes. See Radio Owner's Manual.
- (8) **OIL PRESSURE INDICATOR**—Shows red when ignition is turned on and engine not running. Light should go out when engine is started. Should the light flash or stay on when the engine is running, it indicates lack of oil in the reservoir, or some disarrangement in the oiling system. The engine should be shut off at once and the cause of the difficulty determined.
- (9) **RADIO ON AND OFF AND VOLUME CONTROL KNOB**—Off in extreme left position. Turning knob to right turns on radio and regulates volume.



- (10) **FUEL GAUGE**—Indicates the level of the fuel in the gasoline tank when the ignition switch is turned on. When needle reaches "empty" mark, approximately 11/2 gallons of fuel remains in reserve.
- (11) **RADIO SPEAKER GRILLE**—Located at top of instrument panel.
- (12) **TEMPERATURE GAUGE**—Indicates temperature of water or antifreeze when ignition is turned on. When ignition is turned off, the pointer returns to the "H" position at the right side of the dial.
- (13) **GENERATOR CHARGE INDICATOR**—Shows red when ignition is turned on and when engine is running at low speed. Light should go out as speed is increased. If electrical difficulty is encountered or the generator is not charging, the light will either flash or stay on as a warning. In this case, have the electrical system checked by an Authorized Hudson Dealer.
- (15) **RADIO MANUAL TUNING KNOB**—Turn knob to tune in stations manually. Turning position shown on Station Dial (14).
- (16) **CLOCK**—Mechanical clock requires winding every day. Turn knob clockwise to wind. Electric clock requires no winding and is protected by a fuse at the back. On both types, hands are set by pulling out and turning knob (38).
- (17) **RADIO ANTENNA OPERATING KNOB**—To raise antenna, press in knob slightly and turn to right or left-half turn. To extend antenna, turn knob one-quarter turn, pull out inner or telescopic section of antenna and turn knob until antenna is in upright position.
- (18) **DOME LIGHT SWITCH**—Sliding switch operates front dome light. Rear compartment dome lights operated by sliding switch on right door pillar.
- (19) **LOCKER BOX LOCK**—Press in to open door. Lock by inserting key and turning one-quarter turn to left.
- (20) **PARKING BRAKE LEVER**—Apply brakes by pulling lever backward and pressing down brake pedal at the same time. Release brakes by turning handle to right and pushing it down as far as it will go.
- (21) **HOOD UNLOCKING HANDLE**—Pull handle to release lock. Then release safety catch by reaching finger under louver at front of car and pulling lever forward. Grasp hood at front end and raise. To lock, lower hood and press down on front end.
- (22) **HEADLIGHT FOOT SWITCH**—Controls country (upper) and traffic (lower) beams. When meeting oncoming traffic and beam indicator shows red, depress foot switch once and release for passing beam. Pressing and releasing switch the second time restores light beams to upper or country driving position.
- (23) **CLUTCH PEDAL**—Should be depressed fully to floorboard when shifting gears. On cars equipped with Hudson Drive-Master, this must be done before pressing the starter button or the starter will not operate. When starting the engine, particularly in cold weather, depressing the clutch pedal manually will eliminate transmission gear drag and facilitate starting.

(24) **OVERDRIVE CONTROL KNOB**—Push knob all the way in for operation in Overdrive. This may be done with the car standing or at any ordinary driving speed. Overdrive becomes operative at speeds above approximately 22 miles per hour and the shift is made by removing the foot from the accelerator momentarily. Upon again depressing the accelerator the car will operate in Overdrive and continue to do so until the speed drops to about 19 miles per hour. Overdrive will then automatically disengage, reverting to direct drive through free wheeling.

As operation in Overdrive does not provide best acceleration for passing other cars or give the necessary power to climb steep grades, it is occasionally necessary to revert temporarily to direct drive at speeds higher than 19 miles per hour. This can be accomplished by depressing the accelerator pedal fully beyond the wide open throttle position.

To re-engage Overdrive, momentarily release the accelerator pedal (at speeds above 22 miles per hour) and resume normal operation in Overdrive.

When Overdrive and free wheeling is not desired, as in heavy traffic, on icy and slippery pavements or on steep grades, simply pull the control knob out while the car is standing or moving at less than 19 miles per hour. If a clicking sound is heard after pulling the knob out, depress the accelerator pedal slightly to bring the engine speed up to the car speed and the shift will be completed.

When driving at speeds above 19 miles per hour, it is necessary to depress the accelerator pedal fully beyond full throttle to revert to direct drive and then pull out the control knob.

(25) **BRAKE PEDAL**—Controls hydraulic operation of brakes on all wheels. Also operates reserve mechanical system on rear wheels in event of disablement of hydraulic system.

(26) **COWL VENTILATOR HANDLE**—Should be pushed forward to open cowl ventilator and pulled back to close it. When Hudson Weather-Control is installed, temperature is regulated by ventilator opening. (See Weather-Control Instruction Booklet.)

(27) **IGNITION LOCK**—Inserting and turning key to right turns ignition on. When lights are turned on, lock is illuminated.

(28) **ACCELERATOR PEDAL**—Controls the speed of the engine and car. Never pump the accelerator when starting the engine as it will result in flooding. When starting a cold engine, the accelerator pedal should be pressed half way and released slowly before cranking. (See "To Start Engine".) The accelerator controls the operation of the clutch on cars equipped with Drive-Master and Vacumotive Drive, as well as the engagement of Overdrive on cars fitted with this device.

(29) **INSTRUMENT LIGHT RHEOSTAT**—Controls the brilliance of the instrument lights. Turning knob to right decreases and to left increases amount of light. Turning knob to extreme left turns out lights entirely.

(30) **DRIVE-MASTER AND VACUMOTIVE DRIVE SWITCH DRIVE-MASTER SWITCH**—Turn knob right for automatic operation of clutch and gear shifting. Left

position provides automatic clutch operation and manual gear shifting. Center or off position permits conventional operation of clutch and gear shifting.

**DRIVE-MASTER OPERATION**—To start in forward speeds under normal conditions, place gear shift lever in high gear position. Depress accelerator and car will move in second gear. When accelerator is released above "shifting speed," high gear will be automatically engaged. It is possible to accelerate to any speed in second gear before shifting into high by keeping the accelerator depressed.

When slowing down for a stop upon releasing the accelerator, the transmission will shift into second when the "shifting speed" is reached and the car is ready for a new start.

To start in low gear, move the gear shift lever to the neutral position, hesitate momentarily and then move it into low gear. After starting, release the accelerator and shift into second or high position. If second speed is selected, it will be necessary to shift into high in the conventional manner. If the lever is moved to the high gear position and the accelerator released, the shift is made automatically into either second or high gear, depending upon the car speed.

Shift into reverse in the conventional manner by lifting the foot from the accelerator and moving the gear shift lever into neutral and then into reverse.

**MOUNTAIN DRIVING**—If it is desired to go into second gear when ascending or descending a steep grade, above the "shifting speed" momentarily release the accelerator, disengage the clutch manually and move gear shift lever into second position.

**VACUMOTIVE DRIVE SWITCH**—Turning knob to right provides automatic clutch operation. For manual clutch operation, turn knob to left or off position.

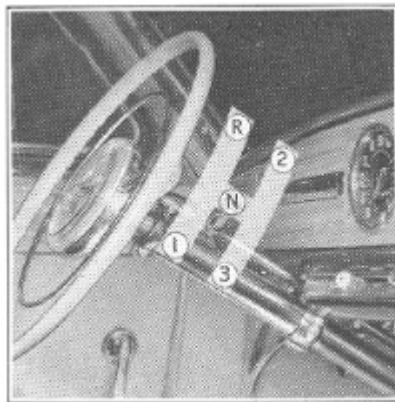


Figure 6

(31) **GEAR SHIFT LEVER**—Should always be placed in neutral position before starting engine. Raise knob and move lever forward for reverse gear and rearward for low gear. Move lever to neutral, depress and slide forward for second gear and rearward for high gear. If car is equipped with Hudson Drive-Master, follow instructions shown under "Drive-Master."

(32) **LIGHTING SWITCH** — Controls instrument lights, headlights, hood light, parking lights, license light and tail lights. Turning knob to first position at right, gives park-

ing lights, hood light, instrument lights, license light and tail lights. Moving knob to second position to right, turns on the headlights in addition to other lights. Turning knob to extreme left position, turns off all lights.

(33) CIGARETTE LIGHTER—Press in to operate. Automatically pushes out when proper temperature has been reached.

(34) WEATHER-CONTROL HEAT REGULATOR LEVER — Controls water circulating through heater. Moving lever to right increases and to left decreases temperature. At extreme left position, water is entirely shut off.

(35) WEATHER-CONTROL SWITCH—Controls operation of fans for defrosting windshield and circulating air when car is standing. Extreme left position of knob "OFF." First position to right provides low speed and extreme right position high speed operation of fans.

(36) WINDSHIELD WIPER CONTROL KNOB—Center position "OFF." Turning knob to right turns on and regulates speed of windshield wipers. When car is equipped with windshield washer as an accessory, turning knob to left and then to right causes wiper to wash windshield.

(37) RADIO AUTOMATIC TUNING BUTTONS—Press in button for automatic tuning of station desired.

### DRIVING YOUR NEW CAR

Before your new Hudson automobile was delivered to you, your Dealer checked it over thoroughly to be sure that all adjustments were in order; that all lubrication fittings and units of the car were properly lubricated; that the cooling system was filled to the proper level, and that the tires were inflated to the proper pressures.

When starting with a cold engine, always keep the speed near 30 until the engine reaches normal operating temperature. This is good practice at any time but especially necessary when the engine is new and the moving parts not worn in. For the first 250 miles keep the speed under 40 but drive as little as possible under 25. Between 250 miles and 500 miles the top limit may be increased to 50 and between 500 and 1000 miles to 60.

At least a third of the mileage of each period should be driven at or near the maximum speed recommended. Do not drive at constant speed for any length of time but vary the speed within the recommended limits. At no time during the first 1000 miles should the throttle be opened fully for quick acceleration or hill climbing.

The first 1000 miles are very important to your new engine and a little care during this time will pay off in added economy throughout a longer life.

After the first 500 miles of driving return your car to your Dealer to have the oil changed, as it is good practice to have fresh clean oil in the engine before starting to drive at the increased speeds permissible during the second 500 miles of the break-in.

### STARTING THE ENGINE

The carburetor is fitted with an automatic choke which correctly proportions the fuel mixture during the starting and warm-up period.

1. Place gear shift lever in neutral position.
2. Depress clutch pedal.
3. Turn on ignition switch.
4. If engine is completely cold from standing for several hours or overnight, depress the accelerator pedal at least one-half way and release slowly, then press starter button. ON CARS EQUIPPED WITH DRIVE-MASTER, THE CLUTCH PEDAL MUST BE DEPRESSED OR THE STARTER WILL NOT OPERATE. After engine has started, it will run at high idle speed for warm-up. When the engine is warm, a slight depression and release of the accelerator pedal will permit the throttle to return to normal idle.
5. If engine is warm from previous running and has not been standing long enough to become completely cold, depress the accelerator pedal one-quarter to one-half way and hold in this position while cranking.

### TO START CAR

After the engine has been started and the clutch pedal depressed, raise transmission control lever and move it forward for reverse gear, or rearward for low gear. Move lever to neutral, depress and slide it forward for second gear, or rearward for high gear.

If car is equipped with Hudson Drive-Master or Vacumotive Drive, see Special Operating Instructions, number (30) listed under "Operating Controls."

If car is equipped with Overdrive, follow Special Operating Instructions, number (24) listed under "Operating Controls".

### CARBON MONOXIDE GAS

CARBON MONOXIDE, A DEADLY, COLORLESS, ODORLESS GAS IS ALWAYS PRESENT IN THE EXHAUST OF THE INTERNAL COMBUSTION ENGINE. GARAGE DOORS SHOULD ALWAYS BE FULLY OPENED WHEN STARTING OR RUNNING THE ENGINE.

### LOCKING YOUR CAR

When your car was delivered to you, it was provided with two sets of keys. The keys with round handles fit the ignition and both front door outside locks. The keys with the octagonal shaped handles fit the locker box door and rear compartment locks.

All keys are numbered and these numbers should be registered on your Owner Identification Card, as well as some other suitable place where they will be available should the keys become lost. As insurance regulations prohibit the stamping of key numbers on lock cylinders,

misplaced or lost keys can be obtained from your Hudson Dealer only by referring to key change number.

Many cars are driven away by unscrupulous persons simply because the ignition key was left in the lock. Make it a practice to remove the key from the lock if the car is to be left unattended even for a few minutes.

### DOOR LOCK OPERATION TO OPEN DOORS

**FROM OUTSIDE**—Outside door handles are of the stationary type, fitted with a push button at the end. To open the door, grasp the handle and press in the push button with the heel of the hand or the thumb. Push door to close.

*Caution: Door will not close if latch bolt has been moved upward from lower end of curved slot in door. To return latch bolt to lower end of slot, lift inside safety button to "up" position, then operate outside or inside door handle.*

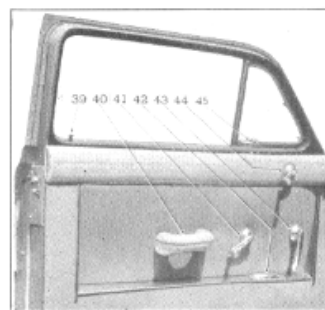


Figure 7

**FROM INSIDE**—Front doors—rotate inside handle (43) by pulling backward. Rear doors—rotate inside handle by pressing down.

Doors cannot be opened from inside or outside unless inside safety buttons in garnish mouldings are in the "up" position.

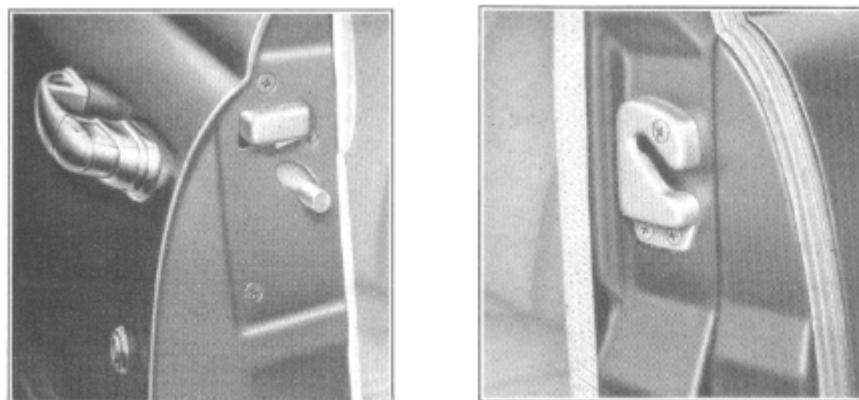


Figure 8

### TO LOCK DOORS

FROM INSIDE—Push down inside safety buttons (39) in garnish moulding.

WHEN LEAVING CAR—Close windows with doors closed. Push down inside safety buttons on all doors except the front one from which you are leaving. Close front door and turn lock with key until inside safety button is "Down." Turn key back to vertical position and remove.

### LOCKER BOX DOOR

To lock the door, turn key one-quarter turn clockwise and remove. To unlock door, turn key one-quarter turn counter-clockwise and remove.

When door is unlocked, it can be opened by pressing in on lock cylinder face.

### REAR COMPARTMENT DOOR

To safeguard the spare tire, tools and any luggage you may be carrying, always lock the rear compartment door. Turning the key one-half turn counter-clockwise unlocks the lock. To lock it, turn the key one-half turn in a clockwise direction. To open, lift the door with the left handle after raising the right handle to release the catches. To close, lower the door, then raise and lower the right handle to engage the catches.

### LOCKING THE HOOD

The hood of your Hudson car is designed to open at the front and is provided with a locking arrangement to prevent the battery, engine and accessories from being tampered with.

The hood lock is controlled by a handle located under the instrument panel on the left side. Pulling out the handle releases the lock and raises the front end of the hood slightly to the safety catch position.



Figure 9



Figure 10





which contribute to poor handling, certain riding discomforts and excessive wear of front end parts. Tires and tubes are balanced at the time of assembly at the factory. The balancing marks are indicated on the tire by a small red mark. Whenever a tire is removed from the wheel, it should always be reinstalled with the red mark aligned with the valve stem.

Although tires and wheels are balanced when they leave the factory, subsequent tire wear causes them to go out of balance. To maintain proper balance and assist in prolonging tire life, it is the tire manufacturers' recommendation that the wheel and tire assemblies be checked for balance every 2,500 miles and whenever a tire is repaired or recapped. Your Authorized Hudson Dealer has the necessary equipment to perform this work.

### **DISMOUNTING AND REMOUNTING TIRES**

**TO DISMOUNT**—Deflate the tube completely. Stand on the tire with both feet to force the bead away from the rim. Push the valve stem back into the tire. With two tire tools inserted about eight inches apart between the bead and the rim, raise the bead over the rim. **BE CAREFUL NOT TO PINCH THE TUBE WITH THE TOOLS.** With one tool in position, move the other tool around the rim and remove the remainder of the bead. Then remove the tube.

Stand wheel in upright position with inner bead in rim well. Apply liquid soap around both sides of rim. Insert both tire tools between bead and rim and pry tire out of rim.

**TO REMOUNT TIRE**—Coat both beads of tire with liquid soap to help slide them over the rim. Inflate tube just enough to round it out, then insert it in the tire, placing the valve stem directly in line with the red balancing mark on the tire. Place the tire on the wheel, carefully guiding valve stem into the hole in the rim. Push the inner bead over the rim and into well at valve stem and force balance of bead over the rim. It may be necessary to force a small remaining portion of the bead over the rim with the tire tool.

Insert the tire tool between outer bead and rim at a point opposite the valve stem and work bead over the rim. Leave tool in place and work other tool around bead and force remainder of the bead over the rim. **BE CAREFUL NOT TO DAMAGE THE TUBE WITH THE TOOL.**

Inflate tire slowly, carefully checking beads to see that they both are seating properly on the rim. The tire may be centered by bouncing it a few times. Inflate tire to recommended pressure.

### **TOOL KIT**

The tool kit is stored in the rear compartment. It contains a wheel hub bolt wrench (which is also used as a jack handle), pliers, screw driver, and a ratchet type bumper jack and base.

### **SPARE TIRE AND WHEEL**

To remove the spare tire and wheel mounted in the rear compartment, take out the clamp bolt and plate, using the wheel hub bolt wrench.

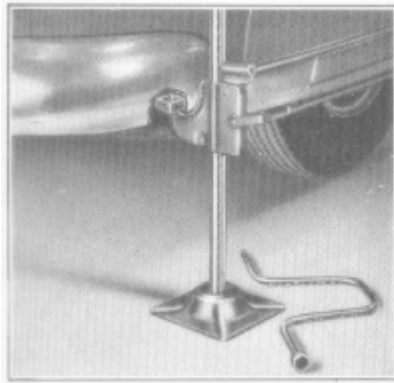


Figure 12

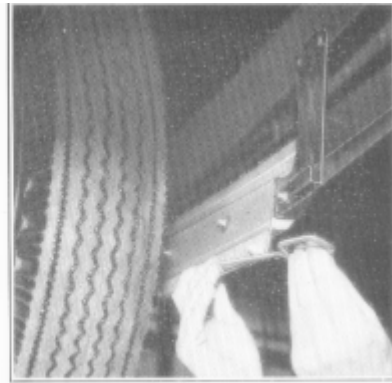


Figure 14

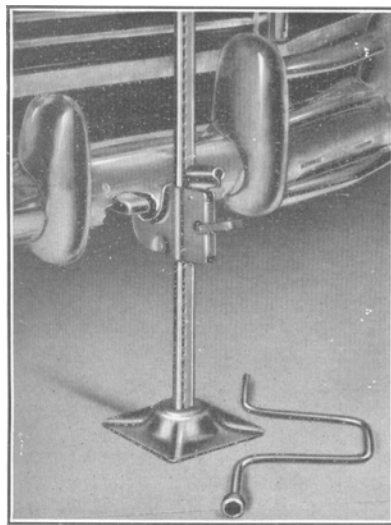


Figure 13

wheel (Fig- 13 ure 14). This can best be done after the car is jacked up, by reaching under and raising up the loop at each end of the attaching rod until it is clear of its hook, as shown.

### CHANGING THE WHEEL AND TIRE

Before raising the car, remove the hub cap with a screw driver and with the hub bolt wrench (jack wrench) loosen the hub bolts one turn. Raise the car sufficiently to clear the

Your New Hudson is provided with special jack lifting pads built into the frame at the front and at the sides near the rear, which assure maximum lifting efficiency and safety and prevents the possibility of springing the bumpers.

Set the parking brake securely and block the wheel opposite the one being changed to prevent any movement of the car. Set the jack base on a level and solid footing and engage the lifting lug of the jack in the socket of the frame pad, as shown. The wheel bolt wrench is designed for use as a handle to operate the jack.

When removing a rear wheel, it is necessary to take off the wheel cover which is a part of the rocker panel opposite the rear

ground and then remove all hub bolts and take off tire and wheel.

When installing the spare, be sure the pilot stud in the hub is in the top position, then slide wheel onto hub using pilot stud as a guide. After wheel has been installed and car lowered, again check tightness of hub bolts and replace hub cap.

## ENGINES

### ENGINE FEATURES—SUPER SIX

Hudson Super Six engines are of "L" head design, mounted at three points in live rubber cushions to prevent sound or vibration being transmitted to the body.

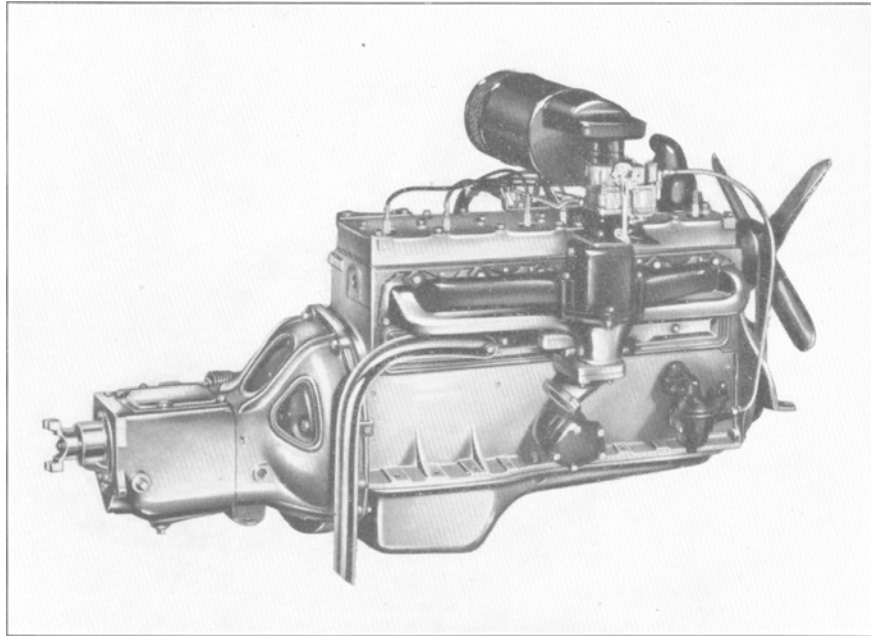


Figure 15

**CYLINDER HEAD**—High turbulence type for better fuel combustion.

**CRANKSHAFT**—Forged in position, fully compensated and equipped with rubber-insulated vibration damper, balanced at rest and in motion: four precision type, steel-backed, babbitt-lined main bearings.

**PISTONS**—T-slot, cam ground, aluminum alloy, fitted with four pinned, plated piston rings.

**CONNECTING RODS**—Drop-forged, high manganese alloy, with replaceable, steel-backed, babbitt-lined precision type bearings. Rifle-drilled for lubrication to piston pin bearing.

**CAMSHAFT**—Nickel-chrome-molybdenum-iron alloy, with angular ground cams for positive rotation of tappet. Heat treated for extreme hardness. Phosphate coated for better lubrication. Bearings pressure lubricated.

**TAPPETS**—Rotating mushroom type with special self-locking adjusting screw. Pressure lubricated.

**VALVES**—Special alloy. Installed at angle for faster intake and exhaust flow. Grooved for conical spring seat retainer. Valve seats integral with cylinder block, cooled around entire surfaces. Exhaust valves are of high nickel-chrome alloy.

**CYLINDER BLOCK**—High chrome alloy, entire block as hard as ordinary valve seat inserts. Water jackets full length of cylinders and all around each cylinder.

**CARBURETION**—Direct passage of fuel through radial manifold to combustion chamber. Dual down-draft type. Automatic choke. Climatic control. Anti-percolator valve.

**LUBRICATION**—Full pressure lubrication to 40 points. Float type oil intake draws clean oil from point just below top level in oil pan.

### ENGINE FEATURES—SUPER EIGHT

Hudson Super Eight engines are of "L" head design, mounted at three points in live rubber cushions to prevent sound or vibration being transmitted to the body.

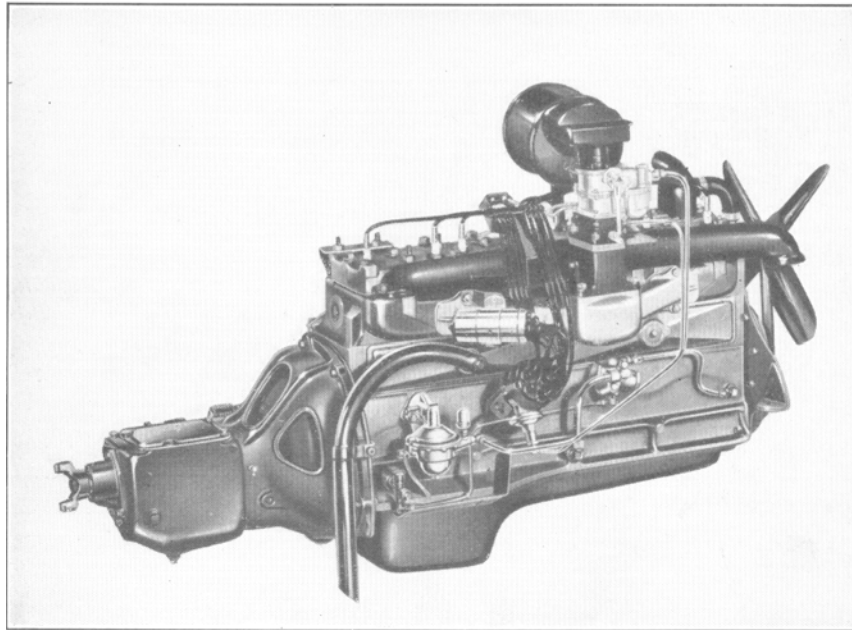


Figure 16

CYLINDER HEAD—High turbulence type for better fuel combustion.

CRANKSHAFT—Drop-forged, fully compensated and equipped with rubber-insulated damper, balanced at rest and in motion; five long-wearing, bronze-backed main bearings.

PISTONS—T-slot, cam ground, aluminum alloy, fitted with four pinned, plated piston rings.

CONNECTING RODS—Drop-forged, high manganese alloy for greater strength, dowel-fitted caps assure perfect alignment. Bearings with centrifugally installed babbitt metal.

CAMSHAFT—Nickel-chrome-molybdenum-iron alloy, heat treated for maximum hardness, specially treated for smooth finish. Large babbitt bearings.

TAPPETS—Exclusive roller cam design. Rotating cam lobe maintains constant contact, requires less adjustment, wears longer.

VALVES—Special alloy steel. Exhaust valves have high chrome content to resist high temperatures.

CYLINDER BLOCK—Super-hard chrome alloy. Provides wear resisting cylinder bores, eliminates need for special valve seat inserts. Entire block is as hard as ordinary valve seat inserts.

CARBURETION—Down-draft type. Dual flow to combustion chambers for more complete combustion. Radial intake manifold provides direct, free flow passages for fuel mixture. Automatic choke. Climatic control. Anti-percolator valve. Air cleaner.

LUBRICATION—Exclusive Duo-Flo supplies oil in direct ratio to engine speed. Lubricates every part at first turn of crankshaft. Float type oil intake draws clean oil from point just below surface of oil in pan.

### VALVE TAPPET ADJUSTMENT

Correct valve tappet adjustment is vital to good engine operation and it is important, therefore, that the specified clearance between the adjusting screws and valve stems be maintained at all times. These are as follows:

	Six Cylinder Engine	Eight Cylinder Engine
Intake Valves	.008"	.006"
Exhaust Valves	.010"	.008"

Tappets checked and adjusted only after the engine has been run long enough to attain normal operating temperature. Be sure to use an accurate feeler gauge.

The valve locations, counting from the front of the engine, are as follows:

	Six Cylinder Engine	Eight Cylinder Engine
Intake Valves	2-4-5-8-9-11	2-3-6-7-10-11-14-15
Exhaust Valves	1-3-6-7-10-12	1-4-5-8-9-12-13-16

## COOLING SYSTEM

The cooling system is of the pressure type, employing a cellular, tubular radiator, centrifugal pump and four blade fan.

The water pump has a large six vane impeller and the shaft is mounted on a double row ball bearing with grease sealed in and requiring no lubrication attention. A new type spring loaded bellows seal and composition thrust washers prevent leakage around the shaft.

By-pass type thermostats are used which permit quick engine warm-up by restricting the coolant circulation through the radiator and by-pass it around the cylinder block. The thermostat begins to open at temperatures of from 150 to 155 degrees and is wide open at 185 degrees.

A large 4 blade fan, with blades unevenly spaced to minimize sound, is used.

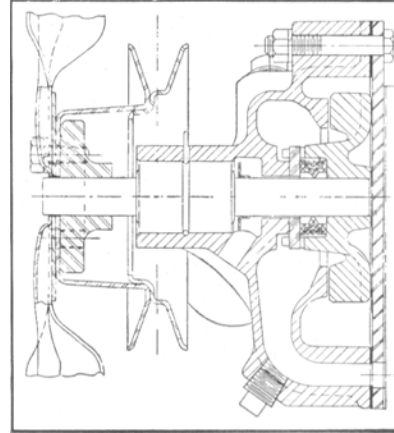


Figure 17

COOLING SYSTEM CAPACITY-6 Cylinder Models-17 Quarts  
8 Cylinder Models-18 Quarts

TO DRAIN the radiator only, turn handle of the drain cock located at the lower right corner of the radiator, counter-clockwise. To drain the complete cooling system, also remove the pipe plug located at the left rear corner of the cylinder block.

*Note: If it becomes necessary to drain the radiator when it contains antifreeze and it is desired to save it, a piece of hose may be fitted over the end of the drain cock and the loose end placed in a container.*

PROPER CARE of the cooling system is highly essential to maintain efficient engine operation. Rust and scale in the cylinder block is a natural product of water and iron. Therefore, unless the necessary precautions are taken to prevent this accumulation, which acts as an insulator, so-called "hot spots" may result through the inability of the water to cool the cylinders and the area adjacent to the valve seats.

The use of Hudson Rust and Corrosion Inhibitor in the cooling system prior to adding anti-freeze in the fall and after draining in the spring will assist to a large measure in keeping the system clean and permit efficient circulation. This product is available through all Authorized Hudson Dealers.

## FAN BELT

The fan belt is of the "V" type and drives the water pump and generator through the vibration dampener pulley.

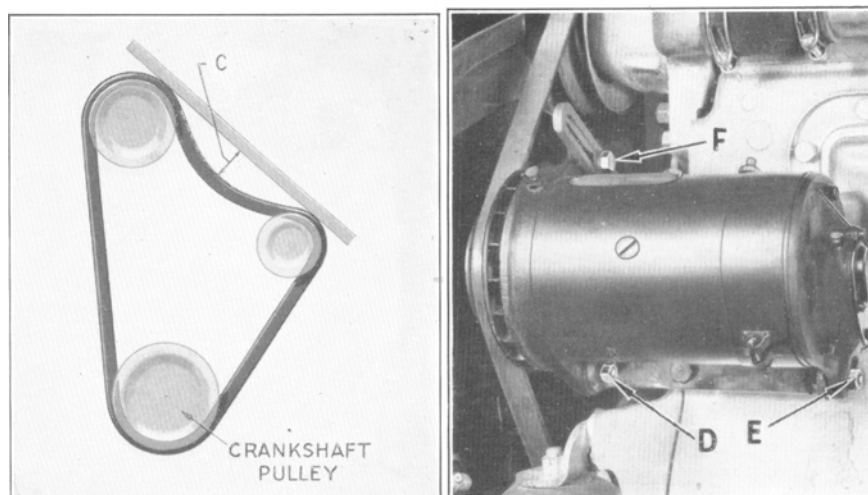


Figure 18

The belt is adjustable by means of a swinging generator mounting. Moving the generator away from the engine increases the belt tension while moving it towards the engine decreases its tension. Belt adjustment is correct when it is possible to depress the belt approximately  $\frac{3}{4}$ ", as shown in the illustration.

Adjustment is made by loosening cap screws and nuts (D), (E) and (F). When proper position has been obtained, be sure to tighten screws and nuts securely.

### ANTI-FREEZE

Before installing any anti-freeze when preparing for winter operation, it is good practice to always drain and flush the cooling system to insure unrestricted circulation. Also carefully check all hoses and gaskets for leaks or signs of deterioration.

Avoid the use of anti-freeze solutions containing calcium salts, or other ingredients which promote electrolytic action. Glucose and honey clog the radiator; kerosene and fuel oil when hot, expel inflammable vapors and, therefore, solutions containing these ingredients should never be used.

The following anti-freeze table will be helpful in determining the quantity of anti-freeze required for proper protection:

Tempera- ture	Ethylene Glycol (Prestone or Equivalent)			Methanol or Denatured 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	4-1/2	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



## CARBURETOR AND FUEL SYSTEM

### FUEL RECOMMENDATIONS

The engine of your Hudson car is designed to give good performance and economy with regular grades of gasoline. One of the most important factors in getting the most out of the fuels available, is correct ignition timing.

The lower grades of gasoline should be avoided in the present day high compression engines, as they tend to cause "pinging" under normal load conditions, which requires that the spark be retarded for quieter operation. Retarding the spark naturally affects the performance of the car, as well as economy of operation and, therefore, no saving in operation is obtained. Also avoid the use of fuels which tend to gum up quickly as they materially affect the operation of the engine.

Premium grades of fuel, such as Ethyl, which have a higher octane rating, permit the use of a more advanced spark timing without knock or "pinging." this will result in improved performance and economy. It should be remembered, however, that these extra advantages cannot be obtained from this type of fuel unless the spark timing is advanced.

For information on "Ignition Timing" see pages 39 and 40.

### FUEL ECONOMY

Gasoline mileage is the subject of considerable discussion among motorists. We hear a good deal about the results obtained by certain owners which may cause others to wonder how the claims are substantiated. Unless we understand the conditions under which the figures were obtained, they mean very little to us.

There are many factors governing gasoline mileage, such as car speed, road conditions, varying wind velocity, temperature changes, heavy traffic and frequent stops. All of these conditions have a direct bearing on the gasoline mileage your car can give. There are, however, a number of things you can do in driving to improve your gasoline mileage.

1. Avoid unnecessary acceleration of the engine.
2. Warm up the engine by letting it run idle for a few minutes when starting, to permit the oil to circulate properly. This is especially important in cold weather.  
CAUTION: Avoid racing the engine during the warm-up period.
3. Accelerate slowly.
4. Do not drive in low or second speed gears unnecessarily.
5. Maintain as nearly uniform speed as possible when driving in city traffic.
6. Avoid sudden and unnecessary stops.
7. Keep tires inflated to the recommended pressure.
8. Do not idle the engine unnecessarily.
9. Use engine oil of the proper viscosity.
10. Keep your car properly lubricated.

11. Have the engine of your car tuned up by your Authorized Hudson Dealer each 5,000 miles. He will check its operation and make any necessary adjustments, including ignition timing, contact points, spark plugs, valve adjustment and other important details which have a direct bearing on operating economy.

### CARBURETORS

The carburetors are of the dual down-draft, automatic choke type, incorporating vacuum controlled metering rods, anti-percolator valve, accelerating pump, and fast idle features. A filter screen is also incorporated at the fuel inlet to prevent the entrance of foreign particles which would otherwise clog the small drilled passages and jets in the carburetor.

**ADJUSTMENTS**—There are no adjustments on the carburetor that will affect high speed operation. Therefore, any servicing the carburetor may require, other than minor adjustments that affect operation at idle speed only, should be performed by your Authorized Hudson Dealer who has the special tools and gauges required to service these units.

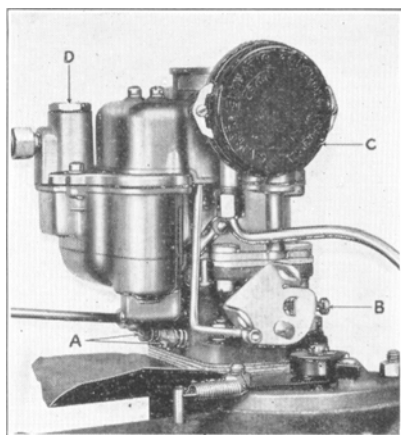


Figure 19

**IDLE MIXTURE ADJUSTMENT**—This adjustment is made by turning both idle adjusting screws (A). The normal position of these screws is 1/4 to 1 turn off their seats. To adjust them, turn both screws into their seats and then out exactly 3/4 of turn. Readjust for smooth idling. Turning the screws in a clockwise direction produces a leaner mixture and turning them in a counter-clockwise direction results in a richer mixture.

**THROTTLE ADJUSTING SCREW (B)**—controls the engine idle speed. This screw should be adjusted to give a speed of 7-1/2 to 8 miles per hour in high gear.

**NOTE:** Before making the idle Mixture and Throttle Adjusting Screw Adjustments, be sure the engine has been run long enough to

reach normal operating temperature. Never make these adjustments when engine is cold.

If these adjustments do not produce satisfactory results, the engine may require an Engine Tune-up and you should consult your Authorized Hudson Dealer.

**AUTOMATIC CHOKE CONTROL**—automatically proportions the fuel and air requirements for both starting and engine warm-up.

The thermostatic housing spring which is contained within the thermostat housing (C), is calibrated to hold the choke valve closed at a temperature of 75° F. when it is set at the factory. As the engine warms up the hot air the hot air drawn into the thermostat housing

through a pipe passing through the exhaust manifold, causes the thermostatic coil spring to release its tension on the choke valve, permitting it to open gradually. Thus as the engine temperature increases, the choke valve gradually opens, resulting in a leaner mixture being fed into the engine to meet operating requirements.

Any service required on the Automatic Choke should be referred to your Authorized Hudson Dealer.

MANIFOLD HEAT CONTROL VALVE—is automatic and requires no adjustment.

FILTER SCREEN CAP (D)—should be removed and the screen cleaned every 2,000 miles.

### CARBURETOR AIR CLEANERS

THE OIL WETTED type air cleaner is used as standard equipment on all models. In this type cleaner the wire gauze is oil soaked and as the air passes through it, foreign particles are removed, thereby permitting only clean air to enter the carburetor.

At periods of 2,000 miles, or oftener if local conditions warrant, the filter unit should be taken out by removing wing nut and lifting off cover. Clean off old oil and dirt by dipping it in kerosene. Blow it dry and re-oil by dipping it in engine oil, using the same grade as used in the engine. Permit excess oil to drain off and reinstall it in the cleaner.

The OIL BATH air cleaner is available as an option or may be installed by your Authorized Hudson Dealer. In this unit, dirt is washed out of the air by the oil spray created as the incoming air strikes the oil in the sump.

The oil bath type air cleaners should be serviced at 2,000 mile intervals or more frequently during severe dust conditions, as follows:

#### SIX CYLINDER ENGINES

1. Loosen long clamp screw at base, lift up and take off cleaner.
2. Remove wing nut at top of cleaner, take out upper section and wash filter element in gasoline.
3. Remove old oil, wash out cleaner base and refill to level indicated with new oil of grade as used in engine.
4. Replace upper section of cleaner without oiling filter element and tighten wing nut.
5. Install cleaner on engine and tighten clamp screw. Do not tighten excessively, as this may distort carburetor air horn.
6. Remove oil filler pipe air cleaner and wash in gasoline.



Figure 20

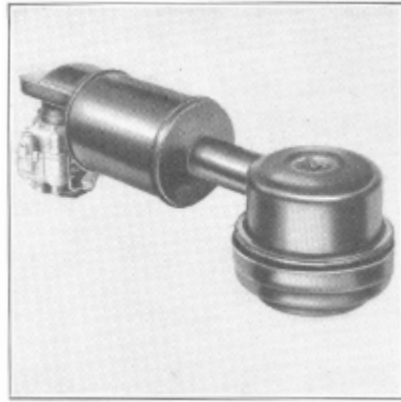


Figure 21

### FUEL PUMPS

The standard fuel pump is of the mechanically operated diaphragm type and should be serviced at 2,000 mile intervals by cleaning the bowl and screen.

This is done by removing the bowl screw "A", which in turn permits the removal of the bowl "B," screen "C" and gasket "D." Clean and carefully inspect screen and gasket and replace them if necessary before reassembling.

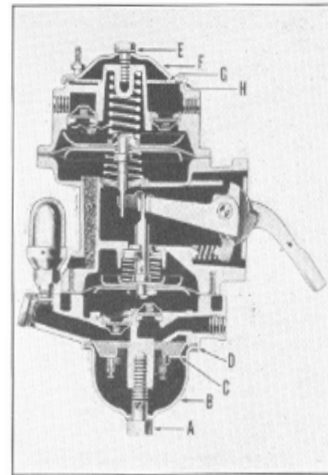


Figure 23

### EIGHT CYLINDER ENGINES

1. Unscrew and remove wing bolt at top of cleaner.
2. Remove lower section of cleaner by pulling it outward toward the left side of the car.
3. Lift out filter element, clean in gasoline and drain.
4. Remove old oil, wash out base, and refill to level indicated with new oil of the same grade as used in engine.
5. Place filter element and container in position without oiling and install lower section of cleaner with the dirt shield facing the front of the car.
6. Install and tighten wing bolt.

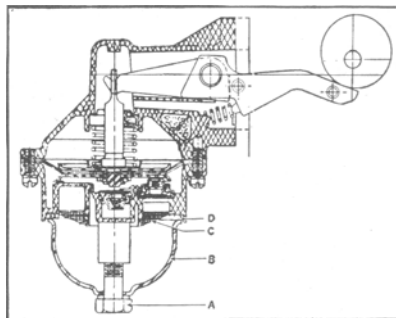


Figure 22

### COMBINATION FUEL AND VACUUM PUMP

This type of pump assures steady windshield wiper action under wide open throttle operation when engine vacuum is low.

To clean the gasoline filter screen, which is recommended every 2,000 miles, remove the lower cap screw (A) and bowl (B). Before replacing screen (C) and bowl gasket (D), carefully examine them and renew if necessary.

The air filter screen should also be cleaned at 2,000 mile intervals. This is accomplished by removing top cover screw (E) and cover (F). Before replacing the screen and cover, carefully examine screen (G) and gasket (H) and renew if necessary.

## STARTING, LIGHTING AND IGNITION

### BATTERY

The battery is located in the left front corner of the engine compartment, where it is easily accessible for servicing.

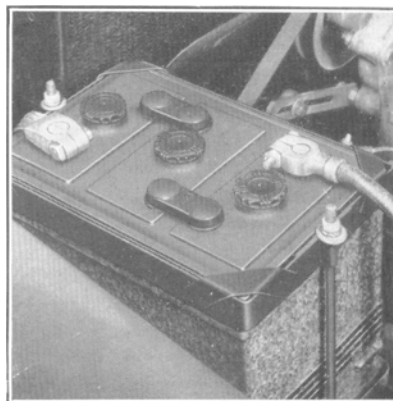
It is of the 51 plate type, 120 ampere hour capacity and has the positive post grounded.

**REGISTRATION** — So that you may receive the full benefits of the battery manufacturer's Guarantee and Adjustment Policy, which covers the battery, be sure your dealer has registered the battery with the National dealer. If not, this should be done within thirty (30) days after you have taken delivery of your car.

**CARE** — The battery is protected from being overcharged by a voltage regulator. At intervals of 5,000 miles, when the engine is tuned up, the regulator will be checked for voltage setting.

The electrolyte level in the battery should be maintained at opening above the top of the plates.

At least twice a month in warm weather and once a month in cold weather, the level should be checked and distilled water added to restore it to the proper height. When adding water in cold weather, do so immediately before driving the car, or else run the engine for a short time to insure the distilled water mixing properly with the battery solution. Unless this precaution is taken, freezing and battery damage may be experienced.



### GENERATORS

The generators used on all models are of the fully ventilated, high output type with third brush adjustment and voltage regulation. The generator is driven from the crankshaft through a "V" type, adjustable fan belt which also operates the water pump.

The maximum output on all models is 44 amperes cold and 38 amperes hot. The term "hot" means after the engine has been run about 15 minutes at a speed corresponding to 20 miles per hour.

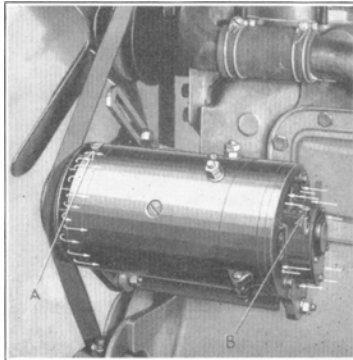


Figure 25

Maximum output is reached at a car speed of about 35 miles per hour. Adjustment of the output is dependent on battery voltage and, therefore, any adjustments required should be made by your Authorized Hudson Dealer, who has the proper checking equipment.

**LUBRICATION**—The front and rear armature bearings should be lubricated every 2,000 miles by applying a few drops of light engine oil to oilers (A) and (B). *Avoid over-oiling.*

### VOLTAGE REGULATOR

This highly sensitive device automatically increases the amount of current flowing into the battery when it is low due to heavy electrical loads and reduces the current flow when the battery voltage reaches a predetermined value. This prevents damage to battery and other electrical units from excessively high voltage.

As special equipment is required to test this unit, and as the cover is sealed in place, the regulator should never be tampered with. See your Authorized Hudson Dealer if it requires checking.

### STARTING MOTOR

The starting motor is located at the rear left corner of the engine and is operated by a separate solenoid switch. Control of the starting motor is by means of a push button located on the instrument panel to the left of the steering column. The starter control is operative only when the ignition switch is turned on.

A small button located at the rear end of the solenoid switch is exposed by unscrewing a cap and may be used to permit cranking the engine when checking ignition timing or changing clutch compound.

**LUBRICATION**—The front and rear armature bearings should be lubricated every 2,000 miles by applying a few drops of light engine oil to oilers (A) and (B). *Avoid over-oiling.*

The Bendix drive pinion threads should be cleaned occasionally with a brush dipped in kerosene to remove gum and dirt. Do not oil the threads as the kerosene will provide all the lubrication required.

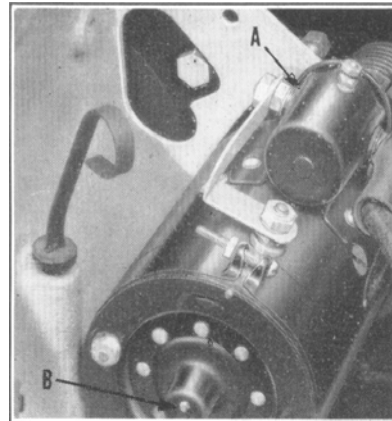


Figure 26

## DISTRIBUTOR

The distributor incorporates an automatic governor advance and in addition, a diaphragm advance control (A), operated by engine vacuum.

The automatic governor advance provides the proper ignition timing in direct proportion to engine speed.

The diaphragm advance control provides additional spark advance over the governor advance, through engine vacuum, for maximum fuel economy. When the engine is running under light load and engine vacuum is high, the distributor is rotated to the maximum advanced position. However, under heavy load conditions, as when the throttle is opened for additional acceleration or hill climbing, and engine vacuum is low, the distributor is rotated to the retarded position to prevent fuel detonation or pinging.

## LUBRICATION

Place a few drops of light engine oil in the oil cup (B) every 2,000 miles. At the same time, apply a few drops of oil to wick (E) at the top of the distributor shaft, to the contact arm pivot (G) and to the lobes of the cam (C).  
**CAUTION:** Do not over-oil.

## CONTACT POINT ADJUSTMENT

The distributor contact points should be clean, smooth and make full contact. The proper gap adjustment is .020" for the six cylinder and .017" for eight cylinder distributor. The points are adjusted by removing the distributor cap and rotor and cranking the engine until the fiber block on the contact arm rests on the highest point of the cam lobe (C). Then loosen lock screw (F) and turn adjusting screw (D) until the correct gap is obtained. Tighten lock screw and recheck the gap.

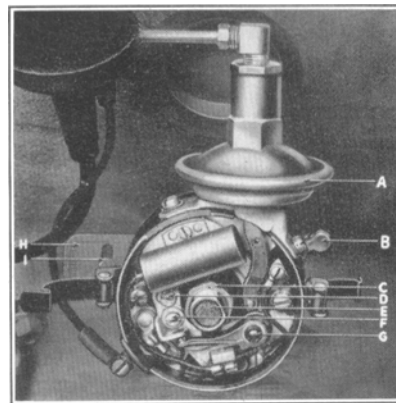


Figure 27

## IGNITION TIMING

Remove spark plug from No. 1 (front cylinder), place finger over spark plug hole and crank the engine until air pressure against the finger indicates that the piston is coming up on the compression stroke. Then continue cranking slowly until the mark "U.D.C. 1-6" (six cylinder engines) or "U.D.C. 1-8" (eight cylinder engines) lines up with opening in the rear engine support plate, as shown.

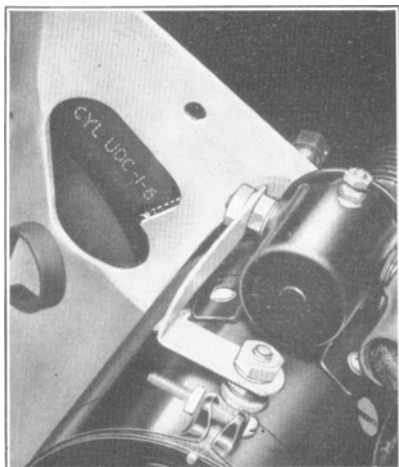


Figure 28

The engine can be cranked by removing the knurled cap on the starting motor solenoid and pressing the button in quick succession.

The distributor rotation is clockwise. Loosen the distributor advance arm screw (I) and rotate the distributor housing clockwise to the limit of the slot in quadrant. Take off the distributor cap and remove the central wire from the cap. Place the bare end 1/8" from the cylinder head. Turn on the ignition and rotate the distributor body counterclockwise slowly just until a spark jumps from the high tension wire to the cylinder head. Tighten screw (I), replace central cable in cap, and clamp cap on distributor.

With the distributor cap in position, the metal strip on the rotor should be directly in line with No. 1 terminal. The cables should be in the cap terminals in the order, 1-5-3-6-2-4 or 1-6-2-5-8-3-7-4, following in a clockwise rotation.

The foregoing is approximate normal timing for regular or non-premium fuels at or near sea level. For final setting see "Fuel and Altitude Compensation."

### FUEL AND ALTITUDE COMPENSATION

When Ethyl or premium fuels are used in place of the regular or non-premium grades, a more advanced spark timing should be used and final tests should be made on the road. Also when operating a car at high altitudes, it will be found that a more advanced spark timing can be used than at or near sea level.

To determine proper spark timing for these conditions, with engine at normal operating temperature, accelerate at full throttle from 10 trifles per hour in high gear. A "ping" should be noted at approximately 15 miles per hour. If no "ping" is heard, loosen the distributor quadrant screw (I), and rotate distributor body in a counter-clockwise direction one graduation mark at a time until the "ping" is heard. Under no circumstances, however, should the pointer on the rear engine support be more than 1 inch (on 1st short mark) before the U.D.C. 1-6 or U.D.C. 1-8 mark on flywheels.

If the "pinging" is heard at speeds above those previously mentioned, retard the spark timing by loosening the clamp screw and rotate distributor body in opposite direction, one graduation mark at a time until the proper setting is obtained.



## HEADLAMPS

Hudson cars employ the headlighting system known as "Sealed Beam," in which the light source, the reflector, the lens, and the gasket are all assembled in one securely sealed unit. When the filament burns out or the lens break, the entire unit is discarded and a new one installed, thereby assuring maximum lighting efficiency throughout the life of the car. "Sealed Beam" headlamps provide two separate and distinct beams.

1. A country (upper) beam is provided to illuminate evenly for a considerable distance ahead of the car. This beam is for use on the open highway when no other vehicles are approaching.

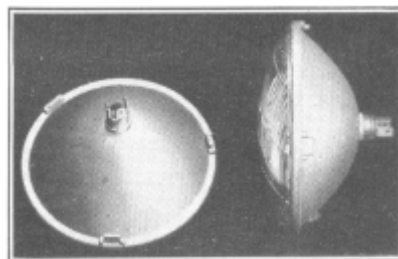


Figure 29

2. A traffic (lower) beam is also provided and is low enough on the left side to avoid glare in the eyes of oncoming drivers. It should always be used when meeting other vehicles. This

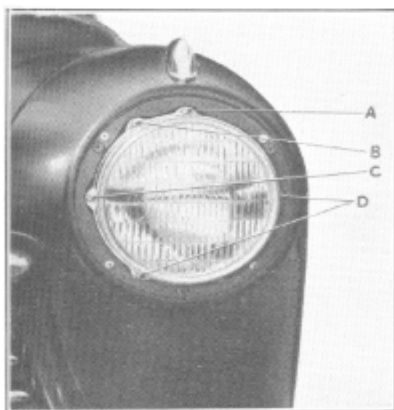


Figure 29

beam is designed so that it does not throw any dazzling light into the eyes of the approaching driver under any condition of car loading. At the same time distribution of light is such that the right side of the road is illuminated as far ahead as is practical without causing glare on curves.

By turning the lighting switch knob on instrument panel to first position, the parking lights, instrument lights, bonnet light, license light and tail lights are turned on. Turning the knob to the second position turns on these lights in addition to the headlights. The country (upper) or traffic (lower) headlight beams are obtained by pressing the foot switch.

When the country (upper) beams are lighted, a red pilot bulb in the speedometer dial will be illuminated, making it convenient for the driver to determine when this beam is in use. Always use the traffic (lower) beam when meeting oncoming traffic.

To Service Unit:

1. Remove headlamp lens rim by taking out the three screws.
2. Loosen, but do not remove, the three screws (B) holding the retaining ring. (Do not disturb the aiming screws (A and C) at the top and left side of the unit.)
3. Remove retaining ring by rotating counter-clockwise, allowing the reflector unit to be removed.
4. Remove the reflector plug from the reflector unit.
5. Install new unit by reversing above operations.

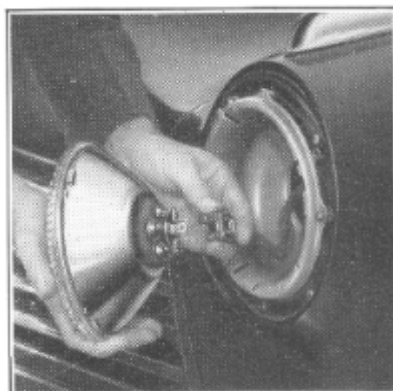


Figure 31

### "SEALED BEAM" HEADLAMP AIMING ADJUSTMENT

To obtain the maximum results in road illumination and the safety that has been built into the headlighting equipment, the headlamps must be properly aimed.

Place the car on a level position with a light-colored vertical screen 25 feet ahead. For best road lighting results, draw a horizontal line (A-A) on this surface at a level of a point three inches below the headlamp center.

If, however, your state requires a loading allowance, draw this horizontal line below the above mentioned line by the amount required by your particular state. Sight through the center of the rear window to the right and left of the windshield center bar and mark two points on the horizontal line. A point midway between these points represents the center

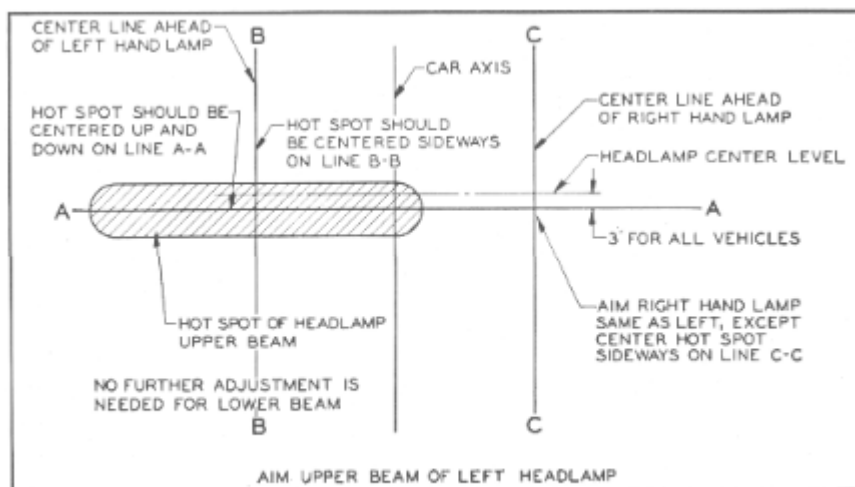


Figure 32

line (car axis) on the screen. Next draw vertical lines (B-B) and (C-C) on the screen to the right and left of the center line at a distance equal to one-half of the center-to-center distance between the two headlamps.

Place lighting switch in the position which produces the country (upper) beam (bright light). When the country (upper) beam is lighted the lower filaments on both lamps are illuminated.

Independent adjustment of both horizontal and vertical aim is provided in "Sealed Beam" headlamps, with the adjustment screws accessible from the front of the lamp after first removing lens rim. The vertical adjustment screw is shown at (A) and the horizontal adjusting screw at (C). The light beam is moved to the right or left by tightening or loosening the horizontal adjusting screw (C). The beam may be raised or lowered by turning the vertical adjusting screw (A).

Cover one lamp to obscure the beam of light and then adjust the beam from the other lamp so that the center of the zone of highest intensity falls on the intersection of the horizontal line (A-A) three inches below the lamp center and the vertical line directly ahead of the lamp. Repeat the operation for the other lamp. No further adjustment is needed for the traffic (lower) beam.

### CIRCUIT BREAKERS AND FUSES

A circuit breaker incorporated in the lighting switch and an auxiliary circuit breaker mounted on the instrument panel protects the lighting and other circuits against damage in the event of a short or other derangement in the electrical system. Separate fuses are also employed for the protection of optional equipment and accessory items, as follows:

*The Electric Clock*—has a 3 ampere fuse contained in the fuse case located at the back of the clock.

*Weather-Control*—is protected by a 14 ampere fuse located in a fuse case on the left side of the heater housing.

*Radio*—includes a 14 ampere fuse contained in the fuse case incorporated in the "A" lead wire.

*Drive-Master*—is protected by a 10 ampere fuse located in the Drive-Master control switch on the instrument panel.

*Direction Indicator*—has a fuse of 10 ampere capacity located in a fuse case attached to the flasher unit lead wire.

### CLUTCH

A Fluid Cushioned Clutch incorporating a single cork-insert disc, is used exclusively in Hudson cars to assure smooth engagement. Long life is assured through triple sealing the unit against fluid loss. Heat developed within the clutch is kept at a minimum through proper ventilation and the constant bath of fluid within the housing.

The only attention required is lubrication and a periodic check of the pedal-to-floor board clearance to insure full travel of the clutch pedal and prevent the pedal from riding against the floor board, which may result in slipping.

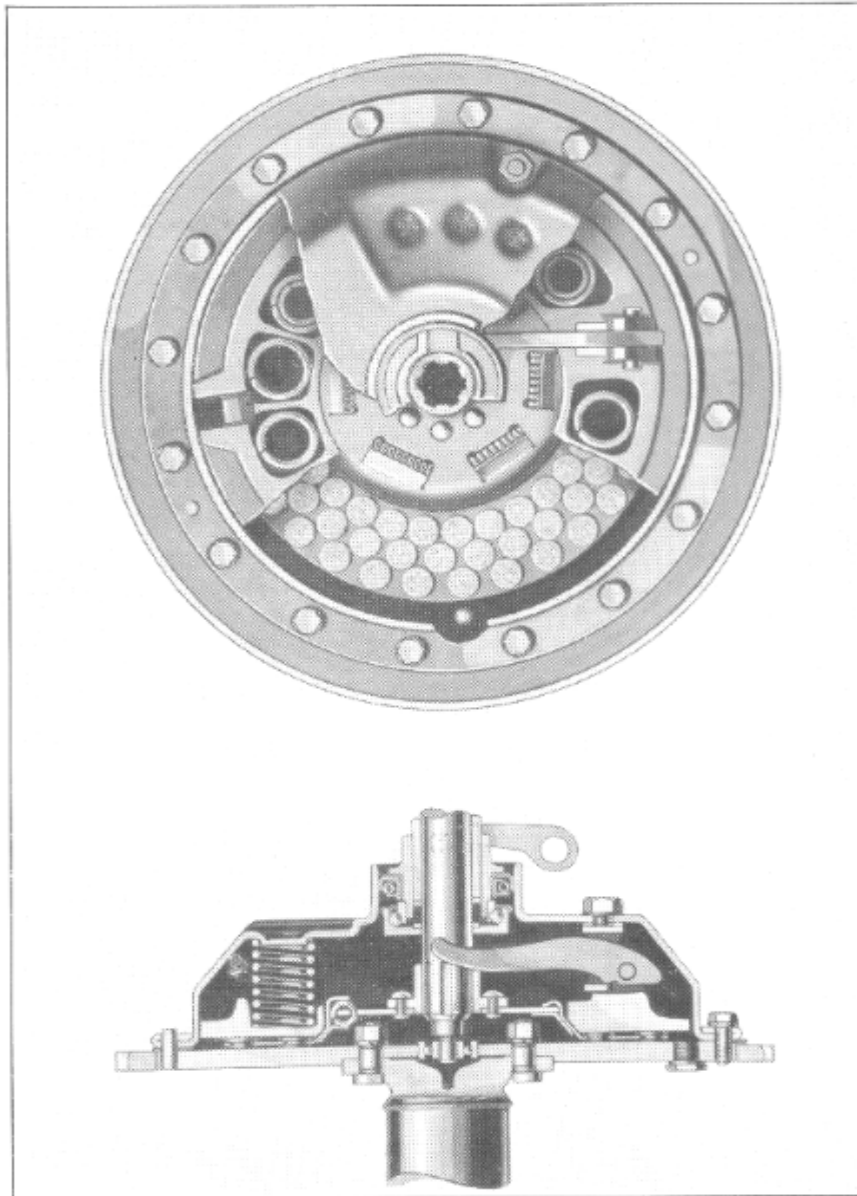


Figure 35

### CLUTCH PEDAL ADJUSTMENT

To assure full disengagement of the clutch to prevent clashing when shifting gears and also to prevent the clutch pedal from riding against the floor board, 1/2" clearance must be maintained between the floor board and rear face of pedal.

This can be adjusted by loosening lock nut (A), removing cotter pin and clevis pin (C), and turning yoke (B) to increase or decrease the clearance as required. Replace clevis pin and cotter pin and tighten lock nut securely.

### LUBRICATION

The clutch throwout bearing should be lubricated every 1,000 miles, using viscous chassis lubricant applied through the grease fitting on the right side of the clutch housing.

The clutch pedal shaft bushings should also be lubricated at intervals of 1,000 miles, using viscous chassis lubricant applied through the grease fitting on the bottom of the pedal, reached from underneath the car.

Every 5,000 miles the clutch should be drained and refilled with HUDSONITE CLUTCH COMPOUND, which is produced in the Hudson Engineering Laboratories, and is available through all Authorized Hudson Dealers. The exclusive use of this compound is your assurance of obtaining smooth, even clutch action.

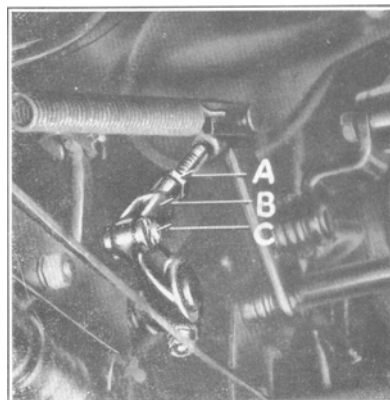


Figure 31

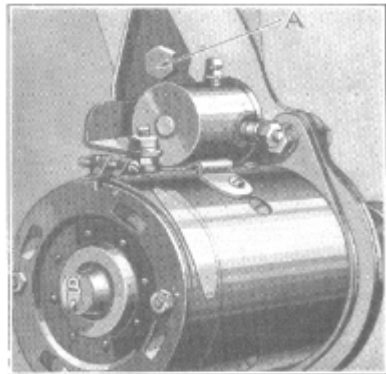


Figure 35

The clutch is drained without disturbing the flywheel guard by removing hex plug (A) in the front face of the flywheel. Then rotate the flywheel until the first star stamped on the flywheel face appears in inspection hole over starter motor and allow the old fluid to drain out. Turn flywheel until filler hole reappears and refill with 1/3 pint of HUDSONITE CLUTCH COMPOUND. Replace plug and tighten securely.

### VACUMOTIVE DRIVE (Optional Equipment)

Vacumotive Drive, which is available as a factory installed option, or may be installed by

your Authorized Hudson Dealer, provides a means of engaging and disengaging the clutch automatically without using the foot. It utilizes the engine vacuum and is operated by momentarily lifting the foot from the accelerator pedal to disengage the clutch and depressing the accelerator pedal to engage the clutch.

A control switch mounted on the instrument panel, permits the driver to change from conventional clutch operation to automatic operation by merely turning the knob to the right. To revert to conventional drive, turn knob to left. This can be done at any time.

A centrifugal governor switch prevents free wheeling or coasting in high gear at speeds above 19 miles per hour. Under certain conditions, such as when driving on icy or slippery pavements, or when descending steep grades when free wheeling may not be desired, the driver may revert to manual clutch control by turning knob to left.

### **OPERATION**

Turn control knob to right. Depress the clutch pedal manually, as Vacumotive Drive is operative only when the engine is running. Place the Gear Shift lever in neutral position and start the engine. Move the lever to the desired gear position and depress the accelerator pedal.

When moving in low gear, accelerate to the desired speed for shift into second gear. Lift the foot from the accelerator pedal, move the gear shift lever into second gear position and then depress the accelerator pedal. Repeat this operation for the shift into high gear.

### **LUBRICATION**

Vacumotive Drive linkage connections should be lubricated every 1,000 miles with a few drops of light engine oil.

At intervals of 10,000 miles, the vacuum power cylinder should be lubricated by removing pipe plug and injecting one ounce of HUDSON SHOCK ABSORBER FLUID. The piston rod end to bellcrank bolt and the valve rod to lever link should be removed and the piston rod rotated with an in-and-out movement to thoroughly distribute the oil over the piston and oil wick.

### **TRANSMISSION**

The transmission is of the synchronized design, incorporating the "blocker type" synchronizing unit, which assures an absence of gear clashing when shifting. It provides three speeds forward and one reverse. All gears are of helical cut tooth design for quiet operation in all speeds.

Gear shifting is accomplished by a steering column gear shift lever. The four speeds are in the conventional "H" plate order. When in neutral the shift lever is in a horizontal position in the second and high rail. To shift into reverse gear, the lever must be raised and moved forward. Movement to low gear is by pulling the lever backward in the same rail. The shift into second gear is forward to neutral position, then press lever down and move forward. Moving the lever backward gives high gear position.

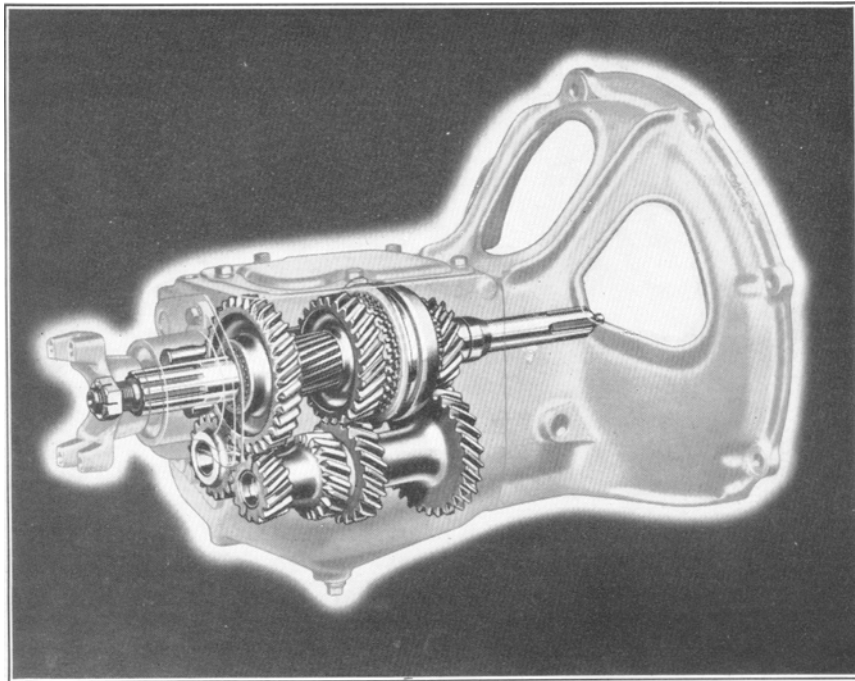


Figure 36

#### **LUBRICATION—STANDARD TRANSMISSION**

The transmission is fitted with one drain plug located at the bottom of the case and one filler plug on the right side.

Remove the filler plug every 1,000 miles and check fluid level. Permit car to stand idle a few minutes before checking the level. This will allow the foam to subside and assure a check of the actual oil level.

At intervals of 5,000 miles the oil should be drained and the transmission refilled with new lubricant. In summer use 2 pounds of S.A.E. 90 E.P. gear oil and in winter use an S.A.E. 80 E.P. grade. If the unit is flushed out, it should be refilled with 2 1/4 pounds of the proper lubricant.

Should hard shifting be encountered in extremely cold weather, drain out 2 ounces of transmission oil, add 2 ounces of kerosene and refill to proper level with oil.

#### **LUBRICATION—TRANSMISSION WITH OVERDRIVE**

As the same grades of gear oil recommended for the transmission are used in the Overdrive, communicating passages are provided between the two units. Separate drain and filler plugs are also provided in the Overdrive housing. The drain plug is located on the bottom and the filler plug is on the right side of the housing.

To check fluid level, first remove Overdrive filler plug and determine level, which should be even with lower edge of hole. If level is low, refill to correct level. Then check oil level in transmission and refill as required.

*To drain and refill*, first be sure lubricant is warm as it will flow more freely. Remove both drain plugs and drain all old lubricant. Replace plugs. Refill Overdrive first, permitting level to come up to bottom of filler plug hole. Next refill transmission to bottom of level of the filler plug hole. Replace both plugs.

Should it be necessary to thin the lubricant to facilitate shifting in extremely cold weather, drain out 2<sup>1</sup>/<sub>2</sub> ounces of lubricant, add 21<sup>1</sup>/<sub>2</sub> ounces of kerosene and then refill to proper level with oil.

## TRANSMISSION OVERDRIVE

### (Optional Equipment)

Transmission Overdrive is available on all models as a factory installed option only. It is not available for field installation. This unit provides fourth speed operation at approximately 22 miles per hour and also permits free wheeling on deceleration below about 19 miles per hour. It reduces engine speed 28 per cent in relation to car speed and contributes to smoother operation and greater gasoline and oil economy at high speeds.

The speeds at which overdrive becomes operative on acceleration and when free wheeling becomes effective on deceleration are controlled by a centrifugal governor switch mounted on the Overdrive housing. Engagement and disengagement of Overdrive is controlled through the accelerator pedal when the Overdrive control knob, located on the instrument panel, is pushed out. Conventional operation is obtained when the knob is pulled out.

### OPERATION

Push the control knob all the way in for operation in Overdrive. This may be done with the car standing or at any ordinary driving speed. Overdrive becomes operative at speeds above approximately 22 miles per hour and the shift is made by removing the foot from the accelerator momentarily. Upon again depressing the accelerator, the car will operate in Overdrive and continue to do so until the speed drops to about 19 miles per hour. Overdrive will then automatically disengage, reverting to direct drive through free wheeling.

As operation in Overdrive does not provide best acceleration for passing other cars or give the necessary power to climb steep grades, it is occasionally necessary to revert temporarily to direct drive at speeds higher than 19 miles per hour. This can be accomplished by depressing the accelerator pedal fully beyond the wide open throttle position.

To re-engage Overdrive, momentarily release the accelerator pedal (at speeds above 22 miles per hour) and resume normal operation in Overdrive.

When Overdrive and free wheeling is not desired, as in heavy traffic, on icy and slippery pavements or on steep grades, simply pull the control knob out while the car is standing or moving at less than 19 miles per hour.



If a clicking sound is heard after pulling the knob out, depress the accelerator pedal slightly to bring the engine speed up to the car speed and the shift will be completed.

When driving at speeds above 19 miles per hour, it is necessary to depress the accelerator pedal fully beyond full throttle to revert to direct drive and then pull out the control knob.

### HUDSON DRIVE-MASTER

#### (Optional Equipment)

Hudson Drive-Master, which is available as a factory installed option only, provides automatic gear shifting in forward speeds under normal conditions, yet permits shifting in the conventional manner at ANY time. Hudson Drive-Master allows the driver to have COMPLETE CONTROL of the transmission in every speed at all times.

When the Drive-Master switch knob on the instrument panel is turned to the right, the operation of the clutch and gear shifting in forward speeds is automatic. When the switch is turned to the left, the clutch is operated automatically, but the transmission gears must be shifted in the conventional manner. When the knob is in the center or "Off" position, both transmission and clutch are operated manually.

*Note: The clutch pedal MUST be depressed before the starter will operate on cars equipped with Hudson Drive-Master.*

### OPERATION

To start in forward speeds under normal conditions, place gear shift lever in high gear position. Depress accelerator and car will move in second gear. When accelerator is released above "shifting speed," high gear will be automatically engaged. It is possible to accelerate to any speed in second gear before shifting into high by keeping the accelerator depressed.

When slowing down for a stop upon releasing the accelerator, the transmission will shift into second when the "shifting speed" is reached and the car is ready for a new start.

To start in low gear, move the gear shift lever to the neutral position, hesitate momentarily and then move it into low gear. After starting, release the accelerator and shift into second or high position. If second speed is selected, it will be necessary to shift into high in the conventional manner. If the lever is moved to the high gear position and the accelerator released, the shift is made automatically into either second or high gear, depending upon the car speed.

Shift into reverse in the conventional manner by lifting the foot from the accelerator and moving the gear shift lever into neutral and then into reverse.

*Mountain Driving—If it is desired to go into second gear when ascending or descending a steep grade, above the "shifting speed," momentarily release the accelerator, disengage the clutch manually and move gear shift lever into second speed position.*

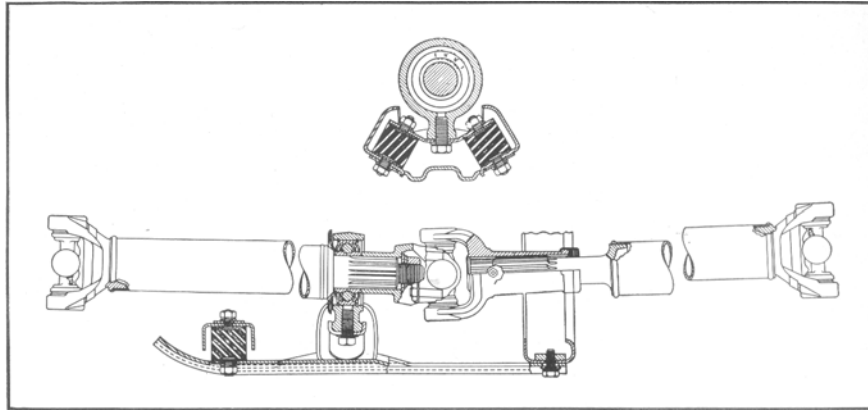


Figure 37

### PROPELLER SHAFT AND UNIVERSAL JOINTS

The engine power is transmitted to the rear axle through two tubular propeller shafts, which permits low center of gravity and smooth operation. The front propeller shaft is supported near the rear end in an annular ball bearing mounted in rubber to absorb any vibration and noise. Three universal joints of the needle roller bearing type are employed, one at the front end of the front shaft, one between the front and rear shafts and another at the rear end of the rear shaft.

### LUBRICATION

Each universal joint is provided with means of lubricating the needle rollers through drilled passages and pressure type grease fittings. The splined sleeve of the middle joint is also lubricated through a pressure fitting. Viscous chassis lubricant should be applied to these fittings each 1,000 miles, using a hand gun or a special adapter on the lubricating hose nozzle, to guard against excessive pressures.

### REAR AXLE

The rear axle is of the semi-floating type employing hypoid gears having teeth cut so that the driving pinion meshes with the ring gear considerably below the center line of the differential. This design provides quieter operation, increased gear tooth strength and a lower car floor with minimum raised section for the propeller shaft. High grade alloy steel is used throughout for gears and shafts and tapered adjustable roller bearings support the differential assembly, drive pinion and the outer ends of the axle drive shafts.

As the axle bearings are accurately adjusted under load at the factory, no further attention should be required. Special equipment is necessary to properly service this unit; therefore, any adjustments or repairs required should be referred to your Authorized Hudson Dealer.

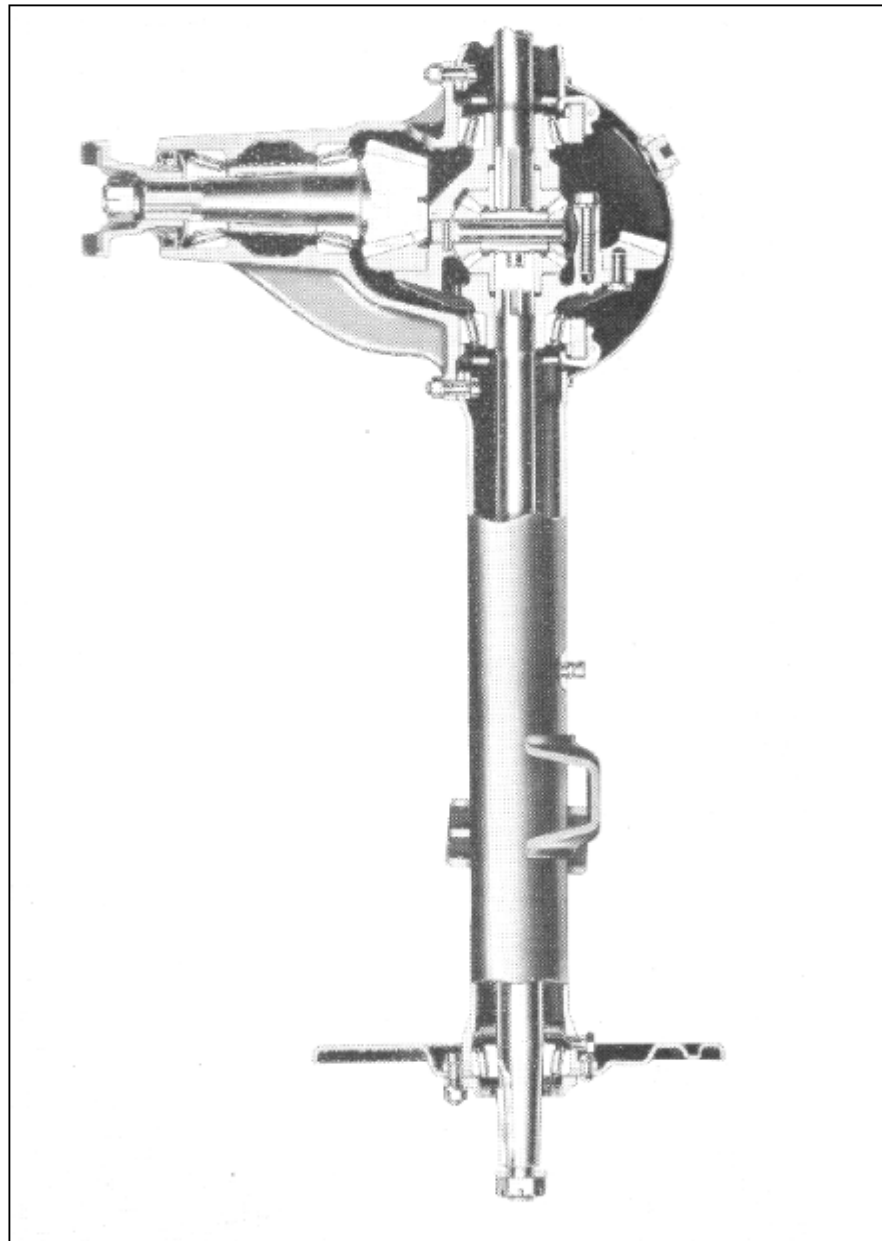


Figure 38

## LUBRICATION

The lubricant with which the axle is filled at the factory is especially suited for protection of the gears during the break-in period. This lubricant should be left in the axle for at least the first 10,000 miles.

The level of the oil in the axle housing should be checked every 1,000 miles and if low, brought up to the level of the filler plug by adding a S.A.E. 90 Multi-Purpose Gear Lubricant which has been qualified under U. S. Army Specification 2-105B.

As all gear oils have a tendency to foam due to agitation, the car should be permitted to stand about fifteen minutes to allow foam to subside before checking the level.

Although seasonal changes are not required it is recommended that the lubricant be removed from the axle housing and 3 1/2 lbs. (1.5 kgs.) of new Multi-Purpose Gear Lubricant be installed at least once a year or every 10,000 miles.

Rear wheel bearings should be removed, cleaned, and repacked every 10,000 miles with 1-1/2 ounces of milled sodium soap base lubricant. A special puller is required to remove the hubs; therefore, this operation should be performed by your Authorized Hudson Dealer.

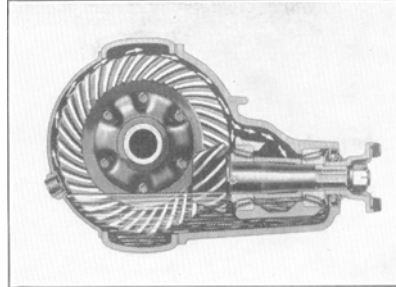


Figure 39

## BRAKE SYSTEM BRAKES

Patented Double-Safe Hydraulic Brakes employing a reserve mechanical system operating from the same brake pedal, are used.

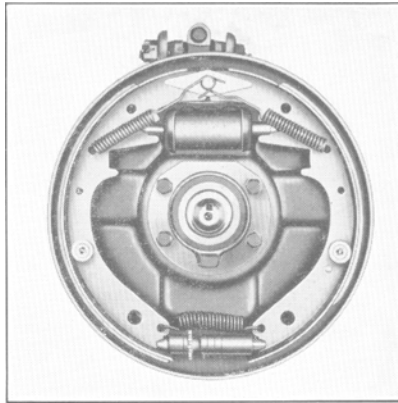


Figure 40

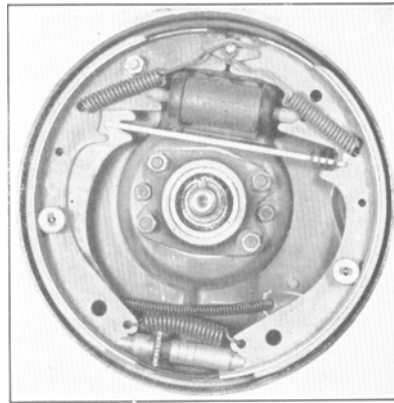


Figure 41

The brakes are of the Bendix Duo-Servo single anchor type, employing wider shoes and larger wheel cylinders at the front than at the rear for maximum brake efficiency and smooth stopping. The shoes are expanded at the top or anchor end by the wheel cylinders, which are actuated by hydraulic pressure exerted by the master cylinder through foot pressure applied to the brake pedal.

If at any time, the hydraulic system should fail due to an accident or some other cause, continued pressure on the foot pedal automatically applies the mechanical reserve system on the rear wheels.

### BRAKE FLUID

Numerous rubber parts are used in the hydraulic system which makes necessary the use of brake fluids that are entirely free of mineral oil and other ingredients which are detrimental to the rubber and may cause swelling and early deterioration. Hudson Hydraulic Brake Fluid meets these requirements.

The master cylinder is self-compensating and should be kept at least half full at all times. Always wipe off the master cylinder at the filler plug before removing plug to check the fluid level.

The hydraulic system must be bled if air enters the system. A spongy feeling pedal is usually an indication that bleeding is necessary.

Have your Authorized Hudson Dealer inspect your brakes and check the fluid level periodically, to insure proper operation. This should include a check of the mechanical follow-up linkage.

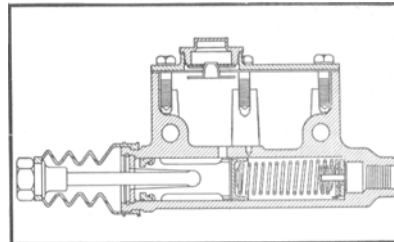


Figure 42

### ADJUSTMENTS

To insure proper functioning of the mechanical reserve brake, it is very important that the clevis at the front end of the pull rod attached to the brake pedal be adjusted to maintain a clearance of  $1/4$ " between the rear end of the slot and the clevis pin at all times.

Brake adjustments should be performed by your Authorized Hudson Dealer. However, if an emergency arises where the brakes must be adjusted before you can reach an Authorized Hudson Dealer, the following adjustment procedure to compensate for lining wear can be used.

1. Jack up all wheels clear of the floor.
2. Be sure hand brake is fully released.
3. Remove wheel backing plate adjusting screw hole covers.
4. At each wheel, with a screw driver or suitable tool inserted through the slot in the brake backing plate, expand shoes against drum with adjusting screw by moving outer end of tool toward center of backing plate until a heavy drag is noted when wheel is turned by hand.

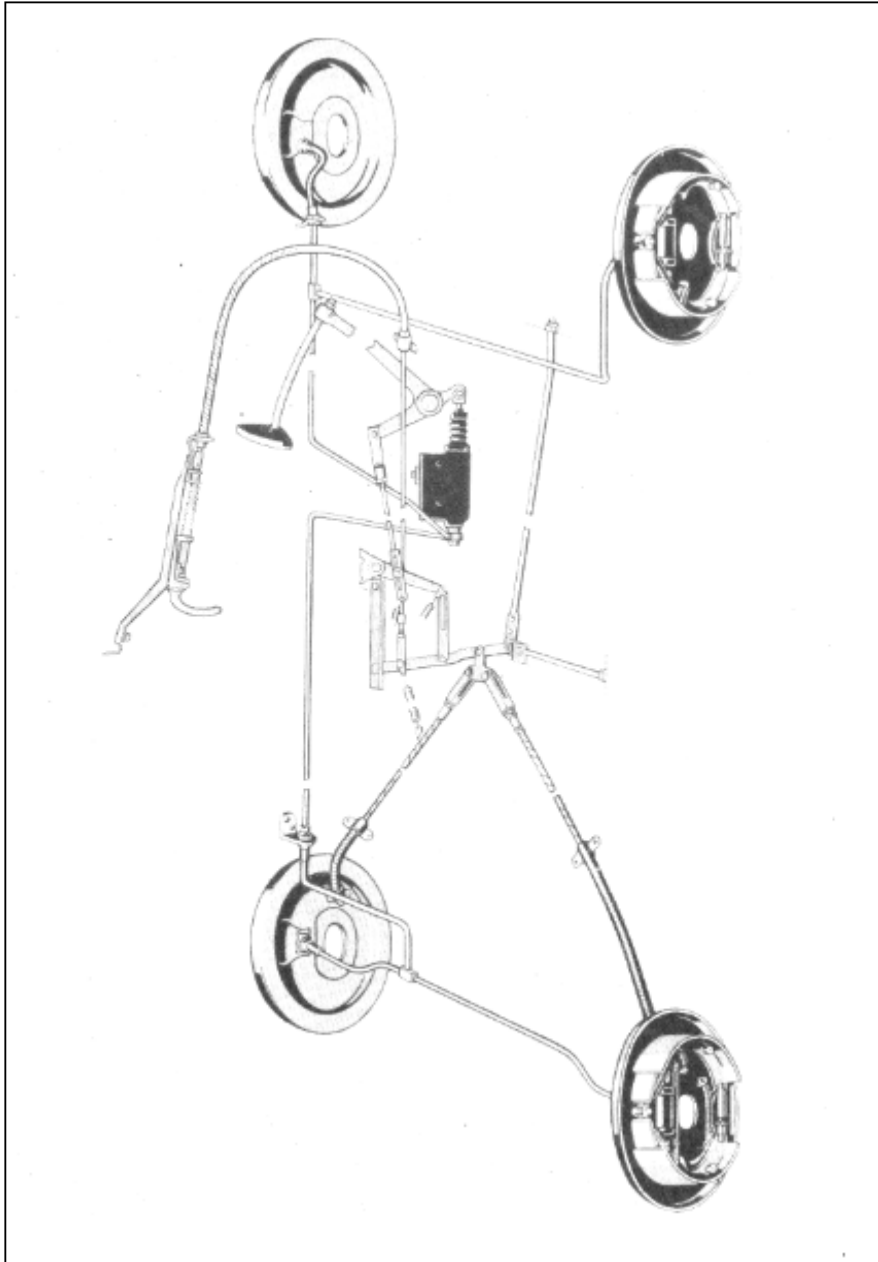


Figure 43

5. Back off screw exactly 14 notches at each wheel by moving tool toward outer edge of backing plate.
6. Replace hole covers and lower car to floor.

Test car for brake balance. If one wheel skids before the others, loosen the adjustment rather than tighten the other screws.

A major brake adjustment involves a complete inspection of the braking system—shoe linings, mechanical follow-up, anchor adjustment, and the hydraulic system. This should be necessary only in the event that an adjustment for normal lining wear does not produce satisfactory braking results

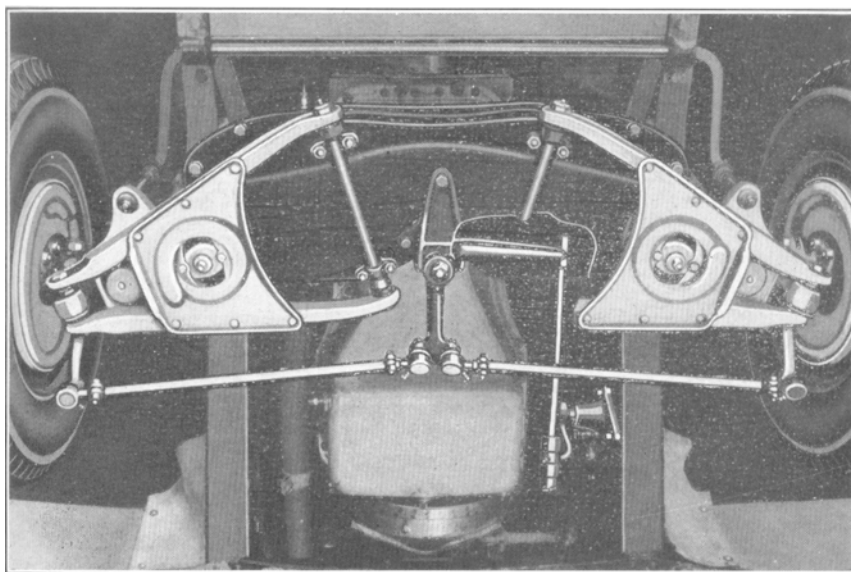


Figure 44

## FRONT SUSPENSION

Hudson Individual Front Wheel Suspension is of the angularly set "wishbone" type, employing large diameter, soft acting coil springs of alloy steel

The upper and lower control arms are pivoted at their inner ends to permit each wheel to move vertically independently of the other as they pass over road irregularities. They are mounted in threaded bushings adjustable for wear and fitted with rubber sleeves for protection against dirt and water.

## LUBRICATION

All front suspension joint grease fittings should be lubricated every 1,000 miles with viscous chassis lubricant. For the various fitting locations see the "Lubrication Chart" at the front of this book.

### MAINTAINING PROPER FRONT END ALIGNMENT

To prolong tire life, and assure easy car handling and maximum safety, it is essential that proper front end alignment be maintained. Unintentionally striking the curb a severe blow when turning, parking, or skidding may not cause enough damage to make it visible to the eye, but will be reflected in the handling of the car at high speeds, or in abnormal tire wear.

Proper front end alignment is dependent on proper adjustment of these three factors:

**CAMBER**, the outward tilt of the front wheels at the top.

**CASTER**, the backward or forward tilt of the spindle pins at the top. **WHEEL TOE-IN**, the setting of the front wheels closer together at the front than at the rear.

Accurate gauges and carefully calibrated equipment are necessary to check and correct alignment. Therefore, it is suggested that any service requirements be referred to your Authorized Hudson Dealer who is best qualified to do this type of work.

### FRONT WHEEL BEARINGS

The front wheel bearings are of the tapered roller type, adjustable to compensate for wear and are adequately sealed against lubricant loss.

**ADJUSTMENT** — To check for looseness, raise the front end of the car, place one hand on the top of the tire and the other hand on the bottom of the tire and alternately pull with one hand while pushing with the other. If there is excessive looseness, adjustment should be made as follows:

Remove outer and inner hub caps (A) and (B), using a pry. Remove cotter pin holding nut (C). Turn nut to the right until a slight drag is felt when turning the wheel by hand. Loosen nut just sufficiently to permit wheel to turn freely. Insert cotter pin, replace hub caps and lower car to floor.

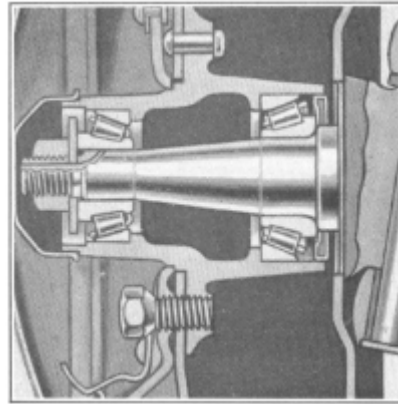


Figure 45

**LUBRICATION**—Every 10,000 miles, the bearings should be removed, cleaned and re-packed with four ounces of milled sodium soap base lubricant. Adjust bearings as instructed under "Adjustment."

### STEERING GEAR

The steering gear is of the worm and triple roller tooth design. The worm revolves in two adjustable tapered roller bearings. The roller tooth shaft rotates in two bronze bushings.

This design provides ease of steering with freedom from frequent adjustments. Provisions



for adjustments are, however, incorporated, should they be required after extensive service.

As special equipment is needed to properly service this unit, all operations or adjustments required should be referred to your Authorized Hudson Dealer.

**LUBRICATION**—Every 1,000 miles, the oil level in the steering gear housing should be checked by removing plug. If level is low, refill to bottom of hole with S.A.E. 90 E.P. gear oil, summer or winter. Be sure plug is securely tightened.

#### **DRAG LINK**

The drag link is fitted with adjustable bearings at the front and rear ends. Adjustments are required only in the event that excessive clearance is felt in the bearings and when steering adjustments are made. As special equipment is required to adjust the drag link to its proper relationship to the steering gear, all operations should be performed by your Authorized Hudson Dealer.

**LUBRICATION**—Grease fittings are provided at the front and rear ends and these should be lubricated every 1,000 miles with viscous chassis lubricant.

#### **FRONT LATERAL STABILIZER**

The front stabilizer is of the dual acting type, connected to each front suspension lower control arm near the steering spindle end and is completely mounted in rubber. It eliminates

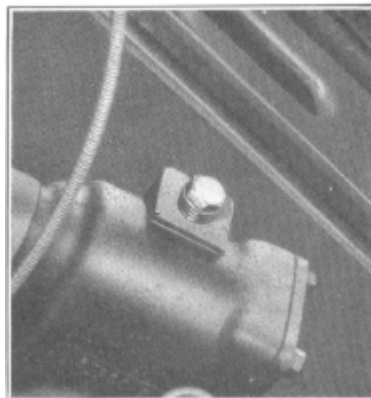


Figure 46

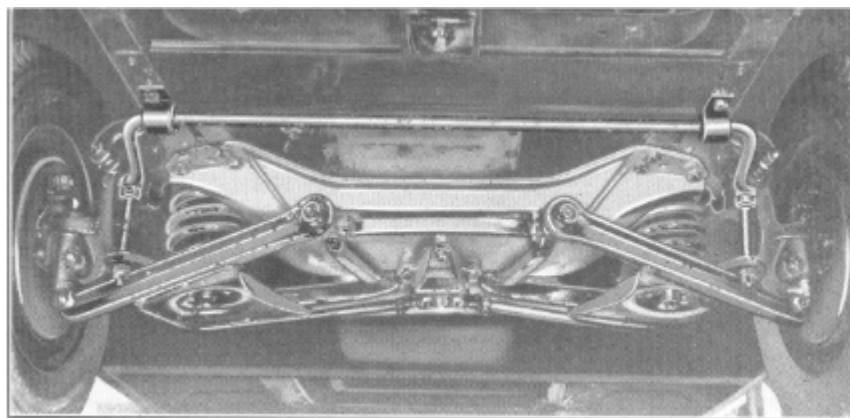


Figure 47

front end sway and stabilizes ride on rough roads, in heavy winds and when making sharp turns.

No service attention is required except to see that the connecting link nuts are properly tightened.

### REAR LATERAL STABILIZER

A rear lateral stabilizer is used as standard equipment. One end of this device is assembled to the frame side member and the other end to the rear axle housing. Its purpose is to control the horizontal movement of the body

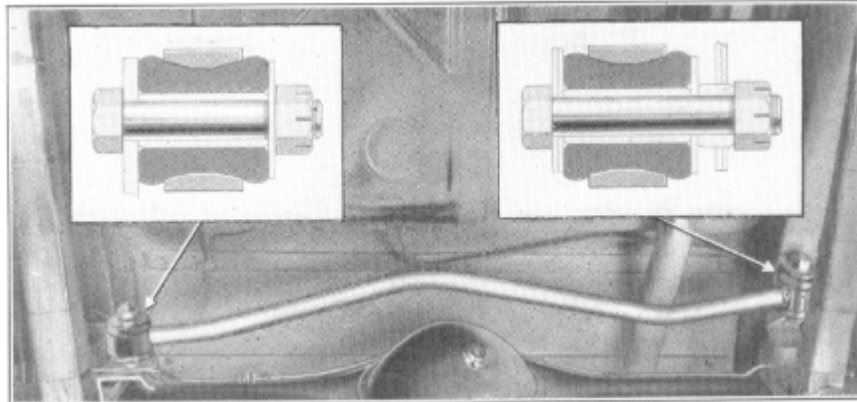


Figure 48

and car. It also prevents lateral shake of the axle under the car on rough roads. The ends of the steel bar are cushioned in rubber and no lubrication should be applied to these points.

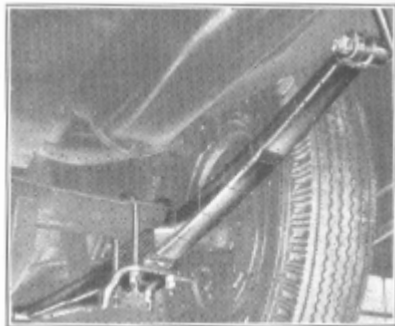


Figure 49

### REAR SPRINGS

Rear springs are of long leaf, semi-elliptical design. The front ends are attached to frame brackets with pivot bolts cushioned in rubber. The rear ends are attached to the frame through threaded, self-adjusting "U" type shackles operating in hardened steel, threaded bushings. The bushing threads are protected from road splash and dirt by rubber seals. The rear springs of passenger models are fitted with metal covers.

**LUBRICATION**—Use Viscous Chassis lubricant at 10,000 miles.

**Metal Covers**—Lubricate through holes in bottom of cover using special tool for this purpose.

Rear shackle bushings are provided with grease fittings and these should be lubricated with viscous chassis lubricant every 1,000 miles.

Rear spring front pivot bolt bushings require no lubrication.

### SHOCK ABSORBERS

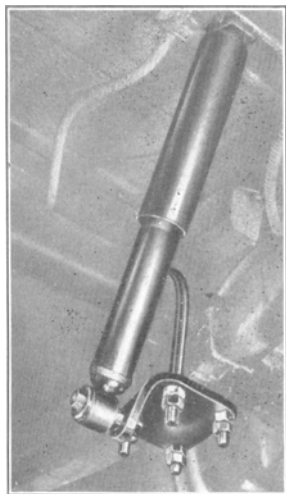


Figure 50

Direct double acting hydraulic type shock absorbers are used at the front and rear. The front shock absorbers are mounted axially within the front coil springs and are cushioned at the upper and lower ends in rubber grommets.

The rear units are identical in construction to the front units, except that eyes are fitted at the upper and lower ends instead of studs and are also cushioned in rubber. At the upper end they are attached to the frame cross member, while at the lower end they are assembled to the rear spring clip plates.

The fluid is sealed in the shock absorbers and they require no further attention, unless a leak should develop. In this event, the faulty unit should be removed for repair or replacement. As special tools are required to service these shock absorbers, all shock absorber work should be performed by your Authorized Hudson Dealer.

### BODY AND FRAME

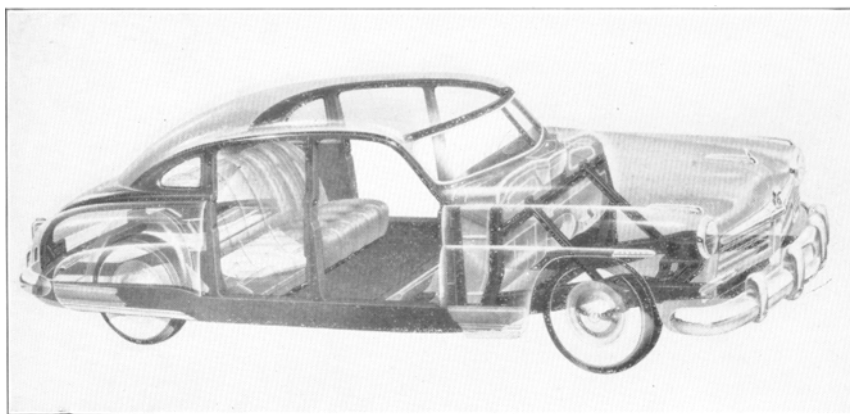


Figure 51

## BODY AND FRAME

The Hudson ALL STEEL Monobilt BODY-AND-FRAME includes box-type foundation frame of sturdy steel girders with all structural members of body-and-frame welded together into a single unit. The strength of steel and the permanence of welding make for rigidity and safety with minimum weight. Outside girders give bumper protection at rear and at both sides, even outside the rear wheels. Lowered floors contribute to a low center of gravity, provide ample head room and maintain road clearance.

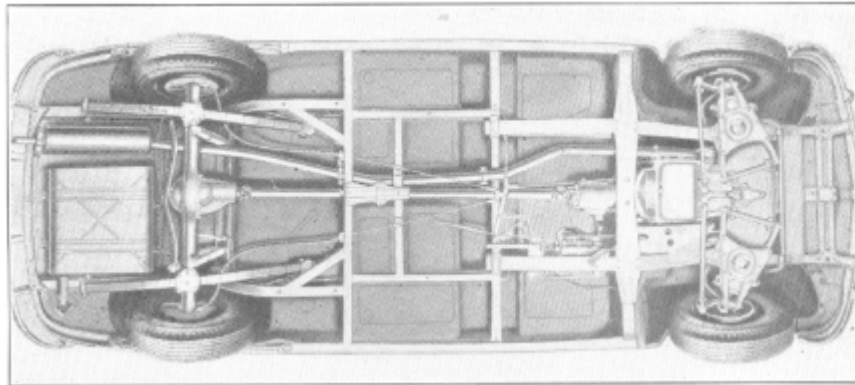


Figure 52

## DOOR LOCKS

Rotary door locks of a new design are used and all doors are fitted with stationary type outside handles. A push button at the end of the handle operates the lock and opens the door. When doors are locked, the handle push button moves in and out freely without actuating the lock.

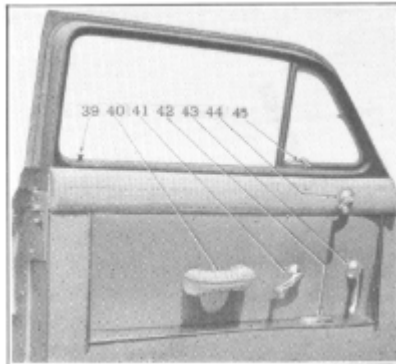


Figure 53

*The Inside Safety Button 39 in the garnish molding, must be in the "up" position before the door can be opened by either the inside or outside handles.*

*To Open Door from Outside, grasp handle and push button either with the *heel of the hand or the thumb*. Push door to close.*

**CAUTION:** Door will not close if latch bolt has been moved upward from lower end of curved slot in door. To return latch to lower end of slot, lift inside safety button to "up" position, then operate inside or outside door handle.

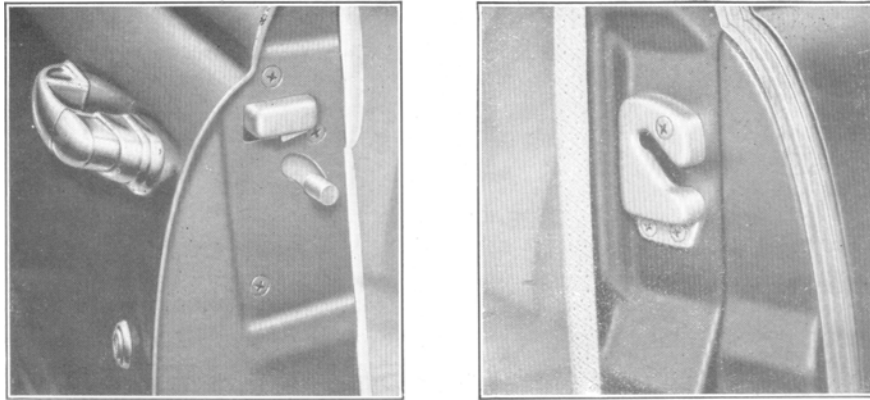


Figure 54 (two views)

*To Open Door from Inside—*

Front Door—Rotate inside (43) handle by pulling it backward.

Rear Door—Rotate inside handle by pressing it down.

*To Lock Car When Leaving—*

(1) Close windows. With doors closed, push inside safety buttons down on all doors except the front one from which you are leaving.

(2) Close front door and turn lock with key until inside safety button is "down." Turn key back to vertical position and remove.

Doors must be closed before they can be locked either by the inside safety buttons or key.

*Door Adjustment—*

Door hinges and strikers are adjustable in both horizontal and vertical positions to insure proper door operation. The striker must be adjusted to permit the door to close easily but firmly against the door rubber weatherstrips with the lock fully engaged. When adjusting the striker, it is important that the lower edge of the opening in which the latch bolt operates is 1/16 inch above the bottom of the latch bolt. This provides a slight interference, which is necessary to insure proper engagement of the latch bolt in the slot.

### VENTILATOR WINGS

Friction type ventilator wings are employed on Super Six and Super Eight models and crank operated type wings on the Commodore Six and Eight models. The friction type wing is operated by pressing in the button and turning the handle (45) upward. The crank type wing is operated by a regulator controlled by a handle (44).

### DOOR WINDOWS

The door windows on all models are opened and closed by operating the handle (41).

### QUARTER WINDOWS

The quarter windows on Brougham and Coupe models are operated by crank handles. On Sedans, the windows are pivoted and friction controlled.

### LUBRICATION

See Body Lubrication Chart on inside of cover for body parts requiring lubrication attention.

### CARE OF THE FINISH

Your car is finished with high grade hand rubbed lacquer and with a reasonable amount of care, it should be possible to maintain its original luster for a long time. Constant exposure to the elements—strong sunlight, rain, snow and dust will cause the finish to become dull. If at all possible, it is good practice to park the car in the shade if it is to remain in one place for any great length of time.

To remove grime and dirt the finish should be washed frequently and occasionally it should also be polished.

WASHING the car should never be done when car is warm from standing in the sun. Always wait until the metal has cooled off. If dirt is heavily caked, soak it off first with cold water, using an ordinary garden hose. Apply Hudson Hurricane Auto Shampoo, as outlined in directions on container.

POLISHING the car is necessary at intervals to provide the finish with a protective coat. If ordinary washing does not remove the road grime use Hudson Polish and Cleaner.

A more durable, long lasting, high luster finish can be obtained by cleaning the surface with Hudson Liquid Glaze Cleaner and then applying Hudson Liquid Glaze Sealer.

NEVER polish the car in the sunlight or when the metal is warm. Let it cool first. When cleaning the surface, a slight amount of the color will be seen on the cloth. This, however, should be no cause for alarm as it is merely the loose pigment being cleaned off.

These cleaners and polishes may be purchased from your Authorized Hudson Dealer.

### CARE OF CHROMIUM PLATED PARTS

Ordinary chromium plated parts require no other attention than the cleaning they receive when the car is washed.

However, in the winter, when many municipalities use salt or calcium chloride to melt ice and snow on the pavements, these parts require a great deal more attention to prevent the finish becoming pitted and corroded. These melting agents are highly destructive to this type of finish and it is important that all trace of the salt be washed off each day.

An application of Hudson Chromium Polish after washing will assist in preserving the finish and provide added protection to the surfaces.

Bumper impact bars that are scratched through the finish should be sprayed with a coating of clear lacquer or have an application of Hudson Chromium Polish to prevent corrosion lifting off the plating.

Hudson Chromium Polish can be purchased from Authorized Hudson Dealers.

### CLEANING FABRIC TOPS

Soiled fabric tops used on Convertible models can be cleaned quite satisfactorily if proper instructions are followed.

Hudson Fabric Cleaner, which is available through your Authorized Hudson Dealer, should be used. Select an area slightly larger than the soiled portion and with a soft, clean cloth or sponge moistened with Hudson Fabric Cleaner, rub it in light successive strokes and work toward the center of the soiled area.

### CARE OF THE UPHOLSTERY

The same careful attention that you give the upholstered furniture in your home should be accorded the upholstery cloth of your automobile. Dust and dirt blown into the car when the windows are open settles in the fibres of the cloth and its abrasive action tends to wear the cloth and cause an unsightly appearance.

Once a month, it is good practice to brush the upholstery with a whisk broom or better still, use the portable attachments usually supplied with most household vacuum cleaners.

### CLEANING THE UPHOLSTERY

Spots on the cushions can easily be cleaned off by using the following instructions.

AVOID using hot water and soap unless specifically called for. NEVER use gasoline, as most brands contain tetraethyl of lead or coloring which is harmful to cloth, and it is also highly inflammable.

NOTE: When using cleaning fluid to remove spots, use it sparingly. Just dampen a clean cloth or a sponge with the fluid and select an area slightly larger than the soiled portion and rub from outside in toward the center in successive strokes. This will avoid forming a ring and prevent the spot from spreading.

Hudson Fabric Cleaner referred to herein, is available at all Authorized Hudson Dealers.

### GREASE SPOTS AND OIL

Scrape off all excess grease with a dull knife. Moisten a cloth or sponge with Hudson Fabric Cleaner and rub spot as directed above.

### CHEWING GUM AND TAR

First moisten lightly with Hudson Fabric Cleaner, then scrape off with a dull knife.

### CANDY (Except Chocolate)

Moisten a clean cloth in very hot water, rinse out and nib lightly as directed above. If an oily spot remains after drying, rub it lightly with a cloth moistened with Hudson Fabric Cleaner.

### CHOCOLATE CANDY

Sponge lightly with LUKEWARM water. After drying, rub lightly as directed above with a cloth moistened with Hudson Fabric Cleaner.

### ICE CREAM

Sponge lightly with LUKEWARM soapsuds, using a neutral soap. Rinse with cold water and allow to dry. If an oily spot remains, rub it lightly as directed above with a cloth moistened with Hudson Fabric Cleaner.

**BLOOD**

Sponge lightly with COLD water. Apply a few drops of household ammonia, then sponge again with COLD water.

CAUTION: Never use warm water as it will set the stain.

**FRUIT AND WINE**

Apply a little hot water to the stain. Rub lightly with a cloth moistened with hot water. Allow it to dry, then rub lightly as directed above with a cloth moistened with Hudson Fabric Cleaner.

CAUTION: Soap or heat applied to a fruit or wine stain will cause it to set.

**COSMETICS**

Lipstick and creams may be removed by applying a few drops of Hudson Fabric Cleaner to the stain and absorbing it quickly with a blotter. Repeat as necessary until the spot is removed.

**SHOE POLISH**

Black and tan polish can be removed by rubbing it with a cloth moistened with Hudson Fabric Cleaner.

White polish can usually be removed by brushing with a whisk broom. If this does not remove it, moisten the spot with cold water, let it dry, then brush it again.

**URINE**

Sponge the spot lightly with a cloth dipped in lukewarm soapsuds (neutral soap) and then rinse well with a clean cloth rinsed in cold water. Next rub the spot with a clean cloth moistened in a solution of one part of household ammonia and five parts of water. After a minute, rinse it off with a clean moist cloth.

**DOG AND CAT HAIR**

Gather the hair together by rubbing the upholstery with a stiff sponge moistened with water. The hair can then be easily picked off.

**RUST SPOTS**

Clean these spots by sponging with a cloth moistened with lukewarm soapsuds (neutral soap).

**LEATHER AND IMITATION LEATHER**

Clean with lukewarm water and any mild soap, such as Castile. Work up a thin suds on a piece of cheese-cloth and rub over the surface. Wipe off the surface the second time, using a piece of cheese-cloth dampened with water. Finish by wiping with a dry cloth.

**HUDSON WEATHER-CONTROL****(Optional Equipment)**

Hudson Weather Control has been designed for maximum passenger comfort and simplicity of operation.

While driving the car with the cowl ventilator open and all windows closed, set the regulator lever at the bottom of the heater in about the mid position. If the car gets too warm, move the lever to the left slightly.



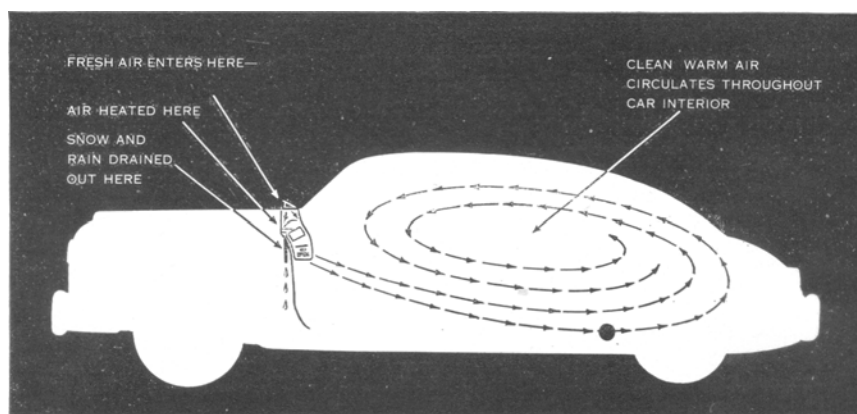


Figure 55

If more heat is needed move the lever to the right. After the lever is set, there will be little need for re-adjustment as the heat is thermostatically controlled.

If cold air is delivered by the heater while the engine is warming up, close the cowl ventilator until the engine heat indicator needle begins to move to the right, then open the cowl ventilator.

Do not re-adjust the heat control during the engine warm-up period in an attempt to get quicker heat. The thermostatic control valve remains wide open until the car temperature rises to the regulated setting and moving the control lever will not increase the heat flow.

When the control lever is moved to the extreme right, the thermostatic valve is locked open and maximum heat output is obtained regardless of car temperature. When the control lever is moved to the extreme left, the valve is locked closed and no water flows through the heater. This position is used for summer driving and permits opening the cowl ventilator in hot or rainy weather. The cowl duct is fitted with a trap to prevent water entering through the open cowl ventilator.

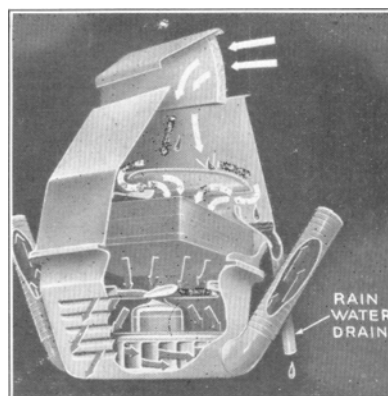


Figure 56

All the air supplied by the Hudson Weather Control is fresh outside air, warmed and reduced in relative humidity. This "drier" air reduces fogging and frosting of the windshield and windows. When starting out with a cold car, and particularly with full passenger

load, some fogging or frosting may develop. This can be reduced by turning on the defroster fan which is controlled by the switch knob on the front of the heater. The fan should be turned off after the windows are clear.

The defroster fan should also be turned on when icing of the windshield occurs and while standing or at low speeds (either summer or winter driving) when the forward movement of the car is not sufficient to supply the required air flow through the cowl ventilator. The cowl ventilator must be open when the defroster fan is being used.

When driving at high speeds in extremely cold weather, it may be more satisfactory to cut down the air flow by partially closing the cowl ventilator. This will give an increase in the temperature of the air delivered by the heater.

Heat is distributed from the front, back and both sides of the heater case so that a large volume of air can be supplied to adequately heat or cool the entire car interior without an excessive amount of air being directed on any of the front seat passengers. A knob located on the left side of the heater case controls the amount of air directed on the driver's feet. The maximum is obtained when the knob is in the up position.

## CONVERTIBLE BROUGHAM TOP

The raising and lowering of the top on the Convertible Brougham model is accomplished by power applied through double acting hydraulic cylinders located within the body structure. Power is furnished by a hydraulic pump, electrically driven, mounted behind the rear seat. This unit should be serviced twice a year by making sure the oil reservoir is at least half full. Use only Hudson Shock Absorber Oil for this purpose. Access to the power unit for servicing is had by removing the cover from the body underpanel.

To insure the top mechanism remaining in good condition, the top should be operated at least once a month.

Power operation of the top is controlled by a two way switch fitted with a knob located on the instrument panel to the left of the steering column.

### TO LOWER TOP:

1. Stop car. Do not attempt to lower or raise top while car is in motion.
2. Release clamps at header on right and left sides.  
*CAUTION: Make sure clamps are completely free from the windshield.*
3. Raise header slightly by hand and pull out control knob on instrument panel until top is fully lowered. This may be done with the door and quarter windows in either the up or down position. The rear window may also be in either the up or down position.
4. Tuck in surplus material at sides and install top boot.

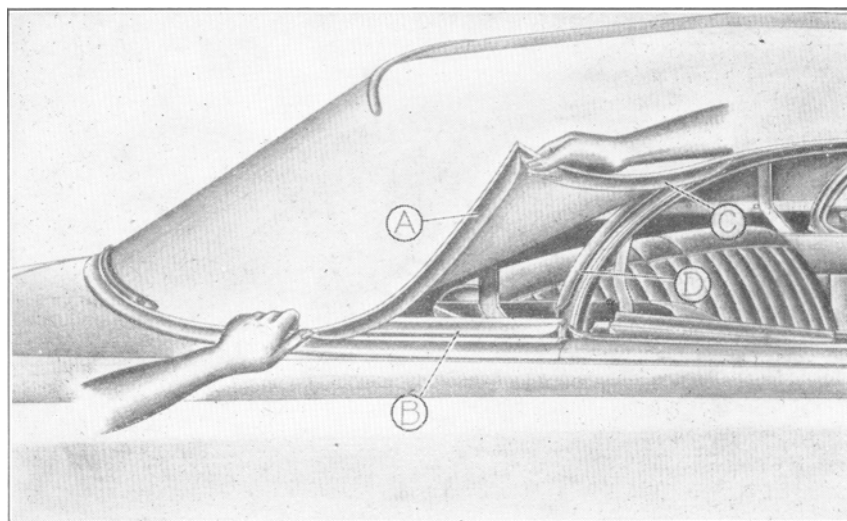


Figure 57

**TO RAISE TOP:**

1. Stop car.
2. Remove top boot.
3. Push top control knob forward until top is fully raised.
4. Pull down top header over windshield and attach and fasten clamps at each side.
5. Fasten side quarters of top by engaging flap "A" (Illustration No. 57) under channel "B", starting at the rear end. Continuing forward, enter flap "C" under curved channel "D" and work upward until flap is in place for its full length.
6. Engage the fasteners in the slides on the bow above the doors.

**POWER OPERATED WINDOWS**

The electrically operated hydraulic pump also furnishes power for raising and lowering the door and quarter windows. Each window is operated by a hydraulic cylinder arrangement and may be raised or lowered to any position by its own control button. Buttons located at each window are operated by pressing down to lower and up to raise the windows.

A group of 4 control buttons is mounted on the left door which permits the driver to operate all windows from a position convenient to the left hand. Counting from the front, buttons Nos. 1 and 2 control the left and right door windows respectively, while buttons Nos. 3 and 4 operate the left and right quarter windows.

### HUDSON APPROVED ACCESSORIES

Your Authorized Hudson Dealer has available for installation on your car, a complete line of Factory Approved Accessories. The addition of these items will greatly enhance the appearance of the car, improve comfort and provide greater safety.

These accessories harmonize beautifully with both the interior and exterior appointments of your Hudson car.

Among the Accessories available are:

Battery Filler—Automatic	Mirror—Large Oval
Battery Charger—Home Type	Mirror—Glare Proof
Cigar Lighter	Mirror—Vanity
Emergency Trouble Light	Oil Filter
Exhaust Deflector	Radio
Fire Extinguisher	Rear Compartment Light
Fog Lamps	Seat Covers—Custom Matting
Gasoline Filter	Seat Covers—Deluxe Matting
Gas Tank Locking Cap	Seat Covers—Rayon Tackle Twill
Gas Tank Locking Cap—Electric	Spare Tire Valve Extension Spotlight
Hydraulic Jack	Under Hood Light—Automatic
Kleenex Tissue Dispenser	Wheel Trim Ring
License Plate Frame	Windshield Washer—Automatic
Locker Box Light	
Mirror—Outside Rear View	

### GENUINE HUDSON SUPPLIES

A complete line of high quality supplies, bearing approval of the Hudson Laboratories, is available. These supplies enable the owner to preserve the finish and clean interiors and chromium plated parts. Essential items for the proper maintenance of your car are included in this group.

Among the items stocked by Hudson Dealers are:

Black Rubber Finish	Hurricane Auto Shampoo
Brake Fluid	Liquid Glaze Cleaner and Sealer Penetrating Oil
Car Washing Sponge	PiB—Ignition Insulation
Chromium Polish	Polish and Cleaner
Combination Cleaner and Wax	Radiator Flush
Door Eases	Radiator Rust Preventive
Fabric Cleaner	Radiator Stop Leak
Gasket Cement	Rust Dissolve
General Use Oil	Shock Absorber Fluid
Glass Cleaner	Spot Remover
High Gloss Wax	Windshield Cleaner Blade
Hudsonite Clutch Compound	

AUTOMOBILE AND PERSONAL DATA  
FOR EASY REFERENCE

Name-----

Address-----

Phone-----

Business Address-----

Phone-----

Body Type-----Model-----

Engine and Serial Number-----

Tire Size-----

Title Number-----

License Plate Number-----

Social Security Number-----

Key Numbers—Ignition and Door-----

Package Compartment and Trunk Lock-----

Dealer's Address-----

Dealer's Phone Number-----

Auto Club Card Number-----

Car Insurance Policy Nos.-----

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