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Hudson-Essex

Service Manual

1927 Supplement

Hudson Cars 750,001 up

Hudson
Rear Axle

(Cars numbered 750,001 and upward)

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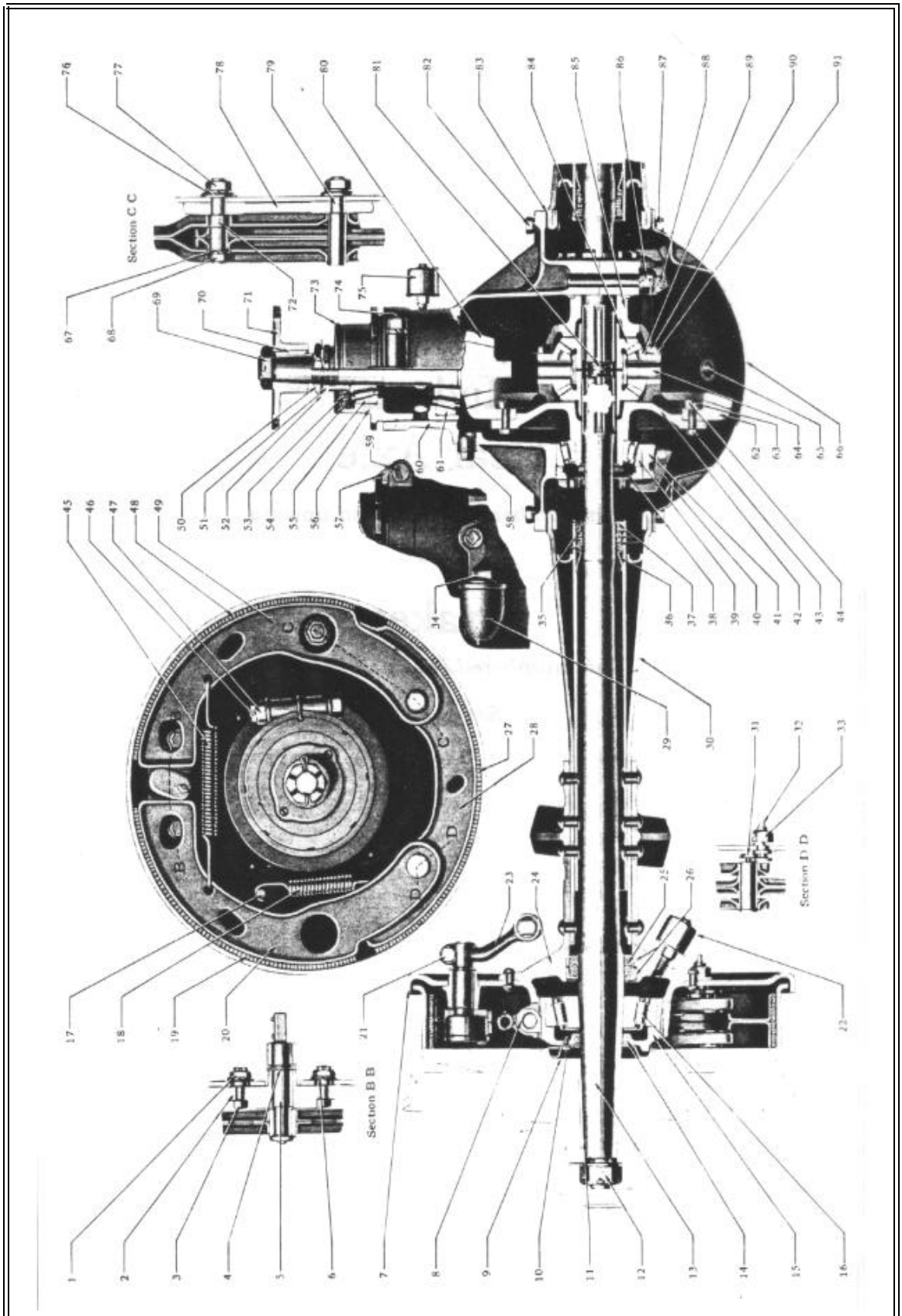
Brakes

(Cars numbered 750,001 and upward)

See page 18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Hudson Rear Axle

(Cars numbered 750,001 and upward)

(Numbers refer to illustration on page 14)

Ref. No.	Name of Part
1.	Camshaft carrier bracket nut
2.	Rear camshaft carrier bracket
3.	Rear camshaft carrier bracket bolt
4.	Rear camshaft retaining washer
5.	Rear camshaft
6.	Camshaft carrier bracket lock washer
7.	Rear axle dust shield
8.	Bearing adjusting nut lock
9.	Bearing grease deflector
10.	Bearing grease deflector screw
11.	Axle shaft key
12.	Axle shaft nut
13.	Axle shaft
14.	Adjusting nut felt washer
15.	Rear wheel bearing adjusting nut
16.	Rear wheel bearing
17.	Secondary shoe spring anchor
18.	Secondary shoe spring
19.	Primary shoe lining
20.	Primary shoe
21.	Rear control lever bolt
22.	Wheel bearing oil cup
23.	Rear control lever
24.	Rear axle brake spider
25.	Drive shaft felt washer
26.	Drive shaft felt washer retainer
27.	Secondary shoe lining
28.	Secondary shoe
29.	Oil filler elbow
30.	Rear axle housing
31.	Articulating pin
32.	Take-up cam
33.	Take-up cam nut
34.	Filler pipe plug
35.	Inner oil retainer felt washers
36.	Inner oil retainer
37.	Inner felt washer spacing rings
38.	Differential bearing adjusting nut
39.	Differential bearing
40.	Differential bearing nut lock
41.	Carrier cap
42.	Differential hand case-left
43.	Drive gear bolt
44.	Drive gear bolt nut
45.	Primary and auxiliary shoe spring
46.	Adjusting nut clamp bolt
47.	Adjusting nut clamp bolt nut
48.	Auxiliary shoe lining
49.	Auxiliary shoe
50.	Pinion shaft adjusting sleeve lock nut
51.	Pinion shaft adjusting sleeve
52.	Pinion shaft adjusting sleeve nut lock
53.	Pinion shaft felt washer
54.	Pinion shaft felt washer retainer
55.	Pinion shaft front bearing
56.	Pinion shaft bearing cage
57.	Pinion shaft bearing cage lock
58.	Drive gear inspection plug
59.	Pinion shaft bearing cage clamp bolt
60.	Differential carrier
61.	Pinion shaft rear bearing
62.	Drive gear
63.	Drive gear bolt nut lock
64.	Differential spider
65.	Housing cover plug
66.	Housing cover
67.	Secondary shoe anchor pin washer
68.	Secondary shoe anchor pin nut
69.	Pinion shaft nut
70.	Companion flange key
71.	Companion flange
72.	Secondary shoe anchor pin
73.	Dust excluder
74.	Pinion shaft bearing cage clamp bolt
75.	Pinion bearing oil cup
76.	Secondary shoe anchor pin outside washer
77.	Secondary shoe anchor pin outside nut
78.	Anchor pin reinforcement strip
79.	Auxiliary shoe anchor pin
80.	Drive pinion
81.	Axle shaft thrust plug
82.	Differential carrier screw
83.	Differential carrier gasket
84.	Differential gear
85.	Differential case-right hand
86.	Differential carrier cap bolt
87.	Housing cover screw
88.	Differential bearing nut lock clevis pin
89.	Differential pinion
90.	Differential case screw
91.	Differential case screw lock

(1-A) Repair or Renew Axle Housing

(Cars numbered 750,001 and upward)

1. Jack up or block up car under frame side members ahead of rear springs or raise rear end of car with chain hoist until weight of car is off the rear springs.

2. Place receptacle under housing to catch lubricant. Remove housing cover cap screws (87) and housing cover (66).

3. Remove rear hubcaps, cotter pins and axle shaft nuts (12), and pull wheels off axle shafts, using a suitable puller. NOTE: Be sure hand brakes are fully released before attempting to pull off wheels.

4. Remove screws (10) holding rear wheel bearing grease deflector (9) to adjusting nut and take off deflector.

5. Remove bearing adjusting nut clamp bolts (46) and locks (8). Unscrew adjusting nut (15) using adjusting nut wrench shown on Page 6 service tool section, and pull out axle shafts and wheel bearings.

6. Remove adjusting nuts from rear brake pull rods and disconnect rods from rear control levers (23).

7. Remove flange bolts at rear universal joint and disconnect propeller shaft.

8. Place jacks or blocking under axle housing and remove nuts from "U" clips holding rear axle to rear springs. This will release the rear axle from the car.

9. Remove nuts from rear spring lower shackle bolts and take out bolts. The rear axle may now be removed and placed on a bench or axle stand for further disassembling.

10. Remove cap screws (82) holding differential carrier assembly to axle housing and take out carrier and gear set.

11. Remove nuts from rear control lever bolts (21), take out bolts and drive control levers (23) off shafts.

12. Remove nut (33) and lock washer from brake shoe take-up cam (32).

13. Remove springs (18), (45), from brake shoes; take off nuts (68), lock washers and plain washers (67) from brake anchor pins and slide off brake shoe assemblies.

14. Remove cotter pins from brake camshaft carrier bracket bolts (3), take off nuts and lock washers and pull out carrier bracket assemblies.

15. Remove nuts (77), lock washers and plain washers from brake anchor pins (72), (79), and tap pins out of dust shield. This completes the disassembling of the axle and any necessary welding or riveting operations may now be performed or housing removed.

16. To reassemble the axle the preceding operations should be reversed. Due to the fact that many of the brake parts used on the right side of the car are not interchangeable with those used on the left side, care must be used to keep them separate when disassembling and to replace them correctly. The brake operating cams must be replaced so that the long ends of the cams point in the direction of the arrows on the ends or to the rear of the car, and the camshaft carrier bracket bolt nuts should be screwed up finger tight temporarily. After cleaning the brake shoes and brake drums with gasoline to remove all traces of oil and grease, the wheels should be replaced and the brakes applied forcibly several times which will have the effect of centralizing the brake shoe assemblies within the brake drums. The lock washers placed under castle nuts (1) should be the original ones removed or exact duplicates in order that the proper tension will be exerted between the carrier bracket (2) and dust shield (7). The use of washers other than these may result in the parts being drawn together so tightly that the brackets will not be able to shift on the dust shields and find their correct positions.

When assembling the rear control levers (23) on the shafts, they should be placed on the serrations so the levers will be slightly to the rear of the vertical center line, or forming an angle of 60° between the levers and the brake pull rods.

Upon completion of the reassembling of the axle, the rear wheel bearings should be adjusted as covered in article "N" and the brakes properly adjusted and equalized in accordance with instructions set forth in Article (1-E).

(B) Renew Carrier and Gear Set Assembly
(See 1926 Service Manual, Page 10)

(C) Renew Axle Drive Shaft
(See 1926 Service Manual, Page 11)

(D) Renew Differential Carrier
(See 1926 Service Manual, Page 11)

(E) Renew Wheel Bearing
(See 1926 Service Manual, Page 11)

(F) Renew Drive Gear and Pinion, Differential Bearings or Pinion Shaft Bearings
(See 1926 Service Manual, Page 12)

(G) Renew Pinion Shaft Felt Washer
(See 1926 Service Manual, Page 13)

(H) Renew Axle Shaft Felt Washers
(See 1926 Service Manual, Page 13)

(I) Renew Differential Case, Gears, Pinions or Spider
(See 1926 Service Manual, Page 14)

(L) Adjust Drive Pinion Bearings
(See 1926 Service Manual, Page 15)

(M) Adjust Drive Gear and Pinion and Differential Bearings
(See 1926 Service Manual, Page 15)

(N) Adjust Rear Wheel Bearings
(See 1926 Service Manual, Page 16)

Brakes

(Cars numbered 750,001 and upward)

For Rear Brakes Refer to Illustration on Page 14
For Front Brakes Refer to Illustration on Page 6

(1-A) Renew Brake Drum

(Cars numbered 750,001 and upward)

1. Remove wheel.
2. Remove hub bolt nuts and bolts. This separates grease shield and brake drum from wheel.
3. Assemble new brake drum on hub, taking care that the brake inspection hole in the drum does not come opposite the valve hole in the wheel.
4. Replace grease shield and insert hub bolts. Apply shellac between the grease shield and drum to act as a seal.
5. Replace hub nuts and screw down securely; then peen over the ends of the hub bolts.
6. Remove brake inspection hole cover from old drum and replace it on new hub; then replace wheel.
7. After necessary parts have been renewed and replaced, the brakes must be adjusted and equalized as described in article (1-E).

(1-B) Renew Rear Brake Camshaft

(Cars numbered 750,001 and upward)

1. Remove rear wheel and brake shoe assembly as explained in article (1-D), paragraphs 1, 2, 3 and 4.
2. Remove ball nut from end of brake pull rod and disconnect rod from control lever (23).
3. Loosen control lever clamp bolt nut (21) and remove control lever.
4. Remove camshaft retaining washer (4).
5. Remove camshaft from carrier bracket (2).
6. To reassemble, reverse the above operations, taking care to see that the long end of the cam marked with arrow points to the center of the wheel, operating the primary shoe.
7. Adjust and equalize brakes as described in article (1-E).

(1-C) Renew Front Brake Control Shaft, Universal Joint Parts, Cam and Camshaft or Stamped Universal End Assembly

(Cars numbered 750,001 and upward)

(See Illustration on Page 6, Front Axle Group)

1. Remove front wheel and brake shoe assembly as explained in article (1-D), paragraphs 1, 2, 3 and 4.
2. Remove ball nut from end of brake pull rod and disconnect rod from control lever (41).
3. Loosen control lever clamp bolt nut.
4. Slip universal joint cover cap spring retainer ring (26) out of groove; then pull control shaft (30) out of the serrated hole in control lever.

5. Slip the spring retainer (28), spring (25), cover (22) and cover cap (23) off the control shaft.

6. Draw the control shaft (30) with cam and camshaft (2) straight out through the carrier bracket (21) without removing the carrier bracket from the dust shield to which it is attached.

7. Any of the parts removed or the stamped universal end assembly (51) may now be replaced if necessary with new parts.

8. Reassemble in the reverse manner, taking care that the long end of the cam marked with arrow stands upwards operating the primary shoe.

9. Adjust and equalize brakes as described in article (1-E).

(1-D) Reline Brakes (Fit New Shoes)

(Cars numbered 750,001 and upward)

1. Jack up or block up car so that all four wheels are clear of the floor.

2. Remove wheels where brakes are to be fitted with new shoes.

3. Remove both springs from brake shoes, and take off nuts and washers from brake anchor pins.

4. Spread the primary and auxiliary shoes clear of cam, and slide off brake shoe assembly.

5. When replacing new brake shoe assembly it is necessary to make a re-adjustment of the pins as follows:

6. Loosen the nuts (1) on the brake camshaft carrier bracket bolts (3), and screw down again until finger tight. The holes in the dust shield for the bolts are slotted, and the bolts will find their own center as follows:

7. Place the brake shoe assembly in position and replace springs and anchor pin nuts and washers; see that brake drum and lining are free from oil and grease.

8. Replace wheel.

9. Apply the brakes forcibly several times, and while still applied tighten the nuts on the camshaft carrier bracket bolts securely. It is important that the original lock washer or an exact duplicate be used under these nuts.

10. After all brake shoes have been replaced in the above manner, the brakes must be adjusted and equalized as described in article (1-E).

(1-E) Adjust Brakes for Wear After Long Service or When Brakes Have Been Removed

(Cars numbered 750,001 and upward)

NOTE: When making the following adjustment for wear it is necessary that all four wheels be jacked up clear of the floor so that the brakes can be equalized properly. The cross shafts, joints and linkage must operate freely and be well lubricated. Under no circumstances should grease or oil be used on the brake shoe pins or cams, and it is important that the drums and brake shoes be free from grease and oil at all times. The numbers in the following paragraphs refer to the rear brakes; the front brakes are adjusted in a similar manner.

1. Back off the ball nuts on ends of brake pull rods until brakes are entirely loose so as not to interfere with the accurate setting of the take-up cam (32).

2. Loosen take-up cam lock nuts (33) and turn take-up cam (32) in the same direction in which the wheel turns when car is moving forward until the brake binds. (The space between the brake lining and the brake drum can be observed by removing the inspection hole cover from the wheel.)

3. Back off the take-up cam (32) slightly until wheel just turns freely. There should be .010' between the brake lining and drum with brakes fully released.

4. Tighten take-up cam lock nut (33) securely. The above adjustments should be made on all wheels if necessary before any further adjustments are made.

5. See if rear control levers (23) and front control levers are located in correct position on their shafts. The rear control levers should be placed in the splines or serrations so they will be slightly to the rear of the vertical center line, or forming an angle of 60° between the levers and the brake pull rods when the brakes are released. The front control levers should be similarly located with respect to the pull rods, but should be slightly in front of the vertical center line, or forming an angle of 60° between the levers and the brake pull rods.

6. To set control levers back off ball nuts on ends of pull rods. Loosen control lever clamp bolt nuts (21), slide lever off serrations on camshaft and replace at an angle of 60° (with brakes released) but not to exceed 90°.

7. Fasten lever in position by tightening control lever bolt securely.

8. Adjust ball socket nuts on ends of pull rods of front brakes, turning them to the right until the brakes start to drag; then the adjustment should be loosened until the wheels just turn freely. This procedure should then be followed by rear wheels. Note: Make sure that the cross pins in the ball socket rest in the grooves in the brake shaft levers after altering the adjustment.

9. The brake pedal should be next held in a slightly depressed position by means of a piece of wood of the required length placed between pedal and front seat heelboard, after which the equalization of the brakes should be tested by turning the front wheels forward against the brake action and noting resistance. This should be approximately equal in each wheel, and in event it is not, the ball socket nut on the tight wheel should be backed off and the one on the loose wheel tightened until a satisfactory adjustment is secured.

The equalizing of the brakes at the rear is accomplished in the same manner as the front. No attempt should be made to equalize the braking effect between the front and rear wheels, as this is automatically proportioned by the linkage.

(1-F) Adjust Brakes to Take up Ordinary Wear

(Cars numbered 750,001 and upward)

1. Jack up all four wheels and see that the cross shafts, joints, and linkage operate freely and are well lubricated.

2. Do not use any oil or grease on the brake shoe pins or cams, and see that drums and brake shoes are free from grease and oil at all times.

3. Adjust ball socket nuts on ends of pull rods of front brakes, turning them to the right until the brakes start to drag; then the adjustment should be loosened until the wheels just turn freely. This procedure should then be followed on the rear wheels.

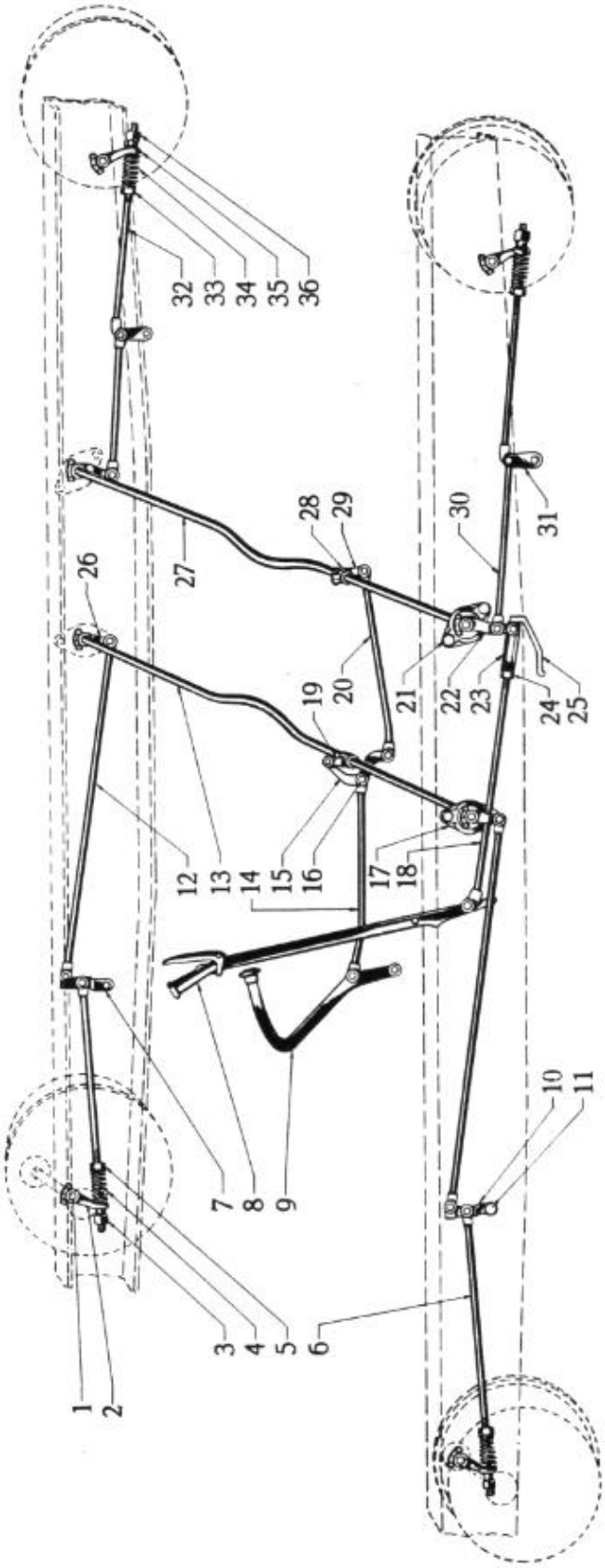
Note: Make sure that the cross pins in the ball socket nuts rest in the grooves in the brake shafts levers after altering the adjustment.

4. The brake pedal should next be held in a slightly depressed position by means of a piece of wood of the required length placed between pedal and front seat heelboard, after which the equalization of the brakes should be tested by turning the front wheels forward against the brake action and noting the resistance. This should be approximately equal in each wheel, and in event it is not the ball socket nut on the right wheel should be backed off and the one on the loose wheel tightened until a satisfactory adjustment is secured.

The equalizing of the brakes at the rear is accomplished in the same manner as at the front. No attempt should be made to equalize the braking effect between the front and rear wheels, as this is automatically proportioned by the linkage.

Hudson
Brake Control

(Cars numbered 750,001 and upward)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Hudson Brake Control

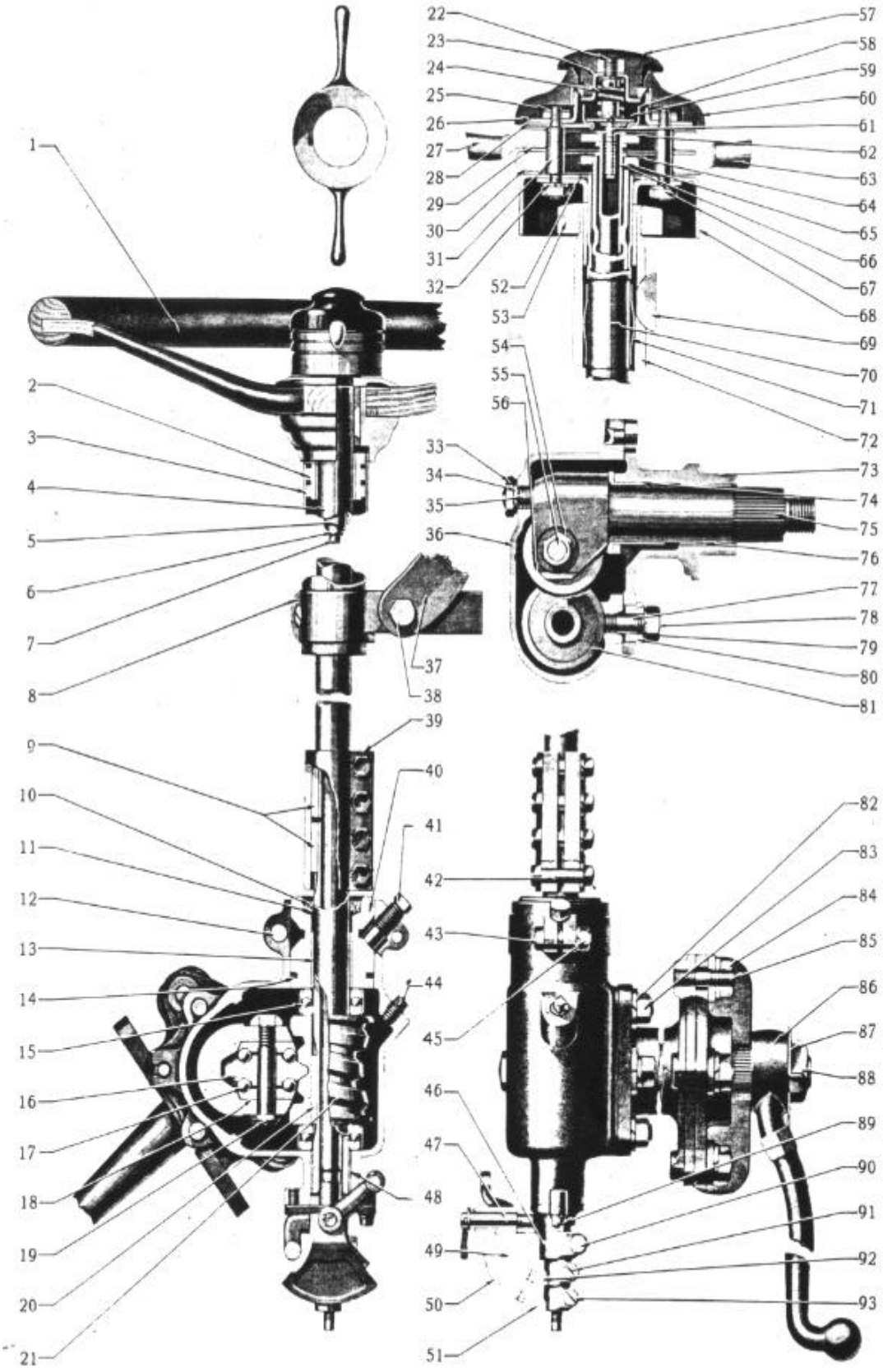
(Cars numbered 750,001 and upward)

(Numbers refer to illustration on page 22)

Ref. No.	Name of Part
1.	Front control shaft
2.	Front control lever
3.	Front control lever ball nut
4.	Front control lever spring
5.	Front control lever spring nut
6.	Front brake operating rod
7.	Front brake idler lever—right hand
8.	Hand brake lever
9.	Brake pedal
10.	Front brake idler lever—left hand
11.	Front brake idler lever pivot
12.	Front brake intermediate rod
13.	Front brake cross shaft
14.	Foot brake pedal rod
15.	Brake equalizer bar
16.	Foot brake pedal rod clevis pin
17.	Brake cross shaft bearing cage
18.	Hand brake operating rod
19.	Brake equalizer bar lever
20.	Equalizer bar to play link rod
21.	Brake cross shaft bearing cage bolt
22.	Rear brake cross shaft end lever
23.	Hand brake operating rod slide yoke
24.	Hand brake operating rod nut
25.	Rear brake cross shaft stop bracket
26.	Front brake cross shaft end lever
27.	Rear brake cross shaft
28.	Rear brake cross shaft center lever
29.	Brake lever play link
30.	Rear brake intermediate rod
31.	Rear brake idler lever
32.	Rear brake operating rod
33.	Rear control lever spring nut
34.	Rear control lever spring
35.	Rear control lever
36.	Rear control lever ball nut

Hudson
Steering Gear

(Cars numbered 750,001 and upward)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Hudson Steering Gear

(Cars numbered 750,001 and upward)

(Numbers refer to illustration on page 00)

Ref. No.	Name of Part
1.	Steering wheel.
2.	Jacket tube bushing
3.	Jacket tube
4.	Main tube-upper
5.	Sector tube
6.	Throttle tube
7.	Spark tube
8.	Jacket tube bracket
9.	Coupling key
10.	Bearing adjusting nut packing plug
11.	Bearing adjusting nut felt washer
12.	Case clamp bolt
13.	Bearing adjusting nut bushing
14.	Bearing adjusting nut packing
15.	Worm thrust bearing
16.	Roller tooth
17.	Roller tooth steel ball
18.	Roller tooth side washer
19	Roller tooth bolt
20.	Worm key
21.	Worm
22.	Screw for horn button
23.	Horn button spring retainer
24.	Horn button spring
25.	Control base stud nut-upper
26.	Control cover plate
27.	Spark hand lever
28.	Friction washer
29.	Friction washer
30.	Friction washer
31.	Control base stud
32.	Control base stud lock washer
33.	Roller tooth shaft adjusting screw nut
34.	Roller tooth shaft adjusting screw washer
35.	Roller tooth shaft adjusting screw
36.	Gear case
37.	Jacket tube cowl bracket
38.	Jacket tube cowl bracket bolt
39.	Main tube coupling
40.	Bearing adjusting nut
41.	Bearing adjusting screw
42.	Coupling bolt
43.	Case clamp bolt
44.	Pipe plug
45.	Case clamp bolt nut
46.	Sector tube clamp bracket
47.	Sector stud
48.	Lower case bushing
49.	Throttle sector
50.	Spark sector
51.	Spark tube pinion
52.	Sector bracket tube plate
53.	Main tube nut
54.	Roller tooth bolt nut
55.	Roller tooth bolt
56.	Roller tooth
57.	Horn button
58.	Horn button contact cup
59.	Horn wire insulating washer
60.	Control cover
61.	Horn wire
62.	Spark tube plate
63.	Throttle control hand lever
64.	Throttle tube plate
65.	Throttle tube
66.	Spark tube
67.	Control base stud nut-lower
68.	Control base
69.	Steering wheel key
70.	Sector bracket tube
71.	Sector tube silencer
72.	Main tube-upper
73.	Case cover
74.	Roller tooth shaft bushing
75.	Roller tooth shaft
76.	Roller tooth shaft bushing
77.	Case adjusting stud
78.	Case stud nut
79.	Case eccentric adjusting sleeve lock
80.	Case eccentric adjusting sleeve
81.	Worm
82.	Case stud lock washer
83.	Case stud nut
84.	Frame bracket to case cover nut
85.	Frame bracket to case cover stud
86.	Steering gear lever
87.	Steering gear lever nut lock
88.	Roller tooth shaft nut
89.	Sector tube bracket machine screw
90.	Sector tube bracket bolt
91.	Throttle tube pinion clamp screw
92.	Throttle tube pinion
93.	Spark tube pinion clamp screw

(1-A) Renew Case and Gear Complete

(Cars numbered 750,001 and upward)

1. Loosen clamp screws (93, 91) in spark and throttle control pinions and remove pinions (51, 92).
2. Loosen sector tube bracket clamp bolt (90).
3. Disconnect at horn terminal, wire (61) leading from steering gear horn button to horn.
4. (Remove screws and cap from jacket tube bracket (8).

5. Loosen main tube coupling bolts (42).

6. Disconnect upper and lower main tubes by grasping steering wheel and pulling column assembly upward until spark tube is clear of lower main tube.

7. Straighten lugs on nut lock (87) and remove nut (88) from roller tooth shaft (75).

8. Pull steering gear lever (86) off taper on roller tooth shaft, using puller shown on page 18, service tool section.

9. Remove nuts and bolts holding steering gear frame bracket to frame. This will allow the removal of the lower case and gear assembly.

10. Install new case and gear assembly and reassemble, reversing the above operations. See that steering gear lever is replaced on roller tooth shaft with center of lever in line with mark on the end of shaft.

(1-B) Renew Upper and Lower Worm Shaft Bushings, Roller Shaft Bushings, Roller Tooth and Shaft Assembly, or Thrust Washer

(Cars numbered 750,001 and upward)

1. Loosen clamp screws (93, 91) in spark and throttle control pinions and remove pinions (51, 92).

2. Loosen sector tube bracket clamp bolt (90).

3. Disconnect at horn terminal, wire (61) leading from steering gear horn button to horn.

4. Remove screws and cap from jacket tube bracket (8).

5. Loosen main tube coupling bolts (42).

6. Disconnect upper and lower main tubes by grasping steering wheel and pulling column assembly upward until spark tube is clear of lower main tube.

7. Straighten lugs on nut lock (87) and remove nut (88) from roller tooth shaft (75).

8. Remove nuts and bolts holding steering gear frame bracket to frame. This will allow the removal of the lower case and gear assembly from the car.

9. Remove sector tube bracket screws (89) and take off sector tube bracket (46) and gasket.

10. Remove case stud nut (78) and washer, eccentric adjusting sleeve lock ring (79) and eccentric adjusting sleeve (80).

11. Remove case stud nuts (83) and lock washers. Take off case cover (73) and gasket; this will allow the removal of the roller tooth and shaft assembly and thrust washer.

12. Remove main tube coupling (39) and coupling key (9).

13. Loosen case clamp bolts (12) and (43) and remove bearing adjusting screw (41).

14. Remove lower main tube assembly-including bearing adjusting nut (40) worm thrust bearing (15) and worm (21).

15. Press out lower bushing (48) and bearing adjusting nut bushing (13) and replace with new parts, using arbor press or bushing drift No. "H-46" shown in service tool section. Ream with special reamer "H-210. "

16. Press out roller tooth shaft bushings (74) and replace with new parts, using bushing press "HE-115" with adapters No. 6 and No. 7 shown in special tool section. Ream with special reamer "H-211. "

17. The lower main tube, worm thrust bearings, roller tooth and shaft assembly or thrust washer may be replaced with new parts where necessary, and steering gear reassembled, reversing above operations.

(C) Renew Jacket Tube Bushings

(See 1926 Service Manual, Page 24)

(D) Renew Steering Gear Lever

(See 1926 Service Manual, Page 25)

(1-E) Renew Lower Tube, Worm, or Thrust Bearings

(Cars numbered 750,001 and upward)

1. Loosen clamp screws (93, 91) in spark and throttle control pinions, and remove pinions (51) and (92).
2. Loosen sector tube bracket clamp bolt (90).
3. Loosen clamp nuts (84) holding case cover (73) to frame bracket.
4. Disconnect at horn terminal, wire (61) leading from steering gear horn button to horn.
5. Remove screws and cap from jacket tube bracket (8).
6. Loosen main tube coupling bolts (42).
7. Disconnect upper and lower main tubes by grasping steering wheel and pulling column assembly upward, until spark tube is clear of lower main tube.
8. Loosen case clamp bolts (12) and (43) and remove bearing adjusting screw (41).
9. The lower main tube, worm, or thrust bearings may be removed and replaced with new parts where necessary, and steering gear reassembled, reversing above operations.

(F) Renew Spark or Throttle Levers, Spark, Throttle or Sector Tubes, Friction Washers, or Column Silencers

(See 1926 Service Manual, Page 25)

(G) Renew Control Cover, Horn Button, Spring, Horn Wire or Compression Plate

(See 1926 Service Manual, Page 26)

(1 -H) Adjust Column for End Play

(Cars numbered 750,001 and upward)

1. Loosen case clamp bolt (12) one-half turn.
2. Loosen case clamp bolt (43) for adjusting screw one-half turn.
3. Tighten bearing adjusting nut screw (41) as much as possible without stiffening the action of steering wheel when turned through its entire movement.

> *NOTE: Care must be taken in making this adjustment not to back up on adjusting screw (41); when completing adjustment this screw must be in positive contact with the bearing adjusting nut which it actuates. To be sure of this, the adjusting screw (41) should last be turned in a clockwise or tightening direction.*

4. Tighten very securely both clamp bolts previously loosened.

(1-I) Adjust Roller Tooth and Shaft for End Play

(Cars numbered 750,001 and upward)

1. Loosen lock nut (33) on roller tooth shaft adjusting screw.
2. Turn adjusting screw (35) as tightly as possible with an ordinary screw driver, then back up slightly.
3. Tighten lock nut (33) securely.

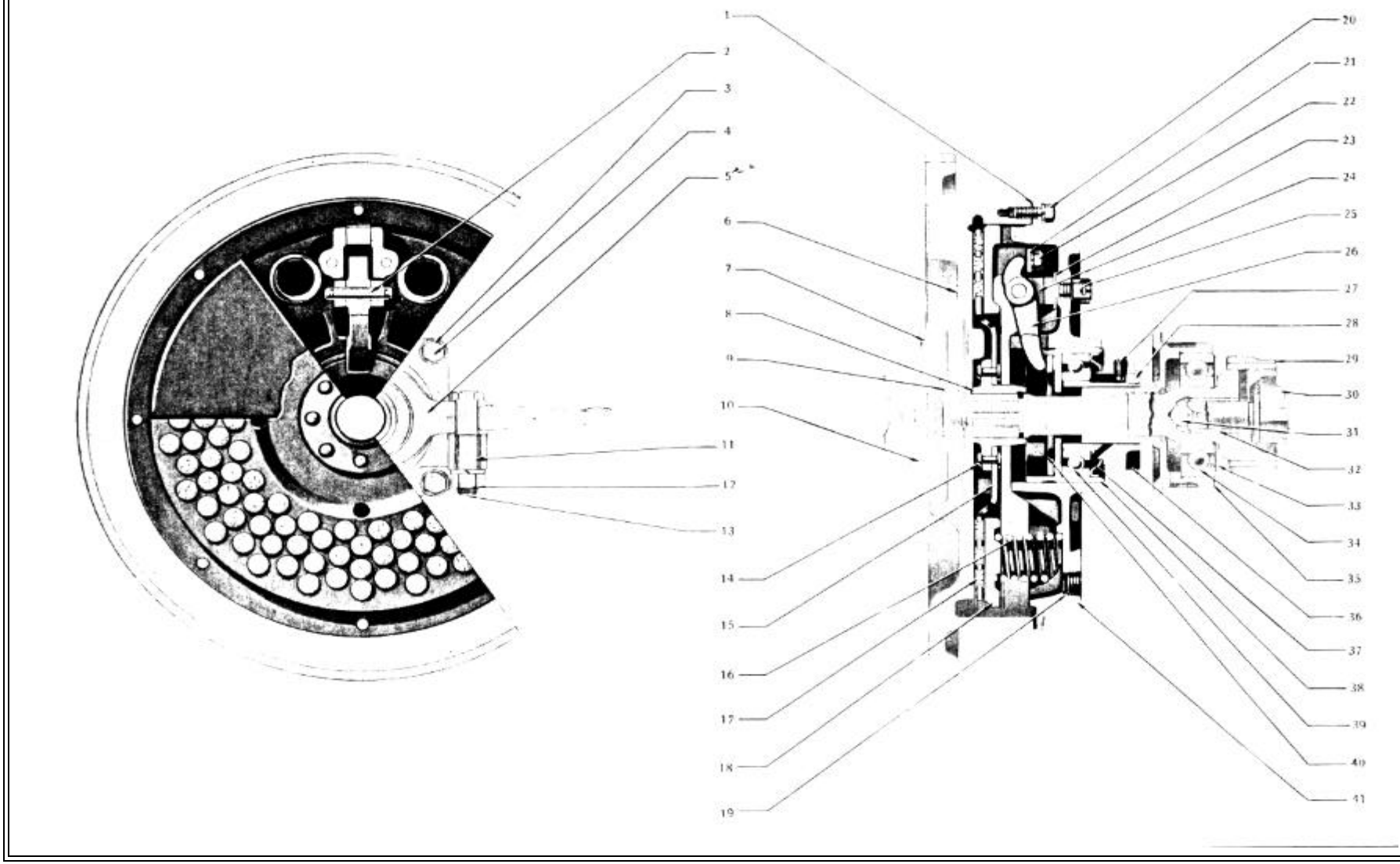
(1-J) Adjust for Play in Mesh of Worm and Roller Tooth

(Cars numbered 750,001 and upward)

1. Turn steering wheel until wheels are in straight ahead position.
2. Disconnect drag link at steering gear ball arm end; shake steering arm to ascertain amount of play if any at this point.
3. Loosen one-quarter turn the four case stud nuts (83).
4. Loosen one-half turn the lock nut (78) for case eccentric adjusting sleeve. Do not loosen the nuts more than the amount mentioned so as not to disturb the adjustment when tightened and to prevent loss of lubricant.
5. Turn case eccentric adjusting sleeve (80) in clockwise direction in very gradual stages and note the results by shaking the steering gear ball arm at each step. It is essential to use great care and see that the sleeve (80) is only turned sufficiently at the last step to eliminate play, and no further. The eccentric action is very sensitive and requires little movement in making this adjustment.
6. Movement of the eccentric adjusting sleeve (80) must in all cases finish in a clock-wise direction so that adjustment will hold. Should it be necessary to back up on account of adjusting too close, do so in excess of the required amount and proceed to re-adjust as described.
7. It is most important that the four nuts (83) on the case cover and the lock nut (79) for eccentric adjusting sleeve be tightened down very securely. Be sure they are positively tight.
8. Connect drag link to steering gear ball arm.

Hudson Clutch

(Cars numbered 750,001 and upward)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Hudson Clutch

(Cars numbered 750,001 and upward)
(Numbers refer to illustration on *Page* 32)

Ref. No.	Name of Part
1.	Clutch cover gasket
2.	Clutch shifter finger pin
3.	Transmission mainshaft front bearing lock washer
4.	Transmission mainshaft front bearing screw
5.	Clutch throwout yoke
6.	Flywheel
7.	Flywheel bolt
8.	Clutch driving plate hub
9.	Clutch pilot bearing
10.	Crankshaft
11.	Clutch throwout yoke bushing
12.	Clutch throwout yoke bolt nut
13.	Clutch throwout yoke bolt
14.	Clutch driving plate rivet
15.	Clutch driving plate
16.	Clutch spring
17.	Clutch driving plate cork
18.	Clutch pressure plate
19.	Clutch cover pipe plug
20.	Clutch cover cap screw
21.	Shifter finger lock plate
22.	Pressure plate cap screw
23.	Shifter finger bracket gasket
24.	Shifter finger bracket
25.	Shifter finger bracket nut
26.	Shifter finger
27.	Thrust bearing retainer pipe plug
28.	Thrust bearing retainer oil hole seal
29.	Transmission main shaft drive gear
30.	Transmission main shaft
31.	Transmission main shaft drive gear steel ball
32.	Transmission main shaft drive gear inner bushing
33.	Transmission front bearing cap oil seal
34.	Main shaft drive gear outer ball bearing
35.	Transmission front bearing cap
36.	Clutch thrust bearing retainer
37.	Clutch thrust bearing retainer washer
38.	Clutch shifting sleeve
39.	Clutch thrust bearing
40.	Clutch shifter plate
41.	Clutch cover

(1-A) Renew Clutch Assembly, Driving Plate, Pressure Plate, Thrust Bearing, Bearing Retainer, Pilot Bearing, Shifter Fingers, Springs or Shifter Finger Brackets

(Cars numbered 750,001 and upward)

1. Remove front compartment rubber and felt mats and take out front toe and floor boards.

2. Remove clevis pin at bottom of brake pedal and disconnect foot brake pull rod.

3. Remove clevis pin from lower end of starter pedal shaft lever, disconnect starter operating shaft and spring.

4. Remove clevis pin from clutch adjustable link and disconnect throwout yoke,

5. Unscrew sleeve at transmission end of speedometer shaft and disconnect shaft from transmission.

6. Remove bolts from front universal joint flange and disconnect propeller shaft.

7. Remove bolts holding pedal control bracket to transmission case and take off pedal bracket assembly.

8. Remove cap screws holding transmission cover and control lever to transmission and take off control assembly.

9. Remove cotter pins and nuts from transmission to crankcase bolts, take out bolts and cap screws removing the upper one last; this will allow the transmission to be withdrawn from the clutch and lowered to the floor. The thrust bearing (39), bearing retainer (36), sleeve (38), and plate (40) can now be removed from the clutch cover hub and renewed if necessary.

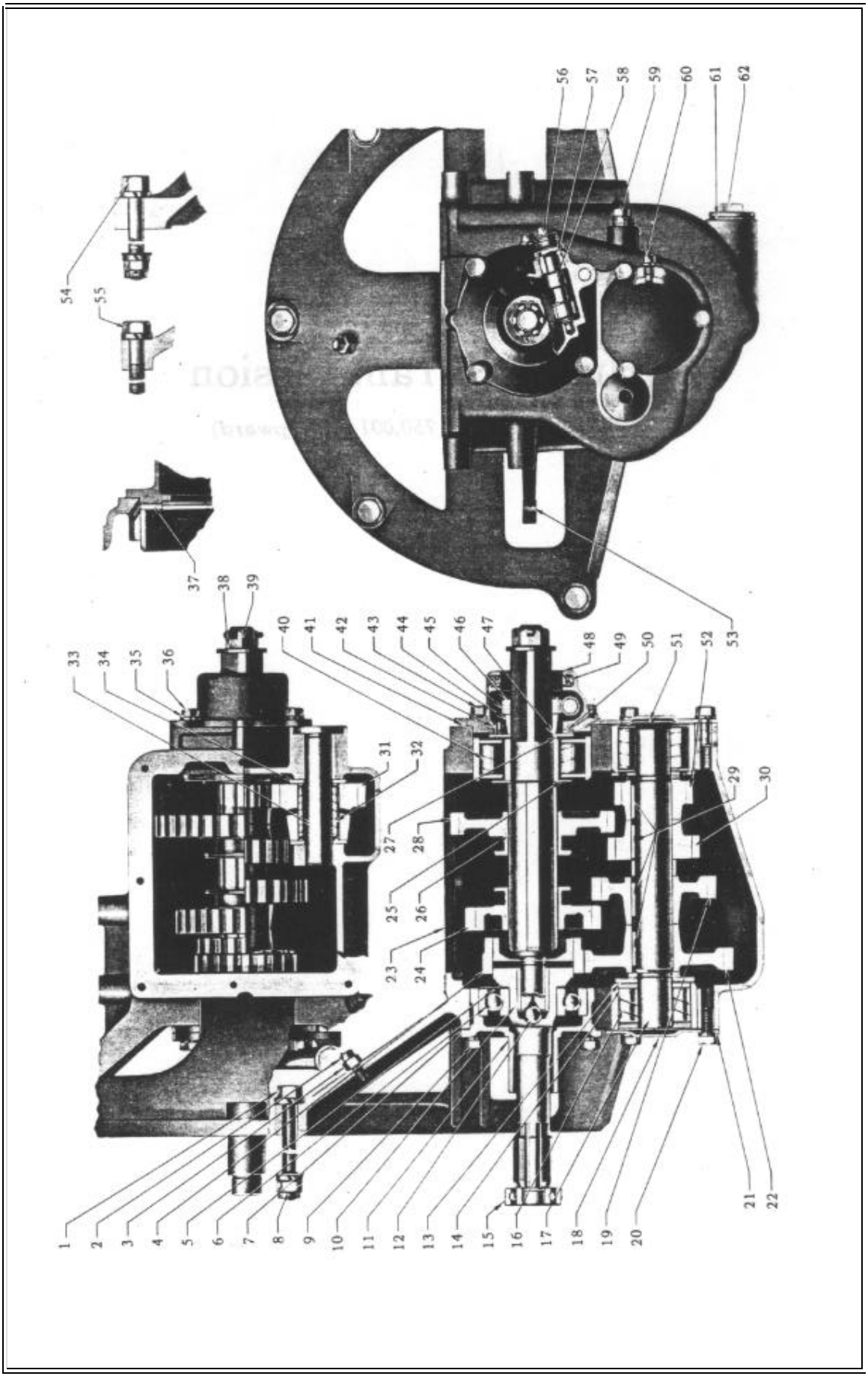
10. Remove cap screws (20) holding clutch cover to flywheel, releasing the clutch assembly and driving plate assembly (15), which parts, as well as the clutch pilot

11. Should replacement of the cover (41), pressure plate (18), springs (16), shifter finger brackets (24), gasket (1), or shifter fingers (26), be necessary, the clutch should be mounted in the clutch assembling fixture "HE-130" shown in Service Tool section and disassembled by removing the cotter pins and castle nuts (25) from the shifter finger brackets (24).

12. After all the parts requiring renewal have been replaced, the clutch is reassembled by reversing the operations listed above, using clutch assembling fixture.

Hudson Transmission

(Cars numbered 750,001 and upward)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Hudson Transmission

(Cars numbered 750,001 and upward)
(Numbers refer to illustration on page 36)

Ref. No.	Name of Part
1.	Transmission case bolt long
2.	Starter pedal stop set screw
3.	Starter pedal stop set screw nut
4.	Mainshaft drive gear
5.	Front bearing oil seal
6.	Mainshaft drive gear outer ball bearing
7.	Mainshaft front bearing cap gasket
8.	Case bolt nut
9.	Front bearing cap screw
10.	Mainshaft drive gear inner bushing
11.	Front bearing cap
12.	Mainshaft thrust ball
13.	Countershaft bronze washer
14.	Countershaft steel washer
15.	Clutch pilot bearing
16.	Countershaft bearing
17.	Countershaft
18.	Countershaft bearing cap
19.	Countershaft second speed gear
20.	Countershaft bearing cap screw
21.	Countershaft bearing cap gasket
22.	Countershaft drive gear
23.	Transmission case cover gasket
24.	Mainshaft second and high speed gear
25.	Mainshaft rear bearing front steel washer
26.	Mainshaft
27.	Mainshaft shim
28.	Mainshaft low and reverse gear
29.	Countershaft gear key
30.	Countershaft low gear
31.	Reverse idler gear
32.	Reverse idler gear bearing
33.	Reverse idler gear shaft
34.	Reverse idler gear thrust washer
35.	Mainshaft rear bearing cap screw washer
36.	Mainshaft rear bearing cap screw
37.	Rear bearing cap oil guide
38.	Mainshaft nut washer
39.	Mainshaft nut
40.	Mainshaft rear bearing
41.	Mainshaft rear bearing cap shim
42.	Mainshaft rear bronze washer pin
43.	Mainshaft rear bearing cap screw
44.	Mainshaft spacing collar
45.	Speedometer drive gear
46.	Speedometer drive gear washer
47.	Mainshaft rear bearing rear steel washer
48.	Mainshaft rear bearing cap
49.	Rear bearing cap felt washer
50.	Rear bearing cap bronze washer
51.	Countershaft bearing shim
52.	Countershaft reverse gear
53.	Clutch throwout yoke
54.	Transmission case bolt medium
55.	Transmission case bolt short
56.	Speedometer driven gear bushing
57.	Speedometer driven gear bushing shim
58.	Speedometer driven gear
59.	Oil level test plug
60.	Bearing outer sleeve lock screw
61.	Drain plug gasket
62.	Drain plug

NOTE: In all operations where it is necessary to adjust the mainshaft for end play, it is important that from .003 to .006 end play be allowed. On cars previous to 750,001 a greater end play of .008 to .012 was necessary because the thrust was greater on the transmission thrust washers and it required this amount of end play to insure their proper lubrication. When referring back therefore to operations described in the 1926 Service Manual and applying these operations to cars numbered 750,001 and upward, use the figures .003 to .006 for end play instead of the figures .008 to .012.

Also note where reference is made to operations in the 1926 Service Manual to be used on cars 750,001 and upwards, it is not necessary to disconnect the brake pull rod at the bottom of the hand brake lever, as this has been removed from the transmission housing and is now attached to the frame of the car on the left hand side.

(1-A) Renew Transmission

(Cars numbered 750,001 and upward)

1, Remove front compartment rubber and felt mats and take out front toe and floor boards.

2. Remove clevis pin from brake pedal and disconnect brake pedal to equalizer bar pull rod.

3. Remove clevis pin from lower end of starter pedal shaft lever. Disconnect starter operating shaft and spring.

4. Remove clevis pin from clutch adjustable link and disconnect throwout yoke.

5. Unscrew sleeve at rear of speedometer shaft and disconnect shaft from transmission.

6. Remove bolts from front universal joint flange and disconnect propeller shaft.

7. Remove bolts holding pedal control bracket to transmission case and take off pedal control assembly.

8. Remove cap screws holding hand control lever assembly and transmission cover to transmission and disconnect control assembly.

9. Remove cotter pins and nuts from transmission to crankcase bolts, take out bolts and cap screws; removing the upper one last. This will permit the transmission to be withdrawn from the clutch assembly and lowered to the floor.

10. Renew transmission and reassemble by reversing the above operations.

(B) Renew Mainshaft, Sliding Gears, Mainshaft Thrust Ball, Mainshaft Front or Rear Bearings, Mainshaft Rear Bearing Thrust Washers or Speedometer Drive Gear

(See 1926 Service Manual, page 36)

(1-C) Rebush or Renew Mainshaft Drive Gear; Renew Drive Gear Bearing, Bearing Caps, Etc.

(Cars numbered 750,001 and upward)

1. Remove front compartment rubber and felt mats and take out front toe and floor boards.

2. Remove clevis pin at bottom of brake pedal and disconnect foot brake pull rod.

3. Remove clevis pin from lower end of starter pedal shaft lever, disconnect starter operating shaft and spring.

4. Remove clevis pin from clutch adjustable link and disconnect throwout yoke.

5. Unscrew sleeve at transmission end of speedometer shaft, and disconnect shaft from transmission.

6. Remove bolts from front universal joint flange and disconnect propeller shaft.

7. Remove bolts holding pedal control bracket to transmission case and take off pedal bracket assembly.

8. Remove cap screws holding transmission cover and control lever to transmission and disconnect control assembly.

9. Remove cotter pins and nuts from transmission to crankcase bolts, take out bolts and cap screws, removing the upper one last; this will allow the transmission to be withdrawn from the clutch and lowered to the floor.

10. Remove cotter pin, nut and washer from rear end of transmission mainshaft.

11. Pull front universal joint flange off mainshaft, using universal joint flange puller shown on page (22) Service Tool section.

12. Remove cap screws (36) holding mainshaft rear bearing cap to transmission and take off cap (48); this will allow the withdrawal and removal of the mainshaft (26), sliding gears (24, 28), rear bearing (40), thrust washers (47, 50), speedometer drive gear (45), and thrust ball (12).

13. Remove cap screws (9) holding front bearing cap (11) to transmission; take off cap (11), bearing (6) and drive gear assembly, which may be renewed as necessary.

14. If drive gear is to be rebushed, remove old bushing with bushing extractor "H-212," Service Tool section, and press new part in place. After this is done, the bushing should be reamed to the correct size and in perfect alignment by means of the drive gear bushing reamer and fixture "H-209" illustrated in Service Tool section.

15. Transmission is reassembled by reversing the foregoing operations, making sure that there is from .003 to .006 end play in the mainshaft after the bearing caps have been bolted in position to allow adequate lubrication.

(1-D) Renew Countershaft, Countershaft Gears, Countershaft Bearings, or Thrust Washers

(Cars numbered 750,001 and upward)

1. Remove front compartment rubber and felt mats and take out toe and floor boards.
2. Remove clevis pin at bottom of brake pedal and disconnect foot brake pull rod.
3. Remove clevis pin from lower end of starter pedal shaft lever, disconnect starter operating shaft and spring.
4. Remove clevis pin from clutch adjustable link and disconnect throwout yoke.
5. Unscrew sleeve at transmission end of speedometer shaft, and disconnect shaft from transmission.
6. Remove bolts from front universal joint flange and disconnect propeller shaft.
7. Remove bolts holding pedal control bracket to transmission case and take off pedal bracket assembly.
8. Remove cap screws holding transmission cover and control lever to transmission and disconnect control assembly.
9. Remove cotter pins and nuts from transmission to crankcase bolts, take out bolts and cap screws, removing the upper one last; this will allow the transmission to be withdrawn from the clutch and lowered to the floor.
10. Remove cotter pin, nut and washer from rear end of transmission mainshaft.
11. Pull front universal joint flange off mainshaft, using universal joint flange puller shown on page (22) Service Tool section.
12. Remove cap screws (36) holding mainshaft rear bearing cap to transmission and take off cap (48) ; this will allow the withdrawal and removal of the mainshaft (26), sliding gears (24, 28), rear bearings (40), thrust washers (47, 50), speedometer drive gear (45) and thrust ball (12).
13. Remove screws (20) from countershaft bearing caps (18) and take off caps, shims (51) and bearing rollers and retainers (16).
14. Pull countershaft bearing outer races out of transmission case, using bearing race puller shown on page 14, Service Tool section.
15. Remove countershaft bronze and steel thrust washers (13, 14), and take out countershaft assembly, moving it slightly to rear, and raising front end upward.
16. Countershaft or countershaft gears which require renewal should now be removed and replaced, using an arbor press. Renew parts (16, 13, 14) as necessary and reassemble transmission reversing the foregoing operations. See that there are sufficient shims (27) on mainshaft to allow .003 to .006 end play for lubrication after caps (11, 48) are bolted in place. Shims (51) should also be added or removed if necessary so that from .014 to .018 end play exists in countershaft.

(E) Renew Reverse Idler Gear, Shaft, Bearing, or Thrust Washers

(See 1926 Service Manual, Page 38)

(1-F) Renew Transmission Case

(Cars numbered 750,001 and upward)

1. Remove front compartment rubber and felt mats and take out toe and floor boards.
2. Remove clevis pin at bottom of brake pedal and disconnect foot brake pull rod.
3. Remove clevis pin from lower end of starter pedal shaft lever, disconnect starter operating shaft and spring.
4. Remove clevis pin from clutch adjustable link and disconnect throwout yoke.
5. Unscrew sleeve at transmission end of speedometer shaft, and disconnect shaft from transmission.
6. Remove bolts from front universal joint flange and disconnect propeller shaft.
7. Remove bolts holding pedal control bracket to transmission case and take off pedal bracket assembly.
8. Remove cap screws holding transmission cover and control lever to transmission and disconnect control assembly.
9. Remove cotter pins and nuts from transmission to crankcase bolts, take out bolts and cap screws, removing the upper one last; this will allow the transmission to be withdrawn from the clutch and lowered to the floor.
10. Remove cotter pin, nut and washer from rear end of transmission mainshaft.
11. Pull front universal joint flange off mainshaft, using universal joint flange puller shown on page (22) Service Tool section.
12. Remove cap screws (36) holding mainshaft rear bearing cap to transmission and take off cap (48); this will allow the withdrawal and removal of the mainshaft (26), sliding gears (24, 28), rear bearings (40), thrust washers (47, 50), speedometer drive gear (45) and thrust ball (12).
13. Remove screws (20) from countershaft bearing caps (18) and take off caps, shims (51) and bearing rollers and retainers (16).
14. Pull countershaft bearing outer races out of transmission case, using bearing race puller shown on page 14, Service Tool section.
15. Remove countershaft bronze and steel thrust washers (13, 14) and take out countershaft assembly, moving it slightly to rear, and raising front end upward.
16. Pull reverse idler gear shaft out of rear transmission case, screwing 3/8"-16 cap screw into hole tapped at end of idler shaft and using large screw-driver or similar tool to pry under head of screw.
17. Remove reverse idler gear (31), bearing (32), and thrust washer (34).
18. Remove bearing outer sleeve lock screw (60), pull outer sleeve of mainshaft rear bearing (40) out of transmission case, using outer sleeve puller shown on page 14, Service Tool section.
19. Remove drain and oil level plugs (62-59).
20. Replace case with new part and reassemble transmission, reversing above operations. When reassembling transmission, allow .003 to .006 end play in mainshaft and .014 to .018 in countershaft for lubrication of thrust washers.

(G) Renew Clutch Throwout Yoke, Throwout Yoke Bushings or Bolt

(See 1926 Service Manual, Page 40)

(H) Renew Mainshaft Rear Bearing Cap Felt Washer

(See 1926 Service Manual, Page 40)

(1-I) Remove End Play from Mainshaft

(Cars numbered 750,001 and upward)

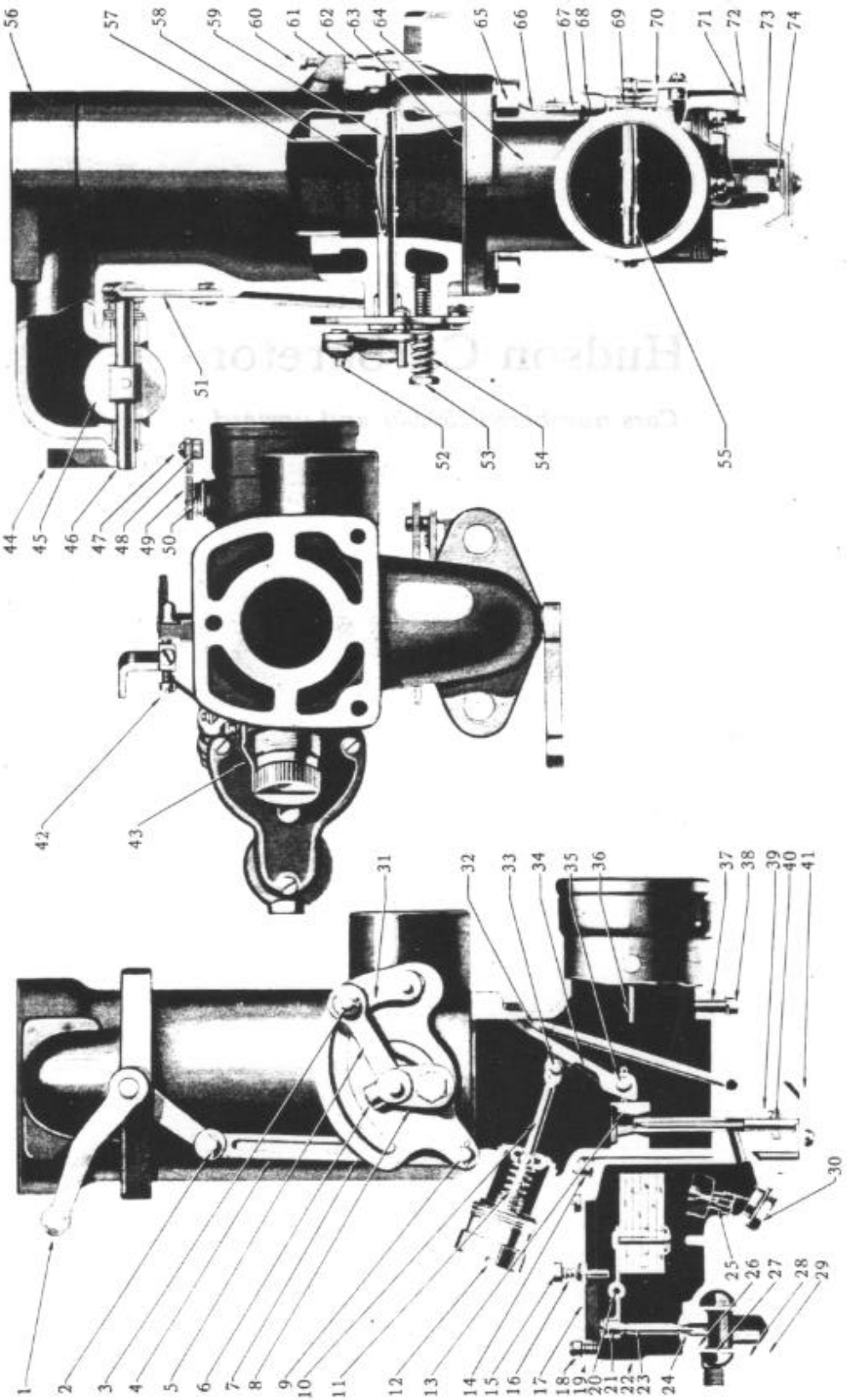
1. Remove bolts from flange of front universal joint and disconnect propeller shaft.
2. Unscrew sleeve at rear end of speedometer shaft and disconnect speedometer shaft from transmission.
3. Remove cotter pin, nut and washer from rear end of transmission mainshaft and pull off universal joint flange, using universal joint flange puller shown on page (22) Service Tool Section.
4. Remove cap screws (36) holding mainshaft rear bearing cap (48) to transmission and take off cap.
5. Remove sufficient shims (27) to take out all but .003 to .006 end play; this amount is essential to insure lubrication of the rear thrust washers.
6. Re-assemble parts, reversing the above operations.

(J) Remove End Play from Countershaft

(See 1926 Service Manual, Page 41)

Hudson Carburetor

(Cars numbered 750,001 and upward)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Hudson Carburetor

(Cars numbered 750,001 and upward)

(Numbers refer to illustration on page 44)

1. Damper lever-dash control end
2. Damper lever pin
3. Cam lever pin
4. Connecting rod
5. Cam lever
6. Pilot set screw
7. Damper control cam
8. Cam friction plate
9. Connecting rod pin
10. Dash pot plunger assembly
11. Air valve spring
12. Air adjusting screw
13. Spacer block
14. Metering pin packing retainer screw
15. Flusher plunger
16. Flusher spring
17. Bowl cover
18. Bowl cover screw
19. Bowl cover gasket
20. Float lever shaft
21. Float lever
22. Bowl
23. Float valve
24. Float valve seat
25. Metering pin jet
26. Float valve seat gasket
27. Strainer gauze
28. Strainer plug gasket
29. Strainer plug
30. Bowl drain plug
31. Cam roller link
32. High speed jet
33. Air spring plunger pin
34. Air valve
35. Air valve shaft
36. Choker valve
37. Body to bowl gasket
38. Body to bowl screw
39. Gasoline adjusting needle packing nut
40. Gasoline adjusting needle packing
41. Gasoline adjusting needle assembly
42. Throttle adjusting screw
43. Ratchet spring
44. Damper lever-dash control end
45. Damper valve
46. Damper valve shaft
47. Choker swivel screw
48. Choker swivel
49. Choker lever
50. Choker spring
51. Damper lever cam end
52. Cam lever pin
53. Cam friction stud
54. Cam friction spring
55. Choker valve shaft
56. Riser
57. Riser lining
58. Throttle valve
59. Throttle valve shaft
60. Throttle adjusting screw pinch screw
61. Lead stop
62. Throttle lever
63. Carburetor flange gasket
64. Carburetor body
65. Carburetor flange cap screw
66. Metering pin link
67. Metering pin
68. Metering pin packing retainer
69. Choker spring
70. Choker lever
71. Metering pin plug gasket
72. Metering pin plug
73. Gas adjusting needle stop
74. Gas adjusting needle

(1-A) Renew Carburetor

(Cars numbered 750,000 and upward)

1. Shut off gasoline valve at bottom of vacuum tank and disconnect gasoline feed pipe at carburetor.

2. Disconnect choke wire from intake manifold and choke lever (49).

3. Remove nut from air cleaner support strap at rear end of air cleaner.

4. Loosen clamp bolt at top of air cleaner support strap and disconnect strap from cleaner; remove air cleaner.

5. Remove 2 cap screws (65) holding carburetor to riser, and take off carburetor assembly. In doing this, the metering pin link (66) and metering pin (67) will pull out of the carburetor body (64) and will remain attached to the throttle lever (62) in the riser assembly.

6. Replace with new carburetor assembly and reassemble all parts removed, reversing the above operations.

(1-B) Renew Float Assembly or Float Needle Valve

(Cars numbered 750,001 and upward)

1. Shut off gasoline valve at bottom of vacuum tank and disconnect gasoline feed pipe at carburetor.
2. Remove 3 screws (18) holding bowl cover (17) to bowl (22) and take off cover.
3. Unscrew float lever shaft (20) from bowl. This will permit the removal of the float and needle valve assembly (23) which may be renewed as necessary.
4. To reassemble, reverse the above operations, checking the float level after the installation to make sure that the fuel will be maintained at the correct level. The distance from the top of the bowl or float chamber to the top of the float should be 9/16" when the float needle valve is closed. If necessary the float lever (21), should be bent until the correct distance (9/16") is obtained.

(1-C) Renew Air Valve and Dash Pot Plunger Assembly

(Cars numbered 750,001 and upward)

1. Remove carburetor assembly as explained in 1-A.
2. Remove air adjusting screw (12) and air valve spring (11) from carburetor body by turning screw to the left.
3. Remove cotter pin holding air valve shaft (35) in position; this will permit the removal of the shaft which may be pushed out of either side, releasing the air valve or air fly (34) and dash pot plunger assembly.
4. Renew or repair parts as necessary and reassemble, reversing the above operations.

(1-D) Clean Carburetor

(Cars numbered 750,001 and upward)

1. Remove carburetor as explained in article 1-A.
2. Thoroughly clean outside of carburetor with gasoline, using a stiff brush or compressed air so there will be no chance of dirt working into the inside of carburetor when disassembled.
3. Remove 3 screws (18) holding bowl cover (17) to bowl (22) and take off cover.
4. Unscrew float lever shaft (20) from bowl and remove float and needle valve assembly.
5. Remove strainer plug (29), gasket (28) and strainer gauze (27).
6. Remove bowl drain plug (30) and gasket.
7. The carburetor body, bowl and disassembled parts, may now be thoroughly cleaned with gasoline and blown out with compressed air. Be sure that all openings and passages including adjusting needle (41), float valve (23), metering pin jet (25) and high speed jet (32) are properly cleaned and free from obstructions which might hinder the flow of gasoline through these parts.
8. It is important when cleaning the carburetor that no abrasives, files, or emery cloth be used; otherwise the carburetor will not function properly when reassembled.

9. After all parts have been thoroughly cleaned, the carburetor should be reassembled by reversing the above operations. It is advisable to examine all gaskets and packing at this time and renew if necessary, or tighten packing glands slightly.

(1-E) Renew or Change Metering Pin Jet

(Cars numbered 750,001 and upward)

1. Shut off gasoline valve at bottom of vacuum tank.
2. Remove metering pin plug (72) and gasket (71).
3. Use a suitable screwdriver and remove metering pin jet (25).
4. Screw new jet into place; replace gasket and plug and tighten securely.

(1-F) Renew Float Valve Seat, or Strainer Gauze

(Cars numbered 750,001 and upward)

1. Shut off gasoline valve at bottom of vacuum tank.
2. Remove strainer plug (29) and gasket (28).
3. Remove strainer gauze (27).
4. Use a suitable screwdriver and remove float valve seat (24) and gasket (26).
5. Reassemble by reversing above operations, using new parts where necessary.

(1-G) Renew or Change High Speed Jet, or Renew Bowl Assembly

(Cars numbered 750,001 and upward)

1. Remove carburetor as explained in article 1-A.

2. Remove 3 screws (38) holding bowl (22) to carburetor and take off bowl assembly and gasket (37).

3. The high speed jet (32) may now be removed by unscrewing it from the stand-pipe, and renewed or changed.

4. If a new bowl assembly is necessary, it may be assembled to carburetor by reversing the above operations.

5. Reassemble carburetor to riser, reversing operations described in article 1-A.

(1-H) Renew Carburetor and Riser Assembly

(Cars numbered 750,001 and upward)

1. Shut off gasoline valve at bottom of vacuum tank and disconnect gasoline feed pipe at carburetor.
2. Disconnect vacuum pipe at intake manifold.
3. Disconnect heat control rod at damper valve behind riser.
4. Disconnect choke wire from intake manifold and choke lever.
5. Disconnect throttle rod at bottom of riser.
6. Remove nut from air cleaner support strap at rear end of cleaner.

7. Loosen clamp bolt at top of strap and disconnect strap from cleaner. Remove air cleaner.
8. Remove packing glands from exhaust by-pass pipe between riser and damper body in exhaust pipe and remove pipe.
9. Disconnect damper body valve operating rod.
10. Remove 4 bolts holding intake manifold to cylinder head, and 2 nuts holding damper body to exhaust manifold, and take off carburetor and riser assembly complete with intake manifold attached
. 11. Remove 3 screws holding intake manifold to riser and' ake off carburetor and riser assembly.
12. Replace with new carburetor and riser assembly, reversing the above operations and fitting new gaskets when bolting riser to intake manifold.

(1-I) Adjust Carburetor

(Cars numbered 750,001 and upward)

Note: No change should be made in carburetor adjustments until after an inspection has been made to determine if the trouble is in some other unit. It should be noted that the gasoline lines and strainer are clean, that there is gasoline in the vacuum tank, that there are no leaks in connections between carburetor and engine and that the ignition system is in proper condition and that there is even compression in all cylinders.

If it is necessary to test adjustments or to make re-adjustment, proceed as follows:

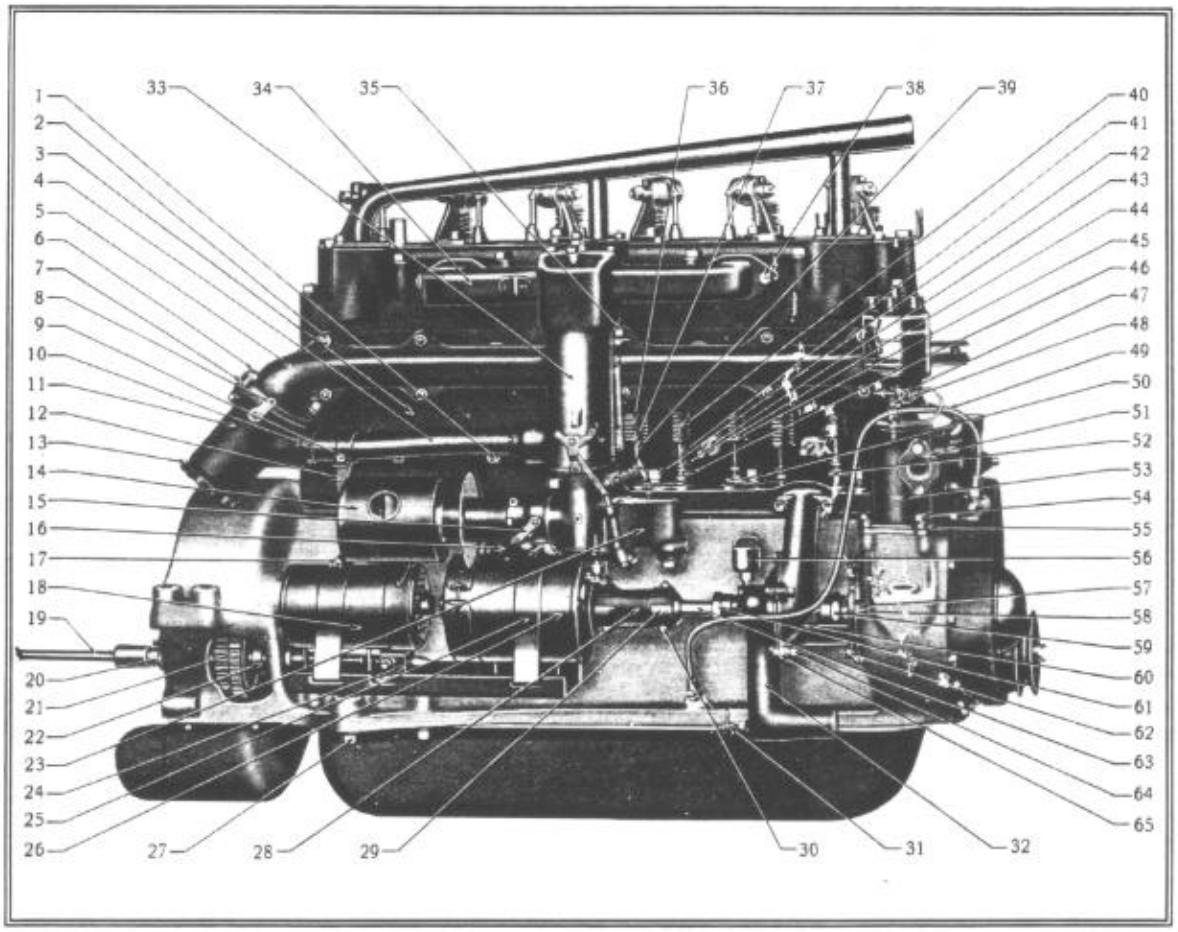
1. Set air adjusting screw (12) so that the end is flush with end of ratchet spring (43).
2. Turn gasoline adjusting needle (74) to the left very carefully until the needle head rests against its stop; then turn to the right to bring the notch in the disk handle (41) directly below the guide post above the disk.

Note: Notch in the disk handle of the adjusting needle is put in the disk after the needle has been carefully calibrated by the manufacturers. When the notch in the disk registers with the guide post above it, this setting is termed "the normal setting" because it is the standard fuel flow for the Hudson Motor.

3. With needle (74) set at normal, set heat control lever on the instrument board at the "hot" position and leave it in this position while making adjustments.
4. Pull out the choke to closed position and start the engine in the usual manner, releasing the choke as soon as the engine fires.
5. Run the engine for a few moments until it has warmed up but do not use the choke more than is absolutely necessary, as this will tend to foul the engine and ruin the lubricating oil in the crankcase.
6. With the motor idling, turn air adjusting screw (12) in or to the right a quarter of a turn at a time until the engine rolls through richness, then turn back to the left until the engine hestitates indicating that the mixture is too lean.
7. Turn air adjusting screw (12) in or to the right three or four notches at a time until the engine runs smoothly. When this idle setting is accomplished by following the above instructions, the carburetor will be properly adjusted for all engine speeds.
8. If the engine idles too fast or too slow, with the throttle closed, loosen throttle adjusting screw pinch screw (60) and turn throttle adjusting screw until proper idling speed is obtained then tighten pinch screw (60).

Hudson Motor

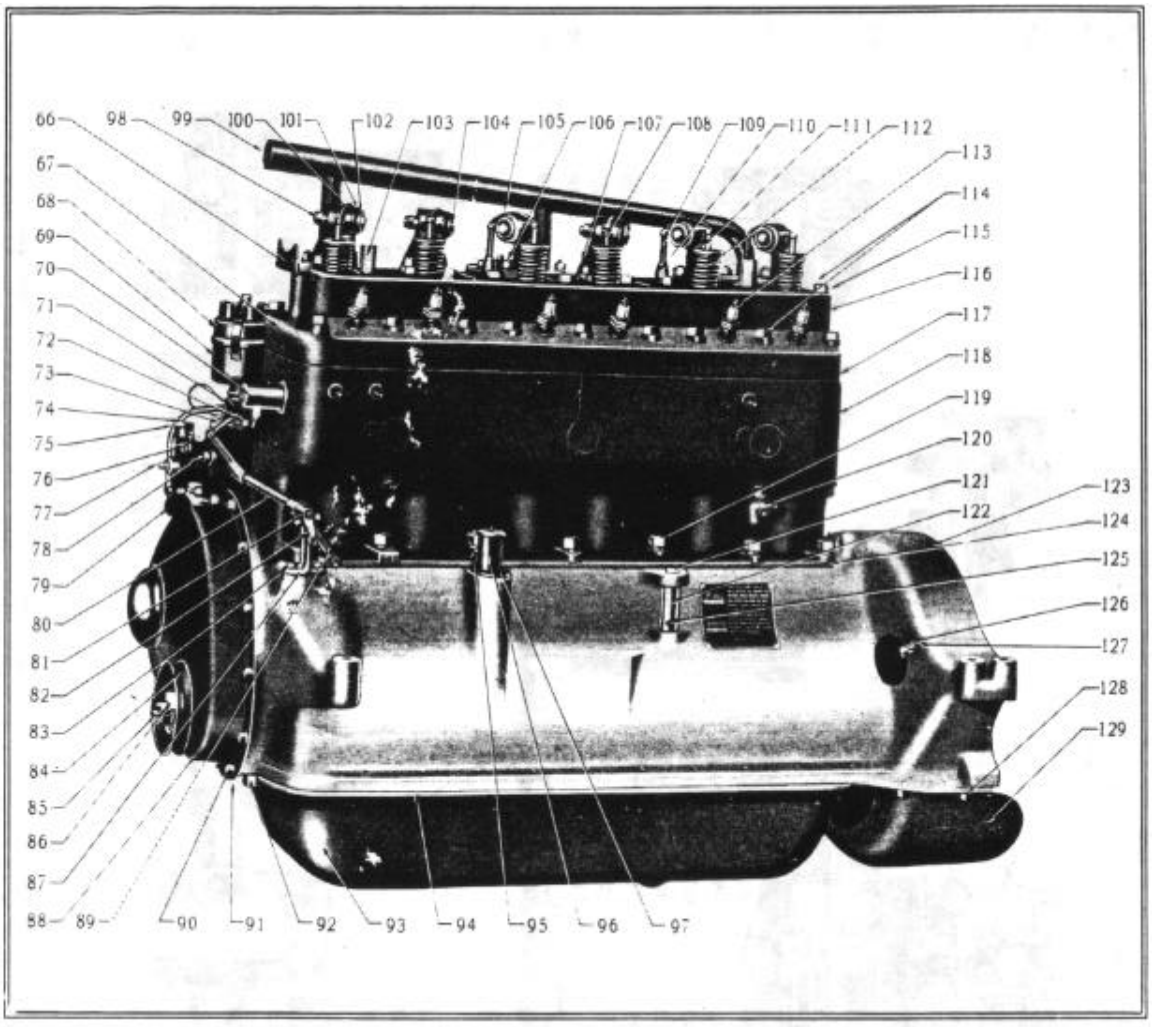
(Cars numbered 750,001 and upward)



Hudson Motor

(Cars numbered 750,001 and upward)

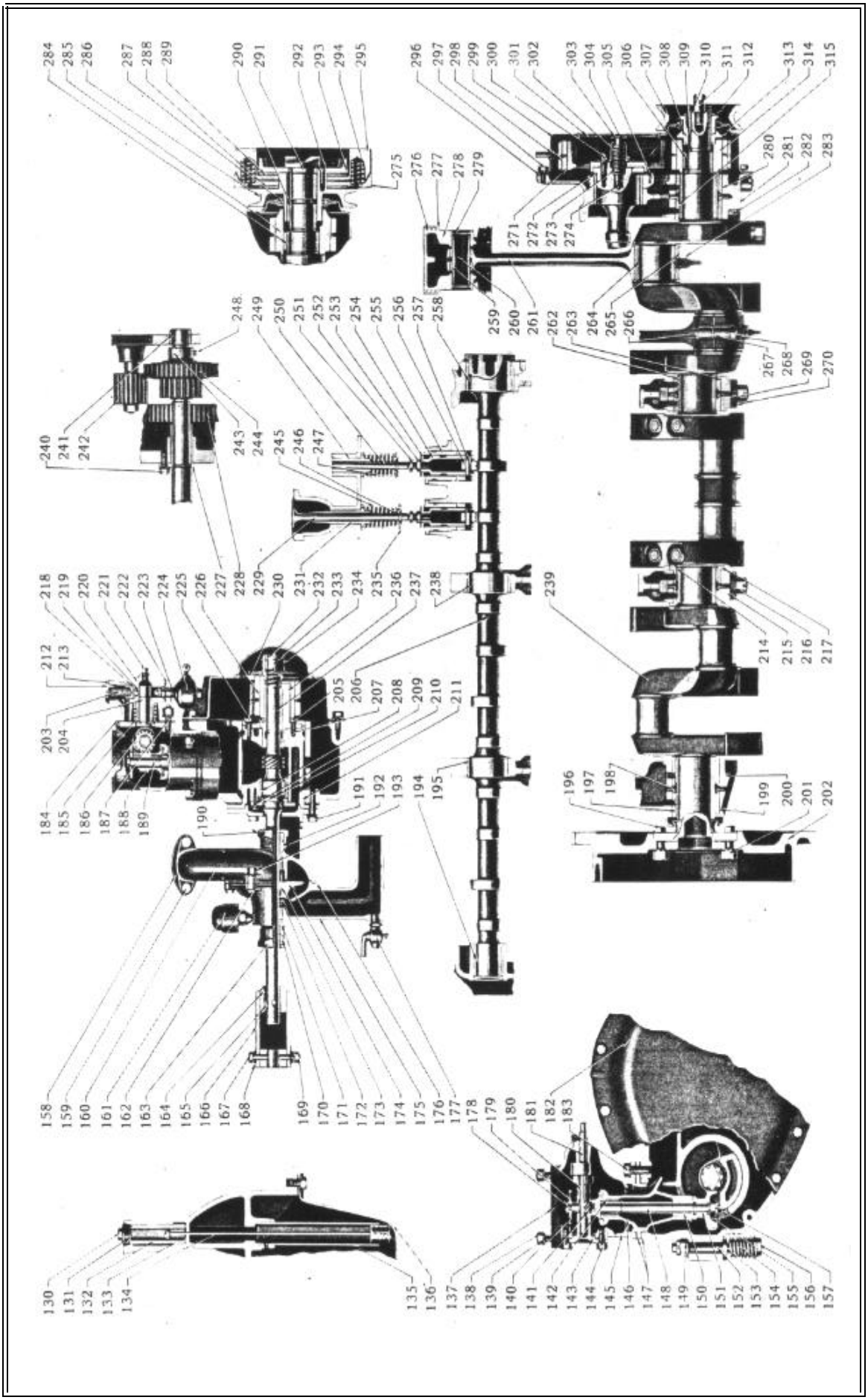
1. Cylinder side plate nut
2. Exhaust manifold nut
3. Cylinder side plate
4. Exhaust manifold by-pass pipe
5. Exhaust manifold
6. Damper body bolt
7. Damper body gasket
8. Damper lever
9. Air cleaner support strap bolt
10. Exhaust manifold by-pass pipe packing gland
11. Damper body
12. Air cleaner support strap
13. Exhaust pipe packing nut
14. Air cleaner
15. Carburetor choker lever
16. Generator cut-out
17. Starting motor strap bolt
18. Starting motor
19. Starter operating shaft
20. Starter shaft rear bushing
21. Starter gears
22. Starter gear holding collar
23. Carburetor
24. Starter switch
25. Generator strap
26. Generator
27. Starter generator base bolt
28. Generator coupling
29. Generator coupling clamp
30. Generator coupling bolt
31. Water pump drain cock
32. Water pump cover
33. Carburetor riser and damper
34. Intake manifold
35. Damper to exhaust manifold nut
36. Exhaust valve spring
37. Exhaust valve spring seat
38. Intake manifold nut
39. Exhaust valve stem
40. Rocker arm push rod spring
41. Rocker arm push rod
42. Cylinder to crankcase stud nut
43. Cylinder side plate stud
44. Tappet adjusting screw
45. Rocker arm push rod spring seat
46. Tappet adjusting screw nut
47. Timing arm clamp screw
48. Oil pipe clip
49. Oil pump suction pipe
50. Tappet guide clamp
51. Oil pump adjusting shaft bearing
52. Valve tappet adjusting screw plate
53. Oil pump and drive gear housing
54. Oil pump and drive gear housing screw
55. Oil pump and drive gear housing gasket
56. Water pump grease cup
57. Eccentric body
58. Eccentric body gasket
59. Water pump packing nut-front
60. Water pump body
61. Water pump packing nut-rear
62. Water pump body to crankcase bolt
63. Water pump shaft



Hudson Motor

Cars numbered 750,001 and upward)

64. Water pump body bolt nut
65. Water pump body gasket
66. Ignition coil bracket
67. Cylinder head
68. Distributor head
69. Distributor
70. Fan arm stud
71. Timing advance arm
72. Distributor stud nut
73. Timing arm link
74. Oil pump body cap
75. Oil pump body cap gasket
76. Oil pump body cap union elbow
77. Oil pump body plug
78. Oil pump body stud nut
79. Oil pump bowl
80. Spark advance cross tube
81. Oil control rocker shaft
82. Oil control rocker shaft lever
83. Spark advance bracket cap screw
84. Fan pulley
85. Starting crank guide
86. Starting crank jaw
87. Spark advance cross tube bracket
88. Crankcase front cover
89. Spark advance cross tube lever
90. Crankcase front cover screw
91. Crankcase front cover gasket
92. Front main bearing bolt nut
93. Oil reservoir
94. Oil reservoir gasket
95. Oil filler cover spring
96. Oil filler vent
97. Oil filler cover
98. Rocker arm pivot
99. Water outlet manifold
100. Rocker arm
101. Rocker arm silencing spring
102. Rocker arm silencing spring cup
103. Cylinder head stud extension nut
104. Rocker arm silencing spring cap bolt
105. Rocker arm roller bearing
106. Rocker arm bracket nut
107. Rocker arm bracket
108. Inlet valve stem
109. Rocker arm push rod
110. Rocker arm push rod guide
111. Inlet valve spring seat
112. Inlet valve springs (inner and outer)
113. Spark plug
114. Cylinder head stud nut
115. Cylinder head cover gasket
116. Cylinder head
117. Cylinder head gasket
118. Cylinder block
119. Cylinder to crankcase stud nut
120. Cylinder drain cock
121. Oil gauge glass cap
122. Oil gauge glass
123. Crankcase
124. Cylinder to crankcase gasket
125. Oil level indicator
126. Flywheel pointer screw
127. Flywheel pointer
128. Flywheel splash guard bolt
129. Flywheel splash guard



130. Oil level indicator glass cap
131. Oil level indicator washer-upper
132. Oil level indicator glass
133. Oil level indicator washer-lower
134. Oil level indicator
135. Oil level indicator guide tube
136. Oil reservoir
137. Distributor gasket
138. Distributor stud nut
139. Distributor stud
140. Distributor drive washer
141. Oil pump worm wheel
142. Distributor drive shaft bushing
143. Oil pump adjusting shaft bearing
144. Adjusting shaft bearing cap screw
145. Oil pump drive gear housing
146. Distributor drive shaft bracket
147. Distributor drive shaft gasket
148. Distributor drive shaft
149. Front motor bolt nut
150. Distributor drive shaft bushing
151. Distributor drive shaft key
152. Front motor bolt
153. Front motor support fiber pad
154. Front motor bolt spring
155. Distributor drive shaft driven gear
156. Front motor bolt spring seat
157. Distributor drive shaft nut
158. Water pump body to cylinder gasket
159. Water pump body to cylinder bolt
160. Water pump body
161. Water pump grease cup
162. Water pump body bolt nut
163. Water pump packing nut-rear
164. Generator drive coupling sleeve
165. Generator drive coupling sleeve key
166. Generator drive coupling-rubber
167. Generator drive coupling clamp bolt
168. Generator drive coupling clamp
169. Generator drive coupling clamp bolt nut
170. Water pump cover packing
171. Water pump cover bushing
172. Water pump paddle taper pin
173. Water pump paddle key
174. Water pump paddle
175. Water pump cover
176. Water pump cover gasket
177. Water pump drain cock
178. Distributor drive washer bolt
179. Distributor drive washer bolt lock
180. Oil pump worm wheel bushing
181. Oil pump adjusting shaft
182. Crankcase front cover
183. Oil pump drive gear housing bolt
184. Oil pump body gasket
185. Oil pump plunger spring
186. Oil pump worm wheel
187. Oil pump stud
188. Oil pump drive worm
189. Oil pump drive worm taper pin
190. Water pump packing nut-front
191. Water pump body to crank case bolt
192. Water pump body bushing
193. Water pump body bolt
194. Camshaft rear bearing
195. Camshaft rear middle bearing
196. Flywheel bolt
197. Crankshaft rear bearing-upper
198. Crankshaft bearing machine screw
199. Crankshaft rear bearing-lower
200. Crankshaft rear bearing cap
201. Flywheel bolt nut
202. Flywheel
203. Oil pump distributor plunger spring
204. Oil pump plunger
205. Water pump sprocket thrust washer
206. Camshaft
207. Water pump sprocket thrust washer spring
208. Eccentric body bushing
209. Water pump drive shaft thrust washer screw
210. Water pump drive shaft thrust washer
211. Eccentric body
212. Oil pump distributor plunger plug
213. Oil pump distributor plunger plug gasket
214. Crankshaft rear middle bearing-upper
215. Crankshaft rear middle bearing cap
216. Middle bearing caps plate
217. Crankshaft rear middle bearing-lower
218. Oil pump distributor plunger
219. Oil pump steel ball
220. Oil pump body
221. Oil pump body pipe plug
222. Oil pump inlet connection gasket
223. Oil pump inlet connection
224. Oil pump bowl
225. Eccentric bolt
226. Water pump shaft sprocket
227. Starter operating shaft rear bushing
228. Flywheel
229. Exhaust valve
230. Floating coupling
231. Exhaust valve stem guide
232. Stationary coupling key
233. Stationary coupling pin
234. Stationary coupling
235. Exhaust valve spring seat
236. Chain adjusting eccentric
237. Water pump drive shaft
238. Camshaft front middle bearing
239. Crankshaft
240. Starter operating shaft rear bushing screw
241. Starter operating shaft front bushing
242. Starter pinion
243. Starter gear holding collar
244. Starter gear
245. Exhaust valve spring
246. Exhaust valve spring seat retainer
247. Rocker arm push rod spring
248. Starter gear holding collar set screw
249. Rocker arm push rod guide
250. Rocker arm push rod
251. Valve tappet adjusting screw

252. Valve tappet adjusting screw nut
253. Valve tappet adjusting screw plate
254. Valve tappet
255. Valve tappet guide
256. Valve tappet roller
257. Valve tappet roller pin
258. Camshaft front bearing
259. Piston pin bushing
260. Piston pin
261. Connecting rod
262. Crankshaft front middle bearing-upper
263. Crankshaft front middle bearing-lower
264. Connecting rod bearing-upper
265. Connecting rod bearing-lower
266. Connecting rod bolt
267. Connecting rod shims
268. Connecting rod bolt nut
269. Crankshaft front middle bearing
270. Middle bearing caps plate
271. Camshaft sprocket
272. Camshaft thrust washer
273. Camshaft thrust button spring
274. Camshaft thrust button shims
275. Vibration dampener inner ring
276. Piston ring
277. Piston ring-oil regulating
278. Piston
279. Piston pin lock ring
280. Crankshaft front bearing-lower
281. Crankshaft front bearing cap
282. Crankshaft front bearing stud nut
283. Connecting rod cap
284. Crankshaft sprocket key
285. Crankshaft sprocket
286. Fan pulley
287. Front cover felt washer
288. Vibration dampener facing
289. Vibration dampener facing
290. Fan pulley key
291. Starting crank jaw
292. Vibration dampener facing plate screw
293. Vibration dampener facing plate
294. Vibration dampener spring
295. Vibration dampener outer ring
296. Front cover gasket
297. Front cover cap screw
298. Front drive chain
299. Front cover
300. Camshaft sprocket screw
301. Front cover silencer plate
302. Camshaft thrust button cup
303. Front cover thrust plate
304. Camshaft thrust button
305. Camshaft thrust washer dowel pin
306. Crankshaft sprocket key
307. Fan pulley
308. Front cover felt washer
309. Fan pulley key
310. Starting crank jaw
311. Starting crank guide
312. Fan pulley washer
313. Fan pulley spacer
314. Crankshaft sprocket
315. Crankshaft front bearing upper

(1-A) Remove Carbon, Grind Valves, Renew Cylinder Head, Cylinder Head Gasket, Valves, Valve Guides, Valve Springs, Seats or Retainers

(Cars numbered 750,001 and upward)

1. Drain water out of cooling system.
2. Loosen rear hose clamp, on upper water hose.
3. Remove nuts holding water outlet manifold (99) to cylinder head (116) and take off manifold.
4. Disconnect wires at spark plugs (113).
5. Shut off gasoline valve at bottom of vacuum tank and disconnect gasoline feed pipe at carburetor.
6. Disconnect vacuum pipe at intake manifold.
7. Disconnect heat control rod at both ends and remove rod.
8. Disconnect choke wire from intake manifold and choke lever.
9. Disconnect throttle rod at bottom of riser (33).
10. Remove nut from air cleaner support strap (12) at rear end of air cleaner.
11. Loosen clamp bolt (9) at top of air cleaner support strap and disconnect strap from air cleaner; remove air cleaner.

12. Remove packing glands (10) from exhaust by-pass pipe (4) using special wrench "H-127," and remove pipe.

13. Disconnect rod from damper body valve.

14. Remove 4 nuts (38) holding intake manifold (34) to cylinder head and 2 nuts (35) holding damper to exhaust manifold and take off carburetor and riser assembly complete.

15. Remove 2 bolts holding overhead valve cover to cylinder head and take off cover.

16. Remove nuts from cylinder side plate studs (43) and take off cylinder side plates.

17. Remove nuts (114) from cylinder head studs taking off ignition coil and bracket (66).

18. Remove cylinder head and cylinder head gasket using special lifting attachment "H-214" shown in Service Tool section and prying up evenly on opposite sides so that the head may be lifted straight up. The cylinder head and tops of inlet valves as well as the tops of pistons, exhaust valves and cylinder block may now be cleaned of carbon deposits by scraping or by means of wire carbon removing brush operated by an electric drill. It is advisable when doing this to stuff rags in the cylinders on top of pistons to prevent particles of carbon from getting between the pistons and cylinder walls.

19. Compress valve springs using valve spring compressor "H-95" shown in Special Tool section. For removing exhaust valves, use the spring compresser without the attachment which is necessary only when removing the inlet valves from the cylinder head. Remove valve spring retainers and take out valves. Insert valves stems through holes drilled in a board in their order of removal from the cylinder block and cylinder head to prevent them becoming mixed.

20. If valve guides require renewal, drive old guides out of cylinder block and cylinder head with a drift or piece of brass rod. Insert new guides, using valve stem guide puller "H-45" shown on page 20, Service Tool section, to draw them into position. After installing they should be reamed to size using valve stem guide reamer "H-77" shown on Page 11, Service Tool section.

21. If push rod guides, upper and lower, require renewal, drive old guides out of cylinder block and cylinder head with a drift or piece of brass rod. Insert new guides using puller "HE-45-6" shown in Service Tool section to draw them into position. After installing them they should be reamed to size using reamer "E-87" shown in Service Tool section.

22. At this time, rocker arms (100), rocker arm brackets (107), pivots (98) or bearings may be renewed as necessary on the cylinder head.

23. Thoroughly clean valves of carbon with wire brush or by other means, also clean inside of valve stem guides. Note carefully the condition of the seats on the valves and cylinder block; if they are at all badly pitted, a great deal of time will be saved and a far better job will be done by having the valve faces ground true on a valve refacing machine, and the seats refaced in the cylinder block. On Page 17, Service Tool section, will be found equipment especially designed to cover this class of work, the use of which will greatly expedite valve grinding operations. After the valves have been renewed, a slight grinding is necessary to insure a perfect seat; this is done as follows:

24. Crank the engine, if necessary, to make sure that the cam operating the valve to be ground is not holding the valve off its seat. Spread a thin coating of valve grinding compound, either water or oil mixed, on face of a valve (a fine grade should be used). Place a light open coil spring over the valve stem and insert valve in position in cylinder block or cylinder head. This spring should be of sufficient size and tension to just keep the valve off its seat. Rotate valve on seat from right to

left with a semi-circular movement, using an electric or hand operated valve grinder or by means of a screw driver held in the slot in the valve head. It is very important when doing this that the head of the valve be frequently raised and turned around half a revolution to guard against cutting grooves in the valve and seat. When grinding has been properly done, the valves and seats will have a silvery color throughout their entire circumference. After the grinding has been completed, be sure to clean valves and cylinder to remove all traces of grinding compound.

25. Replace valves in their respective positions and insert spring seats and retainers.

26. Replace cylinder head, using new cylinder head gasket. When tightening cylinder head nuts, start at center and work toward the ends, alternating on each side and with uniform pressure on the wrench. After the engine has been run and thoroughly warmed up, the nuts should again be drawn tight.

27. Complete reassembling of motor by reversing operations "1 to 19" inclusive. The motor should be run and warmed up, after which the tappets should be adjusted to allow a clearance of from .004 to .006 minimum on the inlet valves and .006 to .008 minimum on the exhaust valves. Replace cylinder side plates, using new gaskets if necessary and tightening nuts sufficiently to prevent oil leaks without springing the side plates-out of shape.

(1-B) Renew Exhaust Valve Springs, Seats, Retainers or Tappet Adjusting Screw

(Cars numbered 750,001 and upward)

1. Disconnect throttle rod at bottom of riser (33).

2. Remove nut from air cleaner support strap (12) at rear end of air cleaner.

3. Loosen clamp bolt (9) at top of air cleaner support strap and disconnect strap from air cleaner. Remove air cleaner.

4. Remove packing glands (10) from exhaust by-pass pipe (4), using special wrench "H-127," Service Tool section and remove pipe.

5. Remove nuts from cylinder side plate studs (43) and take off side plates.

6. Remove valve spring, seat, and tappet adjusting screw; renew parts where necessary.

7. Reassemble parts reversing the above operations. Before replacing the cylinder side plates, the motor should be run and warmed up after which the tappets should be adjusted to allow a clearance of .004 to .006 minimum on the inlet valves and .006 to .008 on the exhaust valves.

(1-C) Renew Valve Tappet, Tappet Guide, Tappet Roller, Roller Pin, Rocker Arm, Rocker Arm Bracket Etc.

(Cars numbered 750,001 and upward)

Note: To remove intake valve tappet guide, tappet roller or roller pin, proceed as outlined in the following paragraphs 1 to 12 inclusive.

1. Remove two bolts holding overhead valve cover to cylinder head and take off cover.

2. Disconnect throttle rod at bottom of riser (33).

3. Remove nuts from air cleaner support strap (12) at rear end of air cleaner (14).

4. Loosen clamp bolt (9) at top of air cleaner support strap and disconnect strap from air cleaner; remove air cleaner.

5. Remove packing glands (10) from exhaust by-pass pipe (4) using special wrench "H-127," Service Tool section and remove pipe.

6. Remove nuts from cylinder side plate studs (43) and take off cylinder side plates (3).

7. Remove rocker arm pivot nut, pivot (98) and rocker arm (100).

8. Remove rocker arm push rod spring seat retainer.

9. Withdraw push rod and remove spring (40) and spring seat (45).

10. Remove nuts (42) from cylinder studs and take off tappet guide clamps.

11. The valve tappet assemblies may now be lifted out of position and any parts which require renewal should be replaced. When removing the valve tappet assemblies, it is advisable to leave the adjusting screws, lock nuts and plates screwed into the tappets to preclude the possibility of the tappets dropping out of guides and into the interior of the motor. It is extremely important when replacing tappet guides in the cylinder block, that the locating washers which fit over the cylinder studs rest in the proper semi-circular grooves in the flanges of the guides.
If this is not done, the rollers will not ride squarely on the cams, and destruction of the camshaft and tappet mechanism will result. When guides are installed correctly in the cylinder, the flat surfaces of the flanges will be exactly at right angles to the center line of the motor.

12. The motor should be reassembled by reversing operations 1 to 11. After allowing the motor to run until warmed up, the tappets should be adjusted to . 004 to .006 clearance minimum on the inlet valves and .006 to .008 clearance on the exhaust valves. Replace cylinder side plates, fitting new gaskets if necessary.
To renew exhaust valve tappet, tappet guide, tappet roller pin, proceed as outlined in the following paragraphs 13 to 32 inclusive.

13. Drain water out of cooling system.

14. Loosen rear hose clamp on water hose.

15. Remove nuts holding water outlet manifold (99) to cylinder head (116) and take off manifold.

16. Disconnect wires at spark plugs (113).

17. Shut off gasoline valve at bottom of vacuum tank and disconnect gasoline feed pipe at carburetor.

18. Disconnect vacuum pipe at intake manifold.

19. Disconnect heat control rod at both ends and remove rod.

20. Disconnect choke wire from intake manifold and choke lever.

21. Disconnect throttle rod at bottom of riser (33).

22. Remove nut from air cleaner support strap (12) at rear end of air cleaner.

23. Loosen clamp bolt (9) at top of air cleaner support strap and disconnect strap from air cleaner; remove air cleaner.

24. Remove packing glands (10) from exhaust by-pass pipe (4) using special wrench "H-127," and remove pipe.

25. Disconnect rod from damper body valve.

26. Remove 4 nuts (38) holding intake manifold (34) to cylinder head and 2 nuts (35) holding damper to exhaust manifold and take off carburetor and riser assembly complete.

27. Remove 2 bolts holding overhead valve cover to cylinder head and take off cover.

28. Remove nuts from cylinder side plate studs (43) and take off cylinder side plates.

29. Remove nuts (114) from cylinder head studs taking off ignition coil and bracket (66).

30. Remove cylinder head and cylinder head gasket using special lifting attachment "H-214" shown in Service Tool section and prying up evenly on opposite sides so that the head may be lifted straight up.

31. The valve tappet assemblies may now be lifted out of position and any parts which require renewal should be replaced. When removing the valve tappet assemblies, it is advisable to leave the adjusting screws, lock nuts, and plates screwed into the tappets to preclude the possibility of the tappets dropping out of guides and into the interior of the motor. It is extremely important when replacing tappet guides in the cylinder block that the locating washers which fit over the cylinder studs rest in the proper semi-circular groves in the flanges of the guides.
If this is not done, the rollers will not ride squarely on the cams, and destruction of the camshaft and tappet mechanism will result. When guides are installed correctly in the cylinder, the flat surfaces of the flanges will be exactly at right angles to the center line of the motor.

32. The motor should be reassembled by reversing the operations 13 to 31. After allowing the motor to run until warmed up, the tappets should be adjusted to .004 to .006 clearance minimum on the inlet valves and .006 to .008 clearance on the exhaust valves. Replace cylinder side plates, fitting new gaskets if necessary.

(1-D) Renew Intake or Exhaust Manifold, Intake or Exhaust Manifold Gaskets, Exhaust Damper Body Assembly or Exhaust Manifold Packing Nut

(Cars numbered 750,001 and upward)

To renew intake manifold (34) or intake manifold gaskets proceed as outlined in the following paragraphs 1 to 5 inclusive.

1. Disconnect choke wire from intake manifold.

2. Disconnect vacuum pipe at intake manifold.

3. Remove 3 screws holding intake manifold (34) to riser.

4. Remove 4 nuts (38) holding intake manifold to cylinder head and remove intake manifold and gaskets.

5. Renew parts necessary and reassemble, reversing the above operations.

To renew exhaust manifold (5) or exhaust manifold gaskets, proceed as outlined in the following paragraphs 6 to 17 inclusive.

6. Shut off gasoline valve at bottom of vacuum tank and disconnect gasoline feed pipe at carburetor.

7. Disconnect choke wire from intake manifold.

8. Disconnect vacuum pipe at intake manifold.

9. Disconnect heat control rod at both ends and remove rod.

10. Disconnect throttle rod at bottom of riser (33).

11. Remove nut from air cleaner support strap (12) at rear end of air cleaner (14).

12. Loosen clamp bolt (9) at top of air cleaner support strap and disconnect strap from air cleaner.

13. Remove packing glands (10) from exhaust by-pass pipe (4) using special wrench "H-127," and remove pipe.

14. Remove 4 nuts (38) holding intake manifold (34) to cylinder head and 2 nuts (35) holding damper to exhaust manifold (5) and take off carburetor and riser assembly complete.

15. Remove two bolts (6) holding exhaust manifold to damper body (11).

16. Remove 12 nuts (2) holding exhaust manifold to cylinder block and remove exhaust manifold and gaskets.

17. Renew parts necessary and reassemble reversing the above operations. To renew damper body assembly (11) proceed as outlined in the following paragraphs 18 to 24 inclusive.

18. Disconnect damper body valve operating rod at damper lever (8). Remove nut from air cleaner support strap (12) at rear end of air cleaner.

20. Remove packing glands (10) from exhaust by-pass pipe (4) using special wrench "H-127," and remove pipe.

21. Unscrew exhaust manifold packing nut out of damper body, using spanner wrench shown on Page 26 Service tool section.

22. Disconnect exhaust tail pipe clamp and muffler clamps and drop exhaust pipe clear of damper body.

23. Remove 2 bolts (6) holding damper body to exhaust manifold and remove damper body assembly.

24. Renew damper body assembly, fitting new packing to exhaust manifold and new gasket. Reassemble all parts removed, reversing the above operations. To renew exhaust manifold packing nut or packing—proceed as outlined in the following paragraphs 25 to 27 inclusive.

25. Unscrew exhaust manifold packing nut out of damper body using spanner wrench shown on Page 26, Service tool section.

26. Disconnect exhaust tail pipe clamp and muffler clamps and drop exhaust pipe clear of damper body.

27. Replace with new packing nut or packing and reassemble, reversing the above operations.

(E) Renew Distributor Drive and Oil Pump Support, Rebush or Renew Distributor Drive Bracket, Renew Oil Pump Drive Worm, Oil Pump Eccentric, Eccentric Shaft, Distributor Drive Shaft or Driven Gear

(See 1926 Service Manual Page 70)

(F) Renew Timing Sprockets, Chain, Gear Case Cover, Cover Gasket, Camshaft, Camshaft Thrust Washer, Thrust Button, Thrust Spring, Generator Sprocket, Stationary or Floating Coupling or Thrust Washer

(See 1926 Service Manual Page 71)

(G) Rebush or Renew Adjusting Eccentric Body, Water Pump Body, Water Pump Cover, Water Pump Paddle, Water Pump Shaft or Water Pump Shaft Rear Thrust Washer

(See 1926 Service Manual Page 72)

(H) Renew Generator Assembly

(See 1926 Service Manual Page 74)

(I) Renew Distributor Assembly

(See 1926 Service Manual Page 75)

(1-J) Renew Pistons, Piston Pins, Piston Rings, Piston Pin Bushings, Connecting Rods or Connecting Rod Bearings

(Cars numbered 750,001 and upward)

1. Place receptacle under oil reservoir, remove oil reservoir drain plug and drain oil.
2. Drain water out of cooling system.
3. Raise up front end of car with chain hoist or axle stands, remove oil reservoir cap screws and take off oil reservoir (93).
4. Loosen rear hose clamp on upper water hose.
5. Remove nuts holding water outlet manifold (99) to cylinder head (116) and take off manifold.
6. Disconnect wires at spark plugs.
7. Disconnect horn wires at horn terminals, remove screws holding horn to motor and take off horn.
8. Remove screws holding cable tube and wires to motor and take off cable tube.
9. Remove screws holding ignition coil to coil bracket (66) and take off coil.
10. Shut off gasoline valve at bottom of vacuum tank and disconnect gasoline feed pipe at carburetor.
11. Disconnect vacuum pipe at intake manifold.
12. Disconnect heat control rod at both ends and remove rod.
13. Disconnect choke wire from intake manifold and choke lever (15).
14. Disconnect throttle rod at bottom of riser (33).
15. Remove nut from air cleaner support strap (12) at rear end of air cleaner (14).
16. Loosen clamp bolt (9) at top of air cleaner support strap and disconnect strap from air cleaner; remove air cleaner.
17. Remove packing glands (10) from exhaust by-pass pipe (4) using special wrench `H-127," and remove pipe.
18. Disconnect rod from damper body valve.

19. Remove 4 nuts (38) holding intake manifold (34) to cylinder head and 2 nuts (35) holding damper to exhaust manifold, and take off carburetor and riser assembly complete.

20. Remove 2 bolts holding overhead valve cover to cylinder head and take off cover.

21. Remove nuts from cylinder side plate studs (43) and take off plates.

22. Loosen fan support arm clamp bolt and remove fan assembly.

23. Unscrew exhaust manifold packing nut using packing nut wrench shown on Page 26, Service Tool section, and loosen exhaust pipe in damper body.

24. Remove 2 cap screws holding water pump body to cylinder.

25. Remove nuts (42) holding cylinder block to crankcase, using wrenches shown on Page 17, Service Tool section.

26. Raise cylinder block from crankcase using chain hoist or block and tackle and motor lifting hooks "H-213" shown in Service Tool section. The motor must be in a level position when doing this and the cylinder block rocked back and forth slightly, which will assist in its removal. It should then be placed on the work bench or a stand for piston fitting, etc.

27. Remove cotter pins and nuts from connecting rod bolts, take off caps and shims and remove connecting rods and pistons.

28. Remove piston pin lock rings from pistons, using piston pin lock ring remover shown on page 17, service tool section.

29. Before removing the piston pins, the pistons should be heated to a temperature of approximately 200 degrees or as hot as can be handled with gloves, using a piston pre-heating stove, electric or gas plate, or other means. The pins can then readily be removed without danger of damaging or breaking the pistons.

30. When replacing pistons, it is advisable to measure the cylinder bores with a cylinder indicator of the type shown in equipment section, to determine whether they are worn excessively out of round or tapered. If this condition exists, or if the bores are scored or damaged, they should be trued up with a cylinder hone or grinder, making them uniform in size and removing only enough stock to enable the next oversize piston to be used. A complete list of piston sizes furnished by the factory, together with their markings, will be found in reference sheet No. 18. New pistons should be fitted to the cylinder bores on cars numbered 750,000 to 790,398 inclusive, with a clearance of . 003" to . 004", and must be installed on the connecting rods so the sawcut or split in the skirt, will face the left side of the cylinder or the side opposite the valves. On cars numbered 790,399 and upward using the "Lynite" pistons the clearance should be . 002".

31. To renew piston pins, a long piloted spiral expansion piston pin reamer similar to that shown on page 11, service tool section, should be used.

The reaming of the piston pin bushing in the connecting rod is best done by holding the connecting rod in a vise with the piston pin bushing in a vertical position, using a tap wrench of the type illustrated on page 26, service tool section, to turn the reamer. This generally produces more satisfactory results than holding the reamer in the vise and revolving the connecting rod around it, in which case there is a possibility of reaming the bushing bell-mouthed, due to the weight of the big end of the rod and the natural tendency of the mechanic to exert a downward pressure on the rod when turning it.

When fitting new piston pins to pistons, it is essential that the piston pin bosses be finished reamed approximately .002" under the diameter of the piston pins, to guard against looseness when the motor is heated up in operation. For this reason it is also necessary, when assembling the pins, that the pistons be preheated as outlined above.

32. To renew piston rings, place connecting rod in vise or secure piston in piston vise while removing or replacing rings. On page 25, service tool section, are shown a piston vise and piston ring spreader, which facilitate this work. Thoroughly clean ring grooves in piston of carbon and foreign matter and test fit of new rings in grooves.They should be of the proper width to slide freely in the piston grooves without perceptible play or looseness. If the rings are too wide it will be necessary to carefully dress them down until the above fit is obtained. This is best done by fastening the new ring to a small flat board into which a number of small brads are driven in a circle, so the heads project from the board slightly less than the width of the ring.

A sheet of No. 0 or No. 1/2 emery cloth should then be laid on a surface plate, and the board, with the ring
attached, is moved back and forth with a light, even pressure of the hand. It is important when doing this, that the ring be occasionally turned around to insure removing an equal amount of metal on all sides, and also that the square edges of the ring are not removed. After the rings have been properly fitted to the piston grooves, any burrs on the faces should be removed, and the slots or gaps fitted to the cylinder bores.

Place piston without rings in cylinder with the bottom or open end outward, then place ring to be fitted in cylinder, straightening the ring by bringing the edge of the piston against it.The slot clearance or gap should then be accurately measured with a feeler gauge and, if necessary, the edges of the ring dressed with a thin, smooth file until the opening measures from .006" to .008," after which they should be placed on their respective pistons.

33. To renew connecting rod bearings, proceed as follows:

Remove machine screws holding connecting rod bearings to rod and cap and take out bearings.Fit new bearings to connecting rod and cap, making sure that no burrs or chips pre¬vent the screws from drawing the bearings firmly into position.

File edges of the bearings down flush with the connecting rod and cap. This must be carefully done to prevent the surfaces of the rod and cap from being filed away.

Place an equal number of shims on each connecting rod bolt and replace cap on rod in proper position as indicated
by numbers stamped on side of rod and cap, then securely tighten nuts on connecting rod bolts; (the combined thickness of the total num¬ber of shims on each side of the rod should be approximately .125").

After new bearings have been installed in the connecting rod and cap, the sides of the bearings or thrust faces must be finished so the overall width will be from .008" to .010" less than the distance between throws on the crankshaft. To insure an accurate job this should be done with a thrust bearing facing cutter; however a file may be used to dress the bearings if care is exercised to get the width uniform at all points. The use of the telescoping gauge and micrometers shown on pages 27, 24, service tool section, will facilitate finishing the bearings to the proper dimensions so the end play mentioned above, which is necessary for lubrication, will be maintained.

Fitting the connecting rod bearings to the crankshaft is best done by means of a connecting rod bearing reamer, either of the adjustable or solid type shown on page 24, service tool section. With ordinary care a satisfactory bearing can be obtained by the use of this tool in far less time than that required by hand scraping. If no reamer is available and it is necessary to scrape the bearing in, proceed as follows:

Connecting rod bearings may be scraped to fit the crankshaft or an accurately machined arbor which is the same diameter as the crankshaft. Separate cap from rod and spread a thin coating of Prussian blue on the crankshaft or arbor, then replace shims and draw up cap tight. Rock connecting rod back and forth on the shaft a few times, then remove cap and examine bearings. The blue marks on the bearings indicate the points of contract with the shaft and must be removed

by scraping. This must be very carefully done so that a very thin shaving of metal will be removed from the blued spots on the bearings.

After all of these "high spots" have been scraped down, the shaft should again be blued and the connecting rod cap tightened. Remove cap from rod after rocking rod on shaft and repeat scraping process described above. This should be done as many times as necessary, until the bearings finally show a fine series of spots, close together and uniformly distributed over the entire surface. When properly fitted, the connecting rod bearings will be from .001" to .0015" larger than the crankpins, and it is essential that this clearance be maintained when assembling the connecting rods to the crankshaft to provide space for an oil film.

34. When new connecting rod bearings or piston pin bushings have been installed or bearings fitted, it is necessary that the connecting rods be tested for alignment, as a satisfactory job cannot be done unless the piston pins are perfectly parallel with the crankshaft in all directions, and the proper clearance exists between the upper ends of the rods and the bosses on the inside of the pistons. On page 10, service tool section, a connecting rod aligning fixture is shown which enables a proper check of rod alignment to be made with a minimum expenditure of time and labor. When using a fixture of this type, it is advisable to remove the piston from the connecting rod before checking the alignment, as the varying diameters of the lands and skirt, together with the extensive relief surrounding the piston pin boss, do not afford a good contact between the side of the piston and the aligning disc on the fixture. If the connecting rods are found to be bent or twisted when checked on the aligning fixture, it will be necessay to straighten them with a bending iron until the contact plate, which is fitted to the upper end of the rod, touches the aligning disc at all points. The connecting rod bending iron illustrated on page 20, service tool section, will be found indispensable when doing this work.

35. Reassemble pistons to connecting rods after aligning has been completed, heating the pistons and placing them on the rods so the diagonal split in the skirt will be on the left side when assembled in position in the motor.

36. Assemble connecting rods and pistons to crankshaft, after thoroughly cleaning bearings and shaft and spreading a film of oil on the surfaces. When doing this, be sure that a sufficient number of shims is used to allow a clearance of approximately .001" for lubrication when the cap bolts are drawn up tight. Connecting rod bearings
adjusted with this clearance will fit the crankshaft just tight enough to prevent the rods and pistons from falling sidewise when placed in a vertical position. It is essential, when doing this work, that all of the connecting rods be adjusted evenly as the additional friction of one bearing adjusted tighter than the others would prevent smooth and quiet operation. Make sure that all of the nuts are securely cotter pinned after adjustment is completed.

37. Examine cylinder block to crankcase gasket and replace with a new one if necessary, shellacking it to the crankcase.

38. Thoroughly clean cylinder bores, pistons and piston rings, and spread a film of oil over them, turning the rings in the grooves in the pistons until the slots are 120 degrees apart.

39. Fasten cylinder to chain hoist or block and tackle as outlined in operation 26, suspending block in perfectly level position. Maneuver position of car if necessary, so the cylinder block will be directly over the pistons; then turn crankshaft until No. 1 and No. 6 pistons are on upper dead centers.

40. Clean the lower face of the cylinder block and top of the crankcase of all dirt or chips, and slowly lower block in position, using piston ring compressors shown on page 25, service tool section

to compress the rings and guide the pistons into the cylinders. After No. 1 and 6 pistons have entered the cylinder block, the crankshaft should be turned slightly and the block lowered over No. 2 and 5 pistons. Repeat this for No. 3 and 4 pistons and lower block to crankcase.
Too much stress cannot be laid upon the necessity for careful handling during this operation, as it is easily possible to set up strains which would spring the connecting rods, thereby offsetting any accurate aligning which may have been done.

41. Securely tighten nuts holding cylinder block to crankcase, using wrenches shown on page 17, service tool section. Make sure that the tappet guide locating washers are placed over the studs in the valve compartment before replacing the tappet guide clamps and also that the guides themselves are in the proper position before tightening the nuts. When the tappet guides are correctly installed the flat surfaces on the flanges are exactly at right angles to the crankshaft.

42. The reassembling of the motor may be completed by reversing operations 1 to 24 inclusive, fitting new gaskets where necessary and new packing at exhaust pipe to damper body joint.

43. Inspect clearance between tappet adjusting screws and valve stems and adjust if necessary. After the assembling of the motor has been completed, it should be run long enough to attain a normal operating temperature, after which the tappets should be adjusted to .004" to .006" clearance on the intake valves, and .006" to .008" clearance on the exhaust valves.

(1-K }Renew Motor Assembly; Crankshaft or Crankshaft Bearings, Camshaft or Camshaft Bearings

(Cars numbered 750,001 and upward)

To remove motor assembly from car, proceed as outlined in the following paragraphs 1 to 41 inclusive.

1. Remove bonnet assembly.
2. Open drain cock at bottom of water pump cover and drain water out of cooling system.
3. Loosen hose clamps at front of upper and lower radiator hose.
4. Disconnect radiator shutter operating rod at radiator.
5. Remove nuts from bolts holding radiator assembly to frame.
6. Remove radiator tie rods and lift off radiator assembly.
7. Loosen clamp bolt on fan support arm and remove fan assembly and fan belt.
8. Remove toe and floor boards.
9. Remove clevis pin from brake pedal and disconnect brake pedal to equalizer bar pull rod.
10. Remove clevis pin from lower end of starter pedal shaft lever; disconnect starter operating shaft and spring.
11. Remove clevis pin from clutch adjustable link and disconnect throwout yoke.
12. Unscrew sleeve at rear end of speedometer shaft and disconnect shaft from transmission.
13. Remove bolts from front universal joint flange and disconnect propeller shaft.
14. Remove bolts holding pedal control bracket to transmission case and take off pedal control assembly.

15. Remove cap screws holding hand control lever assembly to transmission and take off transmission case cover assembly.

16. Remove cotter pins and nuts from transmission to crankcase bolts; take out bolts and cap screws, removing the upper one last. This will permit the transmission assembly to be withdrawn and lowered to the floor.

17. Remove cap screws holding clutch cover to flywheel, and take off clutch assembly and driving plate assembly.

18. Disconnect horn wires at horn terminals, remove screws holding horn to cylinder block, and take off horn.

19. Disconnect wires at spark plugs, and remove spark plugs.

20. Remove screws holding cable tube to cylinder block and take off cable tube.

21. Remove nut holding ignition coil to coil bracket and remove ignition coil.

22. Shut off gasoline valve at bottom of vacuum tank and disconnect gasoline feed pipe at carburetor.

23. Disconnect vacuum pipe at intake manifold.

24. Disconnect heat control rod at both ends and remove rod.

25. Disconnect choke wire from intake manifold and choke lever (15).

26. Disconnect throttle rod at bottom of riser (33).

27. Remove nut from air cleaner support strap (12) at rear end of air cleaner (14).

28. Loosen clamp bolt (9) at top of air cleaner support strap and disconnect strap from air cleaner; remove air cleaner.

29. Remove packing glands (10) from exhaust by-pass pipe (4) using special wrench "H-127," and remove pipe.

30. Disconnect rod from damper body valve.

31. Remove 4 nuts (38) holding intake manifold (34) to cylinder head and 2 nuts (35) holding damper to exhaust manifold and take off carburetor and riser assembly (33) complete.

32. Unscrew exhaust manifold packing nut and disconnect exhaust pipe using exhaust manifold packing nut wrench shown on page 26, Service Tool section.

33. Disconnect starter cable and wires at terminal on starter base and top of generator.

34. Disconnect oil gauge pressure tube at union between oil pump and dash.

35. Disconnect spark and oil control pull rods from rocker shaft levers (82, 89) at front of motor.

36. Remove cotter pins and nuts from motor support bolts and take out bolts.

37. Place receptacle under oil reservoir, remove drain plug, and drain out motor oil.

39. Disconnect generator coupling.

40. Remove bolts (27) holding starting motor and generator base to crankcase and take off base with starting motor and generator assembled.

41. Use motor lifting hooks "H-213" shown in service tool section and lift out motor assembly by means of chain hoist or block and tackle, placing it on a bench or motor stand. The motor may now be replaced with new motor assembly if desired or parts renewed where necessary as described in the following paragraphs.

To renew crankshaft and refit or renew crankshaft bearings, proceed as outlined in the following paragraphs 42 to 65 inclusive.

42. Remove cylinder side plate nuts and take off plates (3).

43. Remove 2 cap screws holding water pump body to cylinder block.

44. Remove nuts holding cylinder block to crankcase, using wrenches shown on pages 17, and 20, service tool section.

45. Remove cylinder block from motor, being careful when doing so to keep the block level and avoid bending the connecting rods.

46. Remove cap screws holding oil reservoir to crankcase and take off oil reservoir.

47. Unscrew starting crank jaw at front end of crankshaft, using starting crank jaw wrench shown on page 23, service tool section.

48. Unscrew starting crank guide from front end of crankshaft, turning same in right hand or clockwise direction.

49. Pull fan pulley off crankshaft, using puller shown on page 19, service tool section.

50. Remove cap screws from timing gear cover and take cover assembly off motor.

51. Remove lock wire and cap screws holding camshaft sprocket to camshaft.

52. Take off camshaft sprocket, thrust button, guide and timing chain, and remove camshaft.

53. Unscrew union nuts at bottom of oil pump and union on crankcase and disconnect oil pump suction pipe.

54. Remove cotter pins and nuts from connecting rod bolts, take off caps, and shims and remove connecting rods and pistons.

55. Remove nuts from flywheel bolts and take off flywheel from crankshaft.

56. Pull crankshaft sprocket off front end of crankshaft, using spi ocket puller shown on page 23 service tool section.

57. Turn crankcase upside down in motor stand and remove cotter pins and nuts from main bearing cap studs, using wrench shown on page 24, service tool section.

58. Remove packing from front and rear bearing caps, using a packing hook or drilling the packing out.

59. Remove main bearings caps, using main bearing cap puller shown on page 27, service tool section on the front and rear caps if necessary, and lift out crankshaft.

60. For the service station doing even a small amount of crankshaft bearing work, a main bearing line reamer of the type shown on page 31, service tool section, will prove an excellent investment. With this equipment, it is not only possible to fit a set of bearings in a fraction of the time required by the laborious hand scraping method, but a comparatively unskilled mechanic can turn out a job which is superior to the best efforts of an experienced bearing scraper. In addition to securing a greater percentage of actual bearing surface, the line reaming method insures accurate alignment of all the bearings, which is a factor of vital importance in turning out a satisfactory and lasting job.

Whenever a main bearing line reamer is available it is recommended that a complete set of new main bearings be installed when renewing the crankshaft or when refitting of the bearings becomes necessary. The great saving of time in such cases more than offsets the cost of new bearings, with the additional assurance that the work will stand up in service.

61. Before reaming or scraping in the main bearings, it is necessary that the crankshaft be carefully inspected for trueness and out of round crankpins and journals, as well as for rough surfaces on these parts. If any of these defects exist, they must obviously be corrected by straightening,

grinding or polishing, if a satisfactory job is to be done. On page 16, service tool section, vee blocks and dial indicator are shown, which make it easy to readily detect a sprung crankshaft. Crankpins and journals can be checked for roundness with a 2" to 3" micrometer, taking measurements at various points around the circumference. Following is the method of procedure when renewing main bearings:

62. Remove countersunk head machine screws holding bearings to caps and crank case and take out bearings.

63. Remove all burrs, dirt and chips from crankcase and backs of new bearings and fit bearings to crankcase and caps. After firmly tightening the screws drawing the bearings into place, it is necessary that the projecting edges be filed perfectly even with the crankcase or caps. The bearing filing blocks shown on page 27, service tool section, will save a great deal of time and labor when doing this operation, as it is possible to file the bearings accurately to size before installing them in crankcase.

64. In event no line reamer is at hand and the bearings are to be scraped in, the thrust faces on the center rear main bearing should be filed down so there will be . 006" end play when the crankshaft is in position. If the bearings are to be line reamed, this operation can be deferred until the line reaming is done, at which time the thrust faces can be smoothly and accurately finished to the required size, with the thrust bearing facing cutter furnished with the tool.

65. To scrape in main bearings to fit the crankshaft, remove bearing caps, spread a thin coat of Prussian blue on the crankshaft journals and place crankshaft in crank-case. Place an equal number of shims (total thickness . 140") over each stud, replace bearing caps in their respective positions and tighten stud nuts. The crankshaft should then be revolved a few times by means of a bar placed between the flywheel bolts, then the stud nuts and bearing caps removed. Lift crankshaft out of crankcase and examine bearing. The blue marks on the bearings indicate the points of contact with the shaft and must be removed by scraping. This requires considerable skill and care, as only a very thin shaving of babbitt should be scraped from the points marked with blue.

After all of these "high spots" have been scraped down, the shaft should again be blued, placed in the crankcase and the bearing caps tightened. Turn crankshaft in bearings a few times and remove stud nuts and bearing caps. Remove crankshaft from crankcase, examine bearings and repeat scraping process described above. This should be done as many times as necessary until the bearings finally show a fine series of spots, close together and uniformly distributed over the entire surface. When properly fitted, the bearings will be from . 001" to . 0015" larger than the crankshaft and it is important that this clearance be maintained when assembling the shaft and adjusting the main bearings to provide space for an oil film.

To renew camshaft bearings:

Due to their inaccessibility and nonadjustable construction, it is extremely difficult when renewing them, to secure proper alignment and sufficient bearing surface unless a bearing line reamer is used. The main bearing line reamer equipment shown on page 31, service tool section, is very well adapted for this work, the camshaft cutters furnished with the tool enabling all of the bearings to be reamed in alignment to exact size with a minimum expenditure of time. The following procedure is necessary when renewing camshaft bearings: (Paragraphs 66 to 71 inclusive.)

66. Remove brass dowel pins holding camshaft bearings in position in crankcase, by driving them into the bearings with a hammer and punch. The bearings to be renewed should be next removed from the crankcase; this should be done with a bearing puller of some kind to prevent damage to the crankcase. On page 29, service tool section, is shown a very simple and effective puller, designed to remove and install Hudson and Essex camshaft bearings in the least possible time and without injury to bearings or crankcase.

67. When drawing the new bearings into position, it is very important that the oil holes register with the oil holes in the crankcase; if they do not, new holes should be drilled into the bearings after assembling. The bearings should next be drilled and pinned against movement with brass dowel pins, which should be a tight fit in both bearings and crankcase.

68. If an expansion type line reamer is used to ream the bearings, care should be taken to ream them from .001" to . 003" larger than the camshaft journals so that there will be sufficient clearance for lubrication. After the bearing fitting and reaming has been completed, the crankcase should be thoroughly cleaned of chips and dirt before reassembling of the motor is started.

69. Place camshaft in position in crankcase, remove crankcase bearing caps, clean and spread oil film on bearings and drop crankshaft in place. Replace shims and bearing caps, being careful to put the shims back in their proper places and the center bearing caps on their studs so the serial numbers will be on the ends nearest a corresponding number stamped on the lower flange of the crankcase. The proper replacing of the center bearing caps is important, as if this is not done, the bearing alignment will be destroyed.

70. Fit plates on center bearing caps, screw nuts on stud and tighten bearings securely, one by one, turning crankshaft after each bearing has been drawn up to test the adjustment. After the bearing adjustment has been completed, be sure to replace and spread cotter pins in studs. Fit new wick packing to front and rear bearing caps to guard against oil leaks at these points.

71. The reassembling of the motor may be completed and its installation in the car accomplished by reversing operations 1 to 59 inclusive. When replacing timing chain on sprockets, it is imperative that the distributor drive shaft and camshaft be properly timed as outlined in operation 19, Article "F. " It is also advisable to have the connecting rods aligned before fitting them to the crankshaft and to use new cylinder to crankcase, oil reservoir and gear case cover gaskets.

Follow instructions given in Article "I" covering replacement and timing of ignition distributor and wires.

(1-L)Renew Flywheel

(Cars numbered 750,001 and upward)

1. Remove front compartment rubber and felt mats and take out front toe and floor boards.

2. Remove clevis pin from brake pedal and disconnect brake pedal to equalizer bar pull rod.

3. Remove clevis pin from lower end of starter pedal shaft lever and disconnect starter operating shaft and spring.

4. Remove clevis pin from clutch adjustable link and disconnect throwout yoke.

5. Unscrew sleeve at rear of speedometer shaft and disconnect shaft from transmission.

6. Remove bolts from front universal joint flange and disconnect propeller shaft.

7. Remove bolts holding pedal control bracket to transmission case and take off pedal control assembly.

8. Remove cap screws holding hand control lever assembly and transmission cover to transmission and disconnect control assembly.

9. Remove cotter pins and nuts from transmission to crankcase bolts, take out bolts and cap screws, removing the upper one last. This will permit the transmission assembly to be withdrawn and lowered to the floor.

10. Remove cap screws holding clutch cover to flywheel, releasing the clutch assembly and clutch driving plate assembly which may now be removed.

11. Remove nuts from flywheel bolts and take flywheel off crankshaft using a bar to pry it loose if necessary.

12. Remove clutch pilot bearing from old flywheel and tap in position in new flywheel.

13. Remove all dirt and chips from flywheel and flange on crankshaft; place flywheel on shaft and tighten fly-wheel bolt nuts securely. It will be found that it is only possible to install the flywheel on the crankshaft in one position, as one of the bolts is offset 1/16" to prevent incorrect installation which would affect the timing marks.

14. Reassemble by reversing operations 1 to 10 inclusive.

(M) Adjust Connecting Rod Bearings

(See 1926 Service Manual Page 84)

(N) Adjust Crankshaft Bearings

(See 1926 Service Manual Page 85)

1 9 2 6

Hudson-Essex

Service Manual

1927 Supplement

Essex Cars 500,001 up

ESSEX

(Cars numbered 500,001 and up)

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(See 1926 Service Manual, page 89)

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(See 1926 Service Manual, page 95)

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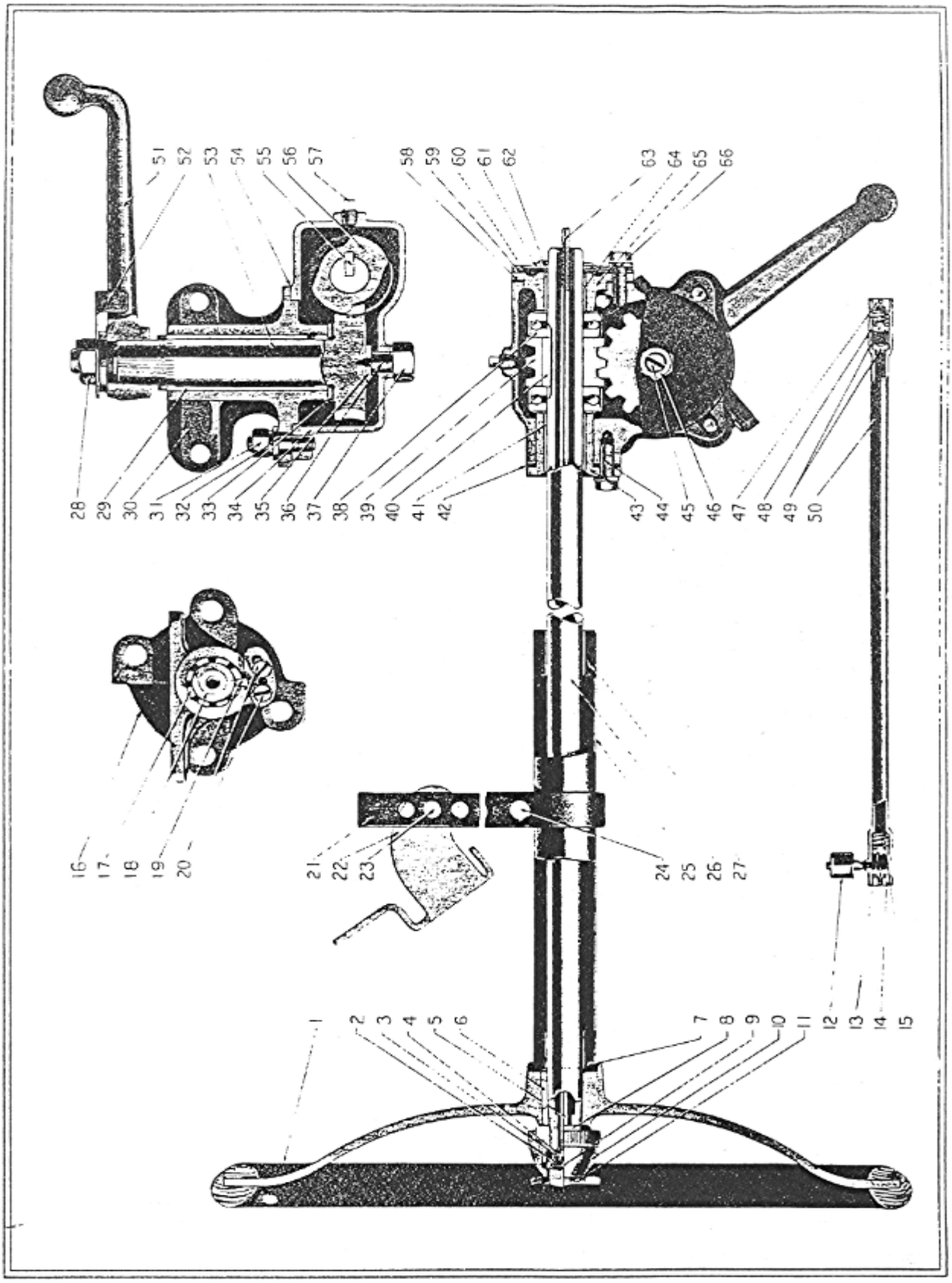
Essex Super Six

Steering Gear

(Cars numbered 500,001 and upward)

Steering Gear Group *(Cars numbered 500,001 and upward)*



Essex Super Six Steering Gear

(Cars numbered 500,001 and upward)

Ref. No..	Name of Part
1.	Steering wheel
2.	Horn button spring
3.	Horn wire ground washer
4.	Horn wire terminal insulator
5.	Horn wire
6.	Steering wheel key
7.	Jacket tube bushing
8.	Steering wheel nut
9.	Contact washer
10.	Steering wheel nut cover
11.	Horn button
12.	Drag link oiler
13.	Drag link ball seat
14.	Drag link plug
15.	Drag link spring
16.	Steering gear frame bracket
17.	Worm wheel eccentric bushing
18.	Worm wheel and shaft
19.	Eccentric bushing lock plate
20.	Lock plate screw
21.	Jacket tube bracket
22.	Cowl bracket
23.	Cowl bracket bolt
24.	Jacket tube bracket bolt
25.	Jacket tube
26.	Steering column
27.	Jacket tube bushing
28.	Worm wheel shaft nut
29.	Worm wheel eccentric bushing
30.	Steering gear frame bracket
31.	Case cover stud nut
32.	Case cover stud -
33.	Worm wheel thrust washer-large
34.	Steering gear case
35.	Worm wheel thrust washer-small
36.	Worm wheel adjusting screw
37.	Worm wheel adjusting screw lock nut
38.	Thrust bearing
39.	Steering worm
40.	Steering worm key
41.	Upper cap bushing
42.	Upper cap shims
43.	Upper cap
44.	Upper cap bolt
45.	Worm wheel adjusting screw
46.	Worm wheel adjusting screw lock nut
47.	Drag link plug
48.	Drag link spring
49.	Drag link ball seat
50.	Drag link
51.	Steering gear arm
52.	Worm wheel shaft nut lock
53.	Worm wheel and shaft
54.	Steering gear case gasket
55.	Steering worm key
56.	Steering worm
57.	Steering gear case plug
58.	Lower cap gasket
59.	Column felt washer plate gasket
60.	Column felt washer plate
61.	Felt washer retainer
62.	Felt washer
63.	Horn wire
64.	Lower cap bushing
65.	Lower cap
66.	Lower cap screw

(1-A) Renew Complete Steering Gear

(Cars numbered 500,001 and upward)

1. Disconnect at horn terminal, wire (63) leading from steering gear horn button to horn.

2. Unscrew cover (10).

3. Remove steering wheel nut (8) from top of steering column and pull off steering wheel, using wheel puller shown on Page 18, Service Tool section.

4. Remove cowl bracket bolt (23); disconnect jacket tube bracket (21) and slide jacket tube assembly off steering column.

5. Remove 2 bolts securing steering gear frame bracket (30) to frame side member. This will release steering gear assembly.

6. Bend back ears on worm wheel shaft nut lock (52); remove nut (28) and nut lock and pull steering gear arm (51) off shaft using steering gear arm puller shown on Page 18, Service Tool section.

7. Remove steering gear assembly from car and install new part, reversing above operations.

(1-B) Renew Case Bushings, Thrust Washers, Column, Worm, Worm Wheel or Thrust Bearings

(Cars numbered 500,001 and upward)

1. Disconnect at horn terminal, wire (63) leading from steering gear horn button to horn.

2. Unscrew cover (10).

3. Remove steering wheel nut (8) from top of steering column and pull off steering wheel, using wheel puller shown on Page 18, Service Tool section.

4. Remove cowl bracket bolt (23); disconnect jacket tube bracket (21) and slide jacket tube assembly off steering column.

5. Remove 2 bolts holding steering gear frame bracket (30) to frame side member. This will allow steering gear assembly to be removed from the car.

6. Bend back ears on worm wheel shaft nut lock (52); remove nut (28) and nut lock and pull steering gear arm (51) off shaft, using steering gear arm puller shown on Page 18, Service Tool section.

7. Remove screws (44) holding upper cap (43) in position; take out cap and shims (42).

8. Remove screws (66) holding lower cap (65) to case; take off lower cap, column, worm, and thrust bearings.

9. The bushings (41, 64) in the upper and lower caps may now be pressed out in an arbor press, or by means of the bushing press shown on Page 13, Service Tool section, and replaced with new parts.

10. Remove 4 nuts (3 1) holding frame bracket to steering gear case; take off frame bracket, worm. wheel and thrust washer.

11. Remove worm wheel bushing (29) and replace with new part.

12. Where replacement is necessary, renew column, worm, thrust bearings, worm wheel or any other parts contained in the case assembly. Reassemble steering gear, reversing above operations, making sure that adjustments are properly made as covered in articles (E), (F) and (G).

(1-C) Renew Jacket Tube Bushings

(Cars numbered 500,001 and upward)

1. Disconnect at horn terminal, wire (63) leading from steering gear horn button to horn.

2. Unscrew cover (10).

3. Remove nut (8) from top of steering column.

4. Pull steering wheel off taper on steering column, using steering wheel puller shown on Page 18, Service Tool section.

5. Remove cowl bracket bolt (23) holding jacket tube bracket (21) to cowl.

6. Slide jacket tube and bracket off column, press out or drive out old bushings (7, 27) and replace with new parts.

7. Reassemble parts, reversing above operations.

(D) Renew Steering Gear Lever

(See 1926 Service Manual, Page 108)

(E) Adjust Column for End Play

(See 1926 Service Manual, Page 108)

(F) Adjust Worm Wheel and Shaft for End Play

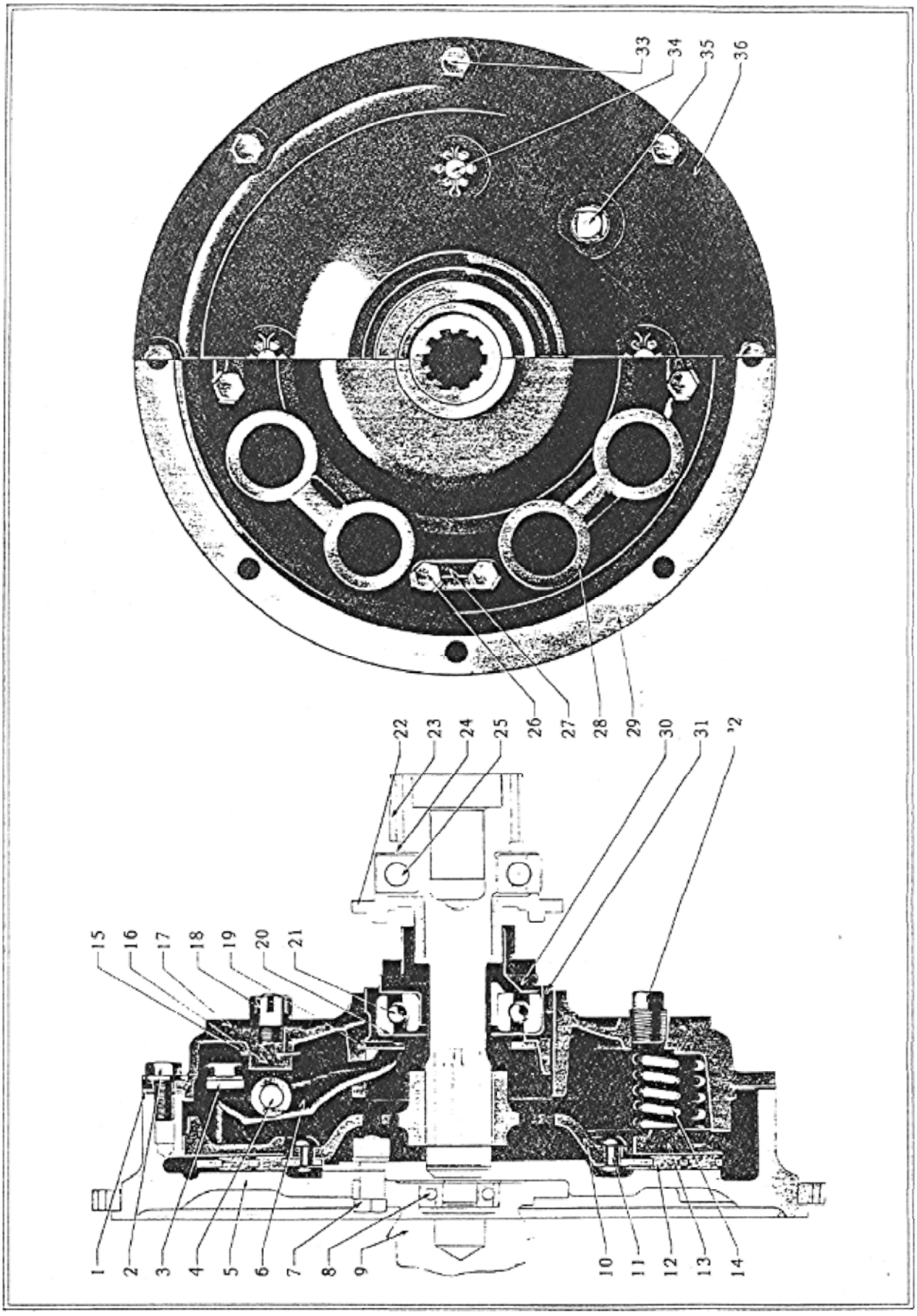
(See 1926 Service Manual, Page 108)

(G) Adjust Worm Wheel and Shaft for Backlash

(See 1926 Service Manual, Page 108)

Essex Super Six
Clutch

(Cars numbered 500,001 and upward)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Essex Super Six Clutch

(Cars numbered 500,001 and upward)

Ref. No.	Name of Part
1.	Clutch cover gasket
2.	Clutch cover cap screw
3.	Shifter finger lock plate
4.	Shifter finger pin
5.	Flywheel
6.	Shifter finger
7.	Flywheel bolt
8.	Clutch pilot bearing
9.	Crankshaft
10.	Clutch driving plate
11.	Driving plate rivet
12.	Driving plate cork insert
13.	Pressure plate
14.	Clutch spring
15.	Shifter finger bracket gasket
16.	Shifter finger bracket
17.	Clutch cover
18.	Shifter finger bracket nut
19.	Throwout cross
20.	Clutch thrust bearing oil ring
21.	Clutch thrust bearing
22.	Transmission front bearing cap
23.	Transmission mainshaft drive gear
24.	Transmission front cap bearing oil seal
25.	Transmission mainshaft drive gear bearing
26.	Pressure plate cap screw
27.	Pressure plate screw lock
28.	Pressure plate
29.	Flywheel
30.	Clutch thrust bearing retainer
31.	Clutch shifting sleeve
32.	Clutch cover pipe plug
33.	Clutch cover cap screw
34.	Shifter finger bracket
35.	Clutch cover pipe plug
36.	Clutch cover

(1-A) Renew Clutch Assembly, Driving Plate, Pressure Plate, Thrust Bearing, Bearing Retainer, Pilot Fearing, Shifter Fingers, Springs or Shifter Finger Brackets

(Cars numbered 500,001 and upward)

1. Remove front compartment rubber and felt mats and take out front toe and floor boards.

2. Remove clevis pin at bottom of brake pedal and disconnect brake pull rod.

3. Remove clevis pin from clutch adjustable link and disconnect clutch throwout yoke.

4. Unscrew sleeve at rear end of speedometer shaft and disconnect shaft.

5. Remove bolts from front universal joint flange and disconnect propeller shaft.

6. Remove cap screws holding transmission cover and control lever to transmission and take off control assembly.

7. Remove bolts holding pedal control bracket to transmission and take off pedal control assembly.

8. Unscrew exhaust manifold packing nut at rear end of exhaust manifold.

9. Remove two bolts holding front end of muffler to muffler bracket.

10. Loosen bolt clamping front of muffler to exhaust pipe; slide exhaust pipe out of exhaust manifold and turn out of way of transmission.

11. Remove bolts holding flywheel guard to rear motor plate, also remove screw holding rear end of guard to transmission case; take off flywheel guard.

12. Remove two bolts holding lower part of transmission case to rear motor plate.

13. Remove nuts from rear ends of three starter motor studs.

14. Remove nuts from two studs holding transmission to motor; this will allow the transmission to be withdrawn from the clutch and lowered to the floor. The thrust bearing (21), bearing retainer (30), and sleeve (31) can now be removed from the clutch cover hub and renewed if necessary.

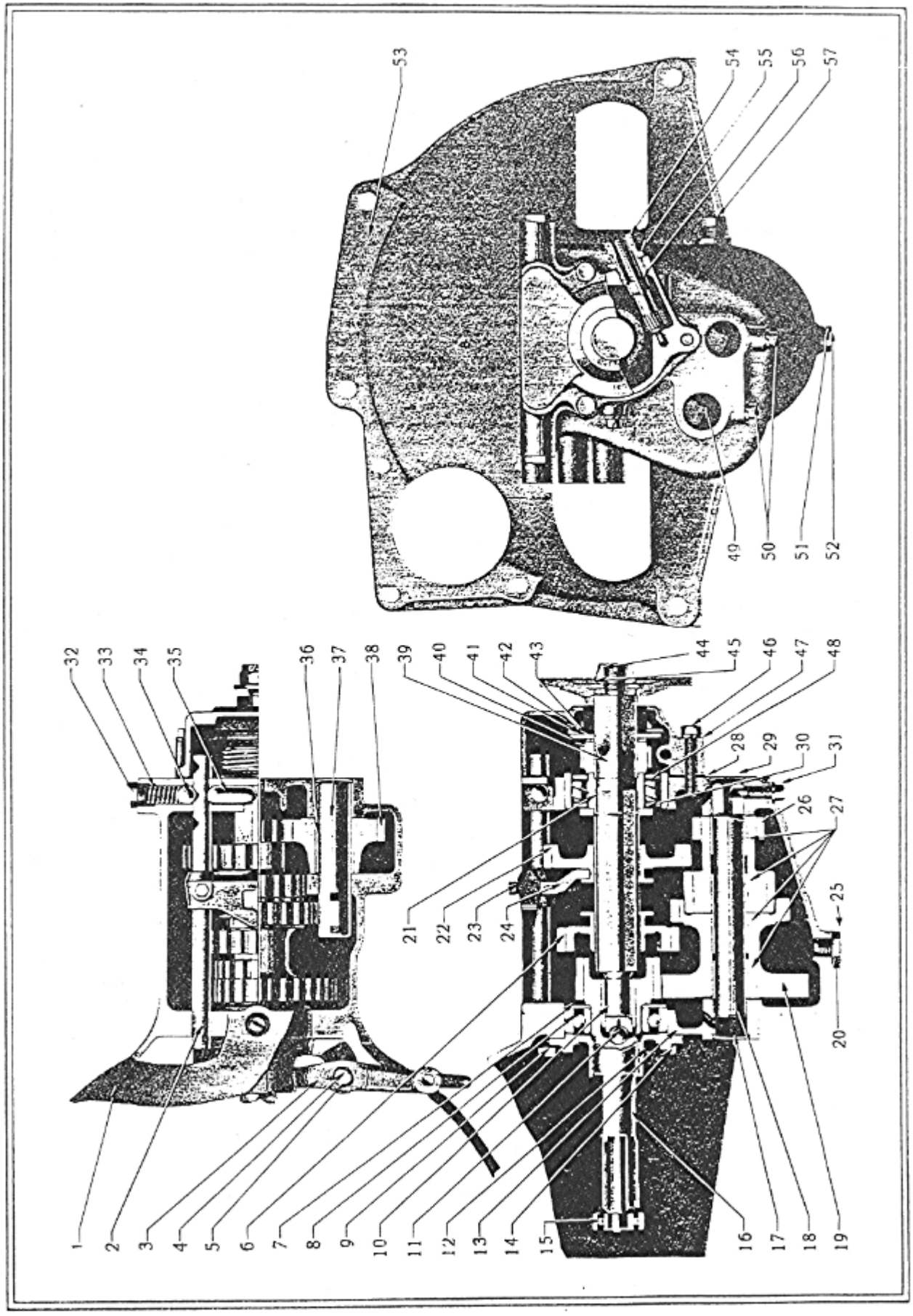
15. Remove cap screws (2) holding clutch cover to flywheel, releasing the clutch assembly and driving plate assembly (10), which parts as well as the pilot bearing (8) may be renewed as required.

16. Should replacement of the cover (36), pressure plate (13), springs (14), shifter finger brackets (16), gasket (15), shifter finger (6), or throwout cross (19), be necessary, the clutch should be mounted in the clutch assembling fixture "HE-130" shown in the Service Tool section, and disassembled by removing the cotter pins and castle nuts (18) from the shifter finger brackets (16)

17. After all of the parts requiring renewal have been replaced, the clutch is reassembled by reversing the above operations, using clutch assembling fixture.

Essex Super Six
Transmission

(Cars numbered 500,001 and upward)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Essex Super Six Transmission

(Cars numbered 500,001 and upward)

Ref. No.	Name of Part
1 .	Transmission case
2.	Shifter shaft-second and high
3.	Clutch throwout yoke
4.	Clutch throwout yoke clevis pin
5.	Clutch throwout yoke bushing
6.	Second and high speed gear
7.	Drive gear bearing oil seal
8.	Mainshaft drive gear outer bearing
9.	Front bearing cap bolt
10.	Mainshaft drive gear bushing
11.	Mainshaft thrust ball
12.	Frofit bearing cap
13,	Front bearing cap gasket
14.	Front bearing cap bolt
15.	Clutch pilot bearing
16.	Mainshaft drive gear
17.	Countershaft welch,plug
18.	Countershaft
19.	Countershaft drive and second speed gear
20.	Oil drain plug gasket
21.	Rear bearing inner sleeve
22.	Mainshaft low and reverse gear
23.	Shifter fork lock screw
24.	Shifter fork
25.	Oil drain plug
26.	Countershaft low and reverse gear
27.	Countershaft gear bushing
28.	Mainshaft rear bearing cap gasket
29.	Countershaft welch plug
30.	Mainshaft rear bearing retainer
31.	Countershaft lock screw
32.	Shifter shaft lock spring cap
33.	Shifter shaft lock spring
34.	Shifter shaft lock ball
35.	Shifter shaft interlock plunger
36.	Reverse idler gear bushing
37.	Reverse idler gear shaft
38.	Reverse idler gear
39.	Mainshaft
4.0	Speedometer drive gear
41.	Mainshaft rear bearing steel washer
42.	Mainshaft rear bearing bronze washer
43.	Mainshaft shim
44,	Mainshaft nut
45,	Mainshaft nut washer
46,	Mainshaft rear, bearing cap bolt-long
47,	Mainshaft rear bearing cap
48.	Mainshaft rear bearing
49.	Reverse idler gear shaft welch plug
50.	Countershaft and idler shaft lock screws,
51.	Oil drain plug gasket
52.	Oil drain plug
53.	Transmission case
54.	Speedometer driven gear sleeve
55.	Speedometer driven gear sleeve shim
56.	Speedometer driven gear
57.	Oil level test plug

NOTE: In all operations where it is necessary to adjust the mainshaft for end play, it is important that from .003 to .006 end play be allowed. On cars previous to 500,001 a greater end play of .008 to .012 was necessary because the thrust was greater on the transmission thrustwashers and it required this amount of end play to insure their proper lubrication. When referring back, therefore, to operations described in the 1926 Service Manual and applying these operations to cars 500,001 and upward, use the figure .003 to .006 for end play instead of the figure .008 to .012. Also note where reference is made to operations in the 1926 Service Manual to be used on cars 500,001 and upward it is not necessary to disconnect the brake pull rod at the bottom of the hand brake lever, as. this has been removed from the transmission housing and is now attached to the frame of the car on the left hand side.

(1-A) Renew Transmission

(Cars numbered 500,001 and upward)

1. Remove front compartment rubber and felt mats and take out floor boards.

2. Remove clevis pin at bottom of brake pedal and disconnect brake pull rod.

3. Remove clevis pin from clutch adjustable link and disconnect clutch throwout yoke.

4. Unscrew sleeve at rear end -of speedometer shaft and disconnect shaft. Remove bolts from front universal joint flange and disconnect propeller shaft.

6. Remove cap screws holding transmission cover and control lever to transmission and take off control assembly.

7. Remove bolts holding pedal control bracket to transmission and take off pedal control assembly.

8. Unscrew exhaust manifold packing nut at rear end of exhaust manifold.

9. Remove two bolts holding front end of muffler to muffler bracket.

10. Loosen bolt clamping front of muffler to exhaust pipe; slide exhaust pipe out of exhaust manifold and turn out of way of transmission.

11. Remove bolts holding flywheel guard to rear motor plate, also remove screw holding rear end of guard to transmission case; take off flywheel guard.

12. Remove two bolts holding lower part of transmission case to rear motor plate.

13. Remove nuts from rear ends of three starting motor studs.

14. Remove nuts from two studs holding transmission to motor; this will allow the transmission to be withdrawn from the clutch and lowered to floor.

15. Replace with new transmission assembly, reversing operations described above.

(1-B) Renew Mainshaft, Mainshaft Thrust Ball, Sliding Gears, Mainshaft Rear Bearing, Mainshaft Rear Bearing Thrust Washers, Speedometer Drive Gear, Shifter Forks, Shifter Shaft or Inter-Lock Plunger

(Cars numbered 500,001 and upward)

1. Remove floor boards.

2. Remove cap screws holding transmission case cover to transmission and take off hand control lever assembly.

3. Unscrew sleeve at rear end of speedometer shaft and disconnect speedometer shaft from transmission.

4. Remove bolts from flange of front universal joint and disconnect propeller shaft.

5. Remove cotter pin, nut (44) and washer from rear end of mainshaft and pull off front universal joint flange, using universal joint flange puller shown on Page 22, Service Tool section.

6. Remove speedometer driven gear sleeve (54), takeout gear (56) and shims (55).

7. Remove screws (46) holding mainshaft rear bearing cap (47) to transmission and take off cap.

8. Remove gear shifter shaft lock spring caps (32), take out springs (33) and lock balls (34).

9. Remove gear shifter fork lock screws (23), slide shifter shaft (2) out of shifter forks (24) and rear end of transmission case.

10. Remove shifter shaft interlock plunger (35).

11. The mainshaft may now be removed and any of the above parts which require renewal replaced. The transmission may be reassembled by reversing the above operations. In reassembling it is very important that the correct number of shims (43) be placed on mainshaft to allow an end play of from .003 to .006 when rear bearing cap is tightly bolted in place.

(I-C) Renew Mainshaft Drive Gear, Mainshaft Outer Bearing, Mainshaft Drive Gear Bushing or Front Bearing Cap

(Cars numbered 500,001 and upward)

1. Remove front compartment rubber and felt -mats, and take out front toe and floor boards.

2. Remove clevis pin at bottom of brake pedal and disconnect brake pull rod.

3. Remove clevis pin from clutch adjustable link and disconnect clutch throwout yoke.

4. Unscrew sleeve at rear end of speedometer shaft and disconnect shaft.

5. Remove bolts from front universal joint flange and disconnect propeller shaft.

6. Remove cap screws holding transmission cover and control lever to transmission and take off control assembly.

7. Remove bolts holding pedal control bracket to transmission and take off pedal control assembly.

8. Unscrew exhaust manifold packing nut at rear end of exhaust manifold.

9. Remove two bolts holding front end of muffler to muffler bracket.

10. Loosen bolt clamping front of muffler to exhaust pipe; slide exhaust pipe out of exhaust manifold and turn out of way of transmission.

11. Remove bolts holding flywheel guard to rear motor plate, also remove screw holding rear end of guard to transmission case; take off flywheel guard.

12. Remove two bolts holding lower part of transmission case to rear motor plate.

13. Remove nuts from rear ends of three starting motor studs.

14. Remove nuts from two studs holding transmission to motor; this will allow the transmission to be withdrawn from the clutch and lowered to the floor.

15. Remove cotter pin, nut (44) and washer from rear end of mainshaft and pull off front universal joint flange, using universal joint flange puller shown on Page 22, Service Tool section.

16. Remove speedometer driven gear sleeve (54), take out gear (56) and shims (55).

17. Remove screws (46) holding mainshaft rear bearing cap (47) to transmission and take off cap.

18. Remove gear shifter shaft lock spring caps (32), take out springs (33) ~and lock balls (34).

19. Remove gear shifter fork lock screws (23), slide shifter shafts (2) out of shifter forks (24) and rear end of transmission case; this will allow the removal of the mainshaft and parts assembled to it.

20. Remove screws (9, 14) holding mainshaft front bearing cap (12) to transmission and take off cap, bearing (8) and drive gear assembly (16). These parts may now be renewed as necessary.

21. If drive gear is to be re-bushed, remove old bushing with bushing extractor, "HE-58," Service Tool section, and press new part in place. After this is done, the bushing should be reamed to the correct size and in perfect alignment by means of drive gear bushing reamer and fixture "E-253."

22. The transmission is re-assembled by reversing the above operations, making sure that there is from .005 to .010 end play in the mainshaft after the bearing caps have been bolted in position.

(1-D) Renew Countershaft, Countershaft Gears, or Countershaft Gear Bushings

(Cars numbered 500,001 and upward)

1. Remove front compartment rubber and felt mats and take out front toe and floor boards. yoke.

2. Remove clevis pin at bottom of brake pedal and disconnect brake pull rod.

3. Remove clevis pin from clutch adjustable link and disconnect clutch throwout

4. Unscrew sleeve at rear end of speedometer shaft and disconnect shaft.

5. Remove bolts from front universal joint flange and disconnect propeller shaft.

6. Remove cap screws holding transmission cover and control lever to transmission and take off control assembly.

7. Remove bolts holding pedal control bracket to transmission and take off pedal control assembly.

8. Unscrew exhaust manifold packing nut at rear end of exhaust manifold.

9. Remove two bolts holding front end of muffler to muffler bracket.

10. Loosen bolt clamping front of muffler to exhaust pipe; slide exhaust pipe out of exhaust manifold and turn out of way of transmission.

11. Remove bolts holding flywheel guard to rear motor plate, also remove screw holding rear end of guard to transmission case; take off flywheel guard.

12. Remove two bolts holding lower part of transmission case to rear motor plate.

13. Remove nuts. from rear ends of three starting motor studs.

14. Remove nuts from two studs holding transmission to motor; this will allow the transmission to be withdrawn from the clutch and lowered to the floor.

15. Remove cotter pin, nut (44) and washer from rear end of mainshaft and pull off front universal joint flange, using universal joint flange puller shown on Page 22, Service Tool section.

16. Remove speedometer driven gear sleeve (54), take out gear (56) and shims (55).

17. Remove screws (46) holding mainshaft rear bearing cap (47) to transmission and take off cap.

18. Remove gear shifter shaft lock spring caps (32), take out springs (33) and lock balls (34).

19. Remove gear shifter fork lock screws (23), slide shifter shafts (2) out of shifter forks (24) and rear end of transmission case; this will allow the removal of the mainshaft and parts assembled to it.

20. Remove screws (9, 14) holding mainshaft front bearing cap (12) to transmission and take off cap bearing (8) and drive gear assembly (16). These parts may now be renewed as necessary.

21. Drill 7/32" hole in center of rear countershaft welch plug (29).

22. Insert hooked tool in opening and pull out plug.

23. Remove countershaft lock screw (50) from bottom of transmission case.

24. Insert hooked tool in lock screw hole at rear end of countershaft and pull out countershaft through rear of transmission case.

25. The countershaft gears may now be removed from transmission and renewed or rebushed as necessary, using busing press shown on Page 12, Service Tool section. The countershaft may also be renewed as required.

26. Reassemble transmission, reversing the above operations, making sure that from .003 to .006 end play exists in the mainshaft after the caps are securely bolted in place. The welch plug (29) at rear end of countershaft should be renewed when reassembling transmission. However, in an emergency, the old plug may be used if the hole is tapped out and plugged with a small machine screw to prevent loss of lubrication.

(E) Renew Reverse Idler Gear, Shaft or Idler Gear Bushing

(See 1926 Service Manual, Page 121)

(1-F) Renew Transmission Case

(Cars numbered 500,001 and upward)

1. Remove front compartment rubber and felt mats and take out front toe and floor boards.

2. Remove clevis pin at bottom of brake pedal and disconnect brake pull rod.

3. Remove clevis pin from clutch adjustable link and disconnect clutch throwout yoke.

4. Unscrew sleeve at rear end of speedometer shaft and disconnect shaft.

5. Remove bolts from front universal joint flange and disconnect propeller shaft.

6. Remove cap screws holding transmission cover and control lever to transmission and take off control assembly.

7. Remove bolts holding pedal control bracket to transmission and take off pedal control assembly.

8. Unscrew exhaust manifold packing nut at rear end of exhaust manifold.

9. Remove two bolts holding front end of muffler to muffler bracket.

10. Loosen bolt clamping front of muffler to exhaust pipe; slide exhaust pipe out of exhaust manifold and turn out of way of transmission.

11. Remove bolts holding flywheel guard to rear motor plate, also remove screw holding rear end of guard to transmission case; take off flywheel guard.

12. Remove two bolts holding lower part of transmission case to rear motor plate.

13. Remove nuts from rear ends of three starting motor studs.

14. Remove nuts from two studs holding transmission to motor; this will allow the transmission to be withdrawn from the clutch and lowered to the floor.

15. Remove cotter pin, nut (44) and washer from rear end of mainshaft and pull off front universal joint flange, using universal joint flange puller shown on Page 22, Service Tool section.

16. Remove speedometer driven gear sleeve (54), take out gear (56) and shims (55).

17. Remove screws (46) holding mainshaft rear bearing cap (47) to transmission and take off cap.

18. Remove gear shifter shaft lock spring caps (32), take out springs (33) and lock balls (34). 1

19. Remove gear shifter fork lock screws (23), slide shifter shafts (2) out of shifter forks (24) and rear end of transmission case; this will allow the removal of the mainshaft and parts assembled to it.

20. Remove shifter shaft interlock plunger (35).

21. Remove screws (9,14) holding mainshaft front bearing cap (12) to transmission. Take off cap and transmission drive gear assembly.

22. Drill 7/32" hole in center of rear countershaft welch plug (29).

23. Insert hooked tool in opening and pull out plug.

24. Remove countershaft lock screw (50) from bottom of transmission case.

25. Insert hooked tool in lock screw hole at rear end of countershaft (18) and pull out countershaft through rear of transmission case. Take out countershaft gears (19, 26).

26. Remove from lower part of transmission case lock screw (50) holding reverse idler gear shaft (37) in place.

27. Drill 7/32" hole in center of reverse idler shaft welch plug (49) located in rear of transmission case. Insert hooked tool in opening and pull out plug.

28. Push out reverse idler gear shaft through rear of transmission and remove idler gear.

29. Replace transmission case with new parts and reassemble, reversing above operations. See that sufficient shims (43) are placed on mainshaft to allow .003 to .006 end play after caps (12, 47) are securely bolted in place.

(1-G)Renew Clutch Throwout Yoke or Throwout Yoke Bushing

(Cars numbered 500,001 and upward)

1. Remove front compartment rubber and felt mats and take out front toe and floor boards.

2. Remove clevis pin at bottom of brake pedal and disconnect brake pull rod.

3. Remove clevis pin from clutch adjustable link and disconnect clutch throwout yoke.

4. Unscrew sleeve at rear end of speedometer shaft and disconnect shaft.

5. Remove bolts from front universal joint flange and disconnect propeller shaft.

6. Remove cap screws holding transmission cover and control lever to transmission and take off control assembly.

7. Remove bolts holding pedal control bracket to transmission and take off pedal control assembly.

8. Unscrew exhaust manifold packing nut at rear end of exhaust manifold.

9. Remove two bolts holding front end of muffler to muffler bracket.

10. Loosen bolt clamping front of muffler to exhaust pipe; slide exhaust pipe out of exhaust manifold and turn out of way of transmission.

11. Remove bolts holding flywheel guard to rear motor plate, also remove screw holding rear end of guard to transmission case; take off flywheel guard.

12. Remove two bolts holding lower part of transmission case to rear motor plate.

13. Remove nuts from rear ends of three starting motor studs.

14. Remove nuts from two studs holding transmission to motor; this will allow the transmission to be withdrawn from the clutch and lowered to the floor.

15. Remove cotter and clevis pin (4) holding throwout yoke (3) to transmission front bearing cap and take off yoke.

16. Renew or rebush yoke (3) and reassemble transmission, reversing the above operations.

(1-H) Remove End Play from Mainshaft

(Cars numbered 500,001 and upward)

NOTE: To insure proper lubrication of mainshaft thrust bearings, it is necessary that there be from .003 to .006 end play in the transmission mainshaft at all times. End play in excess of this amount which will develop after extensive service, should be removed by the addition of shims as detailed below, unless the amount is very great, in which case it will be necessary to renew washers (41,42) as described in article 1-B.

1. Remove bolts from Range of front universal joint and disconnect propeller shaft.

2. Unscrew sleeve at rear end of speedometer shaft and disconnect shaft.

3. Remove cotter pin, nut (44) and washer from rear end of transmission mainshaft and pull off front universal joint Range, using universal joint flange puller shown on Page 22, Service Tool section.

4. Remove rear bearing cap screws (46) and take off rear bearing cap (47).

5. Add the required number of shims (43) to mainshaft to allow .003 to .006 end play after cap is bolted in place and reassemble, reversing the foregoing operations.

(1-I) Remove Shifter Shaft Lock Ball, Lock Ba1l Spring or Cap

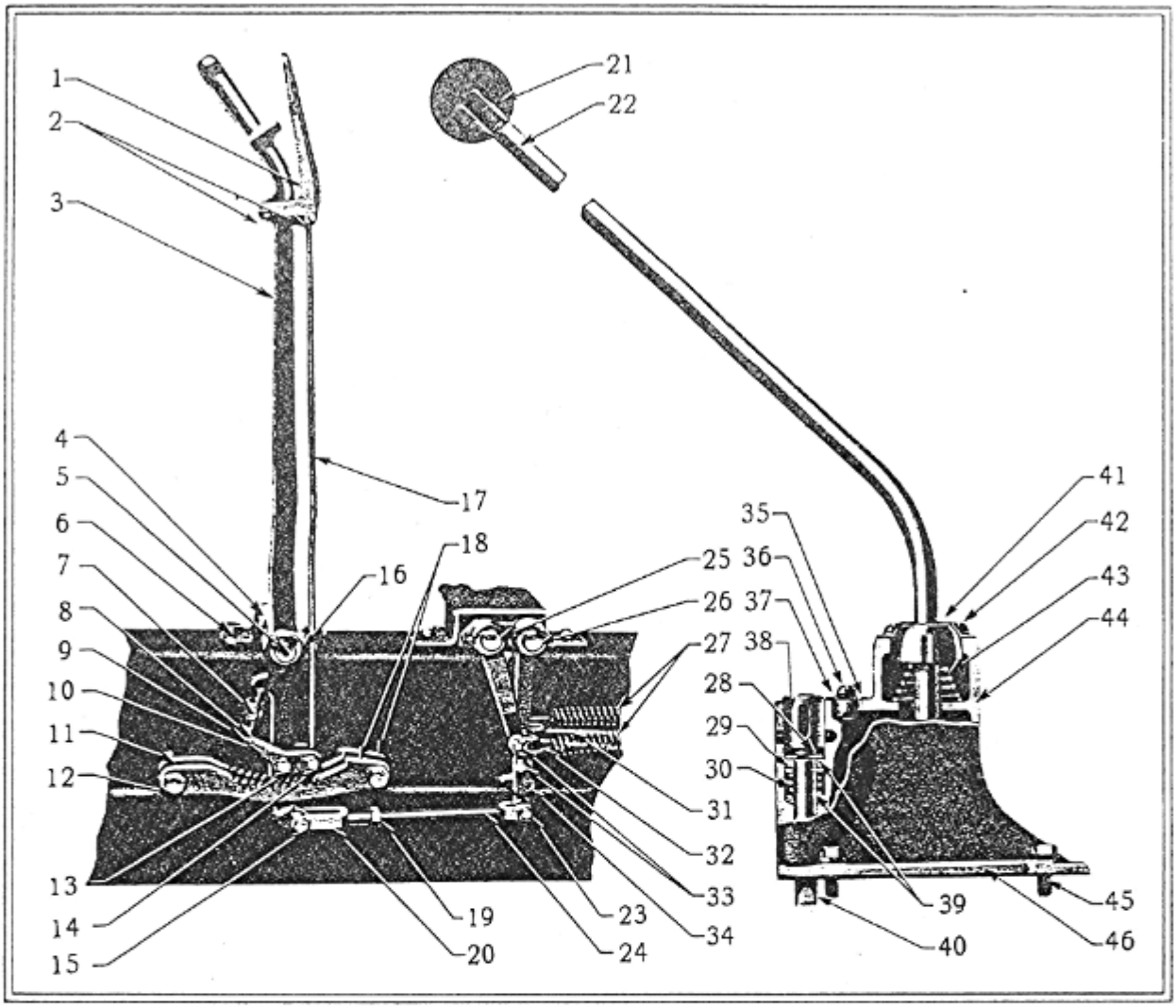
(Cars numbered 500,001 and upward)

1. Remove shifter shaft lock plunger spring cap (32), take out springs (33) and lock balls (34).

2. Replace parts where necessary and reassemble parts and tighten caps.

Essex Super-Six Hand Control

(Cars numbered 500,001 and upward)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Essex Super Six Hand Control

(Cars numbered 500,001 and upward)

Ref. No.	Name of Part ,
1.	Brake hand lever latch grip
2.	Brake hand lever latch screw
3.	Brake hand lever
4.	Brake hand lever bracket
5.	Brake hand lever pivot shaft
6.	Brake hand lever bracket bolt
7.	Brake lever latch spring
8.	Brake lever latch spring hook
9.	Brake lever latch-inside
10.	Brake lever latch-outside
11.	Ratchet to frame spacer
12.	Ratchet bolt
13.	Latch clevis pin
14.	Latch clevis pin
15.	Brake pull rod clevis pin
16.	Brake lever pivot shaft washer
17.	Latch rod
18.	Brake ratchet
19.	Brake pull rod nut
20.	Brake pull rod yoke
21.	Gearshift lever ball
22.	Gearshift lever
23.	Brake pull rod clevis pin
24.	Brake pull rod
25.	Foot brake cross shaft
26.	Hand brake cross shaft
27.	Brake release springs
28.	Control lock plunger washer
29.	Plunger spring washer
30.	Plunger spring
31.	Cross shaft to idler rod-Hand brake
32.	Cross shaft to idler rod-Foot brake
33.	Play link clevis pins
34.	Play link
35.	Oil hole cover gasket
36.	Oil hole cover screw
37.	Oil hole cover
38.	Control lock
39.	Plunger felt washer
40.	Control lock plunger
41.	Gearshift lever cover
42.	Gearshift lever cover screw
43.	Gearshift lever spring
44.	Gearshift lever housing
45.	Gearshift lever housing bolt
46.	Housing to transmission case gasket

(1-A) Renew Gearshift Lever, Gearshift Lever Spring or Cover

(Cars numbered 500,001 and upward)

1. Remove gearshift lever ball (21).

2. Remove gearshift lever cover screws (42) and cover (41).

3. Take out lever (2 2) and springs (43), replace parts where necessary and reassemble, reversing operations 1 and 2.

(1-B) Renew Control Lock, Plunger or Spring

(Cars numbered 500,001 and upward)

1. Remove control lock retaining screw, insert key in lock and turn key as far as possible; this will permit the removal of the lock (38), plunger (40), plunger spring (30) and plunger washer (28).

2. Renew parts where necessary and reassemble.

(1-C) Renew Control Housing

(Cars numbered 500,001 and upward)

1. Remove floor boards.

2. Remove screws (45) holding control housing to transmission, and take off control hand lever assembly.

3. Remove screws (42) holding gearshift lever cover to control housing, take off cover (41), gearshift lever (22) and spring (43).

4. Remove pivot screw from control housing.

5. Remove oil filler cover screws (36), cover (37) and gasket (35).

6. Remove control lock retaining screw, insert key in lock and turn key as far as possible; take out lock (38), plunger (40), plunger spring (30) and plunger washer (28).

7. Replace control housing with new part and reassemble, reversing above operations.

SERVICE LETTERS

PLEASE SEE THAT THIS LETTER REACHES YOUR SERVICE MANAGER OR HEAD MECHANIC IMMEDIATELY

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U.S.A.

CABLE ADDRESS
HUDSONCAR

February 2, 1927

To HUDSON DISTRIBUTORS AND DEALERS:

Attention General Manager

We are attaching to this letter detailed mechanical inspections on the new Hudson Super Six. Please see that this information is given to your Service Manager and the party who prepares your demonstrators.

It is of utmost importance that a proper procedure be followed in breaking in the car, so that it will deliver maximum performance and power. This as you know cannot be accomplished through driving a car at 25 or 30 miles per hour for an extended period of time.

Select your most competent driver, and after the car has been thoroughly inspected (good clean motor oil installed, and all mechanical adjustments Checked), instruct him to proceed as follows:

After the motor has assumed a normal operating temperature, the driver should increase the speed at which the car is driven gradually, but holding the increased speed only for short periods of time. This procedure should be repeated at intervals, increasing the speed two or three miles at a time, but holding it only for a short period, then removing the foot from the accelerator and permitting the car to coast down.

A careful driver can in this manner so break the motor in that it will be possible to indulge in maximum speeds for short periods at the expiration of 1000 miles of driving. It is understood, of course, that the car should not be forced at any time, nor should higher speeds be indulged in except for very short intervals.

During the breaking in process the oil should be changed regularly at 200 mile intervals, and the operator warned, of course, not to drive at high speed at any time unless the motor is thoroughly warmed up.

Yours very truly,

HUDSON MOTOR CAR COMPANY

J. E. Mc LARTY

Ser: 924

Service Manager.

MECHANICAL INSPECTION

NEW HUDSON SUPER SIX.

MOTOR

TAPPET SETTING - Exhaust valves, minimum clearance when warm .006.
Intake " " " " " .004.
NOTE - Intake tappet clearance is measured at rocker arm.

PISTONS - Pistons are accurately fitted at the factory with minimum clearance when cold of .0045". This clearance must positively be maintained to obtain standard performance and power. Do not under any circumstances fit pistons in the new Hudson Super Six motor at any closer clearance.

All pistons in the new Hudson Super Six motor are fitted with oil control rings in the lower ring groove.

OIL PUMP SETTING-The minimum stroke of the oil pump plunger with the motor running at idling speed is to be 5/32" to 3/16".

SPARK PLUGS - Spark plug gap must be accurately set at .028 for best results.

IGNITION DIS-
TRIBUTOR POINTS- Maximum opening .020".

SPARK TIMING- Spark timing is set at the factory with the ignition contact points just opening when the motor is on dead center and the hand spark control lever on the steering wheel set at maximum advance. After a few miles of operation, however, an initial stretching takes place in the chain, etcetera, which throws the timing late. We advocate, therefore, timing the motor at approximately 3/4" on the flywheel, ahead of dead center, and retarding on hills or when necessary with the hand lever on the steering wheel.

BRAKES

The 4-Wheel brakes have been accurately adjusted at the factory, and the adjustment should not be disturbed. Under no consideration should the brake operating linkage,
bell cranks, or lever, be tampered with. The only adjustments the shop need ever perform are the two adjustments pointed out in the large Bendix Brake Chart which has already been mailed you.

In the event you have to make any brake adjustments, as for instance, a brake drum running slightly warm or something of that nature, proceed as follows: Jack up the car, front or rear as the case may be, by placing jacks under the axle. Do not use chain falls attached to frame members, as this will threw the wheels out of ordinary position and thus upset the operating linkage.

(Brakes, continued)
.
With the wheels jacked up as explained above, the ball nut on the end of the brake pull rod effecting the pedal brake on which you are working, should be in the case of a tight brake loosened 1/2 turn at a time until the wheel is free. To tighten the brake, turn the ball nut to the right 1/2 turn at a time, making sure that you do not tighten to the point where the wheel will even bind slightly.

Prospects and owners who are not familiar with 4-Wheel brakes should be cautioned to always apply the brakes gradually - not hastily. While it is possible to stop the car in a very short distance, by heavy foot pressure, this should never be resorted to except in an emergency.

TIRES

It is very important that the proper tire pressures be maintained. Tire pressures, both front and rear, should be as follows:

Minimum 35 lbs.
Maximum 38 lbs.

On demonstrating cars these pressures should be checked daily to insure against loss of air through a leaking valve stem, or something of that nature.

FRONT WHEEL ALIGNMENT

The front wheels should be trammed straight ahead or parallel, or with a maximum toe-in of /8". Wheel adjustments on the new ball joint type of tie rod are accomplished by shifting shims from one side of the ball to the other. There are
plenty of shims installed in the ball joint for this purpose. The above tramming instructions must be carefully adhered to.

LUBRICATION

MOTOR - In the motor use good quality medium heavy oil with sufficiently low cold test to insure free running at the temperature you are encountering.
Capacity of the reservoir sump 7 qts, U.S. standard measure.

CLUTCH- Use clutch oil composed of light cylinder or motor oil and kerosene mixed in equal proportions. The maximum contents of the clutch housing should be 1/4 pt. or 4 oz., liquid measure. Too much clutch oil in the housing may have a tendency to cause the clutch to slip.

TRANS-
MISSION-Use very light grade transmission oil. Oil should be introduced through test plug in right hand side of transmission case and level should be carried no higher than this.

OVERHEAD VALVE ROCKER ARMS

Fill the oil cups supplying oil to the rocker arms on your demonstrator daily. The surplus oil will supply plenty of lubrication to the overhead valve itself, in addition to lubricating the rocker and bearing.

LUBRICATION OF ALL OTHER UNITS IS THE SAME AS BEFORE.

STARTING THE MOTOR

The heat control lever on the right hand side of the instrument board should be set so that the word "Hot" will appear through the little window. The throttle should be open approximately 1/4 of the full opening and the choker pulled out the full travel. Crank the motor, and as soon as it fires immediately return the choker part way; at the same time closing the throttle part way. As soon as possible, return the choker to normal position. This can be done in a few moments, as with the heat control in the "Hot" position, the motor rapidly warms up. Once the motor has assumed a normal operating temperature, the heat control lever should be set so that the word "Warm" will register in the window, for city driving, or driving in congested traffic. When driving cross country at higher rates of speed than is possible in the city, the heat control lever should be set to "Medium" position and left there, as soon as the motor is running at normal operating temperature.

Please note that the over-choking or flooding of the motor with gasoline is not desirable. When starting a motor that is already warm, use the choker very lightly and return it to normal position immediately.

CARBURETOR

The carburetor has been carefully calibrated and the flow of fuel measured by special instruments designed for the purpose. The carburetor setting, there-fore, should not be disturbed, as you will find that the functioning of the carburetor can be controlled largely by proper use of the heat control feature outline above.

HUDSON MOTOR CAR COMPANY

Service Department.

Sheet 3 with
Ser: 924

PLEASE SEE THAT THIS LETTER REACHES YOUR SERVICE MANAGER OR HEAD MECHANIC IMMEDIATELY

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U.S.A.

March 24, 1927.

CABLE ADDRESS
HUDSONCAR

SERVICE LETTER

IMPORTANT

TO HUDSON DISTRIBUTORS AND DEALERS:

Attention Service Manager

Supplementing our serial letter #939.

We again wish to lay stress on the importance of introducing sufficient clutch pedal play during the first few miles of operation. Will you please see that your shopmen or floormen having contact with cars coming in for service are posted to try the pedal clearance on all cars, and arrange to introduce play, if found necessary. We advocate from 3/4" to 1" play between the pedal and toeboard. If the car is driven any appreciable time with the pedal against the floorboard, the clutch may be damaged.

Also note the following changes in clutch oil specifications: Use a mixture composed of FOUR PARTS MOTOR OIL, and ONE PART KEROSENE,

Yours very truly,

HUDSON MOTOR CAR COMPANY

Ser: 950

Service Department.

PLEASE SEE THAT THIS LETTER REACHES YOUR SERVICE MANAGER OR HEAD MECHANIC IMMEDIATELY

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U.S.A.

April 18, 1927.

CABLE ADDRESS
HUDSONCAR

SERVICE LETTER

TO HUDSON DISTRIBUTORS AND DEALERS;

- Attention Service Manager -

The following information will prove helpful in servicing the Marvel carburetor and heat control installations.

Some cases have been reported where a rattle existed in the heat control mechanism, especially when the adjustment was placed in the "cold" position. This is caused by the little damper and the control rod to the fixture on the instrument board,

CURE: Inspection will show you that this control rod passes through a rubber eyelet in the dash, and in these cases where this rattle is observed, the control rod does not touch, or very lightly touches, the side of the hole where it passes thru the dash. Disconnect the control rod from the !mall damper lever at manifold, and put a bend in this rod so that when it is sprung back to connect to the small damper lever, the rod will press firmly against the side of the hole where it goes through the dash. This will completely overcome the rattle.

If the rattle is in the main damper and not as described above, it may be caused by a defective anti-rattle spring an the inside end of the main damper shaft. This spring should measure 7/16" compressed length on the job, and if it measures more and there seems to be but little spring tension, remove cotter key holding on asbestos washer, and place additional spacers on washer behind the asbestos washer until when the cotter pin is reinstalled, a heavier spring pressure has been built up and the compressed length measures 7/16" as above stated.

In response to numerous requests from distributors and dealers as to /here the spark lever on the Hudson should be set when adjusting the carburetor for proper idling, please note that the spark lever should be set 1/2 retarded, and the carburetor then adjusted as leanly as possible, while still permitting the motor to idle properly.

A few oases have been reported of heat drawing the temper from the anti-rattle spring used on the main damper shaft, in spite of the protection afforded by the asbestos bushings and washers, Exhaustive texts have just been completed covering this trouble, with the result that starting about March 7, the damper body assemblies went through production equipped

with a new anti-rattle spring construction making use of a spring approximately 1-1/4" O. D. as compared to the 21/32" spring previously used, and with wire vory much heavier. We have done away with the asbestos bushings and washers, and the spring is now mounted between two cups or spring retainers of stamped steel, our part #125-9.

Where possible the same numbers as shown in the booklet have been kept, to prevent service confusion. Please refer to Page 15 of Model "B" Booklet, and make the following corrections:

Part #60-28 Asbestos Bushing, should be crossed off, as this is now obsolete.

Part #78-50, Damper Shaft Washer, should be crossed off, as this is now obsolete,

Part #78-501, Damper Shaft Washer Assembly, should be crossed off, as this is also obsolete.

All other part numbers remain the same, but the addition of part #125-9, Spring Seat, should be made to your list,

The above mentioned changes require the shortening of the damper shaft in order to keep the larger diameter spring from interference with the motor block. They also require the use of a longer thrust washer, #78-47 to keep the larger spring from interference with the damper body flange. In servicing damper bodies already out, for main damper rattle, when installing the new anti-rattle springs, use the following procedure:

1. Pull cotter key #82-12, and remove all parts, including thrust washer #78-47, from damper shaft.

2. Install new and linger thrust washer #-78-47.

3. Install spring seat #125-9.

4. Install the new large spring.

5. Install the other spring seat #125-9.

6. Install special spacer, part #78-60 for use on original damper shaft, and complete by addition of cotter key #82-12.

All Marvel Service Stations have a supply of these new parts, which they will furnish upon request.

Yours very truly,

HUDSON MOTOR CAR COMPANY

Ser: 954 Service Department.

PLEASE SEE THAT THIS LETTER REACHES YOUR SERVICE MANAGER OR HEAD MECHANIC IMMEDIATELY

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U.S.A.

August 25 1928.

CABLE ADDRESS
HUDSONCAR

SERVICE LETTER

TO HUDSON DISTRIBUTORS AND DEALERS:

Gentlemen:

- Attention: Manager Parts Department -

The attached list of parts will cover all changes in production up to and including August 15th.

Yours very truly,

HUDSON MOTOR CAR COMPANY

Ser: #1004
Supplement #4

Service Department

Starting with Essex car #804302, Hudson car #32163, a new front seat construction entered production. Following are the parts affected:

Old Number	Superseded by	Price	Description	Interchangeable
BO 75142	BO 80607	$ .95	Floor Board - cents	No
BO 75143	BO 80608	.80	Floor Board - center	No
BO 79389	BO 80589	5.00	Carpet (Essex and 118" Sedan)	No
BO 79678	BO 80597	1.25	Heel Board Carpet (Essex and 118" sedan)	No
CO 79158	CO 80604	40.00	Front Seat (Less Robe Rail & Cushion)	Yes
CO 80394	CO 80588	2.75	Front Seat Back Spring	No

Starting with Hudson Roadster approximately #30906 and Essex Roadster approximately #8290131 side lamps were added as standard equipment. The following lamps were used.

BO 30660	Side lamp complete LH Hudson
Bo 30661	" " " LH Hudson
BO 63218	" " " RH Essex
BO 63219	" " " LH Essex
BO 70343	Acorn Nut
BO 79785	Conduit Collar
BO 79787	" " Washer
BZ 5523	" " Check nut

Starting with Essex car #811287 a new front axle assembly entered production. The following parts were affected:

Old Number	Superseded by	Price	Description	Interchangeable
CX 62700	CX 63191	$75.00	Front Axle Assembly	Yes
CX 62702	CX 63193	14.50	Center Assembly	No
BX 63136	BX 63237	4.75	Spindle and Bushing	No
BX 63137	BX 63238	4.75	" " "	No
Bx 9751	BX 70439	.03	Welch Plug Bushing	No
BX 62710	BX 63190	.40	Pivot Pin	No
BX 62719	BX 63199	.03	" " Lock	No
BX 70302	BX 70110	.30	Bearing	No
BX 62711	BX 63194	.10	Bushing - Upper	No
BX 62712	BX 63198	.10	" Lower	No
BX 8372	BX 63201	Per C .25	Shim	Yes
BX 53463	BX 63200	" C .25	Shim	Yes

Starting with 127" Hudson car #814453, 118" Hudson car #27212 and Essex car #811410 and electrolock with new type mounting entered production. The following parts were affected:

Old Number	Superseded by	Price	Description	Interchangeable
BO 30089	BO 30730	8.00	Electrolock assembly - Hudson	Yes * see note
BO 62687	BO 63202	8.00	Electrolock assembly - Essex	Yes * see note
	BO 30734	.05	Clamp Nut Hudson and Essex	New

*Note: New electrolock on both Hudson and Essex can be used in place of old type by slotting the electrolock mounting hole in instrument panel.

Starting with 127" Hudson car #817776 and 118" car #31662 and Essex car #834386, gas tank having "Easy on" type filler cap entered production. The following parts were affected:

Old Number	Superseded by	Price	Description	Interchangeable
CZ 62813	CZ 63209	$10.00	Gas Tank Assembly	Yes
CZ 30299	CZ 30736	15.00	" " "	Yes
BZ 30340	CZ 30738	1.25	Filler neck	Yes with cap BZ
BZ 30553	BZ 30739	.50	Filler cap	No 30739
BZ 23560	BZ 30740	.05	" " gasket	No

Starting with Essex motor #916671 the reverse idler gear bushing was redesigned. The following parts were affected:

Old Number	Superseded by	Price	Description	Interchangeable
BT 60345	BT 63180	$ .25	Reverse idler Gear Bushing	No

Starting with Essex Motor #899562 crankshaft bearings were changed. The following parts were affected:

Old Number	Superseded by	Price	Description	Interchangeable
BM 62529	BM 63109	$ 1.10	Front Bearing - Upper	No
BM 62530	BM 63110	1.10	" " Lower	No
BM 62531	BM 63111	1.10	Center Bearing Upper	No
BM 62532	BM 63112	1.10	" " Lower	No
BM 62533	BM 63113	1. 10	Rear Bearing Upper	No
BM 62534	BM 63114	1.10	Rear Bearing Lower	No
BM 62535	BM 63228 Per C	.40	Front Bearing Shim	Yes
BM 62536	BM 63229 " "	.40	Front Bearing Shim	Yes
BM 62537	BM 63230 " "	.40	Front Bearing Shim	Yes
BM 62538	BM 63231 " "	.40	Center Bearing Shim	Yes
BM 62539	BM 63232 " "	.40	Center Bearing Shim	Yes
BM 62540	BM 63233 " "	.40	Center Bearing Shim	Yes
BM 62541	BM 63234 " "	.40	Rear Bearing Shim	Yes
BM 62542	BM 63235 " "	.40	Rear Bearing Shim	Yes
BM 62543	BM 63236 " "	.40	Rear Bearing Shim	Yes

Starting with Seven Passenger Sedan #819120, Victoria #819434, Landau Sedan #819091, 118" \Sedan #35853, 118" Coach #35857, 118" Coupe #35871, 127" Std. Sedan #821319 and 127" Phaeton #821307, new demountable rims entered production. This change did not affect cars other than previously mentioned. The following parts were affected:

Old Number	Superseded by	Price	Description	Interchangeable
CW 29058	CW 30782	$3.65	Rim Assembly	Yes - excepting appearance
BZ 28279	BZ 30783	.07	" Clamp	" " "
BZ 28280	BZ 3078E	.07	" " Bolt	" " "
BZ 61434	BZ 30785	.07	" " " Nut	" " "

Starting with Essex car #849931 Hudson 127" car #820115 and 118" car #34361, a new instrument frame and mounting was used in production. The following parts were affected:

Old Number	Superseded by	Price	Description	Interchangeable
BO 79753	BO 80572	$6.00	Heat indicator assembly	Yes
BO 79522	BO 80579	1.00	Instrument lamp wire assembly	No
	BO 80583	1.00	" " socket assembly	No
BO 79759	BO 80602	1.50	" frame base (Essex)	Yes
BO 29133		.07	" Lamp Socket Retaining Sprg.	Discontinued
BO 79760	BO 80603		" frame base	Yes

Starting with Hudson Motor #540565 Main bearings were changed. The following parts were affected:

Old Number	Superseded By	Price	Description	Interchangeable
BM 30211	BM 30576	$1.45	Front Bearing - Upper	No
BM 30212	BM 30577	1.45	Front Bearing - Lower	No
BM 30213	BM 30578	1.35	Front Middle Bearing Upper	No
BM 30214	BM 30579	1.35	Front Middle Bearing Lower	No
BM 30215	BM 30580	1.60	Rear Middle Bearing Upper	No
BM 30216	BM 30581	1.60	Rear Middle Bearing Lower	No
BM 30337	BM 30582	1.65	Rear Bearing Upper	No
BM 30338	BM 30583	1.65	Rear Bearing Lower	No
BM 30219	BM 30800	Per C .50	Front Bearing Shim	Yes
BM 30220	BM 30801	" " .50	Front Bearing Shim	Yes
BM 30221	BM 30802	" " .50	Front Bearing Shim	Yes
BM 30222	BM 30803	" " .50	Front Bearing Shim	Yes
BM 30223	BM 30804	" " .50	Middle Bearing Shim	Yes
BM 30224	BM 30805	" " .50	Middle Bearing Shim	Yes
BM 30225	BM 30806	" " .50	Rear Bearing Shim	Yes
BM 30226	BM 30807	" " .50	Rear Bearing Shim	Yes
BM 30227	BM 30808	" " .50	Rear Bearing Shim	Yes

Starting with 127" Standard Sedan #817974, Victoria #817597, Landau Sedan #817976, Seven Passenger Sedan #817981, 118" Sedan #32092, 118" Coach #32257, 118" Coupe #32104, and 118" Roadster #32173, lacquered fenders, splash guards, etc., entered production as standard equipment on all wood wheel jobs except chassis shipments.

Starting with Essex motor #920289, car #855653, new type motor supports and pads entered production. The following parts were affected:

Old Number	Superseded by	Price	Description	Interchangeable
BM 61706	BM 63239	$ .05	Front Motor Support Pad	No
	BM 63240	.10	Rear Motor Support Pad	New
BM 61667	BM 63241	1.60	Rear Motor Support Plate	No
BM 60454	BM 63242	.40	Motor Support R.H.	No
BM 60455	BM 63243	.40	Motor Support L.H.	No
	BM 63244	1.00	Motor Support Brace	New

The following body changes occurred at car numbers listed below:

ESSEX COUPE AT CAR NO. 856515.

BO 78838 Curtain and Roller superseded by BO 78840
BO 79446 Hinge Pillar Windlace and Retainer superseded by 80660

ESSEX COACH AT CAR NO. 858723.

BO 78807 Curtain and Roller superseded by BO 78838.
79482 Hinge Pillar Windlace and Retainer superseded by 80661.

ESSEX SEDAN AT CAR NO. 860462.

BO 78840 Curtain and Roller superseded by BO 78807
79447 Hinge Pillar Windlace and Retainer superseded by 80659
79710 Ctr. Pillar Windlace and Retainer superseded by 80634

HUDSON 118" SEDAN AT CAR NO. 34159.

BO 78841 Curtain and Roller superseded by BO 80632
79711 Ctr. Pillar Windlace and Retainer superseded by 8640
79483 Hinge Pillar Windlace and Retainer superseded by 80662
BO 80116 Ash Tray superseded by BO 80117
BO 80114 Ash Tray and Match Box Container superseded by BO 80115.

HUDSON 127" STANDARD SEDAN AT CAR NO. 819790.

BO 80115 Ash Tray and Match Box Container superseded by PO 30114
BO 80117 Ash Tray superseded by BO 80116

Starting with 127" Standard Sedan, No. 820621, Victoria No. 821613, 118" Coach, No. 36233, 118" Sedan, No. 36234, a new rear spring was used in production. The following parts were affected.

Old Number	Superseded by	Price	Description	Interchangeable
CZ 25821	CZ 29719		Rear Spring (Std. Sedan only)	In pairs
CZ 30184	CZ 30811		Rear Spring (Victoria, 118" Sedan, 118" Coach)	In pairs

Starting with Hudson 127 Car, No. 819777, 118" Car No. 33961 and Essex Car No. 866666, a bushing was used in the lower end of jacket tube and ball bearing at lower end discontinued. The following parts were affected.

Old Number	Superseded by	Price	Description	Interchangeable
	BZ 30791		Lower Bushing (Both)	New
BZ 30567	BZ 30788		Jacket Tube and Bushing (Hudson)	Yes
BZ 63159	BZ 63262		Jacket Tube and Bushing (Essex)	Yes
BZ 79325	BZ 80593		Bracket Assembly (Hudson)	Yes with jacket
BZ 79326	BZ 80594		Bracket Assembly (Hudson)	" " " tube
BZ 79814	BZ 80595		Bracket Assembly (Essex)	" " " tube

Old Number	Superceded by	Price	Description	Interchangeable
BZ 79232			Bearing Retainer	Discontinued
BZ 79233			Bearing Felt	Discontinued
BZ 79234			Bearing Snap	Discontinued
BZ 70338			Bearing	Discontinued

Starting with Hudson 118" Car, No. 34987, 127" Car, No. 820690, a one piece steering column \eliminating the column coupling entered production. The following parts were affected.

Old Number	Superseded by	Price	Description	Interchangeable
CZ 30305	CZ 30815		Steering Gear complete	Yes
BZ 30490	BZ 30816		Case and Gears	Yes by eliminating upper tube
BZ 30492 BZ 29731	Discontinued		Main Tube - upper	One piece can be used for upper and lower tubes
	BZ 30817		Column (one piece)	
BZ 10127	Discontinued		Coupling Key	
BZ 28490	Discontinued		Coupling	

Starting with Essex motor No. 901906, a new type terminal clip was used on high tension cables. The following parts were affected.

Old Number	Superseded by	Price	Description	Interchangeable
BM 62483	BM 63288		Spark Plug Cable #1	Yes
BM 62434	BM 63289		Spark Plug Cable #2	Yes
BM 62435	BM 63290		Spark Plug Cable #3	Yes
BM 62436	BM 63291		Spark Plug Cable #4	Yes
BM 62437	BM 63292		Spark Plug Cable #5	Yes
BM 62438	BM 63293		Spark Plug Cable #6	Yes
BM 62496	BM 63294		Cable Tube and Wires	Yes
BM 62489	BM 63295		Coil to Dist. Cable	Yes

Starting with Hudson 127" Car, No. 820856, 118" Car, No. 35184, the horn bracket was redesigned to improve oil filling conditions. The following parts were affected.

Old Number	Superseded by	Price	Description	Interchangeable
BZ 30076	BZ 30780		Horn and Bracket	Yes except wring
BZ 30077	BZ 30781		Horn and Bracket	As noted above
BZ 30083	BZ 30729		Wire Assembly	BZ 30729 is 4" the longer

PLEASE SEE THAT THIS LETTER REACHES YOUR SERVICE MANAGER OR HEAD MECHANIC IMMEDIATELY

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U.S.A.

August 27 1928.

CABLE ADDRESS
HUDSONCAR

SERVICE LETTER

TO DISTRIBUTORS AND DEALERS:

Attached are price changes and new prices that have become effective since July 13th (Serial Letter Number 1033, Supplement Number 1).

Yours very truly,

HUDSON MOTOR CAR COMPANY

Ser: #1033
Supplement #2

Service Department

SYMBOL NO.	NAME	OLD PRICE	NEW PRICE
GC-1489	W/S Anchor Post Nut	.25	.05
BZ-10123	Steering Gear Worm	1.75	2.50
BM-13065	Oil Pump Adjusting Shaft	.75	1.50
BZ-13761	Clamp - Air Cont.	.04	.16
BZ-22639	Lever - Steering Gear	1.90	2.75
BZ-23273	Lock - Univ. Joint Nut	4.01	.05
BT-24965	Transmission Oil Ring	.06	.15
GY-29002	Brake Spider	7.50	6.50
BZ-30000	Lower Step	3.00	1.30
BM-30578	Crankshaft Bearing	1.45	1.35
BM-30579	Crankshaft Bearing	1.45	1.35
BM-30580	Crankshaft Bearing	1.45	1.60
BM-30581	Crankshaft Bearing	1.45	1.60
BM-30582	Crankshaft Bearing	1.45	1.65
BM-30583	Crankshaft Bearing	1.45	1.65
BZ-60454	Bracket - Rear Motor Support	1.25	.40
BZ-60455	Bracket - Rear Motor Support	1.25	.40
BZ-70295	Rivet - 1/4" x 9/16"	.10 per C	.20 per C
BZ-70345	Bolt - 7/16" - 14 x 1-7/8"	.20 per C	.03
CO-75516	Panel - Quarter Lower	14.00	18.50
CO-75517	Panel - Quarter Lower	14.00	18.50
BO-78819	Moulding - Rear	.75	1.25

- NEW PRICES -

SYMBOL NO.	NAME	PRICE
GO-18229	Screw - No. 6 - 32 x 3/8"	.05
BZ-25115	Pinion - Throttle Control	.45
BZ-30594	Trunk Rack Frame	3.50
BO-30734	Nut - Electrolock Mtg.	.05
CW-30782	Rim Assembly	3.65
BZ-30783	Rim Clamp	.07
BZ-30784	Rim Clamp Bolt	.07
BZ-30785	Rim Clamp Bolt Nut	.07
CZ-30811	Rear Spring Assembly	11.80
CZ-30815	Strg. Gear Complete	55.00
BM-30849	Washer - Fan Spindle	.06
BZ-62776	Bracket - Stop Light Switch	.05
BM-63239	Pad - Frt. Motor Support	.05
BM-63240	Pad - Rear Motor Support	.10
BM-63241	Plate - Rear Motor	1.60
BM-63242	Motor Support	.40
BM-63243	Motor Support	.40

Ser: 1033
Supp. #2
Sheet #1

SYMBOL NO.	NAME	PRICE
BM-63244	Brace - Rear Motor Support	1.00
BZ-63299	Battery Tray and Shield Assembly	.60
BM-63302	Fan Spindle	1.00
BZ-70435	Bolt and Nut	.05
BO-79280	Tube - W/S Cleaner	.50
BO-80177	Windlace and Retainer	2.00
BO-80178	Windlace and Retainer	1.50
CO-80460	Center Pillar - R.H.	7.00
CO-80461	Center Pillar - L.H.	7.00
CO-80470	Roof Rail - Front	2.50
BO-80579	Inst. Lamp Wire	1.00
BO-80583	Inst. Lamp Socket Assembly	1.00
BO-80588	Spring - Seat Back	2.75
BO-80602	Base - Instrument Frame	1.50

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TUNING THE 1929 ESSEX CHALLENGER

FOR MAXIMUM POWER AND

PERFORMANCE

MOTOR

CHECK TAPPET SETTING

Exhaust valves - set to clearance of .006" minimum .008" minimum, when warm.

Inlet valves - set to clearance of .004" minimum - .006" maximum, when warm.

Maximum clearances recommended for consistent high speed driving.

TEST COMPRESSION IN CYLINDERS

Set hand throttle on steering wheel wide open and check each cylinder, using hand crank. If poor compression is evidenced in any cylinder, with tappets properly adjusted, grind in valves.

IGNITION DISTRIBUTOR

See that contact points are clean and present maximum surface to each other.
Points should have a clearance of .020" maximum or .018" minimum, when the fibre block on the contact arm is on the highest point on the cam.

SPARK PLUGS

Spark plug gaps must be accurately set to a minimum clearance Of .025" - maximum .028" for best results. Porcelains must be free from oil, dust or paint to prevent high tension current from short circuiting on outside of plug.

The spark plugs used in production and recommended for service are

A. C. - Symbol No. 841758 - Type G-10

IGNITION WIRING

Make sure that all wires are properly affixed to spark plugs, coil and distributor caps.

Examine wires at entrance and exit of cable tube making sure that no wires have been chafed so as to cut the insulation or bare the enclosed wire.

IGNITION TIMING

The ignition contact points should just be separating when flywheel mark registers from dead center to 3/4" ahead of dead center.

It is recommended that the timing be set on the road, advancing until there is a slight ping evident when the throttle is opened quickly. running at ten miles per hour. It is of vital importance to have sufficient advance.

CARBURETION

VACUUM TANK

Examine all vacuum tank inlet and outlet pipe connections.

Remove sediment bowl (gasoline strainer) dump contents, wipe out bowl and replace.

HEAT CONTROL

Make sure that heat control is set in WARM position.

CARBURETOR ADJUSTMENT

Before attempting to adjust carburetor put accelerator well indicator (on top of carburetor float bowl) in SUMMER position and let motor idle for a few minutes until it is warm,

The only fuel adjustment on the carburetor is controlled by the large brass air valve screw on the side of the carburetor. For the best economy and performance this screw must not carry the air valve too tightly; that is, it must not be screwed in too far. It is difficult to notice an over-rich adjustment when the motor is running at Idling speeds because of the constant air bleed to the manifold by way of the vacuum booster on top of the vacuum tank.

The best procedure is to back out the air valve screw until the adjustment is too LEAN, then carefully turn the screw IN until the engine runs smoothly and will not stall on return to idle after quick opening, of the throttle,

Later, when testing on the road, the screw may be tightened slightly if found necessary. The approximately correct setting is when the end of the screw is flush with the end of the flat lock spring.

When adjustments have been completed return accelerator well indicator to WINTER position if cold temperatures prevail.

CHASSIS

BRAKES

Make sure that there is no perceptible brake drag at any wheel. (See Instruction Book for brake adjustments).

The most positive test for brake dragging is to drive the car one half mile or so without using the brakes and then slowly coast up to the curb using brakes slightly, if at all. Each brake drum should then be immediately inspected and if it is cold, you will be assured that there is no drag.

WHEEL BEARINGS

Wheel bearings should be properly lubricated and should be adjusted so that there is no perceptible shake on the bearings with the wheels turning freely. Absence of brake drags and free wheels on bearings is very important.

REAR AXLE DIFFERENTIAL

See that differential oil is up to proper level.

UNIVERSAL JOINTS

Should be thoroughly lubricated.

TRANSMISSION

Make sure that oil is carried to level of test plug.

CLUTCH

See that clutch contains required amount of light oil or mixture of oil and kerosene.

TIRE PRESSURES

Should be 35 pounds on each wheel.

The object of the foregoing instructions under the heading of 'Chassis' is to insure as far as possible frictionless transmission of power from motor to rear wheels. Upon completion of the chassis inspection the car will roll readily on a level floor or surface, in either direction with the pressure Of one hand. The power developed by the motor will then be converted into useful energy at the driving wheels.

HUDSON MOTOR CAR COMPANY

J. E. McLarty

Ser: 1086
Sheet 3

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U.S.A.

February 28, 1929

CABLE ADDRESS
HUDSONCAR

SERVICE LETTER

-- ELECTRIC GASOLINE AND OIL GAUGE --

SERVICE INSTRUCTIONS

This equipment consists of a voltmeter on the dash, a rheostat operated by a cork float in the oil reservoir and another similar unit in the gasoline tank, a selector switch to permit the connection of either unit to the dash gauge and the wire necessary to connect these parts (see Instruction or Parts Book for wiring diagram).

The current to operate the gauge is taken from the lower terminal on the electrolock head so that the ignition mast be turned on to make the gauge operative,

TESTING

(Ignition must be turned on for all tests)

"A" -- Gasoline reading but no oil reading,

1. Check with bayonet gauge to see that oil in reservoir is at proper level,

2. "Ground" fourth (counting from top) terminal of junction block on front of dash and push button on instrument panel,

   (a) No reading on dash instrument indicates loose connection or broken wire from junction block to gauge switch or no contact in gauge switch when button is pushed in.

      (1a) Check connection by "grounding"' left switch terminal and pushing instrument panel button. If reading is obtained, the fault is in the switch and can be checked by "grounding" right switch terminal. Cleaning of contacts should be sufficient to obtain normal operation,

   (b) If reading is obtained with "ground" in fourth terminal, look for a loose connection or broken wire from junction block to reservoir unit, poor contact between unit and reservoir or reservoir unit inoperative,

      (1b) "Ground" terminal at unit and push dash instrument button, No reading indicates loose connection from unit to junction block or broken wire.

(2b) If reading is shown under test (1b) "ground" unit case to reservoir, being sure to scrape away paint to get good contact and push dash instrument button. Reading indicates poor contact of unit with reservoir. Remove screws holding unit in place, clean thoroughly, scrape paint and dirt from unit flange around screw holes and replace.

(3b) If no reading is shown under test (2b) unit is inoperative, remove screws and withdraw unit from reservoir (oil must first be drained). "Ground" unit and with dash instrument button pushed in, move float up and dawn. If reading is obtained float arm is probably bents preventing movement when installed. Straighten arm and install and test as before.

(4b) If no reading can be obtained by moving float as described under (3b), replace unit with new one,

"B" -- Oil reading but no gasoline reading,

1. See that gasoline tank is at least half full.

2. Test as explained under "A", using top terminal on junction block for first test instead of fourth and using middle terminal of instrument panel switch instead of right terminal. Do not push instrument panel button when testing gasoline gauge.

"C" -- No reading on either gasoline or oil,

1. See that ignition switch is turned on.

2. Check connection from lower terminal of electrolock head to right terminal of dash gauge.

3. Check connection from left terminal of dash gauge to right terminal of selector switch,

4. If no reading can be obtained after checking 1, 2 and 3, "ground" left terminal of dash gauge. No reading indicates inoperative instrument and it should be replaced.

5. If reading is obtained by 4, instrument is not at fault and tests "A" and "B" should both be followed as faulty connections or inoperative rheostat units exist in both the gasoline and oil gauges.

HUDSON SUPER SIX

ALLING & MILES
INCORPORATED
82 STONE STREET
ROCHESTER, N.Y.

ESSEX MOTOR CARS

March 21, 1929.

TO ALL OUR DEALERS:

(Important - Read Carefully)

We have experienced some trouble with the present 1929 Essex motors "missing" when the car is pulling hard hills. Careful investigation has shown us that the following motor adjustments will correct this trouble:

1. Make sure that motor is equipped with G-10 A.C. Spark Plugs, points of which should be set at .023.
2. Set carburetor heat control at "medium" position.
3. Set carburetor float chamber adjustment on "winter".
4. Set valve clearance at .006.
5. Make certain that ignition timing is properly set.
6. Ignition points should be set at .018 clearance, making sure that this clearance is uniform over the entire surface of the point.
7. If ignition points are burned so that they will clean up without leaving pits, install new points.
8. In some cases where points are badly burned, it be necessary to change condensers, as condensers are sometimes weakened by too wide spacing of spark plug and ignition points, especially in high-compression motors of the Essex type.

Very truly yours,

ALLING & MILES, Incorporated.

EWD:GDG Service Manager Manager

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U.S.A.

August 19, 1929.

CABLE ADDRESS
HUDSONCAR

SERVICE LETTER

TO HUDSON-ESSEX DISTRIBUTORS AND DEALERS:

-- HUDSON AND ESSEX OIL PUMPS --

The circulating splash oiling system employed on Hudson and Essex oars permits the use of a simple plunger type oil pump consisting of the pump body, main plunger and spring, inlet check valve, outlet check valve and in the case of the Essex, check valve springs, distributor plunger, spring and cap.

In operation, the actuating eccentric forces the main plunger back against its spring and the pressure exerted on the oil forces it through the upper or outlet check valve. This in turn causes the distributor plunger -- which is located immediately above the upper valve -- to rise against the pressure of its spring and uncover the outlet passage of the pump through which the oil then passes on its way to the front of the engine. As the offset or "throw" of the eccentric passes the center of the main plunger, the spring moves the plunger outward creating a vacuum which lifts open the lower or inlet check valve and draws in a fresh charge of oil from the reservoir through the suction pipe and strainer.

-- OIL PUMP REPLACEMENTS --

Our inspection of Hudson and Essex oil pump assemblies replaced on cars and returned to us because of alleged defects, indicates that only a very small percentage of these are actually in a condition to justify replacement. In view of this and since most of the reasons for oil pump failure can be corrected in the field, we suggest that the following points be checked before renewing assemblies.

1. Broken main plunger spring.
2. Plunger sticks in pump body.
3. Suction pipe damaged in putting on pan.
4. Suction pipe cracked or fittings loose.
5. Distributor plunger sticks in body.

Ser: 1178

6. Distributor plunger spring broken.
7. Oil pump to front motor plate pipe cracked or fittings loose.
8. Oil pressure gauge pipe cracked or fittings loose.
9. Check valves not seating properly.
10. Obstructions in suction pipe or pump inlet.
11. Air leaks at inlet connection joint.
12. Check valve sticks in body.
13. Check valve spring weak or broken.

In the event of oil pump difficulty, an inspection of the foregoing items will generally disclose the cause and suggest the remedy.

Although it is generally understood that the oil pressure gauge reading is relatively unimportant -- being in no way indicative of the amount of oil pumped -- our inspection shows that the tension of the distributor plunger spring and even the spring itself is often changed to obtain a higher reading. This should be avoided as in many instances the bellows of the oil pressure gauge is distorted and the gauge rendered inoperative.

Very truly yours,

HUDSON MOTOR CAR COMPANY

Ser: 1178 General Service Manager

(COPY OF THIS LETTER HAS BEEN FORWARDED TO ALL YOUR DEALERS.)

For The Promotion of

BIGGER SALES BETTER SERVICE

September 18, 1929.

TO ALL OUR DEALERS:

To take care of certain complaints regarding noisy timing chain operation on current Essex cars which cannot be corrected by adjustment of the chain, we are now in a position to supply Part Number XT-297-A Timing Chain Guide.

This device, installed in the chain cover in accordance with the following instructions, will control the movement of the chain and prevent whip.

INSTRUCTIONS

1. Drain water from cooling system.
2. Disconnect radiator shutter operating rod and radiator hose connections.
3. Remove radiator support bolt nuts and take off radiator.
4. Remove fan assembly.
5. Unscrew starting crank jaw and remove fan drive pulley.
6. Remove chain cover cap screws and take off cover.
7. Install chain guide in cover, using 3/16"round head rivets 3/8" long.
8. Carefully adjust chain by means of eccentric adjustment, so there will be approximately 5/8" up and down movement possible when the chain is grasped midway between the crankshaft and generator shaft sprockets.
9. Reassemble parts, reversing preceding operations.

Upon advice from you, we will supply, gratis, Part Number XT-297-A Timing Chain Guides to be used in the correction of such cases as you deem necessary.

Very truly yours,

ALLING & MILES, Incorporated.

EWD:GDG

Service Manager

1927-1929

Mechanical & Paint Specifications

Mechanical Specifications for

Hudson Super Six - 1927 Model

Car Serial No. 750,001 to -------

(Revised March 1927)

REVISED MARCH -1927.

Mechanical Specifications for
Hudson Super Six Model -1927.
Car Serial Nos. 750,00-1 to - - - - - - -

ENGINE

Make	Hudson	Piston Displacement	288
Model	Super Six	Suspension	4 Point
No. of Cylinders	8	Type of head	F
Cylinder Arrangement	Vertical	Cylinder Head	Detachable
Bore	3-1/2"	Cylinders Cast	En Bloc
Stroke	5"	Crankcase	Separate
Rated H.P.	29.4	Upper half	Aluminium
Firing order	1-5-3-6-2-4	Lower half	Pres. steel

CAMSHAFT DRIVE

Type of drive	Chain	No . of links	63
Make	Morse	Pitch	1/2"
Type	No. 28	Adjustment	Adjustable Ecc.
Width of chain	1-5/8"	Sprocket Material	Cast Iron
Camshaft Sprocket	42 teeth		

CAMSHAFT BEARINGS

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

VALVE TIMING

Inlet opens	7º after TDC	Exh. opens	55° before BDC
Inlet closes	42º " BDC	Exh. closes	8º after TDC

VALVES

	INLET VALVE	EXHAUST VALVE
Head material	Tungsten steel	Silicon Steel
Head diameter (outside)	1-31/32	1-31/32
Head diameter (opening)	1-13/16	1-3/4
Stem length	5-29/32	6-15/16
Stem diameter	.371	.371
Stem type of end	Grooved	Grooved
Tappet (type)	Roller	Roller
Tappet clearance	.004 -.006	.003 -.008
Valve lift	9/32"	19/64"
Valve stem guides	Removable	Removable
Spring pressure	96 lbs.	75 lbs.

CRANKSHAFT AND CRANKCASE

No. of main bearings	4	Crankpin Diameter	20
No. 1 (Frt) Diameter	2-1/4"	Main Brg. Material	Bronze and Babbitt
" Length	2-3/8"	Main Brg.end play	.005-.012
No.2 Diameter	2-9/32	Main Brg.clearance	.0015 -.002
" Length	1-7/8"	End thrust on	Rear center brg.
No.3 Diameter	2-5/16"	Sprocket	21 teeth
" Length	2-1/8"	Material	Steel
No.4 Diameter	2-11/32"		
No.4 Length	3-1/8"		

CONNECTING ROD

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

PISTON

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

PISTON RINGS

Material	Cast iron	No. of rings above pin	3
No. per piston	3	Type of joint	Mitre
Width	1/8"	Cap Clearance	.000 -.008
No. of comp. rings	2		
No. of Oil Control rings)	1		

PISTON PIN

Type	Floating	Bushing Outside dia.	1.283
Diameter	1.0937	" " Inside	1.0937
Length	2-11 /16	" " Length	1-1/8

LUBRICATING SYSTEM

Type	Circulating splash
Oil pump type	Plunger
Stroke of pump-plunger idling	Min. 3/16"
" " " High Speed	Max. 5/16"
Capacity-oil reservoir only	7 Quarts
" " " and troughs	9"
Mesh of screen	50
Oil recommended	Medium Heavy - Use low cold test in winter.

COOLING SYSTEM

Type	Centrifugal pump
Radiator - Make	Harrison
Gore type	Ribbon cellular
Radiator shutter - type	Pressed steel
Sutter control type	Manual
Capacity of cooling system	5-1/2 Gallons
Radiator hose - upper - diameter	1-1/2"
" " " length	6"
" " lower - diameter	1-1/2"
" " " length	10-1/2"
Fan belt type	Flat
Fan belt width	1"
" " length	34-7/6
Fan-Make	Hudson
Fan bearing Type	Plain

FUEL SYSTEM

Carburetor - Make	Marvel
" size	1-1/4
Fuel feed - type	Vacuum tank
Make of vacuum tank	Stewart
Air Cleaner - Type	A.C.
Gasoline Tank Capacity	18-3/4 Gallons
Method of heating mxture	Hot spot

EXHAUST SYSTEM

Muffler-Make	Hudson	Exhaust pipe dia. 2-1/4"

IGNITION SYSTEM

Make	Auto-Lite Corporation
Current source	Battery and Generator
Spark control type	Semi-Automatic
Firing order	1-5-3-6-2-4
Timing	10º before D. C. Fully advanced
Breaker point gap	.020
Ignition coil- Make	Auto-Lite Corporation
Spark plug- Make	A. C. Titan.
Spark plug- Type	Short
Spark plug- Size	Metric 18 M/M
Spark plug- Gap	.025-.028

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

STARTER MOTOR

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

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

GENERATOR

Make	Auto-Lite Corporation
Normal charging rate - hot	13 Amperes
Normal charging rate - cold	17 Amperes

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

BATTERY

Make	Prest- 0-Lite	Terminal grounded	Negative
Type	6-15-J.F.M.H.	Length - overall	10-1/4"
Voltage	6	Width	7-3/8
No. of plates	15	Height of box	8" (Including handle- 9-1/4 ")
Amp. Hours capacity	120	Height over terminal	8-1/4"

LIGHTING SYSTEM

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

LAMP BULB SPECIFICATIONS

	Make	Mazda	CP	Contact	Voltage
Head	Mazda	1129	21	Single	6-8
Side	"	63	3	"	6-8
Tail	"	63	3	"	6-8
Dash	"	63	3	"	6-8
Stop	"	87	15	"	6-8
Dcme	"	63	3	"	6-8

HORN

E. A. HORN Motor Type

CHASSIS

Wheelbase	127-3/8"
Lubricating system	Oil cups - wick
Overall length with bumpers	15'-8"
Location of serial number	Frame rear cross member R.H. end

TRANSMISSION

Make	Hudson	Pocket brg.	Bronze Bush
Location	Unit	Reverse idler	Hyatt No. 16820
Speed	3 Forward -1 Rev.	Main Shaft-frt.	N.D. 1308
Gear ratio-Low	3.04 to -1	Main Shaft-rear	Hyatt No. 13684
Gear ratio-Second	1.81 to 1	Countershaft-frt .	Hyatt No. 13506
Gear ratio-High	1 to 1	Countershaft-rear	Hyatt No. 13506
Gear ratio-Rev.	3.09 to 1	Countershaft-Rotates	N. D. No. 1204
Type of lubricant	Light transmission oil		
Oil capacity (approx.)	1-1/2 Quarts		
Pilot brg. in Crankshaft	N.D. No. 1204		

CLUTCH

Make	Hudson	Facing Material	Cork inserts
Type	Single disc in oil	Throwout brg.	Nice No. 0210
No. Cork inserts	132	Throwout	5/32"
Lubrication	1/4 pt.	Clearance at floorboard	3/4"
(Mixture -1/8 pt . mot or oil and -1/8 pt . kerosene)			

UNIVERSALS

Front -Make	Spicer	Rear-Make	Spicer
Front -type	Metal	Rear-type	Metal

TYPE OF DRIVE

Propulsion through Rear springs.

REAR AXLE

Make	Hudson	No. of teeth in pinion	11
Type	Semi-floating	" " " " gear	49
Gear ratio	4-5/-11 to 1		
Type of drive	Spiral bevel	Pinion	Adjustable
Min. road clearance	6-1/4"	Pinion bearing	Adjustable
Clearance for jack	10-1/4"	Oil capacity (approx.)	2 -1/2 Qts.
Diferential -Make	Hudson	Type of lubricant	Dif f. oil
Pinion brg.	Front - Timken 3196 and 3120		
Pinion brg.	Rear - Timken 439T and 432		
Rear Differential brg.	Right - 377 and 3720		
Rear Differential brg	Left - 377 and 3720		

FRONT AXLE

Make	Hudson	Toe in--none-or not over 1/6"	
Section-Type	I	Cast or Angle	1° Backward
2nd-Type	Rev. Elliott	Min. Road Clearance	8-1/4"
King pin thr. brg.	Special Thrust	Clearance for jack	6-3/4"
King pin transverse inclination	6-1/2º		
Spindle " "	2-1/2°		

STANDARD BRAKES

Type of standard brakes	Bendix 4-Wheel Brakes

SERVICE BRAKE

Location	Front & Rear Wheels	Lining length per Wheel	3 pcs, 38-7/32"
Make	Bendix	Width of lining	2"
Type	Internal	Thickness of lining	3/16"
Total braking, area	305-3/4 sq. in.	Clearance of lining	.010
Drum diameter	Front & Rear - 14"	Method of application	Foot pedal

HAND BRAKE

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

WHEELS

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

RIMS

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

TIRES

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

STEERING GEAR

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

SPRINGS

Front Spring		Rear Spring	
Type	Semi-Elliptic	Type	Semi-elliptic
Length	39"	Length	57-11/16"
Width	2-1/4"	Width	2-1/4"
No. of leaves	10	No. of leaves (for Phaeton, Coach, Brougham, 5 and 7 Pass. Sedans	15
Material	Spring Steel	Material	Vanadium Steel
Front Bushing	11/16" diameter	Front Bushing	3/4" diameter
Rear Bushing	11/16" diameter	Rear Bushing	11/16" diameter
Bushing material	Phosphor Bronze	Bushing Material	Phosphor Bronze
Spring Lubrication	Motor Oil		
Shackles - Type	Adjustable		

FRAME

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

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

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

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

Rule #1: MPH Multiplied by 48 = Motor RPM (approximately)
Example: What is the RPM at 40 miles per hour'?
Answer: 40 multiplied by 48 = 1920 RPM (approx.)
Rule #2: MPH multiplied by 44 = Motor RPM (approx.)

TO OBTAIN SPEED IN MILES PER HOUR FOR ANY DESIRED MOTOR RPM:
Note: The following rule $3 is good only for a gear ratio of 4-5/11 to 1 and with a wheel diameter of 31 inches.

Rule #3: RPM divided by 48 - Speed in miles per hour (approx.)
Example: What is the speed at 2400 RPM?
Answer: 2400 divided by 48 = 50 MPH (approx.)

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

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

GEAR RATIO

To obtain the number of revolutions of the motor required for one revolution of the rear wheel, multiply the transmission ration by the rear axle ratio.
Example: 3.04 (low gear ratio) x 4.45 (rear axle ratio) - 13.528 revolutions of the motor to one revolution of the rear wheel.

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

	Transmission Ratio	Rear Axle Ratio	Motor Revolution	Wheel Revolution
With transmission in Low	3.04	4.45	13.528	1
With transmission in Second	1.81	4.45	8.05	1
With transmission in High	1	4.45	4.45	1
With transmission in Reverse	3.69	4.45	16.420	1

Ser: 945
Sheet #7

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

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

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

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

Mechanical Specifications for

Essex Super Six - 1927 Model

Car Serial No. 500,001 to -------

(Revised March 1927)

REVISED MARCH 1927.

Mechanical Specifications for Essex Super Six - 1027 Model
Car Serial No. 500,001 to ----------

ENGINE

Make	Hudson	Piston Displacement	144.67
Model	Essex Super Six	Suspension	4 Point
No. of cylinders	6	Type of head	L
Cylinder arrangement	Vertical	Cylinder head	Detachable
Bore	2-11/16	Cylinders in block	6
Stroke	4-1/4	Crankcase	Integral
Rated H.P.	17.32	Material	Cast Iron
Firing Order	1-5-3-6-2-4	Lower Half	pressed Steel

CAMSHAFT DRIVE

Type of drive	Chain	No. of links	57
Make	Morse	Pitch	1/2"
Type	No. 28	Adjustment	Adjustable Eccen.
Width	1-1/4	Sprocket Material	Cast Iron
Camshaft Sprocket	38 Teeth		

CAMSHAFT BEARINGS

Number of bearings	3	#2 Diameter	1-31/32"
#1 Front - Diameter	2"	#2 Length	1-1/16"
#1 Length	1-1/16"	#3 Diameter	1-1/2"
		#3 Length	15/16"

VALVES

	INLET	EXHAUST
Head Material	Tungsten Steel	Silicon Steel
" diameter (outside)	1-3/8"	1-3/8"
" " (opening)	1-1/4"	1-1/4"
Stem length	5-1/32"	5-1/32"
" diameter	5/16"	5/16 "
" type of end	Grooved	Grooved
Tappet - type	Roller	Roller
" clearance	.003 - .005	.005 - .007
Valve Lift	9/32"	19/64"
" stem guides	Removable	Removable
Spring pressure	40 lbs.	40 lbs.

VALVE TIMING

Inlet opens	7° after T.D.C. Exhaust opens	55º before B.D.C.
" closes 50º "	B.D.C, Exhaust closes	8° after T.D.C.

CRANKCASE AND CRANKSHAFT

No. of main bearings	3	Crank pin diameter	1-13/16"
No. 1 (front)-diameter	2-7/32"	Main bearing mat'l.	Bronze & babbitt
" 1 length	1-9/16"	" " clearance	.001
No. 2 diameter	2-1/4"	" " end play	.007 - .011
" 2 length	1-3/4"	End thrust on	Center bearing
No. 3 diameter	2-9/32"	Sprocket	19 teeth
" 3 length	1-3/4"	Material	Steel

CONNECTING ROD

Material	D.F. Steel	Lower end bearing clear.	.001
Weight	14 lbs.	Clearance (endwise)	.006 - .010
Length C. to C.	6-5/16"	Type	Poured
Lower end bearing		Material	Babbitt
Diameter	1-13/16"		

PISTON

Type	Slotted Skirt	Distance Between Bosses	1-1/8"
Material	Aluminum Alloy	Clearance - skirt	.002
Weight	8 ounces	Depth of grooves	.156
Length	3-1/16"	Lower groove	Drilled radially
Pin center to top	1-11/16"	Number of holes	8
	Diameter of holes	3/32"	

PISTON RINGS

Material	Cast Iron	No. of Oil Rings	1
No. per piston	3 (above pin)	Type of joint	Mitre
Width	1/8"	Gap clearance	.006 - .008
No. of Comp. Rings	2	Make	Piston Ring Co.

PISTON PIN

Type	Floating	Bushing-outside diameter	15/16"
Diameter	3/4"	" -inside diameter	3/4"
Length	2-3/32"	" -length	15/16"

LUBRICATION SYSTEM

Type	Circulating splash
Oil Pump Type	Plunger
Stroke of Pump	Not Adjustable
Capacity - Oil Reservoir Only	5 Quarts
Capacity - Oil Reservoir and troughs	6 "
Mesh of screen	50.
Oil Recommended	Medium Heavy - Use low cold test in winter.

COOLING SYSTEM

Type	Thermo. syphon
Radiator - make	Harrison
Core - type	Ribbon cellular
Radiator Shutter - type	Pressed Steel
Radiator shutter - make	Hudson
Shutter control - type	Manual
Capacity of Cooling System	4-3/4 Gallons
Radiator hose, upper, diameter	2-1/4"
" " " length	5-1/2"
" " lower, diameter	2-1/4"
" " length	15-3/16"
Fan belt type	Flat
" " width	1"
" " length	35-7/8"

COOLING SYSTEM - Cont'd,

Fan - make	Hudson
Fan bearing type	Plain

FUEL SYSTEM

Carburetor make	Stewart
Carburetor size	1
Method of heating mixture	Exhaust Stove and hot spot
Make of vacuum tank	Stewart
Gasoline Tank Capacity	1-1/2 Gallons
Fuel Feed - Type	Vacuum Tank

EXHAUST

Muffler - make — Hudson — Exhaust Pipe Diameter - 1-3/4"

IGNITION SYSTEM

Make	Auto-Lite Corporation
Current source	Battery and Generator
Spark control type	Full Automatic
Firing order	1-5-3-6-2-4
Timing	D.C. (Fully retarded)
Breaker Point Gap	.020
Ignition Coil - make	Auto-Lite Corporation
Spark Plug - make	A. C. Titan
" " - type	Short
" " - size	Metric - 18 m/m
" " - gap	.025 -.028

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

STARTER MOTOR

Make	Auto-Lite Corporation
Drive - type	Bendix
No. of teeth on flywheel	100
Width of tooth face	3/8"
Pinion meshes from	Rear of flywheel

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

GENERATOR

Make	Auto-Lite Corporation
Normal charging rate - hot	10 Amps.
" " " - cold	13.5 Amps

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

BATTERY

Make	Prest-O-Lite	Terminal Grounded	Negative
Type	5-13 J.F.K.E.	Length - overall	9"
Voltage	6	Width - overall	7"
No. of Plates	13	Height of box	7-7/8" (inc, handle
Amp. Hours Cap.	105	Height over terminals	8-3/4" (9-1/2")
Where mounted	Under driver's seat		

LIGHTING SYSTEM

Head and tail lamps - make	John Brown Lamp Company
Head lamp reflector - make	" " " "
Lead lamp - type	Bullet
Side lamp - type	Bullet
Head lamp lens - make	Spreadlight
Head lamp lens - diameter	8"
Head lamp dimmer method	Resistance
Lash and tail lights connected	Separately
Ammeter - make	National Gauge & Equipment Co.
Dash light - make	" " " " "
Lighting switch - make	Auto-Lite Corporation.

LAMP BULB SPECIFICATIONS

	MAKE	MAZDA No.	C, P,	CONTACT	VOLTAGE
Head	Mazda	1129	21	Single	6 - 8
Side	"	63	3	"	6 - 8
Tail	"	63	3	"	6 - 8
Dash	"	63	3	"	6 - 8
Stop	"	87	12	"	6 - 6
Dome	"	63	3	"	6 - 8

HORN

E. A. Horn — Motor type

CHASSIS

Wheelbase	110-1/2"
Lubricating system	Oil cups - wick
Overall length with bumpers	14' - 0"
Location of serial number	Rear cross member

TRANSMISSION

Make	Hudson	Pocket bearing	Bronze bushing
Location	Unit	Reverse idler	11""
:speeds	3 forward 1 rev,	Main shaft-frt.	N.D. #1207
Gear ratio-low	3.244 to 1	Main shaft-rear	Hyatt No. N. C. 306
Gear ratio-sec,	1.961 to 1	Countershaft	Stationary
Gear ratio-high	1 to 1		
Gear ratio-rev.	4.170 to 1		
Type of lubricant	Heavy motor oil		
Oil capacity (approx.)	1 Quart		
Pilot brg. in Crankshaft	N.D. No. 1202		

CLUTCH

Make	Hudson	Lubrication	1/4 pt.
Type	Single disc in oil	Throwout bearing	Annular & Thrust
Facing Material	Cork Inserts	Throwout	5/32"
No. of cork inserts	72	Clearance at F/B	3/4"

LUBRICATION MIXTURE - 1/8 pt. Motor Oil & 1/8 pt. Kerosene

UNIVERSALS

	Make	Type		Make	Type
Front	Spicer	Metal	Rear	Spicer	Metal

TYPE OF DRIVE

"Hotchkiss" - Propulsion through rear springs.

REAR AXLE

Make	Hudson	Wheel Bearing	Timken 415TV & 412A
Type	Semi-floating	Pin. Brg.-Front	" 2691V & 2620
Gear Ratio	5.6 to 1	" " Rear	" 3188 & 3120
Type of Drive	Spiral bevel	Differential Brg.-Right	" 336 & 332C
Min. Road Clear.	9"	" " Left	" 336 & 3320
Clear, for Jack	10-1/4"	No. of teeth in pinion	10
Differential - make	Hudson	" " " " gear	56
Pinion	Adjustable	Oil Capacity (approx.)	1-1/2 quarts
Pinion Bearing	"		

FRONT AXLE

Make	Hudson	Toe in - None, or not over 1/8"	
Section - type	1	Castor Angle	1-1/2° Backward
End - type	Elliott	Min. Road Clearance	9"
King pin thrust brg.	Nice #507	Clearance for jack	7-1/4"
" " transverse inclination -	none	Spindle transverse inclination	2º

STANDARD BRAKES

Type — Two wheel

SERVICE BRAKES

Location	Rear wheels	Lining length per wheel	39-3/6"
Make	Hudson	Width of lining	1-5/4"
Type	External	Thickness "	3/16"
Total braking area	138 sq. inches	Clearance "	1/64"
Drum Dia. (Ext.)	14-3/8"	Method of Application	Foot pedal

HAND BRAKE

Location	Rear wheels	Lining length per wheel	35"
Make	Hudson	Width of lining	1-1/2"
Type	Internal	Thickness of lining	3/16"
Total braking area	122.5 sq. inches	Clearance of "	1/34"
Drum diameter (Int.)	14"	Method of application	Hand lever

WHEELS

Type	Wood-steel felloe
Lake	Motor Wheel Corp.
Front wheel inner bearing	Timken No. 2554 and 2520
" " outer "	" " 2382 and 2320

RIMS

Type	Split	Diameter	21"
Make	Jaxon	Width	4"

TIRES

Size	31 x 5 Balloon, Straight side
Make	Goodyear and U. S.
Number of plies	4
Recommended pressure	Front 28 lbs. Rear 32 lbs.

STEERING GEAR

Make	Hudson
Type	Worm and wheel
2atio	7-1/2 to 1
Steering wheel turns	1-¾ (full swing left to right)
Turning diameter	40 feet
Lubricant	Steam cylinder oil

SPRINGS

Front spring		Rear spring	
Type	Semi-elliptic	Type	Semi-elliptic
Length	36"	Length	54-7/8"
Width	2"	Width	2"
No. of leaves	9	No. of leaves	8
Material	Vanadium Steel	Material	Vanadium Steel
Front bushing	5/6" dia.	Front bushing	5/8" dia.
Rear "	5/8" dia.	Rear "	5/8" dia.
Bushing material	Phosphor Bronze	Bushing material	Phosphor Br,onze
Spring Lubricant	Motor Oil		
Shackles - type	Adjustable		

FRAME

Make	Hudson	Thickness	5/32"
Material	Steel	Width of flange	1-7/8"
Depth	4-1/2"		

ESSEX SUPER SIX - STANDARD EQUIPMENT

CAR SERIAL NO. 500,001 to 610,275

	SPEEDSTER	COUPE	COACH	SEDAN
Windshield Cleaner Make	None	Trico Mfg.Co.	Trico Mfg.Co.	Trico Mfg.Co.
Windshield Cleaner Type	-	Vacuum	Vacuum	Vacuum
Trunk Rack	None	None	None	None
Cowl Ventilator	Yes	Yes	Yes	Yes
Engine Heat Indicator - Boyce Motometer		A L L	M O D E L S	
Gasoline Gauge Location - Instrument Board		A L L	M O D E L S	
Gasoline Gauge Type - King-Seeley Hydrostatic		A L L	M O D E L S	
Wheels - Type - Wood Wheels		A L L	M O D E L S	
Sun Visor	No	Yes	Yes	Yes
Radiator Shutters -	Yes	Yes	Yes	Yes
Rear Traffic Signal -	Yes	Yes	Yes	Yes
Comb. Tail & Stop Light-Make - John Brown Lamp Co.		A L L	M O D E L S	
Cowl Lights	No	Yes	Yes	Yes
Dope Light	No	Yes	Yes	Yes
Speedometer - Make - Stewart-Warner		A L L	M O D E L S	
Transmission Lock	Yes	Yes	Yes	Yes
Spare Rim - One		A L L	M O D E L S	
Horn - Make - E.A.		A L L	M O D E L S	
Headlamps - Make - John Brown Lamp Co.		A L L	M O D E L S	
Tire Carrier - Make - Hudson		A L L	M O D E L S	

MODEL 1927 ESSEX SUPER SIX
Car Serial #500,3001 to ---
GEAR RATIOS AND RULES FOR COMPARING
SPEED IN MILE'S PER HOUR WITH MOTOR R.P.M.

Note: The following rules are good only for a gear ratio of 5.6 to one and with wheel diameter of 31 inches.

TO OBTAIN MOTOR R.P.M. FOR ANY DESIRED SPEED IN MILES PER HOUR
Rule - M.P.H. multiplied by 61 = Motor R.P.M(approx.)
Example - What is the R.P.M. of motor at 40 miles per hour?
Answer - 40 multiplied by 61 = 2440 R.P.M. (approx.)

TO OBTAIN SPEED IN MILES PER HOUR FOR ANY DESIRED MOTOR R.P.M.
Rule - R.P.M. divided by 61 = Speed in miles per hour (approx.)

GEAR RATIOS To obtain the number of revolutions of the motor required for one revolution of the rear wheel:

Multiply the transmission ratio by the rear axle ratio.

Example - 3.244 (low gear ratio) multiplied by 5.6 (rear axle ratio) equals 13.166 revolutions of the motor to one revolution of rear wheel.

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

	TRANS. RATIO	REAR AXLE RATIO	MOTOR REVS.	WHEEL REVS.
With transmission in low	3.244	5.6	10.166	1
" " " sec.	1.961	5.6	10.981	1
" " " high	1	5.6	5.6	1
" " " rev,	4.17	5.6	23.352	1

ESSEX SUPER SIX-- BODY DETAILS

CAR SERIAL NO. 500,001 TO---

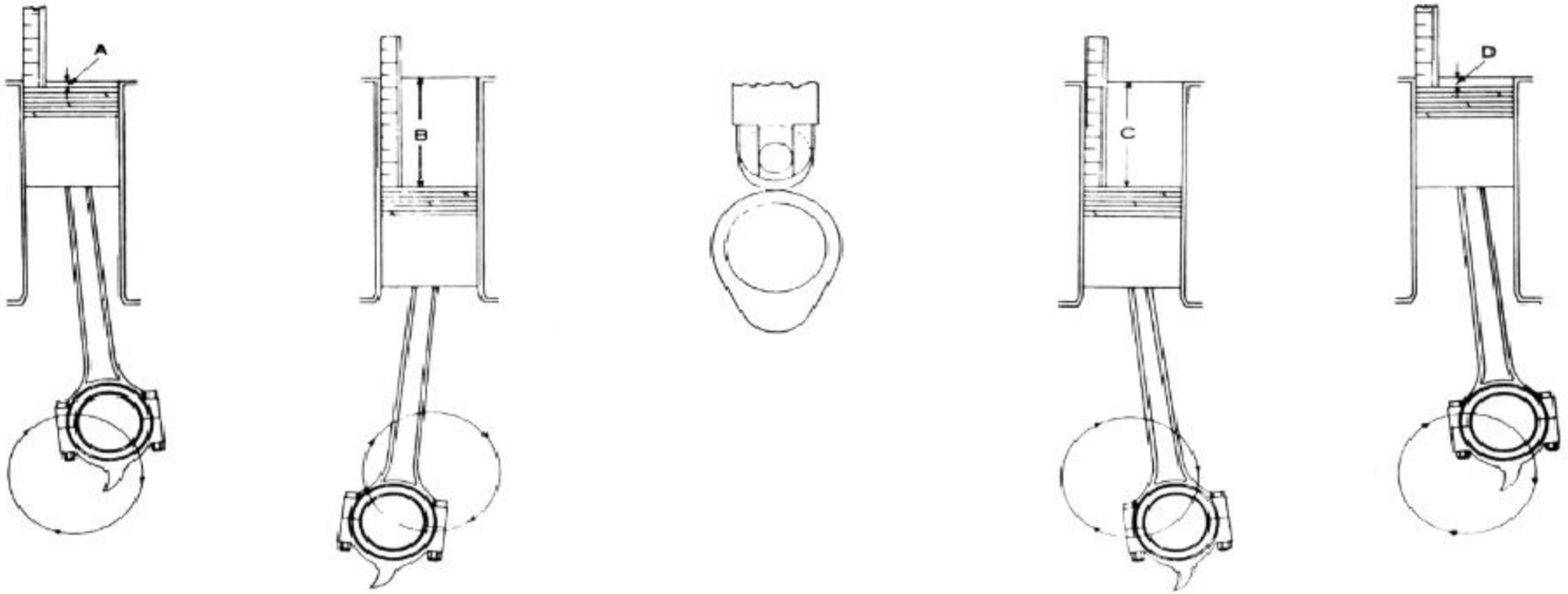
	SPEEDSTER	COUPE	COACH	SEDAN
Model	1927	1927	1927	1927
Wheelbase Buck. Seat Type 2510	110-1/2	110-1/2	110-1/2	110-1/2
Weight		2340	2450 Buck. Seat Type 2510 Bench " " 2530	
No. of doors	4	2	2	4
No. of passengers Optional	4	2	5	5
Seating arrangement	Std.	Std.	Std, Optional Bench or Bucket	
Gear Ratio	5.6 to 1	5.6 to 1	5.6 to 1	5.6 to 1
Make of body	Briggs Mfg. Co.	Briggs Mfg.Co.	Hudson	Hudson
Frame work material	Wood	Steel	Steel	Steel
Body panel material	Steel	Steel	Steel	Steel
Rear & Quarter sect. material	Steel	Steel	Steel	Steel
Windshield - type	One Piece Swing Type -- ALL MODELS			
Windshield - make	Motor Product	-- ALL MODELS		
	Wood	-- ALL MODELS		
Tires - size	31 x 5	-- ALL MODELS		

Hudson & Essex Six

Valve Timing Measured by Piston Travel

Hudson Reference Sheet No. 33 (May 1927)

Hudson and Essex Six Valve Timing Measured by Piston Travel



HUDSON (All Models)

DIMENSION A Inlet opens when piston is 5/64" from top of cylinder on downward stroke.
DIMENSION B Inlet closes when piston is 4-17/32" from top of cylinder on upward stroke.
DIMENSION C Exhaust opens when piston is 4-11/64" from top of cylinder on downward stroke.
DIMENSION D Exhaust closes when piston Is 3/32" from from top of cylinder on downward stroke.

Valve Timing by Degrees is as follows:
Inlet opens 7º after top dead center.
Inlet closes 42º- after bottom dead center.
Exhaust opens 55º before bottom dead center.
Exhaust closes 8º after top dead center.

ESSEX SIX (All Models)

DIMENSION A Inlet opens when piston is 1/64" from top of cylinder on downward stroke.
DIMENSION B Inlet closes when piston is 3-21/32" from top of cylinder on upward stroke.
DIMENSION C Exhaust opens when piston is 3-17/32" from top of cylinder on downward stroke.
DIMENSION D Exhaust closes when piston is 1/32" from top of cylinder on downward stroke.

Valve Timing by Degrees is as follows:
Inlet opens 7º after top dead center.
Inlet closes 50º after bottom dead center.
Exhaust opens 55º before bottom dead center.
Exhaust closes 8º after top dead center

NOTE: Since the inlet valves in the new Hudson No. 750.001 upward, are located in the cylinder head they cannot be checked by piston travel. Checking exhaust valves will be sufficient.

Essex Mechanical Specifications

Super Six - 1928 Model

Car Serial No. 610,276 to - - - - - - - -

Hudson Reference Sheet No. 34 (July 1927)

REVISED JULY, 1927

Mechanical Specifications for Essex

Super Six 1928 Model

Car Serial No. 610,276 to _____

ENGINE

Make	Hudson	Piston displacement	153.15
Model	Essex Super Six	Suspension	4 Point
No. of cylinders	6	Type of head	L
Cylinder arrangement	Vertical	Cylinder head	Detachable
Bore	2-11/16"	Cylinders in block	6
Stroke	4"	Crankcase	Integral
Rated H. P.	17.32	Material	Cast iron
Firing order	1-5-3-6-2-4	Lower half	Pressed steel

CAMSHAFT DRIVE

Type of drive	Chain	No. of links	57
Make	Morse	Pitch	1/2"
Type	No. 28	Adjustment	Adjustable eccen.
Width	1-1/4"	Sprocket material	Cast iron
Camshaft sprocket	38 Teeth		

CAMSHAFT BEARINGS

Number of bearings	3	No. 2 diameter	1-31/32"
No. 1 front—diam.	2"	No. 2 length	1-1/16"
No. 1 length	1-1/16"	No. 3 diameter	1-1/2"
		No. 3 length	15/16"

VALVES

	Inlet	Exhaust
Head material	Silicon steel	Silicon steel
Head diameter (outside)	1-3/8"	1-3/8"
Head diameter (opening)	1-1/4"	1-1/4"
Stem length	5-1/32"	5-1/32"
Stem diameter	5/16"	5/16"
Stem type of end	Grooved	Grooved
Tappet—type	Roller	Roller
Tappet clearance	.003"-.005"	.005"-.007"
Valve lift	9/32"	19/64"
Valve stem guides	Removable	Removable
Spring pressure	40 lbs.	40 lbs.

VALVE TIMING

Inlet opens	7° after T. D. C. Exhaust opens	55° before B. D. C.
Inlet closes	50° after B. D. C. Exhaust closes	8° after T. D. C.

CRANKCASE AND CRANKSHAFT

No. of main bearings	3	Crank pin diameter	1-13/16"
No. 1 (front)—diameter	2-11/32"	Main bearing material	Bronze & babbitt
No. 1 length	1-1/2"	Main bearing clearance	.001"-.0015"
No. 2 diameter	2-3/8"	Main bearing end play	.006"-.012"
No. 2 length	1-3/4"	End thrust on	Center bearing
No. 3 diameter	2-13/32"	Sprocket	19 teeth
No. 3 length	1-3/4"	Material	Steel

CONNECTING ROD

Material	D. F. Steel	Lower end bearing clear.	.001"
Weight	1-1/2 lbs.	Clearance (endwise)	.006"-.010"
Length C. to C.	8-3/16"	Type	Poured
Lower end bearing material	Babbitt		
Diameter	1-13/16""		

PISTON

Type	Slotted Skirt	Distance between bosses	1-1/8"
Material	Aluminum Alloy	Clearance—skirt	.002"
Weight	8 ounces	Depth of grooves	.156"
Length	3-1/16"	Lower groove	Drilled radially
Pin center to top	1-11/16"	Number of holes	8
		Diameter of holes	3/32"

PISTON RINGS

Material	Cast Iron	No. of oil rings	1
No. per piston	3 (above pin)	Type of joint	Mitre
Width	1/8"	Gap clearance	.006"-.008"
No. of comp. rings	2	Make	Piston Ring Co.

PISTON PIN

Type	Floating	Bushing—outside diam.	15/16"
Diameter	3/4"	Bushing—inside diam.	3/4"
Length	2-3/2"	Bushing—length	15/16"

LUBRICATION SYSTEM

Type	Circulating splash
Oil pump type	Plunger
Stroke of pump	Not adjustable
Capacity—Oil reservoir only	5 quarts
Capacity—Oil reservoir and troughs	6 quarts
Mesh of screen	50
Oil recommended	Medium heavy—Use low cold test in winter.

COOLING SYSTEM

Type	Thermo. syphon
Radiator—make	Harrison
Core—type	Ribbon cellular
Radiator shutter—type	Pressed steel

COOLING SYSTEM—Continued

Radiator shutter—make	Hudson
Shutter control—type	Manual
Capacity of cooling system	4-3/4 gallons
Radiator hose, upper, diameter	2-1/4"
Radiator hose, upper, length	5-1/2"
Radiator hose, lower, diameter	2-1/4"
Radiator hose, lower, length	15-3/16"
Fan belt	"V" type
Fan—make	Hudson
Fan bearing type	Plain

FUEL SYSTEM

Carburetor—make	Stewart
Carburetor—size	1
Method of heating mixture	Exhaust stove and hot spot
Make of vacuum tank	Stewart
Gasoline tank capacity	11-1/2 gallons
Fuel feed—type	Vacuum tank

EXHAUST

Muffler—make Hudson

Exhaust pipe diameter-1-3/4"

IGNITION SYSTEM

Make	Auto-Lite Corporation
Current source	Battery and generator
Spark control type	Full automatic
Firing order	1-5-3-6-2-4
Timing	D. C. (fully retarded)
Breaker point gap	.020
Ignition coil—make	Auto-Lite Corporation
Spark plug—make	A. C. Titan
Spark plug—type	Short
Spark plug—size	Metric--18 m m, 1.5 m m thread
Spark plug—gap	.025—.028

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

STARTER MOTOR

Make Auto-Lite Corporation
Drive—type Bendix
No. of teeth on flywheel 100
Width of tooth face 3/8""
Pinion meshes from Rear of flywheel

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

GENERATOR

Make	Auto-Lite Corporation
Normal charging rate—hot	10 Amps.
Normal charging rate—cold	13.5 Amps.

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

BATTERY

Make	Exide	Terminal grounded	Negative
Type	3-X1-13-1-G	Length—overall	9"
Voltage	6	Width—overall	7-1/8"
No. of Plates	13	Height of box	7-7/8"
Where mounted	Under driver's seat	Height over terminals	9"

LIGHTING SYSTEM

Head and tail lamps—make	John Brown Lamp Company
Head lamp reflector—make	John Brown Lamp Company
Head lamp—type	Bullet
Side lamp—type	Bullet
Head lamp lens—type	Parabeam
Head lamp lens—diameter	8"
Head lamp dimmer method	Separate filament
Dash and tail lights connected	Separately
Ammeter—make	National Gauge & Equipment Co.
Dash light—make	National Gauge & Equipment Co.
Lighting switch—make	Auto-Lite Corporation

LAMP BULB SPECIFICATIONS

	Make	Mazda No.	C. P.	Base	Voltage
Head	Mazda	1110	21-21	D. C.	6-8
Side	Mazda	63	3	S. C.	6-8
Tail	Mazda	63	3	S. C.	6-8
Dash	Mazda	63	3	S. C.	6-8
Stop	Mazda	87	12	S. C.	6-8
Dome	Mazda	63	3	S. C.	6-8

HORN

E. A. Horn — Motor type

CHASSIS

Wheelbase	110-1/2"
Lubricating system	Oil cups—wick
Overall length with bumpers	14 '-0"
Location of serial number	Rear cross member

TRANSMISSION

Make	Hudson	Pocket bearing	Bronze bushing
Location	Unit	Reverse idler	Bronze bushing
Speeds	3 forward 1 rev.	Main shaft—front	N. D. No. 1207
Gear ratio—low	3.244 to 1	Main shaft—rear	Hyatt No. N. C. 306
Gear ratio—sec.	1.961 to 1	Countershaft	Stationary
Gear ratio—high	1 to 1		
Gear ratio—rev.	4.170 to 1		
Type of lubricant	Heavy motor oil		
Oil capacity (approx.)	1 quart		
Pilot brg. in crankshaft	N. D. No. 1202		

CLUTCH

Make	Hudson	Lubrication	1/4 Pt.
Type	Single disc in oil	Throwout bearing	Annular & thrust
Facing material	Cork inserts	Throwout	5/32"
No. of cork inserts	72	Clearance at F. B.	3/4"

LUBRICATION-8 ounces light motor oil

UNIVERSALS

	Make	*Type*		*Make*	*Type*
Front	Spicer	Metal	Rear	Spicer	Metal

TYPE OF DRIVE

Propulsion through rear springs.

REAR AXLE

Make	Hudson	Wheel bearing	Timken 415TV and 412A
Type	Semi-floating	Pin. brg.—front	Timken 2691V and 2620
Gear ratio	5.4 to 1	Pin. brg.—rear	Timken 3188 and 3120
Type of drive	Spiral bevel	Differential brg.—right	Timken 336 and 3320
Min. road clear.	9"	Differential brg.—left	Timken 336 and 3320
Clear. for jack	10-1/4"	No. of teeth in pinion	10
Differential—make	Hudson	No. of teeth in gear	54
Pinion	Adjustable	Oil capacity (approx.)	1-1/2 quarts
Pinion bearing	Adjustable		

FRONT AXLE

Make	Hudson	Toe in—none, or not over	1/8"
Section—type	I beam	Castor angle	1-1/2" backward
End—type	Elliott	Min. road clearance	9"
King pin thrust brg.	Nice No. 607	Clearance for jack	7-1/4"
King pin transverse Inclination	None	Spindle transverse Inclination	2°

STANDARD BRAKES

Type Two wheel

SERVICE BRAKES

Location	Rear wheels	Lining length per wheel	39-3/8"
Make	Hudson	Width of lining	1-3/4"
Type	External	Thickness of lining	3/16"
Total braking area	138 sq. inches	Clearance of lining	1/64"
Drum dia. (ext.)	14-3/8"	Method of application	Foot pedal

HAND BRAKE

Location	Rear wheels	Lining length per wheel	35"
Make	Hudson	Width of lining	1-1/2"
Type	Internal	Thickness of lining	3/16"
Total braking area	122.5 sq. inches	Clearance of lining	1 /64"
Drum dia. (int.)	14"	Method of application	Hand lever

WHEELS

Type	Wood-steel felloe
Make	Motor Wheel Corporation
Front wheel inner bearing	Timken No. 2554 and 2520
Front wheel outer hearing	Timken No. 2382 and 2320

RIMS

Type	Split	Diameter	20 "
Make	Jaxon	Width	4"

.

TIRES

Size	30 x 5 balloon, straight side
Make	Goodyear, U. S. and Miller
Number of plies	4
Recommended pressure	Front 28 lbs., rear 32 lbs.

STEERING GEAR

Make	Hudson
Type	Worm and wheel
Ratio	7-1/2 to 1
Steering wheel turns	1-3/4 (full swing left to right)
Turning radius	20 feet
Lubricant	Steam cylinder oil

SPRINGS

Front spring		Rear spring	
Type	Semi-elliptic	Type	Semi-elliptic
Length	36"	Length	54-7/8"
Width	2"	Width	2"
No. of leaves	9	No. of leaves	8
Material	Vanadium steel	Material	Vanadium steel
Front bushing	5/8" dia.	Front bushing	5/8" dia.
Rear bushing	5/8" dia.	Rear bushing	5/8" dia.
Bushing material	Phosphor bronze	Bushing material	Phosphor bronze
Spring lubricant	Motor oil		
Shackles type	Adjustable		

FRAME

Make	Hudson	Thickness	5/32 "
Material	Steel	Width of flange	1-7/8"
Depth	4-1/2"		

ESSEX SUPER SIX

Gear Ratios and Rules for Comparing Speed

in Miles per Hour with Motor R. P. M.

Car Serial No. 610,276 to_____

Note: The following rules are good for a gear ratio of 5.4 to one with wheel diameter of 30 inches, and for the former gear ratio of 5.6 to 1 with wheel diameter of 31 inches.

TO OBTAIN MOTOR R. P. M. FOR ANY DESIRED SPEED IN MILES PER HOUR

Rule—M. P. H. multiplied by 61 = Motor R. P. M. (approx.)
Example—What is the R. P. M. of motor at 40 miles per hour?
Answer —40 multiplied by 61 =2440 R. P. M. (approx.)

TO OBTAIN SPEED IN MILES PER HOUR FOR ANY DESIRED MOTOR R. P. M.

Rule—R. P. M. divided by 61 =Speed in miles per hour (approx.)
GEAR RATIOS—To obtain the number of revolutions of the motor required for one revolution of the rear wheel :

Multiply the transmission ratio by the rear axle ratio.

Example-3.244 (low gear ratio) multiplied by 5.4 (rear axle ratio) equals 17.517 revolutions of the motor to one revolution of rear wheel.

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

	Trans. Ratio	Rear Axle Ratio	Motor Revs.	Wheel Revs.
With transmission in low	3.244	5.4	17.517	1
With transmission in sec.	1.961	5.4	10.589	1
With transmission in high	1	5.4	5.4	1
With transmission in rev.	4.17	5.4	22.518	1

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Essex Super Six Standard Equipment

Car Serial No. 610,276 to

	Speedster	Coupe	Coach	Sedan
Windshield cleaner make	None	Trico Mfg. Co.	Trico Mfg. Co.	Trico Mfg. Co.
Windshield cleaner type		Vacuum	Vacuum	Vacuum
Trunk rack	None	None	None	None
Cowl ventilator	Yes	Yes	Yes	Yes
Engine heat indicator - Boyce motometer		ALL MODELS		
Gasoline gauge location - Instrument board		ALL MODELS		
Gasoline gauge type - King-Seeley hydrostatic		ALL MODELS		
Wheels—type - Wood wheels		ALL MODELS		
Sun visor	No	Yes	Yes	Yes
Radiator shutters	Yes	ALL MODELS		
Rear traffic signal	Yes	ALL MODELS		
Comb. tail and stop light make - John Brown Lamp Co.		ALL MODELS		
Cowl lights	No	Yes	Yes	Yes
Dome light	No	Yes	Yes	Yes
Speedometer—make - Stewart-Warner		ALL MODELS		
Transmission lock -Yes		ALL MODELS		
Spare rim- One		ALL MODELS		
Horn—make - E. A.		ALL MODELS		
Headlamps—make - John Brown Lamp Co.		ALL MODELS		
Tire carrier—make - Hudson		ALL MODELS		
Storage battery—make - "Exide"		ALL MODELS		

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Essex Super Six Standard Equipment

Car Serial No. 610,276 to

	Speedster	Coupe	Coach	Sedan
Model	1928	1928	1928	1928
Wheelbase	110-1/2	110-1/2	110-1/2	110-1/2
Weight	2230	2330	2450	2490
No. of doors	4	2	2	4
No. of passengers	4	2	5	5
Seating arrangement	Std.	Std.	Std.	Std.
Gear ratio	5.4 to 1	5.4 to 1	5.4 to 1	5.4 to 1
Make of body	Briggs Mfg. Co.	Briggs Mfg. Co.	Hudson	Hudson
Frame work material	Wood	Steel	Steel	Steel
Body panel material	Steel	Steel	Steel	Steel
Rear and quarter sect. material	Steel	Steel	Steel	Steel
Windshield—type - One piece swing type	ALL MODELS			
Windshield—make - Motor products	ALL MODELS			
Wheels—type - Wood	ALL MODELS			
Tires—size - 30 x 5	ALL MODELS			

Hudson Mechanical Specifications

Super Six - 1928 Model

Car Serial No. 790,399 to - - - - - - - -

Hudson Reference Sheet No. 35 (July 1927)

REVISED JULY, 1927.

Mechanical Specifications for Hudson Super Six 1928 Model

Car Serial No. 790,399 to

ENGINE

Make	Hudson	Piston displacement	288
Model	Super-Six	Suspension	4 Point
No. of cylinders	6	Type of head	F
Cylinder arrangement	Vertical	Cylinder head	Detachable
Bore	3-1/2"	Cylinders cast	En bloc
Stroke	5"	Crankcase	Separate
Rated H. P.	29.4	Upper half	Aluminum
Firing order	1-5-3-6-2-4	Lower half	Pressed steel

CAMSHAFT DRIVE

Type of drive	Chain	No. of links	63
Make	Morse	Pitch	1/2”
Type	No. 28	Adjustment	Adjustable eccen.
Width of chain	1-5/8"	Sprocket material	Cast iron
Camshaft sprocket	42 teeth		

CAMSHAFT BEARINGS

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

VALVES

	Inlet Valve	Exhaust Valve
Head material	Silicon steel	Silicon steel
Head diameter (outside)	2-1/32"	1-27/32
Head diameter (opening)	1-7/8"	1-5/8"
Stem length	6"	6-3/4"
Stem diameter	.373	.371
Stem type of end	Grooved	Grooved
Tappet (type)	Roller	Roller
Tappet clearance	.004—.006	.006—.008
Valve lift		
Valve stem guides	Removable	Removable
Spring pressure	100 lbs.	75 lbs.

VALVE TIMING

Inlet opens	7° after TDC	Exh. opens	55° before BDC
Inlet closes	42° after BDC	Exh. closes	8° after TDC

CRANKCASE AND CRANKSHAFT

No. of main bearings	4	Crankpin diameter	2-1/4"
No. 1 (frt) diameter	2-1/4"	Main bearing material	Bronze & babbitt
No. 1 length	2-3/8"	Main bearing end play	.006—.012
No. 2 diameter	2-9/32"	Main bearing clearance	.0015—.002
No. 2 length	1-7/8"	End thrust on	Rear center brg.
No. 3 diameter	2-5/16"	Sprocket	21 teeth
No. 3 length	2-1/8"	Material	Steel
No. 4 diameter	2-11/32"		
No. 4 length	3-1/8"		

CONNECTING ROD

Material	D. F. steel	Lower end brg. clear.	.0015—.002
Weight	4 lbs.	Length	2"
Length C. to C.	11.625	Clearance (endwise)	.006—.010
Lower end bearing	Type	Separate	
Diameter	2.25"	Material	Bronze & babbitt

PISTON

Type	Slotted skirt		
Material	Aluminum with steel struts	Distance between bosses	1-3/8"
Weight	20 ounces	Clearance—skirt	.003
Length	4-1/16"	Depth of grooves	5/32"
Pin center to top	2-1/4"		
Middle groove	Drilled radially	4 holes	3/32" diameter
Lower groove	Drilled radially	10 holes	3/32" diameter

PISTON RINGS

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

PISTON PIN

Type	Floating	Bushing outside dia.	1.283
Diameter	1.0937	Bushing inside dia.	1.0937
Length	2-11/16"	Bushing length	1-1/8 "

LUBRICATING SYSTEM

Type	Circulating splash
Oil pump type	Plunger
Stroke of pump—plunger idling	Min. 3/16"
Stroke of pump—plunger high speed	Max. 5/16
Capacity—oil reservoir only	7 quarts
Capacity—oil reservoir and troughs	9 quarts
Mesh of screen	50
Oil recommended	Medium heavy—Use low cold test in winter

COOLING SYSTEM

Type	Centrifugal pump
Radiator—make	Harrison
Core type	Ribbon cellular
Radiator shutter—type	Pressed steel
Shutter control type	Manual
Capacity of cooling system	5-1/2gallons
Radiator hose—upper—diameter	1-1/2"
Radiator hose—upper—length	6"
Radiator hose—lower—diameter	1-1/2"
Radiator hose—lower—length	10-1/2"
Fan belt	"V" type
Fan—make	Hudson
Fan bearing type	Plain

FUEL SYSTEM

Carburetor—make	Marvel
Carburetor—size	1-1/4"
Fuel feed—type	Vacuum tank
Make of vacuum tank	Stewart
Air cleaner—type	A. C.
Gasoline tank capacity	18-3/4 gallons
Method of heating mixture	Hot spot

EXHAUST SYSTEM

Muffler—make	Hudso	Exhaust pipe dia. 2-1/4"

IGNITION SYSTEM

Make	Auto-Lite Corporation
Current source	Battery and generator
Spark control type	Semi-automatic
Firing order	1-5-3-6-2-4
Timing	10° before D. C. fully advanced
Breaker point gap	.020
Ignition coil—make	Auto-Lite Corporation
Spark plug—make	A. C. Titan
Spark plug—type	Short
Spark plug—size	Metric 18 m m, 1.5 m/m thread
Spark plug—gap	.025—.028

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

STARTER MOTOR

Make	Auto-Lite Corporation
Drive type	Manual—sliding gear
No. of teeth on flywheel	18
Width of tooth face	3/4 "
Pinion meshes from	Front of flywheel

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

GENERATOR

Make	Auto-Lite Corporation
Normal charging rate—hot	13 amperes
Normal charging rate—cold	17 amperes

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

BATTERY

Make	Exide	Terminal grounded neg.	
Type	3-X1-15-1-G	Length-overall	10-1/4"
Voltage	6	Width—overall	7-1/8"
No. of plates	15	Height of box	7-7/8"
Height over terminal	9"		

LIGHTING SYSTEM

Head side and tail lamps—make	John Brown Lamp Co.
Head side reflector—make	John Brown Lamp Co.
Head and side lamp type	Bullet
Head lamp lens—type	Parabeam
Head lamp lens—diameter	9"
Head lamp dimmer method	Separate filament
Dash and tail lights connected	Separate
Ammeter—make	National Gauge & Equip't. Co.
Lighting switch—make	Auto-Lite Corporation
Ignition switch—type	Electrolock

LAMP BULB SPECIFICATIONS

	Make	Mazda No.	CP	Base	Voltage
Head	Mazda	1110	21-21	D. C.	6-8
Side	Mazda	63	3	S. C.	6-8
Tail	Mazda	63	3	S. C.	6-8
Dash	Mazda	63	3	S. C.	6-8
Stop	Mazda	87	15	S. C.	6-8
Dome	Mazda	63	3	S. C.	6-8

HORN

E. A. Horn	Motor type

CHASSIS

Wheelbase	127-3/8"
Lubricating system	Oil cups—wick
Overall length with bumpers	15 ' 8"
Location of serial number	Frame rear cross member R. H. end

TRANSMISSION

Make	Hudson	Pocket brg.	Bronze bush.
Location	Unit	Reverse idler	Hyatt No. 16820
Speeds	3 forward 1 rev.	Main shaft—front	N. D. 1308
Gear ratio—low	3.04 to 1	Main shaft—rear	Hyatt No. 16684
Gear ratio—second	1.81 to 1	Countershaft—front	Hyatt No. 16506
Gear ratio--high	1 to 1	Countershaft—rear	Hyatt No. 16506
Gear ratio—rev.	3.69 to 1	Countershaft--rotates	
Type of lubricant		Light transmission oil	
Oil capacity (approx.)		1-1/2 quarts	
Pilot brg. in crankshaft		N. D. No. 1204	

CLUTCH

Make	Hudson	Facing material	Cork inserts
Type	Single disc in oil	Throwout brg.	Nice No. 0210
No. cork inserts	132	Throwout	5/32"
Lubrication (Mixture 1/8 pt. motor oil and 1/8 pt. kerosene)	1/4 pt.	Clearance at floor board	3/4"

UNIVERSALS

Front—make	Spicer	Rear—make	Spicer
Front—type	Metal	Rear—type	Metal

TYPE OF DRIVE

Propulsion through rear springs.

REAR AXLE

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

FRONT AXLE

Make	Hudson	Toe in—none—or not over 1'8"	
Section—type	I-beam	Castor angle	1° backward
End —type	Rev. Elliott	Min. road clearance	8-1/4"
King pin thrust bearing	Special thrust	Clearance for jack	6-3/4"
King pin transverse inclination	6-1/2°		
Spindle transverse inclination	2-1/2°		

STANDARD BRAKES

Type of standard brakes	Bendix 4-wheel brakes

SERVICE BRAKE

Location	Frt. and Rr. wheels	Lining length per wheel	3 pcs, 38372"
Make	Bendix	Width of lining	2"
Type	Internal	Thickness of lining	5/16"
T6			
Total braking area	305-3/4 sq. in.	Clearance of lining	.010
Drum diameter	Frt. and Rr. 14"	Method of application	Frt. pedal

HAND BRAKE

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

WHEELS

Type	Wood-steel felloe
Make	Motor Wheel Corp.
Front wheel inner bearing	Timken No. 415 and 412A
Front wheel outer bearing	Timken No. 315 and 312
Rear wheel bearing	Timken No. 458T and 454

RIMS

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

TIRES

Size	31 x 6. Balloon straight side
Make	Goodyear, U. S. and Miller
Number of plies	(6 on rear of 7-Sedan)
Recommended pressure	Front 35 lbs. Rear 38 lbs.

STEERING GEAR

Make	Gemmer
Type	Worm and roller disc
Ratio	18 to 1
Steering wheel turns	2-1/2 (full swing left to right)
Turning radius	21 feet
Lubricant	Heavy bodied gear oil

SPRINGS

Front Spring		Rear Spring	
Type	Semi-elliptic	Type	Semi-elliptic
Length	39"	Length	57-11/16"
Width	2-1/4"	Width	2-1/4"
No. of leaves	10	No. of leaves	15
Material	Spring steel	Material	Vanadium steel
Front bushing	11/16" dia.	Front bushing	3/4" " dia
Rear bushing	11/16"	Rear bushing	11/16" dia.
Bushing material	Phosphor bronze	Bushing material	Phosphor bronze
Spring lubrication	Motor oil		
Shackles—type	Adjustable		

FRAME

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

HUDSON SUPER SIX

Gear Ratios and Rules for Comparing Speed in Miles per Hour with Motor R. P. M.

Car Serial No. 790,399 to_____

TO OBTAIN MOTOR R. P. M. FOR ANY DESIRED SPEED IN MILES PER HOUR

Note: The following rule No. 1 is good only for a gear ratio of 4 5/11 to one and with wheel diameter of 31 inches.

Rule No. 1—M. P. H. Multiplied by 48 = Motor R. P. M. (approx.)
Example—what is the R. P. M. at 40 miles per hour?
Answer-40 multiplied by 48 =1920 R. P. M. (approx.)

The following rule No. 2 is good only for a gear ratio of 4 1/12 to one and with wheel diameter of 31inches.

Rule No. 2—M. P. H. multiplied by 44 = Motor R. P. M. (approx.)

TO OBTAIN SPEED IN MILES PER HOUR FOR ANY DESIRED MOTOR R. P. M.

Note: The following rule No. 3 is good only for a gear ratio of 4 5/11 to one and with wheel diameter of 31 inches.

Rule No. 3—R. P. M. divided by 48 =Speed in miles per hour (approx.)
Example—what is the speed at 2400 R. P. M.?
Answer-2400 divided by 48 =50 M. P. H. (approx.)

The following rule No. 4 is good only for a gear ratio of 4 1.112 to one and with wheel diameter of 31 inches.

Rule No. 4—R. P. M. DIVIDED by 44 = Speed in miles per hour (approx.)

Gear Ratios—To obtain the number of revolutions of the motor required for one revolution of the rear wheel, multiply the transmission ratio by the rear axle ratio.
Example-3.04 (low gear ratio) x 4.45 (rear axle ratio) = 13.528. Revolutions of the motor to one revolution of rear wheel.
The following list shows the various motor to wheel ratios worked out as above for Super Six cars:

	Trans. Ratio	Rear Axle Ratio	Motor Revs.	Wheel Revs.
With transmission in low	3.04	4.45	13.528	1
With transmission in sec.	1.81	4.45	8.05	1
With transmission in high	1	4.45	4.45	1
With transmission in rev.	3.69	4.45	16.420	1

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Hudson Super Six Standard Equipment

Car Serial No. 790,399 to

	Phaeton	*Coach*	*Brougham*	*Std. 5-Pass. Sedan*	*7-Pass. Sedan*
W/S Cleaner— make	No	Trico	Trico	Trico	Trico
W/S Cleaner— type		Vacuum	Vacuum	Vacuum	Vacuum
Trunk rack	No	Yes	Yes	No	No
Cowl ventilator	ALL MODELS				
Engine heat ind. Boyce motometer	ALL MODELS				
Gasoline gaugelocation Instrument board	ALL MODELS				
Gasoline gauge—type King-Seeley hydrostatic	ALL MODELS				
Wheels—type Wood	ALL MODELS				
Sun visor	No	Yes	Yes	Yes	Yes
Radiator shutters	ALL MODELS				
Rear traffic signal	ALL MODELS				
Com. tail and stop light John Brown Lamp Company	ALL MODELS				
Cowl lights	ALL MODELS				
Rear vision mirror	No	Yes	Yes	Yes	Yes
Ignition electrolock	ALL MODELS				
Speedometer— make Stewart-Warner	ALL MODELS				
Spare rim One	ALL MODELS				
Horn—make E. A.	ALL MODELS				
Headlamps— make John Brown Lamp Company	ALL MODELS				
Tire carrier— make Hudson	ALL MODELS				
Storage battery make "Exide"	ALL MODELS				

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Hudson Super Six Body Details

Car Serial No. 790,399 to_____

Model 1928	*Phaeton*	*Coach*	*Brougham*	*Std. 5-Pass. Sedan*	*7-Pass. Sedan*
Wheelbase - 127-3/8	ALL MODELS				
Weight	3565	3505	3660	3620	3870
No. of doors	4	2	4	4	4
No. of passengers	7	5	4	5	7
Seat arrangements	Std.	Folding Type	Std.	Std.	Std.
Gear ratio	4 5/11 to 1	ALL MODELS			
Make of body	Biddle & Smart	Briggs	Biddle & Smart	Briggs	Biddle & Smart
Frame work mater.	Wood	Steel	Wood	Steel	Wood
Body panel material	Alum.	Steel	Alum.	Steel	Alum.
Wheels type - Wood	ALL MODELS				
Tire size - 31 x 6	ALL MODELS				
Tire type front - 4 ply	ALL MODELS				
Tire type rear	4 ply	4 ply	4 ply	4 ply	6 ply
Smoking set	No	No	Yes	Yes	Yes

"

Hudson - Essex

Paint Specifications

Car Serial No. 400,000 to 790,399
(790,000 up

Hudson Reference Sheet No. 36 (July 1927)

Hudson Coach

Car No.	*Upholstery*	*Car Finish*
400,000 to 418,544	BODIES NUMBERED 1 TO 5706 SEAT CUSHIONS—Blue No. 6793 SEAT BACKS—Blue No. 6793 SIDE WALLS BELOW BELT—Blue No. 6793 SIDE WALLS ABOVE BELT—Blue No. 6794 HEADLINING—Blue No. 6794	BODY—Black BONNET—Black Enamel WHEELS—Black
	BODY 5706 TO CAR 418544 SEAT CUSHIONS—Brown with Gray Stripe No. 11 SEAT BACKS—Brown with Gray Stripe No. 11 SIDE WALLS BELOW BELT—Brown with Gray Stripe No. 11 SIDE WALLS ABOVE BELT—Plain Brown No. 110	BODY—Black BONNET—Black Enamel WHEELS—Black
418,544 to 500,000	SEAT CUSHIONS—Striped Brown Hair Cloth No. 4241 SEAT BACKS—Striped Brown Hair Cloth No. 4241 SIDE WALLS—Plain Brown Hair Cloth No. 4270 HEADLINING—Plain Brown Hair' Cloth No. 4270	BODY—Black BONNET—Black Enamel WHEELS—Black
500,000 to 708,050	SEAT CUSHIONS—Striped Granite Weave No. 167½A SEAT BACKS—Striped Granite Weave No. 1671-A SIDE WALLS—Plain Granite Weave No. 173B HEADLINING—Plain Granite Weave No. 173B	BODY—Dibble Dark Blue BONNET—Black Enamel WHEELS—Black
708,050 to 713,810	SEAT CUSHIONS—Striped Granite Weave N0. 167½A SEAT CUSHIONS—Striped Granite Weave No. 167½A SIDE WALLS—Plain Granite Weave No. 173B HEADLINING—Plain Granite Weave No. 173B	BODY—Match Lock Gray Duco No. 2441681 BONNET—Match Lock Gray Duco No. 2441681 WHEELS—Black
713,810 to 722,300	SEAT CUSHIONS—Greenish Whipcord No. 63 SEAT BACKS—Greenish Whipcord No. 63 SIDE WALLS BELOW BELT—Greenish Whipcord No. 63 SIDE WALLS ABOVE BELT—Greenish Cloth with a small pattern No. 35 HEADLINING—Greenish Cloth with a small pattern No. 35	BODY—Nipponese Blue Duco No. 2443593 Striped Sumac Red Duco No. 2441292 BONNET—Nipponese Blue Duco No. 2443593 WHEELS—Dibble Co's. Black Japan Striped Sumac Red Duco No. 2441292 BELT MOULDING—Black Duco No. 207412

Car No.	Upholstery	Car Finish
722,300 to 735,172	SEAT CUSHIONS—Blue Whipcord No. 71-1 SEAT BACKS --Blue Whipcord No. 71-1 SIDE WALLS BELOW BELT—Blue Whipcord No. 71-1 SIDE WALLS ABOVE BELT—Blue Cloth No. 72-2 HEADLINING—Blue Cloth No. 72-2	BODY Nipponese Blue Duco No. 244393 Striped Sumac Red Duco No. 2411292 BONNET Nipponese Blue Duco No. 2443593 WHEELS Dibble Co's. Black Japan Striped Sumac Red Duco No. 2441292 BELT MOULDING--Black Duco No. 207412
735,172 to 750,000	SEAT CUSHIONS—Mohair Plush Cadet Blue No. 300 SEAT BACKS—Mohair Plush Cadet Blue No. 300 SIDE WALLS—Mohair Plush Cadet Blue lighter weight No. 400 HEADLINING—Mohair Plush Cadet Blue lighter weight No. 400	BODY Nipponese Blue Duco No. 2443593 BONNET- - Nipponese Blue Duco No. 2443593 WHEELS Nipponese Blue Duco No. 2443593. Striped Nassau Orange Duco No. 1399 BELT MOULDING—Black Duco No. 201412. Two Stripes Nassau Orange Duco No. 1399 WINDSHIELD FINISH PANEL-- Nipponese Blue Duco No. 2443593 INSTRUMENT PANEL—Portland Biege Duco No. 1322
750,001 to	SEAT CUSHIONS -Cadet Blue Blumenthol Mohair Plush No. 300 SEAT BACKS—Cadet Blue Blumenthol Mohair Plush No. 300 SIDE WALLS—Cadet Blue, Blumenthol No. 29 AC HEADLINING—Cadet Blue Blumenthol No. 29 AC	UPPER BODY Luxor Blue Duco No. 2444005 LOWER BODY—Luxor Blue Duco No. 2444005 BONNET— Luxor Blue Duco No. 2444005 WHEELS—Luxor Blue Duco No. 2444005 Striped Ditzlac Ivory BELT MOULDING—Standard Blue Light Duco No. 2444006 Striped Ditzlac Ivory INSTRUMENT PANEL --- Ditzlac Plymouth Gray STEERING GEAR JACKET TUBE —Ditzlac Plymouth Gray INTERIOR METAL TRIM—Ditzlac Plymouth Gray WINDOW REVEALS—Standard Blue Light Duco No. 2444006
757,454 to 790,399	SEAT CUSHIONS—Graphite Colored Cloth Blumenthol No. 319 AX SEAT BACKS—Graphite Colored Cloth, Blumenthol No. 319 AX SIDE WALLS — Graphite Colored Cloth Blumenthol No. 29 AC HEADLINING — Graphite Colored Cloth Blumenthol No. 29 AC	UPPER BODY--Luxor Blue Duco No. 2444005 LOWER BODY--Luxor Blue Duco No. 2444005 BONNET—Luxor Blue Duco No. 2444005 WHEELS—Luxor Blue Duco No. 2444005 Striped Ditzlac Ivory BELT, MOULDING--Standard Blue Light Duco No. 2444006 Striped Ditzlac Ivory *INSTRUMENT PANEL — Ditzlac Moleskin Deep

Car No.	Upholstery	Car Finish
757,454 to 790,399	Continued	*STEERING GEAR JACKET TUBE — Ditzlac Moleskin Deep *INTERIOR METAL TRIM—Ditzlac Moleskin Deep WINDOW REVEALS — Standard Blue Light Duco No. 2444006 *Beginning Car No. 770012 Walnut finish interior superseded Moleskin Deep
790,399 to	SEAT CUSHIONS—Blumenthol No. 319 AX Mohair and Wool—Gray with Green Clover Leaf design—Diagonal SEAT BACKS—Blumenthol No. 319 AX Mohair and Wool—Gray with Green Clover Leaf design—Diagonal REAR OF FRONT SEAT—Blumenthol No. 32 AW Worsted Pile Fabric —Gray" SIDE WALLS—Blumenthol No. 32 AW Worsted Pile Fabric—Gray HEADLINING—Bell Co. 124 Bl1 Napped Cloth—Gray	UPPER BODY—Jet Black Ditzlac LOWER BODY—Copra Drab--Ditz lac BONNET—Copra Drab—Dibble WHEELS — Copra Drab — Dibble Striped Swan White Ditzlac WINDOW REVEALS—Ostrich Gray Ditzlac, Edged Swan White on Black around reveals MOULDING—Ostrich Gray, Striped Swan White Ditzlac WINDSHIELD PANEL — Walnut Center, Sheraton Gray outer—Dibble WINDOW FRAMES—Walnut INSTRUMENT BOARD — Sheraton Gray JACKET TUBE—Sheraton Gray

Hudson Standard Sedan, 5-Pass.

Car No.	Upholstery	Car Finish
750,000 to 769,582	SEAT CUSHIONS-Graphite Color Blumenthol No. 319 AX SEAT BACKS—Graphite Color Blumenthol No. 319 AX SIDE WALLS—Graphite Color Blumenthol No. 29 AC HEADLINING—Graphite Color Blumenthol No. 29 AC	UPPER BODY—Standard Blue Light Duco No. 2444006 LOWER BODY — Standard Blue Light Duco No. 2444006 BONNET—Standard Blue Light Duco No. 2444006 WHEELS—Luxor Blue Duco No. 2444005 Striped Ditzlac Ivory BELT MOULDING — Luxor Blue Duco No. 2444005 Striped Ditzlac Azure Blue, Edged Ditzlac Ivory INSTRUMENT PANEL — Ditzlac `Moleskin Deep WINDSHIELD BELT FINISH PANEL—Ditzlac Moleskin Deep WINDOW REVEALS—Luxor Blue Duco No. 2444005 INTERIOR METAL TRIM—Luxor Blue Duco No. 2444005
769,582 to 775,719	SEAT CUSHIONS--Graphite Color Blumenthol No. 319 AX SEAT BACKS—Graphite Color Blumenthol No. 319 AX SIDE WALLS—Graphite Color Blumenthol No. 29 AC HEADLINING — Graphite Color Amoskeag No. 396	UPPER BODY—Standard Blue Light Duco No. 2444006 LOWER BODY — Standard Blue Light Duco No. 2444006 BONNET—Standard Blue Light Duco No. 2444006 WHEELS—Luxor Blue Duco No. 2444005 Striped Ditzlac Ivory BELT MOULDING — Luxor Blue, Striped Ditzlac Azure Blue, Edged Ditzlac Straw Color INSTRUMENT PANEL — Ditzlac Moleskin Deep STEERING GEAR JACKET TUBE —Ditzlac Moleskin Deep WINDSHIELD BELT FINISH PANEL—Walnut Center, Ditzlac Moleskin Outer Edge WINDOW FRAMES (Inside)—Walnut TRIM RETAINERS—Walnut
775,719 to 790,399	SEAT CUSHIONS—Graphite Color Blumenthol No. 319 AX SEAT BACKS—Graphite Color Blumenthol No. 319 AX *SIDE WALLS—Graphite Color Blumenthol No. 29 AC HEADLINING — Graphite Color Amoskeag No. 396 *SIDE WALLS—Changed to Timme 921-6 Graphite Color	UPPER BODY—Ditzlac Black LOWER BODY — Ditzlac Bolling Green Medium BONNET — Ditzlac Bolling Green Medium WHEELS—Ditzlac Bolling Green Medium, Striped Ditzlac Straw Color BELT MOULDING—Ditzlac Black, Striped Ditzlac Milori Green, Edged Ditzlac Straw Color *INSTRUMENT PANEL — Ditzlac Moleskin Deep *STEERING GEAR JACKET TUBE —Ditzlac Moleskin Deep

Car No.	*Upholstery*	Car Finish
775,719 to 790,399	Continued	*WINDSHIELD BELT FINISH PANEL—Walnut Center, Ditzlac Moleskin Outer Edge WINDOW FRA MES (Inside)–Walnut *Windshield finish panel outer edge jacket tube and instrument panel changed to Sheraton Gray at Car 780,084
790,399 to	SEAT CUSHIONS—Blumenthol No. 319 AX Gray with Green Clover Leaf Figure- - Diagonal SEAT BACKS—Blumenthol No. 319 AX Gray with Green Clover Leaf Figure---Diagonal REAR OF FRONT SEAT—Blumenthol No. 32 AW Worsted Pile Fabric —Gray SIDE WALLS—Blumenthol No.32 AW Worsted Pile Fabric—Gray HEADLINING—Bell Co. Napped Cloth No. 124B11—Gray	UPPER BODY—Jet Black Ditzlac LOWER BODY — Seaweed Green Ditzlac BONNET--Seaweed Green Louvres, Striped Cream Light WHEELS—Seaweed Green, Striped Cream Light, Ditzlac WINDOW REVEALS — Seaweed Green, Edged Cream Light MOULDING — Jet Black, Striped Cream Light WINDSHIELD FINISH PANEL —Center Walnut, Outer Sheraton Gray WINDOW FRAMES—Walnut INSTRUMENT PANEL--Sheraton Gray JACKET TUBE—Sheraton Gray

Hudson Sedan, 7-Pass

Car No.	*Upholstery*	*Car Finish*
302,992 to 305,475 Approxi-mately	BODIES NUMBERED 18779 TO 22021 Blue Broadcloth Upholstering No. 1348 used throughout	BODY—Valentine Blue BONNET—Black Enamel WHEELS—Black
305,475 to 308,201 Approxi-mately	BODIES NUMBERED 22021 TO APPROXIMATELY 24925 Blue Broadcloth Upholstering No. 1348 used throughout	BODY—India Blue BONNET—Black Enamel WHEELS—Black
308,201 to 316,133	SEAT CUSHIONS - Plain Granite Weave No. 1726 B SEAT BACKS—Plain Granite Weave No. 1726 B SIDE WALLS BELOW BELT—Plain Granite Weave No. 1726 B SIDE WALLS ABOVE BELT—Plain Granite Weave No. 1726 H HEADLINING—Plain Granite Weave No. 1726 H	BODY—India Blue BONNET—Black Enamel WHEELS--Black
316,133 to 511,238	SEAT CUSHIONS—Striped Granite Weave No. 1673-1/2A SEAT BACKS — Striped Granite Weave No. 167 %A SIDE WALLS—Plain Granite Weave No. 173 B HEADLINING—Plain Granite Weave No. 173 B	BODY—India Blue BONNET—Black Enamel WHEELS—Black
511,238 to 532,781 Approxi-mately	CARS NUMBERED 511238 TO 5 PASS. BODY No. 42042-7 PASS. BODY No. 39992 SEAT CUSHIONS — Bluish Gray Striped Mohair No. 2891 SEAT BACKS -- Bluish Gray Striped Mohair No. 2891 SIDE WALLS—Plain Gray Mohair HEADLINING—Plain Gray Mohair	BODY—India Blue BONNET—Black Enamel WHEELS—Black
Approxi-mately 532,781 to Approxi-mately 704,713	7 PASS. BODY No. 39992 TO CAR No. 704713. 5 PASS. BODY No. 42042 TO CAR No. 600849 SEAT CUSHIONS — Brownish Gray Striped Mohair No. 1005 SEAT BACKS — Brownish Gray Striped Mohair No. 1005 SIDE WALLS—Plain Brownish Gray Mohair No. 1018 HEADLINING — Plain Brownish Gray Mohair No. 1018	BODY—India Blue, Pale Blue Stripe. at Belt BONNET—India Blue WHEELS—Black

Car No.	*Upholstery*	Car Finish
704,713 to 714,674	7 PASS. SEDANS ONLY FROM HERE SEAT CUSHIONS—Brownish Gray Striped Mohair No. 1005 SEAT BACKS -- Brownish Gray Striped Mohair No. 1005 SIDE WALLS—Plain Brownish Gray Mohair No. 1018 HEADLINING—Plain Brownish Gray Mohair No. 1018	BODY—Amesbury Blue Duco No. 2441715 Pale Blue Stripe at Belt BONNET—Amesbury Blue Duco No. 2441715 WHEELS—Black
714,674 to 734,185	SEAT CUSHIONS—Brownish Gray Striped Mohair No. 1005 SEAT BACKS — Brownish Gray Striped Mohair No. 1005 SIDE WALLS—Plain Brownish Gray Mohair No. 1018 HEADLINING—Plain Brownish Gray Mohair No. 1018	UPPER BODY—Alpenstock Green Duco NO. 3005 LOWER BODY—Panama Green Duco No. 1236, Virginia Cream Stripe Duco No. 2813209 BONNET—Panama Green Duco No. 1236 WHEELS—Panama Green Duco No. 1236, Virginia Cream Dart Stripe Duco No. 2813209 BELT MOULDING—Ferric Green Duco No. 2811073
734,185 to 738,373	SEAT CUSHIONS—Striped Mohair Plush Cadet Blue No. 300 SEAT BACKS—Striped Mohair Plush Cadet Blue No. 300 SIDE WALLS—Plain Mohair Plush Cadet Blue No. 400, Lighter Weight Material HEADLINING—Plain Mohair Plush Cadet Blue No. 400, Lighter Weight Material	UPPER BODY—Alpenstock Green Duco No. 3005 LOWER BODY—Panama Green Duco No. 1236,Virginia Cream Stripe Duco No. 2813209 BONNET—Panama Green Duco No. 1236 WHEELS—Panama Green Duco No. 1236, Virginia Cream Dart Stripe Duco No. 2813209 BELT MOULDING—Ferric Green Duco No. 2811073
738,373 to 739,984	SEAT CUSHIONS — Plain Mohair Plush Cadet Blue No. 550 SEAT BACKS—Plain Mohair Plush Cadet Blue No. 550 SIDE WALLS—Plain Mohair Plush Cadet Blue No. 650 HEADLINING—Plain Mohair Plush Cadet Blue No. 650	UPPER BODY—Ardsley Green Duco No. 3038 LOWER BODY—Panama Green Duco, No. 1236, Striped Virginia Cream Duco No. 2813209 BONNET—Panama Green Duco No. 1236 WHEELS—Panama Green Duco No. 1236, Virginia Cream Dart Stripe Duco No. 2813209 BELT MOULDING—Ferric Green Duco No. 2811073
739,984 to 750,000	SEAT CUSHIONS — Plain Mohair Plush, Dark Gray No. 550 SEAT BACKS—Plain Mohair Plush, Dark Gray No. 550 SIDE WALLS—Plain Mohair and Wool, Dark Gray No. 650 HEADLINING—Plain Mohair and Wool, Dark Gray No. 650 . WINDSHIELD BELT FINISH PANEL—Blue Pin Grain Imitation Leather	UPPER BODY—Ardsley Green Duco No. 3038 LOWER BODY—Panama Green Duco No. 1236, Striped Virginia Cream Duco No. 2813209 BONNET—Panama Green Duco No. 1236 WHEELS—Panama Green Duco No. 1236, Virginia Cream Dart Stripe Duco No. 2813209 BELT MOULDING—Ferric Green Duco No. 2811073

Car No.	*Upholstery*	*Car Finish*
750,000 to 769,248	SEAT CUSHIONS—Blumenthol No. 36 AM Dark Gray Mohair SEAT BACKS—Blumenthol No. 36 AM Dark Gray Mohair SIDE WALLS BELOW BELT—Blumenthol No. 312 AX Dark Gray Mohair and Wool SIDE WALLS ABOVE BELT—Blumenthol No. 311 AX Dark Gray Mohair and Wool HEADLINING –Blumenthol No. 311 AX Dark Gray Mohair and Wool	UPPER BODY—Ditzlac Black LOWER BODY—Ditzlac Bokhara Maroon BONNET—Ditzlac Bokhara Maroon WHEELS--Ditzlac Bokhara Maroon, Striped Wren Yellow BELT MOULDING—Ditzlac Black, Striped Ditzlac Royal Chariot Red STREAMLINE MOULDING—Ditzlac Black, Striped Ditzlac Wren Yellow INSTRUMENT PANEL — Ditzlac Dust Proof Gray—Medium STEERING GEAR JACKET TUBE —Ditzlac Dust Proof Gray-Medium WINDOW REVEALS—Ditzlac Bokhara Maroon, edged Ditzlac Royal Chariot Red
769,248 to 790,399	SEAT CUSHIONS ---Blumenthol No. 36 AM Dark Gray Mohair SEAT BACKS—Blumenthol No. 36 AM Dark Gray Mohair SIDE WALLS BELOW BELT—Blumenthol No. 312 AX Dark Gray Mohair and Wool SIDE WALLS ABOVE BELT—Blumenthol No. 311 AX Dark Gray Mohair and Wool HEADLINING—Blumenthol No. 311 AX Dark Gray Mohair and Wool	UPPER BODY—Black Duco No. 207412 LOWER BODY — Standard Blue Light Duco No. 2444006 BONNET—Standard Blue Light Duco No. 2444006 WHEELS—Standard Blue Light Duco No. 2444006 Striped Ditzlac French Gray *BELT MOULDING — Black Duco No. 207412 Striped Ditzlac French Gray *STREAMLINE MOULDING— Black Duco No. 207412 Striped Ditzlac Continga Light Blue, Edged Ditzlac French Gray *INSTRUMENT PANEL—Ditzlac Dust Proof Gray Medium *STEERING GEAR JACKET TUBE —Ditzlac Dust Proof Gray Medium *Car No. 777563 Striping changed as follows: BELT MOULDING — Black Duco No. 207412 Striped Ditzlac Swan White STREAMLINE MOULDING— Black Duco No. 207412, Striped Ditzlac Azure Blue, Edged Ditzlac Swan White *Beginning Car 777,725 INSTRUMENT PANEL—Changed to Sheraton Gray JACKET TUBE—Changed to Sheraton Gray
790,399 to	SEAT AND BACK CUSHIONS— Smoke and Green Chase Figured Modoc Mohair E-8324A	UPPER BODY—Moleskin Deep Ditzlac LOWER BODY—Cuckoo Gray Ditzlac

Car No.	*Upholstery*	*Car Finish*
790,399 to *Cont'd*	AUXILIARY SEATS AND BACKS—Smoke and Green Chase Figured Modoc Mohair E-8324A REAR OF FRONT SEAT—Smoke Shade X -158-B-1 Chase Medford 50-50 Mixture REARS AND BOTTOMS OF AUX-ILIARY SEATS — Smoke Shade X-1158-B-1 Chase Medford 50-50 Mixture SIDE WALLS--Smoke Shade X-1158-B-1 Chase Medford 50-50 Mixture HEADLINING — Smoke Shade X-1158-B-1 Chase Medford 50-50 Mixture	WHEELS — Cuckoo Gray Striped Straw BONNET—Cuckoo Gray Striped same as Streamline Moulding BELT MOULDING—Moleskin Deep Two Stripes Cream Color Dibble STREAMLINE MOULDING — Cream Color Deep Striped Emerald Green Extra Light Dibble, Edged Black INSTRUMENT PANEL—Sheraton Gray JACKET TUBE — Sheraton Gray Dibble

Hudson Brougham

Car No.	*Upholstery*	*Car Finish*
600,849 to Approximately 704,713	SEAT CUSHIONS—Brownish Gray Striped Mohair No. 1005 SEATBAC KS—Brownish Gray Striped Mohair No. 1005 BACK OF FRONT SEAT—(Tonneau Side) Brownish Gray Plain Mohair No. 1018 SIDE WALLS—Brownish Gray Plain Mohair No. 1018 HEADLINING—Brownish Gray Plain Mohair No. 1018	BODY--India Blue Striped Pale Blue BONNET—India Blue WHEELS- - Black
704,713 to Approximately 707,481	SEAT CUSHIONS—Brownish Gray Striped Mohair No. 1005 SEAT BACKS — Brownish Gray Striped Mohair No. 1005 BACK OF FRONT SEAT—(Tonneau Side) Brownish Gray Plain Mohair No. 1018 SIDE WALLS—Brownish Gray Plain Mohair No. 1018 HEADLINING—Brownish Gray Plain Mohair No. 1018	BODY—Amesbury Blue Duco No. 2441715 Striped Pale Blue BONNET—Amesbury Blue Duco No. 2441715 WHEELS- Black
Approximately 707,481 to 726,301	SEAT CUSHIONS--Brownish Gray Striped Mohair No. 1005 SEAT BACKS — Brownish Gray Striped Mohair No. 1005 BACK OF FRONT SEAT—(Tonneau Side) Brownish Gray Plain Mohair No. 1018 SIDE WALLS—Brownish Gray Plain Mohair No. 1018 HEADLINING—Brownish Gray Plain Mohair No. 1018	UPPER BODY — Wellington Gray Duco No. 2441383 LOWER BODY—Kensington Gray Duco No. 2441403, Striped French Gray Duco No. 2813548 BONNET—Kensington Gray Duco No. 2441403 BELT MOULDING—Black Duco No. 207412 WHEELS—Black Duco No. 207412, Striped French Gray Duco No. 2813548
726,301 to 739,638	SEAT CUSHIONS--Striped Mohair Plush Cadet Blue No. 300 SEAT BACKS—Striped Mohair Plush Cadet Blue No. 300 BACK OF FRONT SEAT—(Tonneau Side) Plain Mohair Plush Cadet Blue No. 400 SIDE WALLS—Plain Mohair Plush Cadet Blue No. 400 HEADLINING—Plain Mohair Plush Cadet Blue No. 400	UPPER BODY — Timberline Gray Duco No. 1245 LOWER BODY—Portland Biege Duco No. 1322, Striped Imitation Gold Duco No. 281259 BONNET—Portland Biege Duco No. 1322 WHEELS—Portland Biege Duco No. 1322 Striped Imitation Gold Duco No. 281259 BELT MOULDING—Sheraton Gray Duco No. 2811256
739,638 to 750,000	SEAT CUSHIONS — Plain Mohair Plush Cadet Blue No. 550 SEAT BACKS—Plain Mohair Plush Cadet Blue No. 550	UPPER BODY — Timberline Gray Duco No. 1245 LOWER BODY — Portland Biege Duco No. 1322, Striped Imitation Gold Duco No. 281259

Car No.	Upholstery	*Car Finish*
739,638 to 750,000 Cont' d	BACK OF FRONT SEAT—(Tonneau Side) Plain Mohair Plush Cadet Blue No. 650 SIDE WALLS—Plain 'Mohair Plush Cadet Blue No. 650 HEADLINING—Plain Mohair Plush. Cadet Blue No. 650	BONNET—Portland Siege Duco No. 1322 WHEELS—Portland Biege Duco No. 1322, Striped Imitation Gold Duco No. 281259 BELT MOULDING—Sheraton Gray Duco No. 2811256
750,000 to 770,850	SEAT CUSHIONS—Blumenthol No. 312 AX Cadet Blue Mohair and Wool SEAT BACKS—Blumenthol No. 312 AX Cadet Blue Mohair and Wool BACK OF FRONT SEAT—(Tonneau Side) Blumenthol No. 310 AX Cadet Blue Mohair and Wool . SIDE WALLS— Blumenthol No. 310 AX Cadet Blue Mohair and Wool HEADLINING—Blumenthol No. 310 AX Cadet Blue Mohair and Wool	UPPER BODY—Bolling Green Duco No. 2444003 LOWER BODY—Thistle Green Duco No. 2444004 BONNET—Thistle Green Duco No. 2444004 WHEELS—Thistle Green Duco No. 2444004, Striped Ditzlac Wren Yellow WINDOW REVEALS—Thistle Green No. 2444004 BELT MOULDING--Ditzlac Wren Yellow, Striped Bolling Green Duco No. 2444003 . . STREAMLINE MOULDING—Bolling Green Duco No. 2444003, Striped Ditzlac Wren Yellow INSTRUMENT PANEL — Ditzlac Plymouth Gray STEERING GEAR JACKET TUBE —Ditzlac Plymouth Gray
770,850 to 788,998	SEAT CUSHIONS—Blumenthol No. 312 AX Cadet Blue Mohair and Wool SEAT BACKS—Blumenthol No. 312 AX Cadet Blue Mohair and Wool BACK OF FRONT SEAT—Blumenthol No. 311 AX Plain Cadet Blue *SIDE WALLS—Blumenthol No. 311 AX Plain Cadet Blue *HEADLINING—Chase Co. "Millais" Cadet Blue WINDSHIELD BELT FINISH PANEL-Blue Pin Grain Imitation Leather •This change in upholstering entered production at Car No. 774265	UPPER BODY—Ditzlac Black LOWER BODY—Ditzlac Old Burgundy BONNET—Ditzlac Old Burgundy WHEELS—Ditzlac Jockey Club Maroon, Striped Ditzlac Extra Permanent Vermillion *WINDOW REVEALS—Ditzlac Old Burgtordy, Edged Ditzlac Casino Red *BELT MOULDING—Ditzlac Black, Striped Ditzlac Casino Red *STREAMLINE MOULDING—Ditzlac Black, Striped Ditzlac Casino Red, Edged Ditzlac Falcon Buff INSTRUMENT PANEL -- Ditzlac Plymouth Gray STEERING GEAR JACKET TUBE —Ditzlac Plymouth Gray *Car No. 777,521 Striping Changed as Follows: BELT MOULDING—Ditzlac Black, Edged Ditzlac Straw STREAMLINE MOULDING—Ditzlac Black, Striped Casino Red, Edged Ditzlac Straw INSTRUMENT PANEL--Sheraton Gray JACKET TUBE—Sheraton Gray

Car No.	*Upholstery*	*Car Finish*
788,998 to 790,399	SEAT CUSHIONS—Blumenthol No. 312 AX Cadet Blue Mohair and Wool SEAT BACKS—Blumenthol No. 312 AX Cadet Blue Mohair and Wool REAR OF FRONT SEAT—Blumenthol 311 AX Plain Cadet Blue SIDE WALLS—Blumenthol No. 311 AX Plain Cadet Blue HEADLINING—Chase Co. "Millais" Cadet Blue WINDSHIELD BELT PANEL—Blue Pin Grain Imitation Leather	UPPER BODY—Thistle Green Ditzlac LOWER BODY—Thistle Green Ditzlac BONNET—Thistle Green WHEELS — Thistle Green, Striped Wren Yellow Ditzlac BELT MOULDING—Bolling Green Ditzlac, Striped Wren Yellow STEAMLINE MOULDING—Wren Yellow Two Stripes Thistle Green WINDOW REVEALS—Bolling Green Medium, Edged Wren Yellow INSTRUMENT PANEL—Sheraton Gray Dibble JACKET TUBE—Sheraton Gray
790,399 to	SEAT CUSHIONS—Blue Two Shade Figured Material Modoc Mohair A-184346 A SEAT BACKS — Blue Two Shade Figured Material Modoc Mohair A 184346 A REAR OF FRONT SEATS—Blue Shade X -1159 -B- l Chase Medford Quality 50-50 Mixture SIDE WALLS—Blue Shade X-1159-B-1 Chase Medford Quality 50-50 Mixture HEADLINING—Blue Shade X-1159-B-1 Chase Medford Quality 50-50 Mixture	UPPER BODY—Jet Black Ditzlac LOWER BODY—Bloomfield Gray Ditzlac BONNET--Bloomfield Gray WHEELS—Bloomfield Gray, Striped Straw Color BELT MOULDING—Jet Black Two Stripes Straw Color Ditzlac STREAMLINE MOULDING--Straw Color Two Stripes Black WINDOW REVEALS — Bloomfield Gray, Edged Straw Color INSTRUMENT PANEL — Sheraton Gray Dibble JACKET TUBE—Sheraton Gray

Hudson Special Sedan, 5-Pass.

Car No	*Upholstery*	*Car Finish*
750,000 to 790,399	SEAT CUSHIONS—Blumenthol No. 36 AM Cadet Blue Mohair SEAT BACKS—Blumenthol No. 36 AM Cadet Blue Mohair SIDE WALLS BELOW BELT—Blumenthol No. 312 AX Cadet Blue Mohairand Wool SIDE WALLS ABOVE BELT—Blumenthol No. 311 AX Cadet Blue Mohair and Wool	UPPER BODY—Standard Blue Light Duco No. 2444006 LOWER BODY—Luxor Blue Duco No. 2444005 BONNET—Luxor Blue Duco No. 2444005 WHEELS—Luxor Blue Duco No. 2444005, Striped Ditzlac Ivory BELT MOULDING—Black Duco No. 207412, Striped Ditzlac Ivory STREAMLINE MOULDING — Standard Blue Light Duco No. 2444006, Striped Ditzlac Ivory WINDOW REVEALS—Luxor Blue Duco No. 2444005 *INSTRUMENT PANEL — Ditzlac Plymouth Gray *STEERING GEAR JACKET TUBE —Ditzlac Plymouth Gray *INSTRUMENT PANEL AND JACKET TUBE Changed to Sheraton Gray at Car No. 778,484

Hudson Phaeton

Car No.	*Upholstery*	*Car Finish*
775,000 to 782,146	SEAT CUSHIONS—Red Leather SEAT BACK—Red Leather DOOR TRIM PANELS—Red Leather COWL TRIM PANELS—Red Imitation Leather	BODY—Ditzlac Jockey Club Maroon BONNET—Ditzlac Jockey Club Maroon WHEELS—Ditzlac Jockey Club Maroon, Striped Ditzlac Extra Permanent Vermillion STREAMLINE MOULDING—Ditzlac Falcon Buff, Striped Ditzlac Black, Edged Ditzlac Extra Permanent Vermillion INSTRUMENT PANEL — Ditzlac Jockey Club Maroon STEERING GEAR JACKET TUBE —Ditzlac Jockey Club Maroon WINDSHIELD—Ditzlac Jockey Club Maroon
782,146 to 790,399	SEAT CUSHIONS—Red Leather SEAT BACK—Red Leather DOOR TRIM PANELS—Red Imitation Leather COWL TRIM PANELS—Red Imitation eather	BODY—Ditzlac Old Burgundy BONNET—Ditzlac Old Burgundy *WHEELS—Ditzlac Jockey Club Maroon, Striped Extra Permanent Vermillion STREAMLINE MOULDING—Old Burgundy, Striped Casino Red, Edged Straw Color INSTRUMENT PANEL—Old Burgundy JACKET TUBE—Old Burgundy BOW SOCKETS—Old Burgundy *WHEELS—Changed to Old Burgundy, Striped Straw Color at Car No. 783,093

Hudson Roadster

Car No.	Upholstery	Car Finish
775,000 to 782,146	SEAT CUSHIONS—Red Leather SEAT BACK—Red Leather DOOR TRIM PANELS—Red Leather COWL TRIM PANELS—Red Imitation Leather	BODY—Ditzlac Jockey Club Maroon BONNET—Ditzlac Jockey Club Maroon WHEELS—Ditzlac Jockey Club Maroon, Striped Ditzlac Extra Permanent Vermillion STREAMLINE MOULDING—Ditzlac Falcon Buff, Striped Ditzlac Black, Edged Ditzlac Extra Permanent Vermillion INSTRUMENT PANEL — Ditzlac Jockey Club Maroon STEERING GEAR JACKET TUBE —Ditzlac Jockey Club Maroon WINDSHIELD—Ditzlac Jockey Club Maroon
782,146 to 790,399	SEAT CUSHIONS—Red Leather SEAT BACK—Red Leather DOOR TRIM PANELS—Red Imitation Leather COWL TRIM PANELS—Red Imitation Leather	BODY—Ditzlac Old Burgundy BONNET—Ditzlac Old Burgundy *WHEELS—Ditzlac Jockey Club Maroon, Striped Extra Permanent Vermillion STREAMLINE MOULDING—Old Burgundy, Striped Casino Red, Edged Straw Color INSTRUMENT PANEL—Old Burgundy JACKET TUBE—Old Burgundy BOW SOCKETS—Old Burgundy *WHEELS—Changed to Old Burgundy, Striped Straw Color at Car No. 783,093

Essex Standard Sedan

Car No.	*Upholstery*	Car Finish
475,425 to 489,631	SEAT CUSHIONS—Blue Gray Green Blumenthol Mohair No. 625 SEAT BACKS—Blue Gray Green Blumenthol Mohair No. 625 SIDE WALLS—Blue Gray Green Blumenthol Velour No. 29 AC HEADLINING—Blue Gray Green Amoskeag Velvet No. 14-226	UPPER BODY—Ridge Blue Duco No. 1289 LOWER BODY—Pelham Blue Duco No. 1297 WHEELS—Pelham Blue Duco No. 1297 Striped Yellow Duco No. 3032 BELT MOULDING—Pelham Blue Duco No. 1297, Striped Yellow Duco No. 3032 WINDSHIELD BELT FINISH PANEL—Ridge Blue Duco No. 1289
489,631 to 500,000	SEAT CUSHIONS—Blue Gray Green Blumenthol Mohair No. 625 SEAT BACKS - Blue Gray Green Blumenthol Mohair No. 625 SIDE WALLS—Blue Gray Green Blumenthol Velour No. 29 AC HEADLINING— Blue Gray Green Blumenthol Velour No. 29 AC	UPPER BODY--Ridge Blue Duco No. 1289 LOWER BODY—Ridge Blue Duco No. 1289 BONNET- –Ridge Blue Duco No. 1289 WHEELS--Ridge Blue Duco No. 1289, Striped Lemon Yellow Duco No. 3032 BELT MOULDING—Black Duco No. 207412, Striped Lemon Yellow Duco No. 3032 WINDSHIELD BELT FINISH PANEL –Ridge Blue Duco No. 1289 INSTRUMENT PANEL — Ridge Blue No. 1289 INTERIOR METAL TRIM—Lacquered to match Upholstering
500,000 to 514,834	SEAT CUSHIONS Blue Gray Green Timme Plush No. 912 SEAT BACKS—Blue Gray Green Timme Plush No. 912 SIDE WALLS—Blue Gray Green Cotton Velvet Blumenthol No. 29 AC HEADLINING - Blue Gray Green Cotton Velvet Amoskeag No. 14-226	UPPER BODY—Ching Blue Duco No. 2444019 LOWER BODY—Ching Blue Duco No. 2444019 BONNET--Ching Blue Duco No. 2444019 WHEELS—Ching Blue Duco No. 2444019, Striped Ditzlac Straw Color BELT MOULDING — Black Duco No. 207412, Striped Ditzlac Azure Blue, Edged Ditzlac Straw Color INSTRUMENT PANEL— Ching Blue Duco No. 2444019 INTERIOR METAL TRIM—Lacquered to match Upholstering

Car No.	*Upholstery*	*Car Finish*
514,834 to 572,579	SEAT CUSHIONS—Blue Gray Green Timme Plush No. 912 SEAT BACKS—Blue Gray Green Timme Plush No. 912 SIDE WALLS—Blue Gray Green Cotton Velvet, Blumenthol No. 29 AC HEADLINING--Blue Gray Green Figured Flat Cloth No. 84-4	UPPER BODY—Ching Blue Duco No. 2444019 LOWER BODY—Ching Blue Duco No. 2444019 BONNET—Ching Blue Duco No. 2444019 WHEELS—Ching Blue Duco No. 2444019, Striped Ditzlac Straw Color INSTRUMENT PANEL -- Ching Blue Duco No. 2444019 INTERIOR METAL TRIM—Lacquered to Match Upholstery BELT MOULDING—Black Duco No. 207412, Striped Ditzlac Azure Blue, Edged Ditzlac Straw Color
572,579 to 578,475	SEAT CUSHIONS—Blue Gray Green Timme No. 912 Mottled Velour SEAT BACKS—Blue Gray Green Timme No. 912 Mottled Velour SIDE WALLS—Blue Gray Green Timme No. 1133 Mottled Velour HEADLINING — Blue Gray Green Plain Granite Weave No. 4-4-229	UPPER BODY—Ching Blue Duco No. 2444019 LOWER BODY—Ching Blue Duco No. 2444019 BONNET—Ching Blue Duco No. 2444019 WHEELS—Ching Blue Duco No. 2444019, Striped Ditzlac Straw Color INSTRUMENT PANEL—Sheraton Gray INTERIOR METAL TRIM—Sheraton Gray BELT MOULDING—Black Duco No. 207412, Striped Ditzlac Azure Blue, Edged Ditzlac Straw Color
578,475 to 608,290	SEAT CUSHIONS—Blue Gray Green Timme No. 912 Mottled Velour SEAT BACKS —Blue Gray Green Timme No. 912 Mottled Velour SIDE WALLS—Blue Gray Green Timme No. 1133 Mottled Velour HEADLINING—Blue Gray Green Plain Granite Weave No. 4-4-229	UPPER BODY—Jet Black Ditzlac LOWER BODY- Luxor Blue Duco No. 2444005 BONNET—Luxor Blue WHEELS—Luxor Blue, Striped Swan White BELT MOULDING - Jet Black, Striped Cotinga Blue, Edged Swan White INSTRUMENT PANEL—Sheraton Gray INTERIOR METAL TRIM Sheraton Gray
608,290 and Up	SEAT CUSHIONS—Blue Gray Green Timme No. 912 Mottled Velour SEAT BACKS - Blue Gray Green Timme No. 912 Mottled Velour SIDE WALLS— -Blue Gray Green Timme No. 1133 Mottled Velour HEADLINING—Blue Gray Green Plain Granite Weave No. 4-4-229	UPPER BODY—Algerian Blue Duco No. 2444021 LOWER BODY--Algerian Blue Duco No. 2444021 BONNET —Algerian Blue Duco No. 2444021 WHEELS--Algerian Blue, Striped Straw Color Ditzlac BELT MOULDING—Black Striped Rolls Royce Blue Ditzlac

Essex Coach

Car No.	*Upholstery*	*Car Finish*
100,000 to 107,174	SEAT CUSHIONS- Brown Haircloth No. 4241 SEAT BACKS Brown Haircloth No. 4241 SIDE WALLS Brown Haircloth No. 4270 HEADLINING Brown Haircloth No. 4270	BODY—Blue BONNET—Black Enamel WHEELS—Red to Car 106,256 then Black
107,174 to 442,676	SEAT CUSHIONS Striped Granite Weave No. 1671,2 A SEATBACKS Striped GraniteWeave No. 1671.2 A SIDE WALLS Plain Granite Weave No. 173 B HEADLINING Plain Granite Weave No. 173 B	BODY—Blue BONNET—Black Enamel WHEELS—Black
442,676 to 462,468	SEAT CUSHIONS Striped Granite Weave No. 167 I 2 A SEATBACKS Striped GraniteWeave No. 167.2 A SIDE WALLS Plain Granite Weave No. 173 B HEADLINING Plain Granite Weave No. 173 B	BODY—Black Enamel, Striped Veco Apple Green BONNET—Black Enamel WHEELS—Black, Striped Veco Apple Green NOTE: Some of 1st New Style Bodies had Red Striping, change to Green not recorded.
462,468 to 472,243	SEAT CUSHIONS Striped Granite Weave No. 16712 A SEAT BACKS Striped Granite Weave No. 16719 A SIDE WALLS Plain Granite Weave No. 173 B HEADLINING -Plain Granite Weave No. 173 B	BODY—Black Enamel, Striped Veco Apple Green BONNET—Black Enamel WHEELS—Black, Striped Veco Apple Green
472,243 to 500,000	SEAT CUSHIONS----Striped Granite Weave No. 16719 A SEATBACKS Striped GraniteWeave No. 16719 A SIDE WALL BELOW BELT—Striped Granite Weave No. 16712 A SIDE WALL ABOVE BELT—Plain Granite Weave No. 173 B HEADLINING - Plain Granite Weave No. 173 B	UPPER BODY—Sheffield Green Duco No. 1705 LOWER BODY—Sheraton Green Duco No. 1422, Striped Pistache Green BONNET—Sheraton Green Duco No. 1422 WHEELS—Sheraton Green Duco No. 1422, Striped Pistache Green
500,000 to 511,668	SEAT CUSHIONS -Blue Gray Green Timme Plush No. 912 SEAT BACKS—Blue Gray Green Timme Plush No. 912 SIDE WALLS—Blue Gray Green Cotton Velour Blumenthol No. 29 AC HEADLINING—Blue Gray Green Cotton Velvet Amoskeag No. 14-226	UPPER BODY—Algerian Blue Duco No. 2444021 LOWER BODY—Algerian Blue Duco No. 2444021 BONNET—Algerian Blue Duco No. 2444021

Car No.	*Upholstery*	Car Finish
500,000 to 511,668	Continued	WHEELS—Algerian Blue Duco No. 2444021, Striped Ditzlac Straw Color BELT MOULDING —Black Duco No. 207412, Striped Ditzlac Rolls Royce Blue WINDSHIELD BELT FINISH PANEL—Algerian Blue Duco No. 2444021 INSTRUMENT PANEL—Algerian Blue Duco No. 2444021 INTERIOR METAL TRIM—Lacquered to Match Cloth Trimming
511,668 to 573,000 Approx- imately	SEAT CUSHIONS—Blue Gray Green Timme Plush No. 912 SEAT BACKS—Blue Gray Green Timme Plush No. 912 SIDE WALLS—Blue Gray Green Cotton Velour Blumenthol No. 29 AC HEADLINING—Blue Gray Green Figured Flat Cloth Bell No. 84-4	UPPER BODY—Algerian Blue Duco No. 2444021 LOWER BODY—Algerian Blue Duco No. 2444021 BONNET—Algerian Blue Duco No. 2444021 WHEELS—Algerian Blue Duco No. 2444021, Striped Ditzlac Straw Color BELT MOULDING - -Black Duco No. 207412, Striped Ditzlac Rolls Royce Blue WINDSHIELD BELT FINISH PANEL—Algerian Blue Duco No. 2444021 INSTRUMENT PANEL---Algerian Blue Duco No. 2444021 INTERIOR METAL TRIM- -Lacquered to Match Upholstery
573,000 Approx- imately to 610,276	SEAT CUSHIONS—Blue Gray Green Timme No. 912 Mottled Velour SEAT BACKS—Blue Gray Green Timme No. 912 Mottled Velour SIDE WALLS—Blue Gray Green Cotton Velour Blumenthol No. 29 AC HEADLINING—Blue Gray Green Plain No. 84-4	UPPER BODY—Algerian Blue Duco No. 2444021 LOWER BODY—Algerian Blue Duco No. 2444021 . BONNET—Algerian Blue Dui° No. 2444021 WHEELS—Algerian Blue Duco No. 2444021, Striped Ditzlac Straw Color BELT MOULDING--Black Duco No. 207412, Striped Ditzlac Rolls Royce Blue WINDSHIELD BELT FINISH PANEL—Sheraton Gray INSTRUMENT PANEL—Sheraton Gray INTERIOR METAL TRIM—Sheraton Gray
610,276 to	SEAT CUSHIONS—Blue Gray Green Timme No. 912 Mottled Velour SEAT BACKS—Blue Gray Green Timme No. 912 Mottled Velour SIDE WALLS—Blue Gray Green Timme No. 1133 Mottled Velour	UPPER BODY—Bolling Green Ditzlac LOWER BODY—Special Milori Green —Deep—Ditzlac BONNET—Special Milori Green —Deep

Car. No.	*Upholstery*	*Car Finish*
610,276 to Cont'd	HEADLINING—Blue Gray Green Timme No. 1133 Mottled Velour 84-4 then 75 at Car 613,295 then Timme 1133 Car 615,239, then 75-4, then Amoskeag 462.	WHEELS — Special Milori Green —Deep, Striped Straw Color MOULDING—Black Striped Special Milori Green —Deep, Edged Straw Color WINDOW REVEALS — Special Milori Green— Deep, Edged Straw Color INSTRUMENT PANEL—Sheraton Gray, Dibble JACKET TUBE—Sheraton Gray INTERIOR METAL TRIM—Except Door Belt Finish Moulding, Sheraton Gray WINDSHIELD BELT PANEL—Walnut Center, Sheraton Gray Outer DOOR BELT MOULDING—Walnut

Essex Coupe

Car No.	Upholstery	Car Finish
500,000 to 512,885	SEAT CUSHIONS—Blue Gray Green Timme Plush No. 912 SEAT BACKS—Blue Gray Green Timme Plush No. 912 SIDE WALLS—Blue Gray Green Cotton Velour Blumenthol No. 29 AC HEADLINING—Blue Gray Green Cotton Velour, Amoskeag No. 14-226	UPPER BODY—Ditzlac Milani Green —Deep LOWER BODY—Ditzlac Milori Green—Deep BONNET—Ditzlac Milori Green—Deep WHEELS—Ditzlac Milori Green—Deep, Striped Ditzlac Straw Color BELT MOULDING— Ditzlac black —Striped Ditzlac Straw Color WINDSHIELD BELT PANEL — Ditzlac Milori Green—Deep INSTRUMENT PANEL —Ditzlac Milori Green—Deep INTERIOR METAL TRIM—Lacquered to Match Upholstering
512,885 to 519,318	SEAT CUSHIONS - Blue Gray Green Timme Plush No. 912 SEAT BACKS--Blue Gray Green Timme Plush No. 912 SIDE WALLS --Blue Gray Green Cotton Velour Blumenthol No. 29 AC HEADLINING—Blue Gray Green Figured Flat Cloth, Bell Co. 84.4	UPPER BODY-Ditzlac Milori Green —Deep LOWER BODY Ditzlac Milori Green Deep BONNET Ditzlac Milori Green Deep WHEELS—Ditzlac Milori Green Deep, Striped Ditzlac Straw Color BELT MOULDING—Ditzlac Black, Striped Ditzlac Straw Color WINDSHIELD BELT PANEL-Ditzlac Milori Green—Deep INSTRUMENT PANEL—Ditzlac Milori Green—Deep INTERIOR METAL TRIM—Lacquered to Match Upholstery
519.318 to Approx-imately 573,000	SEAT CUSHIONS—Dark Blue Leather SEAT BACKS—Dark Blue Leather DOOR PANEL—Chase Imitation Dark Blue Leather No. 102 SIDE WALLS ABOVE BELT—Blue Whipcord No. 71-1 HEADLINING- .Blue Whipcord No. 71-1 NOTE: Leather and cloth upholstery optional after car No. 519,318. For cars upholstered completely in cloth use same material as for cars No. 512,885 to No. 519,318.	UPPER BODY—Ching Blue Duco No. 4444019 LOWER BODY—Ching Blue Duco No. 2444019 BONNET—Ching Blue Duco No. 2444019 WHEELS - Ching Blue Duco No. 2444019, Striped Ditzlac Straw Color BELT MOULDING—Ditzlac Black, Striped Azure Blue Light, Edged Ditzlac Straw Color WINDSHIELD BELT PANEL—Ditzlac Plymouth Gray INSTRUMENT PANEL—Lacquered to Match Upholstering INTERIOR METAL TRIM—Lacquered to Match Upholstering
Approx-imately 573,000 to 610,276	SEAT CUSHIONS—Blue Gray Green Timme No. 912 Mottled Velour SEAT BACKS—Blue Gray Green Timme No. 912 Mottled Velour	UPPER BODY--Ching Blue Duco No. 2444019 LOWER BODY—Ching Blue Duco No. 2444019

Car No.	Upholstery	*Car Finish*
Approx-imately 573,000 to 610,276 Cont'd	SIDE WALLS—Blue Gray Green Timme No. 1133 Mottled Velour HEADLINING--Blue Gray Green Figured Flat Cloth, Bell Co. No. 84-4	BONNET —Ching Blue Duco No. 2444019 WHEELS—Ching Blue Duco No. 2444019, Striped Ditzlac Straw Color BELT MOULDING—Ditzlac Black., Striped Azure Blue Light, Edged Ditzlac Straw Color WINDSHIELD BELT PANEL—Sheraton Gray INSTRUMENT PANEL—Sheraton Gray INTERIOR METAL TRIM— Sheraton Gray
610,276 to	SEAT CUSHIONS - Blue Gray Green Timme No. 912 Mottled Velour SEAT BACKS— Blue Gray Green Timme No. 912 Mottled Velour SIDE WALLS Blue Gray Green Timme No. 1133 Mottled Velour HEADLINING Blue Gray Green Timme No. 1133 Mottled Velour Same as Coach.	UPPER BODY—Bolling Green Medium Ditzlac LOWER BODY—Special Milori Green—Deep, Ditzlac BONNET—Special Milori Green—Deep WHEELS—Special Milori Green—Deep, Striped Straw Color Ditzlac MOULDING—Black, Striped Special Milori Green—Deep, Edged Straw Color WINDOW REVEALS—Special Milori Green —Deep, Edged Straw Color WINDSHIELD BELT PANEL—Walnut Center, Sheraton Gray Dibble Outer DOOR BELT FINISH MOULDING —Walnut

Essex Deluxe Sedan

Car No.	*Upholstery*	Car Finish
560,600 to 610,276	SEAT CUSHIONS—Graphite Color Mohair and Wool, Blumenthol No. 319 AX SEAT BACKS—Graphite Color Mohair and Wool, Blumenthol No. 319 AX *SIDE WALLS—Graphite Color Mohair and Wool, Blumenthol No. 319 AX *HEADLINING—Graphite Color Cotton Velour Timme No. 921-6 *HEADLINING—Changed to Bell Co's. No. 72-25 Graphite Color at Car 593,605 *HEADLINING—Changed from Bell Co. 72-25 to Amoskeag No. 396 Napped Cloth at Car 606,772 *SIDE WALLS—Changed to Blumenthol No. 32 AW Worsted Pile Fabric Graphite Color at Car 600,421	UPPER BODY—Ditzlac Black LOWER BODY—Ditzlac Pine Grove Green BONNET—Ditzlac Pine Grove Green WHEELS—Ditzlac Pine Grove Green, Striped Ditzlac Straw Color BELT MOULDING—Ditzlac Black, Striped Ditzlac Milori Green—Light, Edged Ditzlac Straw Color WINDSHIELD BELT FINISH PANEL—Ditzlac Moleskin—Deep INSTRUMENT PANEL— Ditzlac Moleskin—Deep STEERING GEAR JACKET TUBE —Ditzlac Moleskin—Deep INTERIOR METAL TRIM—Ditzlac Moleskin—Deep WINDOW REVEALS—Ditzlac Pine Grove Green, Striped Ditzlac Straw Color *INTERIOR METAL TRIM, INSTRUMENT PANEL and JACKET TUBE—Changed to Sheraton Gray approximately Car No. 571,000
610,276 to 630,255	*SEAT CUSHIONS —Blumenthol No. 319 AX Mohair and Wool, Gray WITH Green Clover Leaf Design *SEAT BACKS- Blumenthol No. 319 AX Mohair and Wool, Gray with Green Clover Leaf Design REAR OF FRONT SEAT —Blumenthol No. 32 AW Worsted Pile Fabric, Gray SIDE WALLS - Blumenthol No. 32 AW Worsted Pile Fabric, Gray HEADLINING—Bell Co. Napped Cloth No. 124-B-11 Gray *Seat Cloth Changed to Blumenthol No. 319 AX Gray with Green Zig-Zag Design at Car No. 619,840 *Seat Cloth Changed Back to No.319AX Gray with Green Clover Leaf Design Printed Diagonallyat Car No. 624,428	UPPER BODY—Grouse Gray Dibble LOWER BODY--Dove Gray Dibble BONNET--Dove Gray WHEELS —Dove Gray, Striped Swan White WINDOW REVEALS—Dove Gray, Edged Swan White Dibble MOULDING•Grouse Gray, Striped Milori Green, Edged Swan White WINDSHIELD BELT PANEL—Walnut Center, Sheraton Gray Outer WINDOW FRAMES—Walnut ALL OTHER INTERIOR METAL TRIM-- Sheraton Gray
630,255 to	No change in upholstery.	UPPER BODY—Ditzlac Jet Black LOWER BODY—DitzlacPeacock Blue BONNET—Ditzlac Peacock Blue WHEELS—Ditzlac Peacock Blue, Striped Ditzlac Cream Color—Deep WINDOW REVEALS—Ditzlac Peacock Blue, Edged Ditzlac Cream Color—Deep MOULDING—Ditzlac Jet Black, Striped Ditzlac Bambaline Blue, Edged Ditzlac Cream Color—Deep WINDSHIELD BELT PANEL — Walnut Center, Sheraton Gray, Outer GARNISH MOULDING ON ALL DOORS— Walnut ALL OTHER INTERIOR METAL TRIM—Ditzlac Sheraton Gray

Essex Speedster (Phaeton)

Car No.	*Upholstery*	Car Finish
500,000 to 610,276	SEAT CUSHIONS - Algerian Blue Cross Cobra Grained Leather SEAT BACK CUSHIONS—Algerian Blue Cross Cobra Grained Leather BACK OF FRONT SEAT—Algerian Blue Imitation Leather Chase No. 102 DOOR PANELS --Algerian Blue Imitation Leather Chase No. 102 COWL QUARTERS --Algerian Blue Imitation Leather Chase No. 101 STRIP OVER COWL—Algerian Blue Imitation Leather Chase No. 101	BODY — Algerian Blue Duco No. 2444021 BONNET -Algerian Blue Duco No. 2444021 WHEELS--Algerian Blue Duco No. 2444021, Striped Ditzlac Straw Color WINDSHIELD—Algerian Blue Duco No. 2444021 INSTRUMENT PANEL—Plymouth Gray Dibble No. 353 STEERING GEAR JACKET TUBE Plymouth Gray Dibble No. 353 STREAMLINE MOULDING--Black Duco No. 207412, Striped Ditzlac Mandarin Vermillion, Edged Ditzlac Straw Color
610,276 to	SEAT CUSHIONS Algerian Blue Cross Cobra Grained Leather SEAT BACK CUSHIONS -Algerian Blue Cross Cobra Grained Leather BACK OF FRONT SEAT Algerian Blue Imitation Leather Chase No. 102 DOOR PANELS Algerian Blue Imitation Leather Chase No. 102 COWL QUARTERS Algerian Blue Imitation Leather- Chase No. 101 STRIP OVER COWL Algerian Blue Imitation Leather Chase No. 101	BODY Dundee Gray Ditzlac BONNET Dundee Gray WHEELS Dundee Gray, Striped Cream Color Dibble STREAMLINE MOULDING C. P. Green Double Deep Dibble, Striped Black, Edged Cream Light Dibble BOW SOCKETS -Dundee Gray WINDSHIELD GLASS FRAME Dundee Gray INSTRUMENT PANEL Sheraton Gray. JACKET TUBE Sheraton Gray Dibble

Essex Speedabout (Roadster)

Car No.	*Upholstery*	Car Finish
534,811 to 610,276	SEAT CUSHION—Black Cobra Grained Leather SEAT BACK—Black Cobra Grained Leather TRIM PANELS — Black Imitation Leather Chase No. 102	BODY—Milori Green Light Dibble No. 750 BONNET--Milori Green Light Dibble No. 750 WHEELS—Milori Green Light Dibble No. E. G. 40, Striped Black Dibble No. E. B. 37 WINDSHIELD—Milori Green Light Dibble No. 750 REAR SILL PANEL—Black, Dibble No. 125 INSTRUMENT PANEL--Moleskin —Deep, Dibble No. 438 STEERING GEAR JACKET TUBE --Moleskin—Deep, Dibble No. 438 DECK MOULDING—Black Duco No. 207412, Striped Ditzlac Straw Color
610,276 to	SEAT CUSHIONS — Black Cobra Grained Leather SEAT BACK—Black Cobra Grained Leather TRIM PANELS — Black Imitation Leather Chase No. 102	BODY—Sahara Sand Dibble BONNET—Sahara Sand Dibble WHEELS — Emerald Green Light Dibble, Striped Sahara Sand MOULDING--Emerald Green Light, Striped Black, Edged Cinnibar Red Ditzlac WINDSHIELD FRAME and STAN-CHIONS—Sahara Sand BOW SOCKETS-- Sahara Sand INSTRUMENT PANEL — Shera ton Gray Dibble JACKET TUBE-- Sheraton Gray REAR VERTICAL MOULDING— Sahara Sand

Mechanical Specifications

for Essex Super-Six
1929 Model

Car Serial No. 928658 to _____

Hudson Reference Sheet No. 34 (Jan. 1929)

REVISED JANUARY, 1929

Mechanical Specifications for Essex

Super Six - 1929 Model

Car Serial No. 928658 to_____

ENGINE

Make	Hudson	Piston displacement	160.38
Model	Essex Super Six	Suspension	4 Point
No. of cylinders	6	Type of head	L
Cylinder arrangement	Vertical	Cylinder head	Detachable
Bore	2-3/4"	Cylinders in block	6
Stroke	4-1/2"	Crankcase	Integral
Rated H. P.	18.15	Material	Cast iron
Firing order	1-5-3-6-2-4	Lower half	Pressed steel

CAMSHAFT DRIVE

Type of drive	Chain	No. of links	57
Make	Morse	Pitch	1/2"
Type	No. 28	Adjustment	Adjustable eccen.
Width	1-1/4"	Sprocket material	Cast iron
Camshaft sprocket	38 Teeth		

CAMSHAFT BEARINGS

Number of bearings	3	No. 2 diameter	1-31/32"
No. 1 front - diam.	2"	No. 2 length	1-1/16"
No. 1 length	1-1/16"	No. 3 diameter	1-1/2"
		No. 3 length	15/16"

VALVES

	Inlet	Exhaust
Head material	Silicon steel	Silicon steel
Head diameter (outside)	1-3/8"	1-3/8".
Head diameter (opening)	1-1/4"	1-1/4"
Stem length	5-1/32"	5-1/32"
Stem diameter	5/16"	5/16"
Stem type of end	Grooved	Grooved
Tappet-type	Roller	Roller
Tappet clearance	.003"-.005"	.005" - .007"
Valve lift	5/16"	21/64"
Valve stem guides	Removable	Removable
Spring pressure	50 lbs.	50 lbs.

CRANKCASE AND CRANKSHAFT

No. of main hearings	3	Crank pin diameter	1-13/16"
No. I (front) - diameter	2-11/32"	Main bearing material	Bronze & babbitt
No. 1 length	1-5/8"	Main bearing clearance	.001" - .0015"
No. 2 diameter	2 -3/8"	Main bearing end play	.006" - .012"
No. 2 length	1-3/4"	End thrust on	Center bearing
No. 3 diameter	2-13/32"	Sprocket	29 teeth
No. 3 length	1-3/4"	Material	steel

CONNECTING ROD

Material	D. F. Steel	Lower end bearing clear	.001"
Weight	1-1/2 lbs.	Clearance (endwise)	.006" - .010"
Length C. to C.	8-3/16"	Type	Spun
Lower end bearing	Material	Babbitt	
Diameter	1-13/16"		

PISTON

Type	Slotted Skirt	Distance between bosses	1-1/8"
Material	Aluminum Alloy	Clearance - skirt	.002"
Weight	8 ounces	Depth of grooves	.156"
Length	3-1/16"	Lower groove	Drilled radially
Pin center to top	1-11/16"	Number of holes	8
		Diameter of holes	3/32"

PISTON RINGS

Material	Cast Iron	No. of oil rings	2
No. per piston	3 (above pin)	Type of joint	Mitre
Width	1/8"	Gap clearance	.006" -.008"
No. of comp. rings	1	Make	Piston Ring Co.

PISTON PIN

Type	Floating	Bushing - outside diam.	15/16"
Diameter	3/4"	Bushing - inside diam.	3/4"
Length	2-3/32"	Bushing - length	15/16"

LUBRICATION SYSTEM

Type	Circulating splash
Oil pump type	Plunger
Stroke of pump	Not adjustable
Capacity - Oil reservoir only	5 quarts
Capacity - Oil reservoir and troughs	6 quarts
Mesh of screen	50
Oil recommended	Medium heavy - use low cold test in winter

COOLING SYSTEM

Type	Thermo. syphon
Radiator - make	Harrison
Core - type	Ribbon cellular
Radiator - shutter	Pressed steel - Vertical

COOLING SYSTEM - Continued

Radiator shutter - make	Hudson
Shutter control - type	Manual
Capacity of cooling system	4-3/4 gallons
Radiator hose, upper, diameter	2-1/4"
Radiator hose upper, length	5-1/2"
Radiator hose, lower, diameter	2-1/4"
Radiator hose, lower, length	15-3/16"
Fan belt	"V" type
Fan - make	Hudson
Fan bearing type	Plain

FUEL SYSTEM

Carburetor-make	Marvel V
Carburetor-size	1-1/8"
Method of heating mixture	Marvel Heat Control
Make of vacuum tank	Stewart
Gasoline tank capacity	11-1/2 gallons
Fuel feed - type	Vacuum tank

EXHAUST

Muffler - make	Hudson

IGNITION SYSTEM

Make	Auto-Lite Corporation
Current source	Battery and generator
Spark control type	Full automatic
Firing order	1-5-3-6-2-4
Timing	D. C. (fully retarded)
Breaker point gap	.020"
Ignition coil - make	Auto-Lite Corporation IG-4065
Spark plug-make	A. C.
Spark plug-type	Short
Spark plug - size	Metric - 18 m/m, .5 m/m thread
Spark plug - gap	.025 - .028

Note: Any other information must be obtained from the manufacturer

STARTER MOTOR

Make	Auto-Lite Corporation MZ-4014
Drive - type	Bendix
No. of teeth on flywheel	100
Width of tooth face	3/8"
Pinion meshes from	Rear of flywheel

Note: Any other information must be obtained from the manufacturer

GENERATOR

Make	Auto-Lite Corporations - GAM-4101
Normal Charging Rate - hot	10 Amps.
Normal Charging Rate - cold	13.5 Amps.

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

BATTERY

Make	Exide	Terminal grounded	Negative
Type	3-XI-13-1-G	Length - overall	9"
Voltage	6	Width - overall	7-1/8"
No. of Plates	13	Height of box	7-7/8"
Where mounted	Under driver's seat	Height over terminals	9"

LIGHTING SYSTEM

Head and tail lamps - make	John Brown Lamp Company
Head lamp reflector - make	John Brown Lamp Company
Head lamp - type	Bullet
Side lamp - type	Bullet
Head lamp lens - type	Parabeam
Head lamp lens - diameter	8"
Head lamp dimmer method	Separate filament
Dash and tail lights connected	Separately
Ammeter - make	National Gauge & Equipment Co.
Dash light - make	National Gauge & Equipment Co.
Lighting switch control	On steering wheel

LAMP BULB SPECIFICATIONS

	Make	*Mazda No.*	*C. P.*	*Base*	*Voltage*
Head	Madzda	1110	21-21	D. C.	6-8
Side	Mazda	63	3	S. C.	6-8
Tail	Mazda	63	3	S. C.	6.8
Dash	Mazda	63	3	S. C.	6-8
Stop	Mazda	87	12	S. C.	6-8
Dome	Mazda	63	3	S. C.	6-8

HORN

E. A. Horn — Motor type

CHASSIS

Wheelbase	110-1/2"
Lubricating system	Alemite
Overall length with bumpers	14' - 0"
Location of serial number	Rear cross member

TRANSMISSION

Make	Hudson	Pocket bearing	Bronze bushing
Location	Unit	Reverse idler	Bronze bushing
Speeds	3 forward, 1 rev.	Main shaft - front	N. D. No. 1207
Gear ratio - low	3.244 to 1	Main shaft - rear	Hyatt No. N. C. 306
Gear ratio - second	1.961 to 1	Countershaft	Stationary
Gear ratio - high	1 to 1		
Gear ratio - reverse	4.170 to 1		
Type of lubricant	Heavy motor oil		
Oil capacity (approx.)	1quart		
Pilot brg. in crankshaft	N. D. No. 1202		

CLUTCH

Make	Hudson	Throwout bearing	Annular & thrust
Type	Single disc in oil	Throwout	5/32"
acing material	Cork inserts	Clearance at F/B	3/4"
No. of cork inserts	72		

LUBRICATION - 1/2 pint light motor oil.

UNIVERSALS

	Make	Type		Make	Type
Front	Spicer	Metal	Rear	Spicer	Metal

TYPE OF DRIVE

Propulsion through rear springs.

REAR AXLE

Make	Hudson	Wheel bearing	Timken 415TV and 412A
Type	Semi-floating	Pin. brg. - front	Timken 2691V and 2620
Gear ratio	5 6/10 or 5 1/11	Pin. brg. - rear	Timken3188 and 3120
Type of drive	Spiral bevel	Differential brg. - right	Timken336 and 3320
Min. road clear.	8"	Differential brg. - left	Timken 336 and 3320
Clear. for jack	10 1/4"	No. of teeth in pinion 10 or 11	
Differential - make	Hudson	No. of teeth in gear 56	
Pinion	Adjustable	Oil capacity (approx.) 1-1/2 quarts	
Pinion bearing	Adjustable		

FRONT AXLE

Make	Hudson	Toe in-none - or not over 1/8"	
Section - type	I beam	Castor angle	0
End - type	Rev. Elliott	Min. road clearance	8"
King pin thrust brg.	Ball brg.	Clearance for jack	11" on spring
King pin transverse		Spindle transverse	
Inclination	7 º	Inclination	1 º

STANDARD BRAKES

Type Bendix 4-wheel brakes

SERVICE BRAKES

Location	Front and Rear. wheels	Lining length per wheel; 2 pieces 24-1/2 "	
Make	Bendix	Width of lining	1-1/2"
Type	Internal	Thickness of lining	5/32"
Total braking area	147 sq. inches	Clearance of lining	.010"
Drum diameter	11"	Method of application	Foot pedal

HAND BRAKE

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

WHEELS

Type	Wood steel felloe
Make	Motor Wheel Corporation
Front wheel inner bearing	Timken No. 2554 and 2520
Front wheel outer bearing	Timken No. 2382 and 2320

RIMS

Type	Split	Diameter	20"
Make	Jaxon	Width	4"

TIRES

Size	30 x 5 balloon, straight side
Make	Goodyear
Number of plies	4
Recommended pressure	Front 28 lbs; Rear 32 lbs.

STEERING GEAR

Make	Gemmer
Type	Worm and shaft
Ratio	15 to 1
Steering wheel turns	2-1/2 (full swing left to right)
Turning radius	20 feet
Lubricant	Steam cylinder oil

SPRINGS

Front spring		*Rear Spring*	
Type	Semi-elliptic	Type	Semi-elliptic
Length	36"	Length	54-7/8"
Width	2"	Width	2"
No. of leaves	8	No. of leaves	7, 8 or 10
Material	Vanadium Steel	Material	Vanadium Steel
Front bushing	5/8" diameter	Front bushing	5/8" diameter
Rear bushing	5/8" diameter	Rear bushing	5/8" diameter
Bushing material	Phosphor bronze	Bushing material	Phosphor bronze
Spring lubricant	Motor oil		
Shackle - type	Adjustable		

FRAME

Make	Hudson	Thickness	5/32"
Material	Steel	Width of flange	1-7/8"
Depth	4-1/2"		

ESSEX SUPER SIX

Gear Ratios and Rules for Comparing Speed in Miles per Hour with Motor R. P. M.

Car Serial No. 928,658 to _____

TO OBTAIN MOTOR R. P. M. FOR ANY DESIRED SPEED IN MILES PER HOUR

Note: The following rule No. I is good only far a gear ratio of 5 6/10 to one and with wheel diameter of 30 inches.

Rule No. 1: - M. P. H. multiplied by 62.5 = Motor R. P. M. (approx.)
Example - What is the R. P. M. of motor at 40 miles per hour?
Answer - 40 multiplied by 62.5-2500 R. P. M. (approx.)

The following rule No. 2 is good only for a gear ratio of 5 1 /11 to one and with wheel diameter of 30 inches,

Rule No. 2: - M. P. H. multiplied by 57 = Motor R. P. M. (approx.)

TO OBTAIN SPEED IN MILES PER HOUR FOR ANY DESIRED MOTOR R. P. M.

Note: The following rule No. 3 is good only for a gear ratio of 5 6/10 to me and with wheel diameter of 30 inches.

Rule No. 3: - R. P. M. divided by 62.5 =Speed in miles per hour (approx.)
Example - what is the speed at 2400 R. P. M.?
Answer - 2400 divided by 62.5 - 38.4 M. P. H. (approx.)

The following rule No. 4 is good only for a gear ratio of 5 1 /11 to one and with wheel diameter of 30 inches.

Rule No. 4: - R. P. M. DIVIDED by 57 = Speed in miles per hour (approx.)

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

Example - 3.244 (low &ear ratio) multiplied by 5.6 (rear axle ratio) equals 18.166 revolutions of the motor to one revolution of rear wheel.

The following list shows the various motor to wheel ratios worked out as above for Essex Super Six cars with rear axle gear ratio 5.6 to 2:

	Trans. Ratio	Rear Axle Ratio	Motor Revs.	Wheel Revs.
With transmission in low	3.244	5.6	18.166	1
With transmission in sec.	1.961	5.6	10.981	1
With transmission in high	1	5.6	5.6	1
With transmission. in rev.	4.17	5.6	23.352	1

REVISED JANUARY, 1929

Essex Super Six-Standard Equipment

Car Serial No. 928,658 to_____

	Phaeton	*Std Road.*	*Conv. Coupe*	*Std. Coupe*	*Coach*	*Sedan*	*Town Sedan*
Windshield cleaner -make	Trico Mfg. Co.	Trico Mfg. Co.	Trico Mfg. Co.	Trico Mfg. Co.	Trico Mfg. Co.	Trico Mfg. Co.	Trico Mfg. Co
Windshield cleaner -type	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum
Trunk Rack	None	None	None	None	None	None	None
Cowl ventilator	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Engine heat indicator	On instrument board					ALL MODELS	
Gasoline and oil level gauge location	Instrument board					ALL MODELS	
Gasoline and oil level gauge - type	Electric					ALL MODELS	
Wheels - type	Wood wheels					ALL MODELS	
Sun visor	Yes	No	Yes	Yes	Yes	Yes	
Radiator shutters	Yes					ALL MODELS	
Rear traffic signal	Yes					ALL MODELS	
Comb. tail and stop light - make	John Brown Lamp Co.					ALL MODELS	
Cowl lights	No	No	Yes	Yes	Yes	Yes	
Dome light	No	No	Yes	Yes	Yes	Yes	
Speedometer - make	Stewart-Warner					ALL MODELS	
Ignition electrolock						ALL MODELS	
Spare rim	One					ALL MODELS	
Horn - make	E. A.					ALL MODELS	
Headlamps - make	Parabeam - John Brown Lamp Co.					ALL MODELS	
Tire carrier - make	Hudson					ALL MODELS	
Storage battery - make	"Exide"					ALL MODELS	
Shock absorber - make	Monroe					ALL MODELS	
Shock absorber - type	Hydraulic					ALL MODELS	
Bumpers - front and rear						ALL MODELS	

REVISED JANUARY, 1929

Essex Super Six-Body Details
1929 Models

Car Serial No. 928,658 to_____

	Phaeton	*Std. Coupe*	*Convertible Coupe*	*Coach*	*Std. Sedan*	*Town Sedan*	*Roadster*
Model	1929	1929	1929	1929	1929	1929	1929
Wheelbase	110-1/2	110-1/2	110-1/2	110-1/2	110-1/2	110-1/2	110-1/2
Weight	2490	2600	2540	2635	2745	2795	2465
No. of doors	4	2	2	2	4	4	2
No. of passengers	5	2 or 4	2 or 4	5	5	5	4
Seating Arrangement	Std.	Std.	Std.	Std.	Std.	Std.	Std.
Gear ratios		5 6/10 and 5 1/11 to 1			ALL MODELS		
Make of body	Briggs Mfg. Co.	Own	Own	Own	Own	Own	Briggs Mfg. Co.
Windshield-type		One piece swing type			ALL MODELS		
Windshield - make		Motor products			ALL MODELS		
Wheels - type Wood					ALL MODELS		
Tires - size 30 x 5					ALL MODELS		

Mechanical Specifications

for Hudson Super-Six

1929 Model

(127-7/16” Wheel Base)

Car Serial No. 825407 to _____

Hudson Reference Sheet No. 34 (Jan. 1929)

REVISED JANUARY, 1929

Mechanical Specifications for Hudson Super Six 1929 Models

122 – 7/16" Wheel Base Car Serial No. 825,407 to _____

ENGINE

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

CAMSHAFT DRIVE

Type of drive	Chain	No. of links	63
Make	Morse	Pitch	½"
Type	No. 28	Adjustment	Adjustable eccen.
Width of chain	1½"	Sprocket material	Cast iron
Camshaft sprocket	42 teeth		

CAMSHAFT BEARINGS

No. of bearings	4		
No. 1 (front) diameter	2-19/32"	No. 3 diameter	2-5/16"
No. 1 length	1-5/8"	No. 3 length	1-1/16"
No. 2 diameter	2-11/32"	No. 4 diameter	1½"
No. 2 length	1-1/16"	No. 4 length	1-3/4"

VALVES

	Inlet Valve	*Exhaust Valve*
Head material	Silicon steel	Silicon steel
Head diameter (outside)	2-1/32"	1-27/32"
Head diameter (opening)	1-7/8"	1-5/8"
Stem length	6"	6-3/4"
Stem diameter	.373	.371
Stem type of end	Grooved	Grooved
Tappet (type)	Roller	Roller
Tappet clearance	.004 - .006	.006 - .008
Valve lift	11/32"	15/64"
Valve stem guides	Removable	Removable
Spring pressure	96 lbs.	75 lbs.

CRANKCASE AND CRANKSHAFT

No. of main bearings	4	Crankpin diameter	2¼”
No. 1 (frt.) diameter	2-3/8"	Main bearing material	Bronze & babbitt
No. 1 length	2-9/16"	Main bearing end play	.006-.012
No. 2 diameter	2-13/32"	Main bearing clearance	.0015-.002
No. 2 length	1-1/8”	End thrust on	Rear center brg.
No. 3 diameter	2-7/16"	Sprocket	21 teeth
No. 3 length	2 -1/8"	Material	Steel
No. 4 diameter	2-11/32"		

CONNECTING ROD

Material	D. F. steel	Lower end bearing clearance	.0015-.002
Weight	2.8 lbs.	Length	2"
Length C. to C.	11.625	Clearance (endwise)	006-.010
Lower end bearing – Diameter	2.25”	Material	Bronze & babbitt

PISTON

Type	Lynite Control		
Material	Aluminum with steel struts	Distance between boses	1-3/ 8”'
Weight	20 ounces	Clearance skirt	.002”
Length	4-1/16"	Depth of grooves	5/32”
Pin center to top	2¼”		
Middle groove	Drilled radially	4 holes	3/32” diameter
Lower groove	Drilled radially	10 holes	3/32” diameter

PISTON RINGS

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

PISTON PIN

Type	Floating	Bushing outside dia	1.283
Diameter	1.0937	Bushing inside dia	1.0937
Length	2-11/16”	Bushing length	1-1/8"

LUBRICATING SYSTEM

Type	Circulating splash
Oil pump type	Plunger
Stroke of pump	Not adjustable
Capacity-oil reservoir only	7 quarts
Capacity-oil reservoir and troughs	9 quarts
Mesh of screen	50
Oil recommended	Medium heavy-Use low cold test in winter

COOLING SYSTEM

Type	Centrifugal pump
Radiator-make	Harrison
Core type	Ribbon cellular
Radiator shutter - type	Pressed steel - Vertical
Shutter control type	Manual
Capacity of cooling system	5½ gallons
Radiator hose - upper - diameter	1½"
Radiator hose - upper -length	7"
Radiator hose - lower - diameter	1½"
Radiator hose - lower - length	10½"
Fan belt	"V" type
Fan-make	Hudson
Fan bearing type	Plain

FUEL SYSTEM

Carburetor - make	Marvel VB-10-725
Carburetor -size	1½
Fuel feed type	Vacuum tank
Make of vacuum tank	Stewart
Air cleaner-type	A. C.
Gasoline tank capacity	18¾ gallons
Method of heating mixture	Marvel heat control

EXHAUST SYSTEM

Muffler-make - Hudson	Exhaust pipe diameter 2¼"

IGNITION SYSTEM

Make	Auto-Lite Corporation
Current source	Battery and generator
Spark control type	Semi-Automatic
Firing order	1-5-3-6-2-4
Timing	10 degrees BDC fully advance
Breaker point gap	.020
Ignition coil make	Auto-Light
Spark plug- make	A. C. Titan
Spark plug- type	Short
Spark plug -size	Metric 18 m/m, 1.5 m/m thread
Spark plug-gap	.025 - .028

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

STARTER MOTOR

Make - Auto-Lite Corporation	MUA-4011
Drive type	Manual - sliding gear
No. of teeth on flywheel	118
Width of tooth face	3/4"
Pinion meshes from	Front of flywheel

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

GENERATOR

Make - Auto-Lite Corporation	GAB-4008
Normal charging rate - hot	13 amperes
Normal charging rate - cold	17 amperes

Note: Any other information must be obtained from the manufacturer

BATTERY

Make	Exide	Terminal grounded neg.	
Type	3-X1-15-1-G	Length-overall	10¼”
Voltage	6	Width-overall	7-1/8”
No. of plates	15	Height of box	7-7/8"
		Height over terminal	9”

LIGHTING SYSTEM

Head side and tail lamps-make	John Brown Lamp Co,
Head side reflector-make	John Brown Lamp Co.
Head and side lamp type	Bullet
Head lamp lens-type	Parabeam
Head lamp lens-diameter	10”
Head lamp dimmer method	Separate filament
Dash and tail lights connected	Separate
Ammeter-make	National Gauge & Equipment. Co.
Lighting switch control	On steering wheel
Ignition switch-type	Electrolock

LAMP BULB SPECIFICATIONS

	Make	*Mazda No.*	*CP*	*Base*	*Voltage*
Head	Mazda	1110	21-21	D. C.	6-8
Side	Mazda	63	3	S. C.	6-8
Tail	Mazda	63	3	S. C.	6-8
Dash	Mazda	63	3	S. C.	6-8
Stop	Mazda	87	15	S. C.	6-8
Dome	Mazda	63	3	S. C.	6-8

HORN

E. A. Horn	Vibrator type

CHASSIS

Wheelbase	122-7/16”
Lubricating system	Oil cups-wick
Overall length with bumpers	16’
Location of serial number	Frame rear cross member R. H. end

TRANSMISSION

Make	Hudson	Pocket bearing	Bronze bush.
Location	Unit	Reverse idler	Hyatt No, 16820
Speeds	3 forward, 1 reverse	Main shaft - front	N. D. 1308
Gear ratio-low	3.04 to 1	Main shaft-rear	Hyatt No. 16684
Gear ratio- second	1.81 to 1	Countershaft - front	Hyatt No. 16506
Gear ratio- high	1 to 1	Countershaft - rear	Hyatt No. 16506
Gear ratio - reverse	3.69 to 1	Countershaft - rotates	
Type of lubricant	Light transmission oil	Pilot bearing in crankshaft	N. D. No. 1204
Oil capacity (approx.)	1½ quarts		

CLUTCH

Make	Hudson	Facing material	Cork inserts
Type	Single disc in oil	Throwout brg.	Nice No. 0210
No. cork inserts	144	Throwout	5/32"
Lubrication (Mixture1/8pt. motor oil and 1/8 pt. kerosene)	3/4 pt.	Clearance at floor board	3/4"

UNIVERSALS

Front - make	Spicer	Rear - make	Spicer
Front type	Metal	Rear -type	Metal

TYPE OF DRIVE

Propulsion through rear springs.

REAR AXLE

Make	Hudson	No. of teeth in pinion	12 (4-5/12 to 1)
		No. of teeth in pinion	13 (4-1/13 to 1)
Type	Semi-floating	No. of teeth in gear	53
Gear ratio	4-5/12 and 4-1/13 to 1		
Type of drive	Spiral bevel	Pinion	Adjustable
Min. road clearance	8"	Pinion hearing	Adjustable
Clearance for jack	10¼"	Oil capacity (approx.)	2½ quarts
Differential -make	Hudson	Type of lubricant	Diff. oil.
Pinion bearing	Front	Timken 3196 and 3120	
Pinion bearing	Rear	Timken 439T and 432	
Differential bearing	Right	Timken 377 and 3720	
Differential bearing	Left	Timken 377 and 3720	

FRONT AXLE

Make	Hudson	Toe in - none - or not over 1/8"	
Section type	I-beam	Castor angle	1 degree backward
End type	Rev. Elliott	Min. road clearance	8”
King pin thrust bearing	Special thrust	Clearance for jack	6¾"
King pin transverse inclination		6½ degrees	
Spindle transverse inclination		2½ degrees	

STANDARD BRAKES

Type of standard brakes	Bendix 4-wheel brakes

SERVICE BRAKE

Location	Front and Rear wheels	Lining length per wheel	3 pieces 30-¼"
Make	Bendix	Width of lining	2"
Type	Internal	Thickness of lining	3/16"
Total braking area	242 sq. in.	Clearance of lining	.010
Drum diameter	Front and Rear 14"	Method of application	Front pedal

HAND BRAKE

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

WHEELS

Type	Wood-steel felloe
Make	Motor Wheel Corp.
Front wheel inner bearing	Timken No. 415 and 412A
Front wheel outer bearing	Timken No. 315 and 312
Rear wheel bearing	Timken No. 458T and 454

RIMS

Type	Split	Diameter	19"
Make	Firestone	Width	4½"

TIRES

Size	31 x 6.50 (139” W.B.) 31 x 6.00 (122-7/16” W.B.)
Make	Goodyear
Number of plies	4
Recommended pressure	35 lbs. Rear 38 lbs.

STEERING GEAR

Make	Gemmer
Type	Worm and roller disc
Ratio	20 to 1
Steering wheel turns	2¾ (full swing left to right)
Turning radius	20 feet
Lubricant	Heavy bodied gear oil

SPRINGS

Front Spring		*Rear Spring*	
Type	Semi-elliptic	Type	Semi-elliptic
Length	39 "	Length	57-11/16"
Width	2¼"	Width	2¼"
No. of leaves	9	No. of leaves	10
Material	Spring steel	Material	Vanadium steel
Front bushing	11/16" diameter	Front bushing	¾" diameter
Rear bushing	11/16" diameter	Rear bushing	11/16" diameter
Bushing material	Phosphor bronze	Bushing material	Phosphor bronze
Spring lubrication	Motor oil		
Shackles-type	Adjustable		

FRAME

Make	Hudson	Depth	7”
Material	Steel	Thickness	3/16"
		Width of flange	2¼"

HUDSON SUPER SIX

Gear Ratios and Rules for Comparing Speed in Miles per Hour with Motor R. P. M.

122-7/16" Wheel Base Car Serial No. 825,407 to _____

TO OBTAIN MOTOR R. P. M. FOR ANY DESIRED SPEED IN MILES PER HOUR

Note: The following rule No. 1 is good only for a gear ratio of 4 5/ 12 to one and with wheel diameter of 31 inches.

Rule No. 1 - M. P. H. Multiplied by 47.5 = Motor R. P. M. (approx.)
Example what is the R. P. M. at 40 miles per hour?
Answer - 40 multiplied by 47.5 = 1900 R. P. M. (approx.)
The following rule No. 2 is good only for a gear ratio of 4 1/13 to one and with wheel diameter of 31 inches.

Rule No. 2-M. P. H. multiplied by 44 =Motor R. P. M. (approx.)

TO OBTAIN SPEED IN MILES PER HOUR FOR ANY DESIRED MOTOR R. P. M.

Note: The following rule No. 3 is good only for a gear ratio of 4 5/12 to one and with wheel diameter of 31 inches.

Rule No. 3-R. P. M. divided by 47.5 = Speed in miles per hour (approx.)
Example-what is the speed at 2400 R. P, M.
Answer-2400 divided by 47.5 = 50 M. P. H. (approx.)
The following rule No. 4 is good only for a gear ratio of 4 1/13 to one and with wheel diameter of 31 inches.

Rule No. 4 - R. P. M. DIVIDED by 44 = Speed in miles per hour (approx.)

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

Example-3.04 (low gear ratio) x 4.42 (rear axle ratio) = 13.528. Revolutions of the motor to one revolution of rear wheel.

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

	Trans. Ratio	Rear Axle Ratio	Motor Revs.	Wheel Revs.
With transmission in low	3.04	4.42	13.437	1
With transmission in second	1.81	4.42	8.	1
With transmission in high	1.	4.42	4.42	1
With transmission in reverse	3.69	4.42	16.31	1

EVISED JANUARY, 1929

Hudson Super Six Standard Equipment
1929 Models

122-7/16” Wheel Base Car Serial No. 825,407 to _____

139” WHEEL BASE	122-7/16” WHEEL BASE	
7-Pass. Phaeton	*Coach*	*Landau Sedan*
	Std. Sedan	*Victoria*
7-Pass. Sedan	*Std. Coupe*	*Roadster*
5-Pass. Sport Phaeton	*Converible. Coupe*	*5-Pass. Phaeton*
5-Pass. Club Sedan	*Town Sedan*	

W/S Cleaner- make	Trico vacuum	ALL MODELS
Cowl Ventilator		ALL MODELS
Engine heat indicator on instrument board		ALL MODELS
Gasoline gauge – on instrument board		ALL MODELS
Oil resevior gauge – Electric – on instrument board		ALL MODELS
Wheels	122-7/8” Wood	ALL MODELS EXCEPT VICTORIA
	139” – Wire	ALL MODELS
Smoking Set		ALL MODELS, EXCEPT COUPE, CONVERTIBLE COUPE PHAETON, ROADSTER
Cigar Lighter		TOWN SEDAN, LANDAU SEDAN, VICTORIA
Sun visor		ALL MODELS EXCEPT PHAETON, ROADSTER
Radiator shutters		ALL MODELS
Rear traffic signal	.	ALL MODELS
Com. tail and stop light	John Brown Lamp Company	ALL MODELS
Cowl lights	.	ALL MODELS
Rear vision mirror		ALL MODELS
Ignition electrolock		ALL MODELS
Speedometer - make	Stewart-Warner	ALL MODELS
Spare rim	One	ALL MODELS
Horn - make	E. A	ALL MODELS
Headlamps - make	John Brown Lamp Company	ALL MODELS
Tire carried in R. H. front fender well		ALL MODELS
Storage battery - make	"Exide"	ALL MODELS
Shock Absorber make	Wahl	ALL MODELS
Trunk		VICTORIA
Trunk Rack		ALL MODELS EXCEPT VICTORIA, CLUB SEDAN, SPORT PHAETON

REVISED JANUARY, 1929

Hudson Super Six Body Details
1929 Models

122-7/8" Wheel BaseCar Serial No. 825,407 to_____

	5-Pass. Phaeton	*Landau. Sedan*	*. Victoria*	*Std. 5-Pass. Sedan*	*Town Sedan*
Weight		3825		3785	
No. of doors	4	4	2	4	4
No. of passengers	5	5	4	5	5
Seat arrangements	Std	Std.	Right front seat folding	Std.	Std.
Gear ratio	4 5/12 or 4 1/13	.	..	ALL MODELS	
Make of body	Briggs	Biddle & Smart	Biddle & Smart	Own	Briggs
Framework mater.	Steel	Wood	Wood	Steel	Wood
Body panel mater.	Steel	Aluminum	Aluminum	Steel	Aluminum
Wheels type	Wood			ALL MODELS	
Tire size	31 x 6.00			ALL MODELS	
Tire type front	4 ply			ALL MODELS	
Smoking set	No	Yes	Yes	Yes	Yes

Paint Specifications

The Greater Hudson
Essex the Challenger

(March 1929 Models)

Hudson Reference Sheet No. 36 (March 1929)

PAINT SPECIFICATIONS COVERING

The GREATER HUDSON

and

ESSEX the CHALLENGER

1929

INDEX

HUDSON MOTOR CAR CO.

DETROIT, MICHIGAN

Source of Supply of all Paint Used in Manufacturing Hudson and Essex, 1929 Models

Armitage, Newark, N. J.
Ault & Wiborg, 507 Shelby, Detroit
Dibble Color Co., 1497 E. Grand Blvd., Detroit
Ditzler, 8000 W. Chicago, Detroit (Request list of Distributing Points)
Jones & Dabney, 4835 Woodward, Detroit
Rinshed Mason, 5971 Milford St., Detroit
Dupont De Nemurs, (Request list of Distributing Points)

ANTLER TAN – Dibble

BAYOU BLUE – Ditzler

BLUE HOUR – Dupont

CASHEW NUT TAN - Rinshed Mason, Ault and Wiborg, Ditzler

CHINESE RED - Rinshed Mason

CREAM COLOR DEEP - Jones and Dabney, Ditzler, Dupont, Ault and Wiborg, Rinshed Mason

DEVONSHIRE CREAM - Ault and Wiborg

DIANA BLUE - Armitage, Ditzler, Jones and Dabney

EMERALD GREEN EXTRA LIGHT- Ditzler, Jones and Dabney

EXTRA PERMANENT VERMILLION – Jones and Dabney, Rinshed Mason

FROSTY GREEN – Ditzler, Jones and Dabney

GAZELLE BROWN - Rinshed Mason

GENEVA BLUE - Jones and Dabney

GLENROCK GREEN - Jones and Dabney

HUDSON STANDARD BLUE - Jones and Dabney, Ault and Wiborg

IVORY JET BLACK - Dibble, Jones and Dabney, Ditzler, Dupont, Rinshed Mason, Ault and Wiborg

KARNAK GREEN - Dupont and Dabney

LORELEI BLUE - Dibble

MALAGA MAROON - Rinshed Mason, Ditzler

MARMORA GREEN - Ditzler

MARSHLAND GRAY - Jones and Dabney

MILANO BLUE - Jones and Dabney

MOUNTAIN MIST BLUE – Dupont

NARRAGANSETT BLUE – Ditzler

NEPTUNE BLUE – Ditzler

OLD IVORY-Ault and Wiborg, Jones and Dabney

ORIOLE RED - Rinshed Mason, Jones and Dabney

PHEASANT BLUE – Ditzler

PRAIRIE GRASS - Dupont

RESEDA GREEN - Rinshed Mason, Dupont

ROYAL CHARIOT RED - Ditzler, Rinshed Mason

RUST GOLD – Dupont

SEACREST GREEN – Ditzler

SEAL BROWN - Ault and Wiborg, Ditzler

SPANISH YELLOW - Jones and Dabney

SUNNYBROOK BLUE - Jones and Dabney, Ditzler, Ault and Wiborg, Armitage

TERRAPIN GRAY - Dibble, Jones and Dabney

TIOGA TAN - Dibble, Rinshed Mason, and Dabney

VALLIBLUE - Dupont

VENEZIA BLUE - Dibble

WOODLAWN GREEN- Armitage

Enamel and Dipping Lacquer, all Colors Used on Wheels, Shutters, etc., Supplied By Dibble Color Co.

Essex Coach
CARS 928663 to 953294

STANDARD NO OPTIONAL

UPPER BODY - Lorelie Blue
LOWER BODY - Lorelie Blue
BELT PANEL - Venezia Blue
Striped -Tioga Tan
Permanent Vermillion
BONNET- Lorelie Blue
WOOD WHEELS - Lorelie Blue
Striped - Tioga Tan
Permanent Vermillion
WIRE WHEELS - Black Enamel
[1] SHUTTER ASSY. - Ivory Jet Black
[2] FENDERS, SPLASH GUARDS ETC.
Ivory Jet Black Enamel

NOTES
[1] Changed to Lorelie Blue at car No. 929937
[2] Changed to Lorelie Blue at car No 944346

THIS COMBINATION USED
ON FIRST ESSEX COACHES
Signified by letters "QQ"

Essex Coach
CARS 933294 UPWARD

STANDARD COLOR

UPPER BODY - Malaga Maroon
LOWER BODY - Malaga Maroon
BELT PANEL - Ivory Jet Black
Striped -Extra

BONNET - Malaga Maroon
WOOD WHEELS - Malaga Maroon
Striped - Extra

WIRE WHEELS - Black Enamel
[1]SHUTTER ASSY. - Malaga Maroon
FENDERS, SPLASH GUARDS, ETC.--
Ivory Jet Black Enamel

NOTES
[1] Changed to Ivory Jet Black at car No. 958136

THIS IS KNOWN AS
"Dark Red" COMBINATION
Signified by letters"AA"

Essex Coach
CARS 953292 UPWARD

OPTION NO. 1

UPPER BODY - Hudson Standard Blue
LOWER BODY - Terrapin Gray
BELT PANEL - Geneva Blue
Striped - -Cream Color Deep
BONNET - Terrapin Gray
WOOD WHEELS - Terrapin Gray
Striped - Geneva Blue
WIRE WHEELS - Black Enamel
[1]SHUTTER ASSY. - Terrapin Gray
FENDERS, SPLASH GUARDS, ETC.
Ivory Jet Black Enamel

NOTES
[1]Changed to Ivory Jet Black at car No. 958136

THIS IS KNOWN AS
"Light Gray" COMBINATION
Signified by letter"M"

Essex Coach
CARS 953311 UPWARD

OPTION NO. 2

UPPER BODY - Gazelle Brown
LOWER BODY - Gazelle Brown
BELT PANEL - Cashew Nut Tan
Striped - Oriole Red
BONNET - Gazelle Brown
WOOD WHEELS - Cashew Nut Tan
* - * * Oriole Red
WIRE WHEELS - Black Enamel
[1]SHUTTER ASSY. - Gazelle Brown
FENDERS, SPLASH GUARDS, ETC.
Ivory Jet Black Enamel

NOTES
[1] Changed to Ivory Jet Black at car No. 958136

THIS IS KNOWN AS
Dark Brown COMBINATION
Signified by letter"S"

Essex Coach
CARS 953293 UPWARD

OPTION NO. 3

UPPER BODY - Ivory Jet Black
LOWER BODY - Woodlawn Green
BELT PANEL - Sunnybrook Blue
Striped - Cream Color Deep
BONNET Woodlawn Green
WOOD WHEELS - Sunnybrook Blue
Striped - Cream Color Deep
WIRE WHEELS - Black Enamel
[1] SHUTTER ASSY. - Woodlawn Green
FENDERS, SPLASH GUARDS, ETC
Ivory Jet Black Enamel

NOTES
[1] Changed to Ivory Jet Black at car No. 958136

THIS IS KNOWN AS
"Bluish Green." COMBINATION
Signified by letter"T"

Essex Coach
CARS 953314 UPWARD

OPTION NO. 4

UPPER BODY - Hudson Standard Blue
LOWER BODY - Hudson Standard Blue
BELT PANEL - Geneva Blue
Striped - Cream Color Deep
BONNET - Hudson Standard Blue
WOOD WHEELS - Geneva Blue
Striped - Cream Color Deep
WIRE WHEELS - Black Enamel
[1] SHUTTER ASSY. - Hudson Standard Blue
FENDERS, SPLASH GUARDS, ETC.
Ivory Jet Black Enamel

NOTES
[1] Changed to Ivory Jet Black at car No. 958136

THIS IS KNOWN AS
"Dark Blue" COMBINATION
Signified by letter"U"

Essex Coupe

CARS 928781 to 938857
STANDARD - NO OPTIONAL

UPPER BODY - Ivory Jet Black
LOWER BODY - Ivory Jet Black
BELT PANEL - Cream Color Deep
Striped - Ivory Jet Black
BONNET - Ivory Jet Black
[1] WOOD WHEELS - Cream Color Deep
Striped - Ivory Jet Black
WIRE WHEELS - Cream Color Deep
SHUTTER ASSY. - Ivory Jet Black
FENDERS, SPLASH GUARDS, ETC. -
Black Enamel

NOTES
[1] Wood Wheel Hub Flanges changed from Cream Color Deep to Ivory Jet Black, at car No. 930716

THIS COMBINATION USED
ON FIRST ESSEX COUPES
Signified by letters"K4"

Essex Coupe

CARS 938857 to 942389
STANDARD - NO OPTIONAL

UPPER BODY- Glenrock Green
LOWER BODY- Antler Tan
BELT PANEL - Marshland Gray
Striped - Spanish Yellow
BONNET - Antler Tan
WOOD WHEELS - Marshland Gray
Striped - Spanish Yellow
WIRE WHEELS - Black Enamel
SHUTTER ASSY. - Antler Tan
FENDERS, SPLASH GUARDS, ETC. -
Ivory Jet Black Enamel

Signified by letters"SS"

Essex Coupe

CARS 942389-950690
STANDARD - NO OPTIONAL

UPPER BODY - Ivory Jet Black
LOWER BODY - Ivory Jet Black
BELT PANEL - Cream Color Deep
Striped - Ivory Jet Black
BONNET - Ivory Jet Black
[1] WOOD WHEELS - Cream Color Deep
Striped - Ivory Jet Black
WIRE WHEELS - Cream Color Deep
SHUTTER ASSY. - Ivory Jet Black
FENDERS, SPLASH GUARDS, ETC.
Ivory Jet Black Enamel

NOTES
This combination considered standard on cars
NOTES No. 950690 to No. 953593
[1] Flanges - Ivory Jet Black [2]

THIS IS KNOWN AS
"Greenish Blue" COMBINATION
Signified by letters"K4" Signified by letter"K-2"

Essex Coupe

CARS 954551 UPWARD
OPTION NO. 1

UPPER BODY - Ivory Jet Black
LOWER BODY - Sunnybrook Blue
BELT PANEL - Woodlawn Green
Striped - Diana Blue
BONNET - Sunnybrook Blue
WOOD WHEELS - Sunnybrook Blue
Striped - Ivory Jet Black
WIRE WHEELS - Black Enamel
[2] SHUTTER ASSY. - Sunnybrook Blue
ENDERS, SPLASH GUARDS, ETC.
Black Eggshell Enamel

Changed to Ivory Jet Black at car No. 958575

Essex Coupe

CARS 953593 UPWARD
STANDARD COLOR

UPPER BODY - Ivory Jet Black
LOWER BODY - Ivory Jet Black
BELT PANEL - Cream Color Deep
Striped - Ivory Jet Black
BONNET - Ivory Jet Black
[1]WOOD WHEELS - Cream Color Deep
Striped - Ivory Jet Black
WIRE WHEELS - Cream Color Deep
SHUTTER ASSY. - Ivory Jet Black
FENDERS, SPLASH GUARDS, ETC.-
Ivory Jet Black Enamel

NOTES
[1] Flanges - Ivory Jet Black
This combination considered No. 1 Optional
on cars No. 949997 to 953593

THIS IS KNOWN AS
"Black" COMBINATION
Signified by letter"K4"
Same as 3X Town Sedan No. 2

Essex Coupe

CARS 950689 UPWARD
OPTION NO. 2

UPPER BODY - Reseda Green
LOWER BODY - Reseda Green
BELT PANEL - Ivory Jet Black
Striped - Cream Color Deep
BONNET - Reseda Green
WOOD WHEELS - Reseda Green
Striped - Cream Color Deep
WIRE WHEELS - Black Enamel
[2] SHUTTERS ASSY. - Reseda Green
FENDERS, SPLASH GUARDS, ETC.-
Ivory Jet Black Enamel

NOTES
[2] Changed to Ivory Jet Black at car No. 958575

THIS IS KNOWN AS
"Dark Green" COMBINATION
Signified by letter"R-2"

Essex Coupe

CARS 950686 UPWARD
OPTION NO. 3

UPPER BODY - Gazelle Brown
LOWER BODY - Gazelle Brown
BELT PANEL - Cream Color Deep
Striped - Oriole Red
BONNET - Gazelle Brown
WOOD WHEELS - Gazelle Brown
Striped - Cream Color Deep
WIRE WHEELS - Black Enamel
[1]SHUTTER ASSY. - Gazelle Brown
FENDERS, SPLASH GUARDS, ETC. -
Ivory Jet Black Enamel

NOTES
*Changed to Ivory Jet Black at car No. 958575

THIS IS KNOWN AS
"Dark Brown" COMBINATION
Signified by letter"M"
Signified by letter "S-3"

Essex Coupe

CARS 950758 UPWARD
OPTION NO.4

UPPER BODY - Hudson Standard Blue
LOWER BODY - Terrapin Gray
BELT PANEL - Geneva Blue
Striped - Cream Color Deep
BONNET - Terrapin Gray
WOOD WHEELS - Terrapin Gray
Striped -Geneva Blue
WIRE WHEELS - Black Enamel
[2]SHUTTER ASSY. - Terrapin Gray
FENDERS, SPLASH GUARDS, ETC. -
Ivory Jet Black Enamel

NOTES
[2] Changed to Ivory Jet Black at car No. 958575

THIS IS KNOWN AS
"Light Gray" COMBINATION
Same as SX Coach No. 1

Essex Convertible Coupe

CARS 937531 UPWARD
STANDARD COLOR

UPPER BODY- Bayou Blue

LOWER BODY - Bayou Blue

BELT PANEL - Neptune Blue
Striped - Cream Color Deep

BONNET - Bayou Blue

WOOD WHEELS - Bayou Blue
Striped -Cream Color Deep

[1] WIRE WHEELS - Cream Color Deep

SHUTTER ASSY. - Bayou Blue

FENDERS, SPLASH GUARDS, ETC. - Bayou Blue

NOTES
WINDOW REVEALS - Neptune Blue
[1] DRUMS - Bayou Blue

STANDARD COLOR
NO OPTION
Signified by letters "CC"

Essex Roadster

CARS 935436 UPWARD
STANDARD COLOR

UPPER BODY - Royal Chariot Red

LOWER BODY - Royal Chariot Red

BELT MLDG. - Ivory Jet Black
Striped - Extra Permanent Vermillion

BONNET-Royal Chariot Red

WOOD WHEELS - Royal Chariot Red
Striped - Extra Permanent Vermillion

[1] WIRE WHEELS - Extra Permanent Vermillion

[2] SHUTTER ASSY. - Malaga Maroon

FENDERS, SPLASH GUARDS, ETC. - Malaga Maroon

NOTES
WINDSHIELD BELT PANEL - Malaga Maroon
[1] DRUMS - Malaga Maroon
[2] Changed to Ivory Jet Black at car No. 958136

STANDARD COLOR - NO OPTION
Signified by letters "EE"

Essex Phaeton

CARS 962383 UPWARD
STANDARD COLOR

UPPER BODY - Antler Tan

LOWER BODY - Antler Tan

BELT MLDG. - Ivory Jet Black
Striped - English Coach Vermillion

BONNET - Antler Tan

[1]WOOD WHEELS - Antler Tan
Striped - English Coach Vermillion

WIRE WHEELS - Black

SHUTTER ASSY. - Ivory Jet Black

FENDERS, SPLASH GUARDS, ETC.
Ivory Jet Black

NOTES
BETWEEN MLDG .- English Coach Vermillion
[1]FLANGES - Antler Tan

STANDARD COLOR
Signified by letters "DD"

Essex Phaeton

CARS 992313 AND UPWARD
OPTION NO. 1

UPPER BODY - Geneva Blue

LOWER BODY - Geneva Blue

BELT MLDG. - Ivory Jet Black
Striped - Cream Color Deep

BONNET - Geneva Blue

WOOD WHEELS - Geneva Blue
Striped - Crearn Color Deep

WIRE WHEELS - Ivory Jet Black

SHUTTER ASSY. - Ivory Jet Black

FENDERS, SPLASH GUARDS, ETC-
Ivory Jet Black

NOTES
BETWEEN MLDG. - Narragansett Blue.

Signified by letters "FFF"

Essex Standard Sedan

CARS 928665 to 948537
STANDARD COLOR - NO OPTION

UPPER BODY - Gazelle Brown

LOWER BODY- Gazelle Brown

BELT PANEL - Seal Brown
Striped-- -Devonshire Cream

BONNET - Gazelle Brown

WOOD WHEELS - Gazelle Brown
Striped - Devonshire Cream

WIRE WHEELS - Black Enamel

[1]SHUTTER ASSY. - Ivory Jet Black

[2]FENDERS, SPLASH GUARDS, ETC.-
Ivory Jet Black Enamel

NOTES
[1]Changed to Gazelle Brown at car No. 939275
[2]Running Board Splash Guards changed to
Gazelle Brown at car No. 944126

THIS COMBINATION USED
ON FIRST ESSEX STANDARD SEDANS .
Signified by letters "TT"

Essex Standard Sedan

CARS 948537 UPWARD
STANDARD COLOR

UPPER BODY - Reseda Green

LOWER BODY - Reseda Green

BELT PANEL - Ivory Jet Black
Striped-Cream Color Deep

BONNET - Reseda Green

WOOD WHEELS - Reseda Green
Striped - Cream Color Deep

WIRE WHEELS - Black Enamel

[1]SHUTTER ASSY. - Reseda Green

FENDERS, SPLASH GUARDS, ETC. -
Black Enamel

NOTES
[1]Changed to Ivory Jet Black at car No. 958210

THIS IS KNOWN AS
'Dark Green" COMBINATION
Signified by letters "FF"

Essex Standard Sedan

CARS 948537 UPWARD
OPTION NO. 1

UPPER BODY - Ivory Jet Black

LOWER BODY - Cashew Nut Tan

BELT PANEL - Gazelle Brown
Striped - Oriole Red

BONNET - Cashew Nut Tan

WOOD WHEELS - Cashew Nut Tan
Striped - Oriole Red

WIRE WHEELS - Black Enamel

[1]SHUTTER ASSY. - Cashew Nut Tan

FENDERS, SPLASH GUARDS, ETC. -
Ivory Jet Black Enamel

NOTES
[1]Changed to Ivory Jet Black at car No. 958210

THIS is KNOWN AS
"Light Brown" COMBINATION
Signified by letter "V"

Essex Standard Sedan

CARS 948537 UPWARD
OPTION NO. 2

UPPER BODY - Geneva Blue

LOWER BODY - Geneva Blue

BELT PANEL - Terrapin Gray
Striped - Ivory Jet Black

BONNET - Geneva Blue

WOOD WHEELS - Terrapin Gray
Striped - Ivory Jet Black

WIRE WHEELS - Black Enamel

[2]SHUTTER ASSY. - Geneva Blue

FENDERS SPLASH GUARDS, ETC. -
Ivory Jet Black Enamel

NOTES
[2]Changed to Ivory Jet Black at car No. 9.58210

THIS IS KNOWN AS
"Light Blue" COMBINATION
Signified by letter "0-2"

Essex Standard Sedan

CARS 948537 UPWARD
OPTION NO.3

UPPER BODY - Ivory Jet Black

LOWER BODY Ivory Jet Black

BELT PANEL - Reseda Green
Striped - Cream Color Deep

BONNET - Ivory Jet Black

WOOD WHEELS - Reseda Green
Striped - Cream Color Deep

WIRE WHEELS - Black Enamel

SHUTTER ASSY. - Ivory Jet Black

FENDERS, SPLASH GUARDS, ETC. -
Ivory Jet Black Enamel

NOTES
THIS IS KNOWN AS
"Black" COMBINATION
Signified by letter "K-3"

Essex Standard Sedan

CARS 948537 UPWARD
OPTION NO. 4

UPPER BODY - Gazelle Brown

LOWER BODY - Gazelle Brown

BELT PANEL - Cashew Nut Tan
Striped - Ivory Jet Black

BONNET - Gazelle Brown

WOOD WHEELS - Gazelle Brown
Striped - Ivory Jet Black

WIRE WHEELS - Black Enamel

[1]SHUTTER ASSY. - Gazelle Brown

FENDERS, SPLASH GUARDS, ETC. -
Ivory Jet Black Enamel

NOTES
[1]Changed to Ivory Jet Black at car No. 958210
THIS IS KNOWN AS
"Dark Brown" COMBINATION
Signified by letter "S-2"

Essex Town Sedan

CARS 931386 to 949350
STANDARD COLOR - NO OPTION

UPPER BODY - Geneva Blue

LOWER BODY - Geneva Blue

BELT PANEL - Ivory Jet Black
Striped - Crearn Color Deep

BONNET - Geneva Blue

WOOD WHEELS - Geneva Blue
Striped - Crearn Color Deep

[1]WIRE WHEELS-Cream Color Deep

SHUTTER ASSY. - Geneva Blue

FENDERS, SPLASH GUARDS, ETC. -
Geneva Blue

NOTES
[1]DRUMS - Geneva Blue
THIS COMBINATION USED
ON FIRST ESSEX TOWN SEDANS
Signified by letters "UU"

Essex Town Sedan

CARS 949350 UPWARD
STANDARD COLOR

UPPER BODY - Ivory Jet Black

LOWER BODY - Hudson Standard Blue

BELT PANEL - Geneva Blue
Striped - Cream Color Deep

BONNET - Hudson Standard Blue

WOOD WHEELS - Geneva Blue
Striped - Cream Color Deep

[1]WIRE WHEELS-Cream Color Deep

[2]SHUTTER ASSY. - Hudson Standard

FENDERS, SPLASH GUARDS, ETC. -
Hudson Standard Blue

NOTES
[1]DRUMS - Hudson Standard Blue
Changed to Ivory Jet Black at car No. 957847
THIS IS KNOWN AS
"Dark Blue" COMBINATION
Signified by letters "GG"

Essex Town Sedan

CARS 949348 UPWARD
OPTION NO. 1

UPPER BODY - Geneva Blue

LOWER BODY - Geneva Blue

BELT PANEL - Ivory Jet Black
Striped - Cream Color Deep

BONNET - Geneva Blue

WOOD WHEELS - Geneva Blue
Striped - Cream Color Deep

WIRE WHEELS - Cream Color Deep

[2]SHUTTER ASSY. - Geneva Blue

FENDERS, SPLASH GUARDS, ETC. -
Geneva Blue

NOTES
[2]Changed to Ivory Jet Black at car 957847

THIS IS KNOWN AS
"Light Blue" COMBINATION
Signified by letter "0-3"

Essex Town Sedan

CARS 949341 UPWARD
OPTION NO. 2

UPPER BODY - Ivory Jet Black

LOWER BODY - Ivory Jet Black

BELT PANEL - Cream Color Deep
Striped - Ivory Jet Black

BONNET - Ivory Jet Black

[1]WOOD WHEELS - Cream Color Deep
Striped - Ivory Jet Black

WIRE WHEELS - Cream Color Deep

SHUTTER ASSY. - Ivory Jet Black

FENDERS, SPLASH GUARDS, ETC. -
Ivory Jet Black Enamel

NOTES
'FLANGES- Ivory Jet Black

THIS IS KNOWN AS
"Black" COMBINATION
Signified by letter "K-4"
Same as SX Coupe Standard

Essex Town Sedan

CARS 949357 UPWARD
OPTION NO.3

UPPER BODY - Hudson Standard Blue

LOWER BODY - Terrapin Gray

BELT PANEL - Geneva Blue
Striped - Cream Color Deep

BONNET -Terrapin Gray

WOOD WHEELS - Geneva Blue
Striped - Cream Color Deep

WIRE WHEELS----Cream Color Deep

[1]SHUTTER ASSY.- Terrapin Gray

FENDERS, SPLASH GUARDS, ETC. -
Terrapin Gray

NOTES
[1] Changed to Ivory Jet Black at car No. 957847

THIS IS KNOWN AS
"Light Gray" COMBINATION
Signified by letter "M-l"

Essex Town Sedan

CARS 954683 UPWARD
OPTION NO.4

UPPER BODY - Ivory Jet Black

LOWER BODY - Malaga Maroon

BELT PANEL - Royal Chariot Red
Striped - Ivory Jet Black

BONNET - MaIaga Maroon

WOOD WHEELS - Royal Chariot Red
Striped - Ivory Jet Black

WIRE WHEELS- Extra Permanent Vermillion

[1]SHUTTER ASSY. - Malaga Maroon

FENDERS, SPLASH GUARDS, ETC.
Malaga Maroon

NOTES
[1] Changed to Ivory Jet Black at car No. 957847

THIS IS KNOWN AS
'Dark Red" COMBINATION
Signified by letter "H"

Hudson Coach
CARS 825416 UPWARD

STANDARD COLOR NO OPTION

UPPER BODY - Hudson Standard Blue

LOWER BODY - Terrapin Gray

BELT PANEL - Hudson Standard Blue
Striped - Cream Color Deep

BONNET - Terrapin Gray

[1]WOOD WHEELS - Terrapin Gray
Striped - Hudson Standard Blue

WIRE WHEELS - Cream Color Deep

SHUTTER ASSY. - Terrapin Gray

FENDERS SPLASH GUARDS, ETC. -
Terrapin Gray

NOTES
[1] FLANGES - Hudson Standard Blue
++DRUMS-Terrapin Gray

THIS COMBINATION USED
ON FIRST HUDSON COACHES
Signified by letters "V V"

Hudson Coach
CARS 831903 UPWARD

STANDARD COLOR

UPPER BODY - Hudson Standard Blue

LOWER BODY - Geneva Blue

BELT PANEL - Terrapin Gray
Striped - Milano Blue

BONNET - Geneva Blue

[1]WOOD WHEELS - Terrapin Gray
Striped - Milano Blue

WIRE WHEELS - Cream Color Deep

SHUTTER ASSY. - Geneva Blue

FENDERS, SPLASH GUARDS, ETC.-
Geneva Blue

NOTES
[1] FLANGES - Hudson Standard Blue

THIS IS KNOWN AS
"Light Blue" COMBINATION
Signified by letters "HH"

Hudson Coach
CARS 832856 UPWARD

OPTION NO. 1

UPPER BODY - Ivory Jet Black

LOWER BODY - Malaga Maroon

BELT PANEL - Royal Chariot Red
Striped - Ivory Jet Black

BONNET-- Malaga Maroon

[1]WOOD WHEELS - Royal Chariot Red
Striped - Ivory Jet Black

[2]WIRE WHEELS - Extra Permanent Vermillion

SHUTTER ASSY. - Hudson Standard Blue

FENDERS, SPLASH GUARDS, ETC.
Malaga Maroon

NOTES

[1] FLANGES-Ivory Jet Black
[2] DRUMS-Malaga Maroon

THIS IS KNOWN AS
"Dark Red" COMBINATION
Signified by letter "H"

Hudson Coach
CARS 831846 UPWARD

OPTION NO. 2

UPPER BODY - Ivory Jet Black

LOWER BODY - Hudson Standard Blue

BELT PANEL - Geneva Blue
Striped - Cream Color Deep

BONNET - Hudson Standard Blue

[1]WOOD WHEELS - Geneva Blue
Striped - Cream Color Deep

WIRE WHEELS - Cream Color Deep

SHUTTER ASSY. - Malaga Maroon

FENDERS, SPLASH GUARDS, ETC.
Hudson Standard Blue

NOTES

[1]FLANGES - Ivory Jet Black

THIS IS KNOWN AS
"Dark Blue" COMBINATION
Signified by letter "J"

Hudson Coach

CARS 831907 UPWARD

OPTION NO. 3

UPPER BODY - Ivory Jet Black

LOWER BODY - Ivory Jet Black

BELT PANEL - Cream Color Deep
Striped - Ivory Jet Black

BONNET - Ivory Jet Black

[1]WOOD WHEELS - Cream Color Deep
Striped - Ivory Jet Black

WIRE WHEELS - Cream Color Deep

SHUTTER ASSY. - Ivory Jet Black

FENDERS, SPLASH GUARDS, ETC.-
Ivory Jet Black

NOTES
[1] FLANGES - Ivory Jet Black
DRUMS - Ivory Jet Black

THIS IS KNOWN AS
"Black" COMBINATION
Signified by letter "K4"

Hudson Coach

CARS 831878 UPWARD

OPTION NO. 4

UPPER BODY - Geneva Blue

LOWER BODY - Terrapin Gray

BELT PANEL - Hudson Standard Blue
Striped - Cream Color Deep

BONNET - Terrapin Gray

[1]WOOD WHEELS - Terrapin Gray
Striped - Hudson Standard Blue

WIRE WHEELS - Cream Color Deep

SHUTTER ASSY. - Terrapin Gray

FENDERS, SPLASH GUARDS, ETC.-
Geneva Blue

NOTES
[1] FLANGES - Hudson Standard Blue
DRUMS - Geneva Blue

THIS IS KNOWN AS
"Light Gray" COMBINATION
Signified by letter "L"

Hudson Coupe
CARS 825468 to 830360

STANDARD COLOR - NO OPTION

UPPER BODY - Gazelle Brown

LOWER BODY - Cashew Nut Tan

BELT PANEL - Gazelle Brown
Striped - Chinese Red

BONNET - Cashew Nut Brown

[1]WOOD WHEELS - Cashew Nut Tan
Striped - Chinese Red

WIRE WHEELS - Chinese Red

SHUTTER ASSY. - Cashew Nut Tan

FENDERS, SPLASH GUARDS, ETC. -
Gazelle Brown

NOTES
[1] FLANGES - Chinese Red

THIS COMBINATION USED
ON FIRST HUDSON COUPES
Signified by letters "WW"

Hudson Coupe
CARS 830360 to 832272

STANDARD COLOR

UPPER BODY - Malaga Maroon

LOWER BODY - Royal Chariot Red

BELT PANEL - Malaga Maroon
Striped - Extra Permanent Vermillion

BONNET - Royal Chariot Red

[1]WOOD WHEELS - Royal Chariot Red
Striped - Extra Permanent Vermillion

WIRE WHEELS - Extra Permanent Vermillion

SHUTTER ASSY. - Royal Chariot Red

FENDERS - Malaga Maroon

RUNNING BOARD, SPLASH GUARDS –
Royal Chariot Red

NOTES
[1] FLANGES - Malaga Maroon

THIS IS KNOWN AS
"Light Red" COMBINATION
Signified by letters "JJ"

Hudson Coupe
CARS 832369 UPWARD

OPTION NO. 1

UPPER BODY - Ivory Jet Black

LOWER BODY - Ivory Jet Black

BELT PANEL - Malaga Maroon
Striped - Extra Permanent Vermillion

BONNET - Ivory Jet Black

[1]WOOD WHEELS - Malaga Maroon
Striped - Extra Permanent Vermillion

WIRE WHEELS - Extra Permanent Vermillion

SHUTTER ASSY. - Antler Tan

FENDERS, SPLASH GUARDS, ETC-
Ivory Jet Black

NOTES
[1] FLANGES - Ivory Jet Black

THIS IS KNOWN AS
"Black" COMBINATION
Signified by letter "K-l"

Hudson Coupe
CARS 832272 UPWARD

OPTION NO. 2

UPPER BODY - Ivory Jet Black

LOWER BODY - Antler Tan

BELT PANEL - Reseda Green
Striped - Tioga Tan

BONNET - Antler Tan

[1]WOOD WHEELS - Antler Tan
Striped - Ivory Jet Black

WIRE WHEELS - Tioga Tan

SHUTTER ASSY. - Ivory Jet Black

FENDERS- -Reseda Green

RUNNING BOARD, SPLASHGUARDS
Antler Tan

NOTES
[1] FLANGES - Ivory Jet Black

THIS IS KNOWN AS
"Tan" COMBINATION
Signified by letter "N"

Hudson Coupe
CARS 832333 UPWARD

OPTION NO. 3

UPPER BODY - Geneva Blue

LOWER BODY - Geneva Blue

BELT PANEL - Cashew Nut Tan
Striped - Ivory Jet Black

BONNET - Geneva Blue

[1]WOOD WHEELS - Cashew Nut Tan
Striped - Ivory Jet Black

WIRE WHEELS - Tioga Tan

SHUTTER ASSY. - Geneva Blue

FENDERS - Cashew Nut Tan

RUNNING BOARD, SPLASH GUARDS - Geneva Blue

NOTES
[1]FLANGES - Geneva Blue

THIS IS KNOWN AS
"Light Blue" COMBINATION
Signified by letter "0-1"

Hudson Coupe
CARS 832316 UPWARD

OPTION NO.4

UPPER BODY - Geneva Blue

LOWER BODY - Terrapin Gray

BELT PANEL - Hudson Standard Blue
Striped - Cream Color Deep

BONNET - Terrapin Gray

[1]WOOD WHEELS - Hudson Standard Blue
Striped - Cream Color Deep

WIRE WHEELS - Cream Color Deep

SHUTTER ASSY. - Terrapin Gray

FENDERS, SPLASH GUARDS, ETC. - Terrapin Gray

NOTES
[1]FLANGES- --Geneva Blue

THIS IS KNOWN AS
"Light Gray" COMBINATION
Signified by letter "L"

Hudson Convertible Coupe

CARS 827004 UPWARD
STANDARD COLOR

UPPER BODY - Frosty Green

LOWER BODY - Frosty Green

BELT MOULDING - Seacrest Green
Striped - Cream Color Deep

BONNET - Frosty Green

WOOD WHEELS - Frosty Green
Striped - Cream Color Deep

[1]WIRE WHEELS - Cream Color Deep

SHUTTER ASSY. - Frosty Green

FENDERS, SPLASH GUARDS, ETC.
Frosty Green

NOTES
[1]DRUMS - Frosty Green

STANDARD COLOR - NO OPTION
Signified by letters "KK"

Hudson Victoria

CARS 825421 to 829424
832858 UPWARD

STANDARD COLOR

UPPER BODY – Ivory Jet Black

LOWER BODY – Reseda Green

BELT PANEL – Ivory Jet Black
Striped – Cream Color Deep

BONNET – Reseda Green

WIRE WHEELS – Cream Color Deep

SHUTTER ASSY. – Reseda Green

FENDERS, SPLASH GUARDS, ETC –
Reseda Green

NOTES

STANDARD COLOR – NO OPTION
Signified by letters "PP"

Hudson Town Sedan

CARS 827844 UPWARD
STANDARD COLOR

UPPER BODY – Hudson Standard Blue

LOWER BODY – Hudson Standard Blue

BELT MLDG. – Upper – Ivory Jet Bla,c

BELT MLDG. – Lower – Hudson Standard Blue
Both Striped – Old Ivory
[1]WOOD WHEELS – Hudson Standard Blue
Striped – Old Ivory

[2]WIRE WHEELS – Old Ivory

SHUTTER ASSY. – Ivory Jet Black

FENDERS, SPLASH GUARDS, ETC. -
Ivory Jet Black

NOTES
[1] FLANGES – Ivory Jet Black
[2] DRUMS - Black

STANDARD COLOR – NO OPTION
Signified by letters "QQ"

Hudson 122" Phaeton

CARS 836383 UPWARD

STANDARD COLOR

UPPER BODY – Terrapin Gray

LOWER BODY – Terrapin Gray

BELT MLDGS. – Hudson Standard Blue
Striped – Old Ivory

BONNET – Terrapin Gray

WOOD WHEELS – Terrapin Gray
Striped – Hudson Standard Blue

[1]WIRE WHEELS – Old Ivory

SHUTTER ASSY. – Terrapin Gray

FENDERS, SPLASH GUARDS, ETC. -
Terrapin Gray

Hudson Landau Sedan

CARS 825419 to 827429

STANDARD COLOR

UPPER BODY - Cashew Nut Tan

LOWER BODY - Cashew Nut Tan

BELT MLDG. - Seal Brown
Striped - Devonshire Cream

BONNET-Cashew Nut Tan

[1]WOOD WHEELS - Cashew Nut Tan
Striped - Devonshire Cream

WIRE WHEELS - Cream Color Deep

SHUTTER ASSY. - Cashew Nut Tan

FENDERS, SPLASH GUARDS, ETC.-
Seal Brown

NOTES
[1] FLANGES - Seal Brown

STANDARD COLOR - NO OPTION
Signified by letters "XX"

Hudson Roadster

CARS 826719 UPWARD
STANDARD COLOR

UPPER BODY – Ivory Jet Black

LOWER BODY – Ivory Jet Black

BELT MLDG. – Mamora Green

BONNET – Ivory Jet Black

[1]WOOD WHEELS – Emerald Green – Extra Lite

WIRE WHEELS – Emerald Green – Extra Lite

FENDERS, ETC. – Emerald Green – Extra Lite

RUNNING BOARD, SPLASH GUARDS –
Ivory Jet Black

NOTES
[1] FLANGES – Ivory Jet Black

STANDARD COLOR – NO OPTION
Signified by letters “LL”

Hudson Landau Sedan

CARS 827429 UPWARD

STANDARD COLOR

UPPER BODY - Ivory Jet Black

LOWER BODY - Sunnybrook Blue

BELT MLDG. - Ivory Jet Black
Striped - Diana Blue

BONNET - Sunnybrook Blue

WOOD WHEELS - Sunnybrook Blue
Striped - Ivory Jet Black

[1]WIRE WHEELS - Sunnybrook Blue

SHUTTER ASSY. - Sunnybrook Blue

FENDERS, ETC.--Ivory Jet Black

RUNNING BOARD, SPLASH GUARDS-
Sunnybrook Blue

NOTES
[1] DRUMS - Ivory Jet Black

STANDARD COLOR - NO OPTION
Signified by letters "MM"

Hudson 139”
Limousine Sedan

CARS 41384 UPWARD

STANDARD COLOR

UPPER BODY- Ivory Jet Black

LOWER BODY- Valliblue

BELT PANEL – Pheasant Blue
Striped – Cream Color Deep

BONNET - Valliblue

WIRE WHEELS – Cream Color Deep

SHUTTER ASSY. - Valliblue

FENDERS, SPLASH GUARDS, ETC.
Ivory Jet Black

Signified by letters “CCC”

Hudson 139”
5-Pass. Phaeton

CARS 41384 UPWARD

STANDARD COLOR

UPPER BODY – Mountain Mist Blue

LOWER BODY – Mountain Mist Blue

BELT MLDG. – Blue Hour
Striped – Cream Color Deep

BONNET – Mountain Mist Blue

WIRE WHEELS – Cream Color Deep

SHUTTER ASSY. – Mountain Mist Blue

FENDERS, SPLASH GUARDS, ETC. –
Blue Hour

Signified by letters “EEE”

Hudson 139”
5-Pass. Sedan

FIRST CARS AND UPWARD

STANDARD COLOR – NO OPTION

UPPER BODY – Ivory Jet Black

LOWER BODY – Ivory Jet Black

[1]BELT PANEL – Karnack Green
Striped – Ivory Jet Black

[2]WIRE WHEELS – Karnak Green

SHUTTER ASSY. – Ivory Jet Black

FENDERS, SPLASH GUARDS, ETC -
Karnak Green. Changed to Ivory Jet Black
Black on Car 41905

NOTES

[1] Changed from Karnak Green to Ivory Jet Black with a Silver stripe at Car No. 41905

[2] Changed from Karnak Green to Aluminum Bronze at Car No. 41905.

Signified by letters “AAA”

Hudson 139”
7-Pass. Sedan

CARS 41384 UPWARD

STANDARD COLOR – NO OPTION

UPPER BODY – Pheasant Blue

LOWER BODY – Valliblue

BELT PANEL – Pheasant Blue
Striped – Cream Color Deep

WIRE WHEELS – Cream Color Deep

SHUTTER ASSY. – Valliblue

FENDERS, ETC. – Pheasant Blue

RUNNING BOARD, SPLASH GUARDS –
Valliblue

Signified by letters “BB”

Hudson 139”
7-Pass. Phaeton

CARS 413845UPWARD

STANDARD COLOR

UPPER BODY – Mountain Mist Blue

LOWER BODY – Mountain Mist Blue

BELT PANEL – Blue Hour
Striped – Cream Color Deep

BONNET – Mountain Mist Blue

WIRE WHEELS – Cream Color Deep

SHUTTER ASSY. – Mountain Mist Blue

FENDERS, SPLASH GUARDS ETC. –
Blue Hour

Signified by letters “EEE”

Paint Specifications

The Greater Hudson
Essex the Challenger
and
Dover Commercial Car

(1929 Models)

Hudson Reference Sheet No. 36 (August 1929)

PAINT SPECIFICATIONS COVERING

The GREATER HUDSON
ESSEX the CHALLENGER

and

DOVER COMMERCIAL CAR

1929

INDEX

HUDSON MOTOR CAR CO.

DETROIT, MICHIGAN

Source of Supply of all Paint Used in Manufacturing Hudson and Essex, 1929 Models

Armitage, Newark, N. J.
Ault, Wiborg, 507 Shelby, Detroit
Dibble Color Co., 1497 E. Grand Blvd., Detroit
Ditzler, 8000 W. Chicago, Detroit (Request list of Distributing Points)
Jones Dabney, 4835 Woodward, Detroit
Rinshed Mason, 5971 Milford St., Detroit
Dupont De Nemurs, (Request list of Distributing Points)
V. E. P. Co., Pontiac, Mich.

COLOR NAME	MANUFACTURER	Color Number
ANTLER TAN	Dibble	1
BAYOU BLUE	Ditzler	2
BLUE HOUR	Dupont	3
BREWSTER GREEN	Rinshed Mason	4
CASHEW NUT TAN	Rinshed Mason, Ault and Wiborg, Ditzler	5
CHINESE RED	Rinshed Mason	6
CREAM COLOR DEEP	Jones and Dabney, Ditzler, Dupont, Ault and Wiborg, Rinshed Mason	7
DERBY BROWN	Jones and Dabney	8
DEVONSHIRE CREAM	Ault and Wiborg.	9
	Dabney	10
ELIZABETHAN BLUE	Rinshed Mason	11
EMERALD GREEN EXTRA LIGHT	Ditzler, Jones and Dabney	12
EXTRA PERMANENT VERMILION	Jones and Dabney, Rinshed Mason	13
FROSTY GREEN	Ditzler, Jones and Dabney	14
GAZELLE BROWN	Rinshed Mason	15
GENEVA BLUE	Jones and Dabney	16
GLENROCK GREEN	Jones and Dabney	17
HIGHWAY GRAY	Dibble	18
HUDSON STANDARD BLUE	Jones and Dabney, Ault and Wiborg	19
IVORY JET BLACK	Dibble, Jones Dabney, Ditzler, Dupont, Rinshed Mason, Ault and Wiborg	20
KARNAK GREEN	Dupont	21
LORELEI BLUE	Dibble	22
MALAGA MAROON	Rinshed Mason, Ditzler	23
MALAY BROWN	Dibble	24
MARMORA GREEN	Ditzler	25
MARSHLAND GRAY	Jones and Dabney	26
MILANO BLUE	Jones and Dabney	27
MOUNTAIN MIST BLUE	Dupont	28
NARRAGANSETT BLUE	Ditzler	29
NEBRASKA GREEN	Armitage	30
NEPTUNE BLUE	Ditzler	31
OLD IVORY	Ault and Wiborg, Jones and Dabney	32
ORIOLE RED	Rinshed Mason, Jones and Dabney	33
PHEASANT BLUE	Ditzler	35
PRAIRIE GRASS	Dupont	36
RESEDA GREEN	Rinshed Mason, Dupont.	37
RIMINI BLUE	Rinshed Mason	38
ROYAL CHARIOT RED	Ditzler, Rinshed Mason	39
RUST GOLD	Dupont	40
SEACREST GREEN	Ditzler	41
SEAL BROWN	Ault and Wiborg, Ditzler	42
SPANISH YELLOW	Jones and Dabney	43
SUNNYBROOK BLUE	Jones and Dabney, Ditzler, Ault and Wiborg, Armitage	44
TARANTO RED	Rinshed Mason	45
TERRAPIN GRAY	Dibble, Jones and and Dabney	46
THORNE BROWN	Jones and Dabney	47
TIOGA TAN	Dibble, Rinshed Mason, Jones and Dabney	48
VALLIBLUE	Dupont	49
VENEZIA BLUE	Dibble	50
WOODLAWN GREEN	Armitage	51

Color numbers refer to color chart

Essex Coach

	STANDARD	No.1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL NO.	1135350 up	1135348 up	1135369 up	1135365 up	1135387 up
UPPER BODY	Ivory Jet Black	Elizabethan Blue	Ivory Jet Black	Nebraska Green	Thorne Brown
LOWER BODY	Ivory Jet Black	Elizabethan Blue	Malay Brown	Nebraska Green	Malaga Maroon
BELT PANEL	Pharaoh Green	Hudson Std. Blue	Taranto Red	Ivory Jet Black	Deep Cream
BELT PANEL STRIPE	Deep Cream	Deep Cream	Deep Cream	Emerald Green	Taranto Red
BONNET	Ivory Jet Black	Elizabethan Blue	Malay Brown	Nebraska Green	Malaga Maroon
WOOD WHEELS	Pharaoh Green	Elizabethan Blue	Malay Brown	Nebraska Green	Malaga Brown
WOOD WHEELS STRIPE	Deep Cream	Deep Cream	Taranto Red	Emerald Green	Deep Cream
WOOD WHEELS FLANGES	Pharaoh Green	Elizabethan Blue	Malay Brown	Nebraska Green	Malaga Maroon
WIRE WHEELS	Deep Cream	Deep Cream	Deep Cream	Emerald Green	Deep Cream
WIRE WHEELS DRUMS	Ivory Jet Black	Black	Black	Black	Black
SHUTTER ASSY.	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black
FENDERS, SPLASH GUARDS, ETC.	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black
COLOR COMBINATION	Black	Medium Blue	Light Brown	Dark Green	Dark Red

Essex Coupe

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL NO.	1135375 up	1135339 up	1135368 up	1135377 up	1135372 up
UPPER BODY	Nebraska Green	Ivory Jet Black	Elizabethan Blue	Malaga Maroon	Elizabethan Blue
LOWER BODY	Pharoah Green	Ivory Jet Black	Elizabethan Blue	Malaga Maroon	Highway Gray
BELT PANEL	Ivory Jet	Black Deep Cream	Hudson Std. Blue	Ivory Jet Black	Hudson Std. Blue
BELT PANEL STRIPE	Deep Cream	Ivory Jet Black	Deep Cream	Deep Cream	Deep Cream
BONNET	Pharoah Green	Ivory Jet Black	Elizabethan Blue	Malaga Maroon	Highway Gray
WOOD WHEELS	Pharaoh Green	Deep Cream	Elizabethan Blue	Malaga Maroon	Deep Cream
WOOD WHEELS STRIPE	Ivory Jet Black	Ivory Jet Black	Deep Cream	Deep Cream	Ivory Jet Black
WOOD WHEELS FLANGES	Pharaoh Green	Ivory Jet Black	Elizabethan Blue	Malaga Maroon	Highway Gray
WIRE WHEELS	Deep Cream	Deep Cream	Deep Cream	Deep Cream	Deep Cream
WIRE WHEELS DRUMS	Black	Black	Black	Black	Black
SHUTTER ASSY.	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black
FENDERS, SPLASH GUARDS, ETC.	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black
COLOR COMBINATION	Medium Green	Black	Medium Blue	Dark Red	Medium Gray

Additional color information and key to color chart on page two.

Essex Convertible Coupe

	STANDARD	No. 1 OPTION	No. 1 OPTION	No. 2 OPTION	No. 2 OPTION
STARTING CAR SERIAL NO.	937531 up	1094744	1145961	1094885 to 1145961 up	
UPPER BODY	Bayou Blue	Cashew Nut Tan	Malay Brown	Ivory Jet Black	Ivory Jet Black
LOWER BODY	Bayou Blue	Cashew Nut Tan	Malay Brown	Ivory Jet Black	Ivory Jet Black
BELT PANEL	Neptune Blue	Gazelle Brown	Derby Brown	Geneva Blue	Elizabethan Blue
BELT PANEL STRIPE	Deep Cream	Deep Cream	Deep Cream	Deep Cream	Deep Cream
BONNET	Bayou Blue	Cashew Nut Tan	Malay Brown	Ivory Jet Black	Ivory Jet Black
WOOD WHEELS	Bayou Blue	Gazelle Brown	Derby Brown	Geneva Blue	Elizabethan Blue
WOOD WHEELS STRIPE	Deep Cream	Deep Cream	Deep Cream	Deep Cream	Deep Cream
WOOD WHEELS FLANGES			Derby Brown	Geneva Blue	Elizabethan Blue
WIRE WHEELS	Deep Cream	Deep Cream	Deep Cream	Deep Cream	Deep Cream
WIRE WHEELS DRUMS	Bayou Blue		Derby Brown	Ivory Jet Black	Ivory Jet Black
SHUTTER ASSY.	Bayou Blue	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black
FENDERS, SPLASH GUARDS, ETC.	Bayou Blue	Gazelle Brown	Derby Brown	Ivory Jet Black	Ivory Jet Black
COLOR COMBINATION	Light Blue	Light Brown	Light Brown	Black	Black

Essex Phaeton

	STANDARD	STANDARD
STARTING CAR SERIAL NO.	962383 to 1139508	1139508 up
UPPER BODY	Antler Tan	Malay Brown
LOWER BODY	Antler Tan	Malay Brown
BELT PANEL	Ivory Jet Black	Derby Brown
BELT PANEL STRIPE	*Coach Vermilion	Deep Cream
BONNET	Antler Tan	Malay Brown
WOOD WHEELS	Antler Tan	Malay Brown
WOOD WHEELS STRIPE	*Coach Vermilion	Deep Cream
WOOD WHEELS FLANGES	Antler Tan	Malay Brown
WIRE WHEELS	Black	Black
WIRE WHEELS DRUMS	Black	Black
SHUTTER ASSY.	Ivory Jet Black	Ivory Jet Black
FENDERS, SPLASH GUARDS, ETC.	Ivory Jet Black	Ivory Jet Black
COLOR COMBINATION	Tan	Light Brown

*Note: - At car 1136891 Sunnybrook Blue and Deep Cream were used in place of English Coach Vermilion.

Additional color information and key to color chart on page two.

Essex Roadster

	STANDARD	No. 1 OPTION	No. 1 OPTION	No. 2 OPTION	No. 2 OPTION
STARTING CAR SERIAL NO.	113238	1094753 to 1139055	1139055 up	1094840 to 1141537	1141537 up
UPPER BODY	Malaga Maroon	Cashew Nut Tan	Malay Brown	Sunnybrook Blue	Highway Gray
LOWER BODY	Malaga Maroon	Cashew Nut Tan	Malay Brown	Sunnybrook Blue	Highway Gray
BELT MOULDING	*Royal Chariot Red	Gazelle Brown	Derby Brown	Ivory Jet Black	Ivory Jet Black
BELT MOULDING STRIPE	Ivory Jet Black	Deep Cream	Deep Cream	Deep Cream	Deep Cream
BONNET	Malaga Maroon	Cashew Nut Tan	Malay Brown	Sunnybrook Blue	Highway Gray
WOOD WHEELS	*Royal Chariot Red	Gazelle Brown	Derby Brown	Sunnybrook Blue	Highway Gray
WOOD WHEELS STRIPE	Ivory Jet Black	Deep Cream	Deep Cream	Ivory Jet Black	Ivory Jet Black
WOOD WHEELS FLANGES	*Royal Chariot Red	Gazelle Brown	Derby Brown	Sunnybrook Blue	Highway Gray
WIRE WHEELS	Vermilion	Deep Cream	Deep Cream	Deep Cream	Deep Cream
WIRE WHEELS DRUMS	*Royal Chariot Red	Gazelle Brown	Derby Brown	Sunnybrook Blue	Ivory Jet Black
SHUTTER ASSY.	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black
FENDERS, SPLASH GUARDS, ETC.	Malaga Maroon	Gazelle Brown	Derby Brown	Ivory Jet Black	Ivory Jet Black
COLOR COMBINATION	Dark Red		Light Brown		Medium Gray

*Note: - At car 1138865 Taranto Red replaced Royal Chariot Red.

Essex Standard Sedan

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL NO.	1134969 up	1134971 up	1135891 up	1135011 up	1135016 up
UPPER BODY	Hudson Std. Blue	Ivory Jet Black	Derby Brown	Thorne Brown	Nebraska Green
LOWER BODY	Hudson Std. Blue	Ivory Jet Black	Derby Brown	Thorne Brown	Nebraska Green
BELT PANEL	Elizabethan Blue	Taranto Red	Thorne Brown	Malay Brown	Nebraska Green
BELT PANEL STRIPE	Deep Cream	Deep Cream	Deep Cream	Deep Cream	Deep Cream
BONNET	Hudson Std. Blue	Ivory Jet Black	Derby Brown	Thorne Brown	Nebraska Green
WOOD WHEELS	Elizabethan Blue	Taranto Red	Thorne Brown	Malay Brown	Pharaoh Green
WOOD WHEELS STRIPE	Deep Cream	Deep Cream	Deep Cream	Deep Cream	Deep Cream
WOOD WHEELS FLANGES	Elizabethan Blue	Taranto Red	Thorne Brown	Malay Brown	Pharaoh Green
WIRE WHEELS	Deep Cream	Deep Cream	Deep Cream	Deep Cream	Deep Cream
WIRE WHEELS DRUMS	Black	Black	Black	Black	Black
SHUTTER ASSY.	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black
FENDERS, SPLASH GUARDS, ETC.	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black
COLOR COMBINATION	Dark Blue	Black	Medium Brown	Dark Brown	Dark Green

Additional color information and key to color chart on page two.

Essex Town Sedan

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL NO.	1134582 up	1134589 up	1134957 up	1134998 up	1134584 up
UPPER BODY	Malaga Maroon	Ivory Jet Black	Elizabethan Blue	Hudson Std. Blue	Elizabethan Blue
LOWER BODY	Malaga Maroon	Ivory Jet Black	Elizabethan Blue	Hudson Std. Blue	Highway Gray
BELT PANEL	Ivory Jet Black	Ivory Jet Black	Deep Cream	Highway Gray	Hudson Std. Blue
BELT PANEL STRIPE	Vermilion	Silver	Elizabethan Blue	Deep Cream	Deep Cream
BONNET	Malaga Maroon	Ivory Jet Black	Elizabethan Blue	Hudson Std. Blue	Highway Gray
WOOD WHEELS	Ivory Jet Black	Silver	Elizabethan Blue	Hudson Std. Blue	Hudson Std. Blue
WOOD WHEELS STRIPE	Vermilion	Ivory Jet Black	Deep Cream	Deep Cream	Deep Cream
WOOD WHEELS FLANGES	Ivory Jet Black	Silver	Elizabethan Blue	Hudson Std. Blue	Hudson Std. Blue
WIRE WHEELS	Vermilion	Silver	Deep Cream	Deep Cream	Deep Cream
WIRE WHEELS DRUMS	Malaga Maroon	Ivory Jet Black	Elizabethan Blue	Hudson Std. Blue	Elizabethan Blue
SHUTTER ASSY.	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black
FENDERS, SPLASH GUARDS, ETC.	Malaga Maroon	Ivory Jet Black	Elizabethan Blue	Hudson Std. Blue	Highway Gray
COLOR COMBINATION	Dark Red	Black	Medium Blue	Dark Blue	

Dover Commercial Car

	STANDARD
STARTING CAR SERIAL NO.	10001 up
BODY	Hudson Std. Blue
STRIPE	Deep Cream
FENDERS, SPLASH GUARDS, ETC.	Ivory Jet Black
RADIATOR SHELL	Hudson Std. Blue
SHUTTER ASSY.	Ivory Jet Black
WHEELS	Hudson Std. Blue
WHEELS STRIPE	Deep Cream
COLOR COMBINATION	Dark Blue

Additional color information and key to color chart on page two.

Hudson Coach

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL NO.	880889 up	880869 up	880872 up	880880 up	881176 up
UPPER BODY	Thorne Brown	Ivory Jet Black	Hudson Std. Blue	Ivory Jet Black	Hudson Std. Blue
LOWER BODY	Thorne Brown	Ivory Jet Black	Elizabethan Blue	Hudson Std. Blue	Highway Gray
BELT PANEL	Ivory Jet Black	Elizabethan Blue	*Hudson Std. Blue	Elizabethan Blue	Elizabethan Blue
BELT PANEL STRIPE	Deep Cream	Deep Cream	Deep Cream	Deep Cream	Deep Cream
BONNET	Thorne Brown	Ivory Jet Black	Elizabethan Blue	Hudson Std. Blue	Highway Gray
WOOD WHEELS I	Ivory Jet Black	Elizabethan Blue	Hudson Std. Blue	Elizabethan Blue	Elizabethan Blue
WOOD WHEELS STRIPE	Deep Cream	Deep Cream	Deep Cream	Deep Cream	Deep Cream
WOOD WHEELS FLANGES	Thorne Brown	Ivory Jet Black	Elizabethan Blue	Hudson Std. Blue	Hudson Std. Blue
WIRE WHEELS	Deep Cream	Deep Cream	Elizabethan Blue	Deep Cream	Deep Cream
WIRE WHEELS DRUMS	Thorne Brown	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black
SHUTTER ASSY.	Thorne Brown	Ivory Jet Black	Elizabethan Blue	Hudson Std. Blue	Highway Gray
FENDERS, SPLASH GUARDS, ETC.	Thorne Brown	Ivory Jet Black	Hudson Std. Blue	Hudson Std. Blue	Hudson Std. Blue
RUNNING BOARD SPLASH GUARDS		Elizabethan Blue			
COLOR COMBINATION	Dark Brown	Black	Medium Blue	Dark Blue	Medium Gray

*Note: - At car 884728 belt panel changed to Ivory Jet Black.

Hudson Coupe

	STANDARD	No. 1 OPTION	No.2 OPTION	No.3 OPTION	No. 4 OPTION
STARTING CAR SERIAL NO.	880848 up	880914 up	881008 up	880884 up	880897 up
UPPER BODY	Ivory Jet Black	Hudson Std. Blue	Derby Brown	Thorne Brown	Nebraska Green
LOWER BODY	Ivory Jet Black	Elizabethan Blue	Malay Brown	Thorne Brown	Nebraska Green
BELT PANEL	Taranto Red	Ivory Jet Black	Thorne Brown	Thorne Brown	Pharaoh Green
BELT PANEL STRIPE	Deep Cream	Deep Cream	Deep Cream	Deep Cream	Deep Cream
BONNET	Ivory Jet Black	Elizabethan Blue	Malay Brown	Thorne Brown	Nebraska Green
WOOD WHEELS	Taranto Red	Ivory Jet Black	Thorne Brown	Thorne Brown	Pharaoh Green
WOOD WHEELS STRIPE	Deep Cream	Deep Cream	Deep Cream	Deep Cream	Deep Cream
WOOD WHEELS FLANGES	Ivory Jet Black	Elizabethan Blue	Malay Brown	Deep Cream	Nebraska Green
WIRE WHEELS	Deep Cream	Deep Cream	Deep Cream	Deep Cream	Deep Cream
WIRE WHEELS DRUMS	Ivory Jet Black	Ivory Jet Black	Malay Brown	Thorne Brown	Pharaoh Green
SHUTTER ASSY.	Ivory Jet Black	Elizabethan Blue	Malay Brown	Thorne Brown	Nebraska Green
FENDERS, SPLASH GUARDS, ETC.	Ivory Jet Black	Hudson Std. Blue	Malay Brown	Thorne Brown	Pharaoh Green (Fenders only) Nebraska Green
SPLASH GUARDS, ETC.					
COLOR COMBINATION	Black	Medium Blue	Light Brown	Dark Brown	Dark Green

Additional color information and key to color chart on page two.

Hudson Convertible Coupe

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL NO.	827004 up	867554 up	868299 up		
UPPER BODY	Frosty Green	Mountain Mist Blue	Malaga Maroon		
LOWER BODY	Frosty Green	Mountain Mist Blue	Malaga Maroon		
BELT PANEL	Seacrest Green	Blue Hour	Ivory Jet Black		
BELT PANEL STRIPE	Deep Cream	Old Ivory	Deep Cream		
BONNET	Frosty Green	Mountain Mist Blue	Malaga Maroon		
WOOD WHEELS	Frosty Green	Blue Hour	Malaga Maroon		
WOOD WHEELS STRIPE	Deep Cream	Old Ivory	Ivory Jet Black		
WOOD WHEELS FLANGES	Frosty Green	Mountain Mist Blue	Ivory Jet Black		
WIRE WHEELS	Deep Cream	Old Ivory	Deep Cream		
WIRE WHEELS DRUMS	Frosty Green	Blue Hour	Malaga Maroon		
SHUTTER ASSY.	Frosty Green	Mountain Mist Blue	Malaga Maroon		
FENDERS, SPLASH GUARDS, ETC.	Frosty Green	Blue Hour	Malaga Maroon		
RUNNING BOARD SPLASH GUARDS, ETC.		Mountain Mist Blue			
COLOR COMBINATION	Medium Green	Medium Blue	Dark Red		

Hudson Landau Sedan

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL NO.	880341 up	868291 up	867940 up		
UPPER BODY	Ivory Jet Black	Rust Gold	Ivory Jet Black		
LOWER BODY	Pharaoh Green	Prairie Grass	Ivory Jet Black		
BELT PANEL	Ivory Jet Black	Rust Gold	Ivory Jet Black		
BELT PANEL STRIPE	Emerald Green	Deep Cream	Silver		
BONNET	Pharaoh Green	Prairie Grass	Ivory Jet Black		
WOOD WHEELS	Pharaoh Green	Rust Gold	Ivory Jet Black		
WOOD WHEELS STRIPE	Ivory Jet Black	Deep Cream	Silver		
WOOD WHEELS FLANGES	Pharaoh Green	Prairie Grass	Ivory Jet Black		
WIRE WHEELS	Pharaoh Green	Deep Cream	Aluminum Bronze		
WIRE WHEELS DRUMS	Ivory Jet Black	Rust Gold	Ivory Jet Black		
SHUTTER ASSY.	Pharaoh Green	Prairie Grass	Ivory Jet Black		
FENDERS, SPLASH GUARDS, ETC.	Ivory Jet Black	Rust Gold	Ivory Jet Black		
RUNNING BOARD SPLASH GUARDS, ETC.		Prairie Grass			
COLOR COMBINATION	Medium Green	Tan	Black		

Additional color information and key to color chart on page two.

Hudson Phaeton (122")

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL	NO. 884502 up				
UPPER BODY	Highway Gray				
LOWER BODY	Highway Gray				
BELT PANEL	Hudson Std. Blue				
BELT PANEL STRIPE	Old Ivory				
BONNET	Highway Gray				
WOOD WHEELS	Highway Gray				
WOOD WHEELS STRIPE	Hudson Std. Blue				
WOOD WHEELS FLANGES	Hudson Std. Blue				
WIRE WHEELS	Old Ivory				
WIRE WHEELS DRUMS	Highway Gray				
SHUTTER ASSY.	Highway Gray				
FENDERS, SPLASH GUARDS, ETC.	Highway Gray				
COLOR COMBINATION	Medium Gray				

Hudson Roadster

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 2 OPTION
STARTING CAR SERIAL NO.	826719 up	867401 up	867495 to 875781	875781 up.
UPPER BODY	Ivory Jet Black	Mountain Mist Blue	Royal Chariot Red	Malaga Maroon
LOWER BODY	Ivory Jet Black	Mountain Mist Blue	Royal Chariot Red	Malaga Maroon
BELT PANEL	Marmora Green	Blue Hour	Malaga Maroon	Ivory Jet Black
BELT PANEL STRIPE	Emerald Green	Old Ivory	Vermilion	Deep Cream
BONNET	Ivory Jet Black	Mountain Mist Blue	Royal Chariot Red	Malaga Maroon
WOOD WHEELS	Emerald Green	Blue Hour	Malaga Maroon	Malaga Maroon
WOOD WHEELS STRIPE		Old Ivory	Vermilion	Deep Cream
WOOD WHEELS FLANGES	Ivory Jet Black	Mountain Mist Blue	Royal Chariot Red	Ivory Jet Black
WIRE WHEELS	Emerald Green	Old Ivory	Vermilion	Vermilion
WIRE WHEELS DRUMS	Emerald Green	Blue Hour	Malaga Maroon	Malaga Maroon
SHUTTER ASSY.	Emerald Green	Mountain Mist Blue	Royal Chariot Red	Malaga Maroon
FENDERS, SPLASH GUARDS, ETC.	Ivory Jet Black	Blue Hour	Malaga Maroon	Malaga Maroon
COLOR COMBINATION		Medium Blue		Dark Red

Additional color information and key to color chart on page two.

Hudson Standard Sedan

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL NO.	880825 up	880877 up	880834 up	880827 up	880900 up
UPPER BODY	Hudson Std. Blue	Ivory Jet Black	Derby Brown	Nebraska Green	Ivory Jet Black
LOWER BODY	Elizabethan Blue	Ivory Jet Black	Malay Brown	Pharaoh Green	Highway Gray
BELT PANEL	Ivory Jet Black	Pharaoh Green	Thorne Brown	Highway Gray	Pharaoh Green
BELT PANEL STRIPE	Deep Cream	Deep Cream	Emerald Green	Deep Cream	Deep Cream
BONNET	Elizabethan Blue	Ivory Jet Black	Malay Brown	Pharaoh Green	Highway Gray
WOOD WHEELS	Ivory Jet Black	Pharaoh Green	Derby Brown	Highway Gray	Pharaoh Green
WOOD WHEELS STRIPE	Deep Cream	Deep Cream	Emerald Green	Deep Cream	Deep Cream
WOOD WHEELS FLANGES	Elizabethan Blue	Ivory Jet Back	Thorne Brown	Pharaoh Green	Ivory Jet Black
WIRE WHEELS	Deep Cream	Deep Cream	Emerald Green	Deep Cream	Deep Cream
WIRE WHEELS DRUMS	Elizabethan Blue	Ivory Jet Black	Thorne Brown	Nebraska Green	Highway Gray
SHUTTER ASSY.	Elizabethan Blue	Ivory Jet Black Malay Brown		Pharaoh Green	Highway Gray
FENDERS, SPLASH GUARDS, ETC.	Elizabethan Blue	Ivory Jet Black	Thorne Brown	Nebraska Green	Highway Gray
RUNNNG BOARD SPLASH GUARDS			Malay Brown		
COLOR COMBINATION	Medium Blue	Black	Light Brown	Medium Green	Medium Gray

Hudson Town Sedan

	STANDARD	No. 1 OPTION	No. 1 OPTION	No. 2 OPTION
STARTING CAR SERIAL NO.	923,004 up	867693 to 880414	880414 up	866721 up
UPPER BODY	Hudson Std. Blue	Reseda Green	Nebraska Green	Malaga Maroon
LOWER BODY	Hudson Std. Blue	Reseda Green	Nebraska Green	Malaga Maroon
BELT PANEL	Ivory Jet Black	Ivory Jet	Nebraska Green	Malaga Maroon
BELT PANEL STRIPE	Hudson Std. Blue	Deep Cream	Deep Cream	Deep Cream
BONNET	Old Ivory	Reseda Green	Nebraska Green	Malaga Maroon
WOOD WHEELS	Hudson Std. Blue	Ivory Jet Black	Ivory Jet Black	Malaga Maroon
WOOD WHEELS STRIPE	Old Ivory	Deep Cream	Deep Cream	Deep Cream
WOOD WHEELS FLANGES	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black	Malaga Maroon
WIRE WHEELS	Old Ivory	Deep Cream	Deep Cream	Deep Cream
WIRE WHEELS DRUMS	Black	Black	Black	Black
SHUTTER ASSY.	Ivory Jet Black	Reseda Green	Nebraska Green	Malaga Maroon
FENDERS, SPLASH GUARDS, ETC.	Ivory Jet Black	Reseda Green	Nebraska Green	Ivory Jet Black
COLOR COMBINATION	Dark Blue	Dark Green	Dark Green	Dark Red

Additional color information and key to color chart on page two

Hudson Victoria

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL NO.		873215 up	872577 up		
UPPER BODY	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black		
LOWER BODY	Nebraska Green	Rimini Blue	Ivory Jet Black		
BELT PANEL	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black		
BELT PANEL STRIPE	Deep Cream	Silver	Silver		
BONNET	Nebraska Green	Rimini Blue	Ivory Jet Black		
WOOD WHEELS					
WOOD WHEELS STRIPE					
WOOD WHEELS FLANGES					
WIRE WHEELS	Deep Cream	Aluminum Bronze	Aluminum Bronze		
WIRE WHEELS DRUMS	Nebraska Green	Ivory Jet Black	Ivory Jet Black		
SHUTTER ASSY.	Nebraska Green	Rimini Blue	Ivory Jet Black		
FENDERS, SPLASH GUARDS, ETC.	Nebraska Green	Ivory Jet Black	Ivory Jet Black		
RUNNING BOARD SPLASH GUARDS		Rimini Blue	Rimini Blue		
COLOR COMBINATION	Dark Green	Light Blue	Black		

Hudson Limousine

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL	NO. 41384 up				
UPPER BODY	Ivory Jet Black				
LOWER BODY	Valliblue				
BELT PANEL	Pheasant Blue				
BELT PANEL STRIPE	Deep Cream				
BONNET	Valliblue				
WOOD WHEELS					
WOOD WHEELS STRIPE					
WOOD WHEELS FLANGES					
WIRE WHEELS	Deep Cream				
WIRE WHEELS DRUMS	Ivory Jet Black				
SHUTTER ASSY.	Valliblue				
FENDERS, SPLASH GUARDS, ETC.	Ivory Jet Black				
COLOR COMBINATION	Medium Blue				

Additional color information and key to color chart on page two.

Hudson Phaeton 5-Pass. (139")

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL	NO. 41384 up	45241 up			
UPPER BODY	Prairie Grass	Rimini Blue			
LOWER BODY	Prairie Grass	Rimini Blue			
BELT MOULDING	Rust Gold	Ivory Jet Black			
BELT MOULDING STRIPE	(None)	Silver			
BONNET	Prairie Grass	Rimini Blue			
WOOD WHEELS					
WOOD WHEELS STRIPE					
WOOD WHEELS FLANGES					
WIRE WHEELS	Prairie Grass	Aluminum Bronze			
WIRE WHEELS DRUMS	Rust Gold	Ivory Jet Black			
SHUTTER ASSY.	Prairie Grass	Rimini Blue			
FENDERS, SPLASH GUARDS, ETC.	Rust Gold	Ivory Jet Black			
RUNNING BOARD SPLASH GUARDS	Rimini Blue				
COLOR COMBINATION	Tan	Light Blue			

Hudson Phaeton 7-Pass. (139")

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL NO.	41385 upward				
UPPER BODY	Mountain Mist Blue				
LOWER BODY	Mountain Mist Blue				
BELT MOULDING	Blue Hour				
BELT MOULDING STRIPE	Deep Cream				
BONNET	Mountain Mist Blue				
WOOD WHEELS					
WOOD WHEELS STRIPE					
WOOD WHEELS FLANGES					
WIRE WHEELS	Deep Cream				
WIRE WHEELS DRUMS	Blue Hour				
SHUTTER ASSY.	Mountain Mist Blue				
FENDERS, SPLASH GUARDS, ETC.	Blue Hour				
COLOR COMBINATION	Medium Blue				

Additional color information and key to color chart on page two

Hudson Sedan 5-Pass. (139")

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL NO.	41384 up	44404 up	44427 up		
UPPER BODY	Ivory Jet Black	Rust Gold	Ivory Jet Black		
LOWER BODY	Ivory Jet Black	Prairie Grass	Rimini Blue		
BELT PANEL	*Karnak Green	Rust Gold	Ivory Jet Black		
BELT PANEL STRIPE	Ivory Jet Black	Deep Cream	Silver		
BONNET	Ivory Jet Black	Prairie Grass	Rimini Blue		
WOOD WHEELS					
WOOD WHEELS STRIPE					
WOOD WHEELS FLANGES					
WIRE WHEELS	**Karnak Green	Deep Cream	Aluminum Bronze		
WIRE WHEELS DRUMS	Ivory Jet Black	Rust Gold	Ivory Jet Black		
SHUTTER ASSY.	Ivory Jet Black	Prairie Grass	Rimini Blue		
FENDERS, SPLASH GUARDS, ETC.	*Karnak Green	Rust Gold	Rimini Blue		
RUNNING BOARDS, SPLASH GUARDS		Prairie Grass	Ivory Jet Black		
COLOR COMBINATION	Black	Tan	Light Blue		

*Changed to Ivory Jet Black with Silver stripe at car 41905.
**Changed to Aluminum Bronze at car 41905

Hudson Sedan 7-Pass. (139")

	STANDARD	No. 1 OPTION	No. 2 OPTION	No. 3 OPTION	No. 4 OPTION
STARTING CAR SERIAL NO.	42856 up	45166 up	45187 up		
UPPER BODY	Ivory Jet Black	Ivory Jet Black	Ivory Jet Black		
LOWER BODY	Brewster Green	Valliblue	Ivory Jet Black		
BELT PANEL	Ivory Jet Black	Pheasant Blue	Ivory Jet Black		
BELT PANEL STRIPE	Deep Cream	Silver	Silver		
BONNET	Brewster Green	Valliblue	Ivory Jet Black		
WOOD WHEELS					
WOOD WHEELS STRIPE					
WOOD WHEELS FLANGES					
WIRE WHEELS	Deep Cream	Deep Cream	Aluminum Bronze		
WIRE WHEEL DRUMS	Brewster Green	Ivory Jet Black	Ivory Jet Black		
SHUTTER ASSEMBLY	Brewster Green	Valliblue	Ivory Jet Black		
FENDERS, SPLASH GUARDS, ETC.	Brewster Green	Ivory Jet Black	Ivory Jet Black		
COLOR COMBINATION	Dark Green	Medium Blue	Black		

Additional color information and key to color chart on page two.

Mechanical Specifications

Dover
Commercial Super Six

(1929 Model)

Car Serial No. 10,001 to _____

Hudson Reference Sheet No. 38 (July 1929)

MECHANICAL SPECIFICATIONS

DOVER

Commercial Super Six

Car Serial No. 10,001 to _____

ENGINE

Make	Hudson	Piston displacement	160.38
Model	Essex Super Six	Suspension	4 Point
No. of cylinders	6	Type of head	L
Cylinder arrangement	Vertical	Cylinder head	Detachable
Bore	2-3/4"	Cylinders in block	6
Stroke	4-1/2"	Crankcase	Integral
Rated H. P.	18.15	Material	Cast
Firing order	1-5-3-6-2-4	Lower half	Pressed steel

CAMSHAFT DRIVE

Type of drive	Chain	No, of links	57
Make	Morse	Pitch	1/2"
Type	No. 28	Adjustment	Adjustable eccentric
Width	1- 1/4"	Sprocket material	Cast Iron
Camshaft sprocket	38 Teeth		

CAMSHAFT BEARINGS

Number of bearings	3	No. 2 diameter	1-31/32"
No. I front - diameter	2"	No. 2 length	1-1/16"
No. I length	1-1/16"	No. 3 diameter	1- 1/2
		No. 3 length	15/16"

VALVES

	Inlet	Exhaust
Head material	Silicon steel	Silicon steel
Head diameter (outside)	1-3/8"	1-3/8"
Head diameter (opening)	1- 1/4"	1- 1/4"
Stem length	5-1/32"	5-1/32"
Stern diameter	5/16"	5/16"
Stem type of end	Grooved	Grooved
Tappet-type	Roller	Roller
Tappet clearance	.003"-.005"	.005" -.007"
Valve lift	5/16"	21/64"
Valve stem guides	Removable	Removable
Spring pressure	50 tbs.	50 tbs.

CRANKCASE AND CRANKSHAFT

No. of main hearings	3	Crank pin diameter	1-13/16"
No. I (front) - diameter	2-11/32"	Main bearing material	Bronze & babbitt
No. I length	1-5/8"	Main bearing clearance	.001" - .0015"
No. 2 diarneter	2 -3/8"	Main bearing end play	.006 " - .012
No. 2 length	1-3/4"	End thrust on	Center bearing
No. 3 diameter	2-13/32"	Sprocket	19 teeth
No. 3 length	1-3/4"	Material	Steel

CONNECTING ROD

Material	D, F, Steel	Lower end bearing clear	.0011,
Weight	1-1/2 lbs.	Clearance (endwise)	006"-.010"
Length C. to C.	8-3/16"	Type	Spun
Lower end bearing - Dia.	1- 13/16"	Material	Babbitt

PISTON

Type	Slotted Skirt	Distance between bosses	1-1/8"
Material	Aluminum Alloy	Clearance - skirt	.002"
Weight	8 ounces	Depth of grooves	.156"
Length	3-1/16"	Lower groove	Drilled radially
Pin center to top	1-11/16"	Number of holes	8
		Diameter of holes	3/32"

PISTON RINGS

Material	Cast Iron	No. of oil rings	2
No. per piston	3 (above pin)	Type of joint	Mitre
Width	1/8"	Gap clearance	.006"-.008"
No. of comp. rings	1	Make	Piston Ring Co.

PISTON PIN

Type	Floating	Bushing - outside diameter	15/16"
Diameter	3/4"	Bushing - inside diameter	3/4"
Length	2-3/32"	Bushing - length	15/16"

LUBRICATION SYSTEM

Type	Circulating splash
Oil pump type	Plunger
Stroke of pump	Not adjustable
Capacity - Oil reservoir only	5 quarts
Capacity - Oil reservoir and troughs	6 quarts
Mesh of screen	50
Oil recommended	Medium heavy - use low cold test in winter

COOLING SYSTEM

Type	Thermo. syphon
Radiator - make	Harrison
Core - type	Ribbon cellular
Radiator - shutter	Pressed steel - Horizontal

COOLING SYSTEM - Continued

Radiator shutter - make	Hudson
Shutter control - type	Manual
Capacity of cooling system	4-3/4 gallons
Radiator hose, upper, diameter	2-1/4"
Radiator hose upper, length	5-1/2"
Radiator hose, lower, diameter	2-1/4"
Radiator hose, lower, length	15-3/16"
Fan belt	"V" type
Fan - make	Hudson
Fan bearing type	Plain

FUEL SYSTEM

Carburetor-make	Marvel
Carburetor-size	1-1/8"
Method of heating mixture	Marvel Heat Control
Make of vacuum tank	Stewart
Gasoline tank capacity	11-1/2 gallons
Fuel feed - type	Vacuum tank

EXHAUST

Muffler - make - Hudson Exhaust pipe diameter 1-3/4"

IGNITION SYSTEM

Make	Auto-Lite Corporation
Current source	Battery and generator
Spark control type	Full automatic
Firing order	1-5-3-6-2-4
Timing	D, C. (fully retarded)
Breaker point gap	.018 -.020"
Ignition coil - make	Auto-Lite Corporation
Spark plug-make	A. C.
Spark plug-type	G-10
Spark plug - size	Metric - 18 m/m, .5 m/m thread
Spark plug - gap	025-.028

Note: Any other information must be obtained from the manufacturer

STARTER MOTOR

Make	Auto-Lite Corporation
Drive - type	Bendix
No. of teeth on flywheel	100
Width of tooth face	3/8"
Pinion meshes from	Rear of flywheel

Note: Any other information must be obtained from the manufacturer

GENERATOR

Make	Auto-Lite Corporations
Normal Charging Rate - hot	10 Amps.
Normal Charging Rate - cold	11.5 Amps.

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

BATTERY

Make	Exide	Terminal grounded	Negative
Type	3-XI-33-1-G	Length - overall	9"
Voltage	6	Width - overall	7"
No. of Plates	13	Height of box	7-7/8"
Where mounted	Under driver's seat	Height over terminals	9"

LIGHTING SYSTEM

Head and tail lamps - make	John Brown Lamp Company
Head lamp reflector - make	John Brown lamp Company
Head lamp - type	Bullet
Side lamp - type	Bullet
Head lamp lens - type	Parabeam
Head lamp lens - diameter	8"
Head lamp dimmer method	Separate filament
Dash and tail lights connected	Separately
Ammeter - make	National Gauge & Equipment Co.
Dash light - make	National Gauge & Equipment Co.
Lighting switch control	On steering wheel

LAMP BULB SPECIFICATIONS

	Make	*Mazda No.*	*C.P.*	*Base*	*Voltage*
Head	Mazda	1110	21-21	D. C.	6-8
Side	Mazda	63	3	S. C.	6-8
Tail	Mazda	63	3	S. C.	6.8
Dash	Mazda	63	3	S. C.	6-8
Stop	Mazda	87	12	S. C.	6-8
Dome	Mazda	63	3	S. C.	6-8

HORN

E. A, Horn — Motor type

CHASSIS

Wheelbase	110-1/2"
Lubricating system	Alemite
Location of serial number	Rear cross member

TRANSMISSION

Make	Hudson	Pocket bearing	Bronze bushing
Location	Unit	Reverse idler	Bronze bushing
Speeds	3 forward, 1 rev.	Main shaft - front	N. D. No. 1207
Gear ratio - low	3.244 to 1	Main shaft - rear	Hyatt No. N. C. '106
Gear ratio - second	1.961 to 1	Countershaft	Stationary
Gear ratio - high	I to I	Pilot bearing in crankshaft	N. D. No, 1202
Gear ratio - reverse	4.170 to 1	Oil capacity (approx.)	1 quart
Type of lubricant	Heavy motor oil		

CLUTCH

Make	Hudson	Throwout bearing	Annular & thrust
Type	Single disc oil	Throwout	5/32"
Facing material	Cork inserts	Clearance at F/B	3/4"
No. of cork inserts	72		

LUBRICATION - 1/2 pint light motor oil.

UNIVERSALS

	Make	Type	Make	Type
Front	Spicer	Metal	Rear	Spicer Metal

TYPE OF DRIVE

Propulsion through rear springs.

REAR AXLE

Make	Hudson	Wheel bearing	Timken 415TV and 412A
Fype	Semi-floating	Pinion bearing - front	Timken 2691V and 2620
Gear ratio	5 6/10	Pinion bearing - rear	Timken 3188 and 120
Type of drive	Spiral bevel	Differential bearing - right	Timken 336 and 3320
Min. road clear.	8"	Differential bearing - left	Timken 336 and 3320
Clear. for jack	10-1/4"	No. of teeth in pinion	10 or 11
Differential - make	Hudson	No. of teeth in gear	56
Pillion	Adjustable	Oil capacity (approx.)	1-1/2 quarts
Pinion bearing	Adjustable		

FRONT AXLE

Make	Hudson	Toe in - none, or not over 1/8"	
Section - type	I beam	Castor angle	0
End - type	Rev. Elliott	Min. road clearance	8"
King pin thrust bearing	Ball bearing	Clearance for jack	11" on spring
King pin transverse inclination	7 degrees	Spindle transverse inclination	1 degree

STANDARD BRAKES

Type	Bendix 4-wheel brakes

SERVICE BRAKES

Location	Front and Rear wheels	Lining length per wheel, 2 pieces	24-1/2
Make	Bendix	Width of lining	1-1/2"
Type	Internal	Thickness of lining	5/32"
Total braking area	147 sq. inches	Clearance of lining	.010"
Drum diameter	11"	Method of application	Foot pedal

HAND BRAKE

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

WHEELS

Type	Wood steel felloe
Make	Motor Wheel Corporation
Front wheel inner bearing	Timken No. 2554 and 2520
Front wheel outer bearing	Timken No. 2382 and 2320

RIMS

Type	Split	Diameter	20"
Make	Jaxon	Width	4"

TIRES

Size	30 x 5 Front - 30 x 5.50 Rear; balloon, straight side
Make	Goodyear
Number of plies	4 Front - 6 Rear
Recommended pressure	Front 35 lbs; Rear 40 lbs.

STEERING GEAR

Make	Gemmer
Type	Worm and shaft
Ratio	15 to 1
Steering wheel turns	2-1/2" (full swing left to right)
Turning radius	20 feet
Lubricant	Steam cylinder oil

SPRINGS

Front Spring

Type	Semi-elliptic
Length	36"
Width	2"
No of leaves	8
Material	Chrome - Vanadium
Front bushing	5/8" diameter
Rear bushing	5/8" diameter
Bushing material	Phosphor bronze
Spring lubricant	Motor oil
	P

Rear Spring

Type	Semi-elliptic
Length	54-7~
Width	
No, of leaves	12
Material	Chrome - Vanadium
Front bushing	5/8" diameter
Rear bushing	5/8" diameter
Bushing material	Phosphor bronze
Shackle - Type	Adjustable

FRAME

Make	Hudson	Thickness	5/32"
Material	Steel	Width of flange	1-7/8"
Depth	7		

JULY, 1929

Dover Super Six-Standard Equipment

Car Serial No. 10,001 to _____

	Panel	*Express*	*Express Canopy*	*Screen Canopy*	*Chassis*	*Cab*
Windshield cleaner - make	Trico Mfg Co.	Trico Mfg. Co.	Trico Mfg. Co.	Trico Mfg. Co.	Trico Mfg. Co.	Trico Mfg. Co.
Windshield cleaner -type	Vacuum	Vacuum	Vacuum	Vacuurn	Vacuum	Vacuum
Rear View Mirror	Yes	Yes	Yes	Yes	Yes	Yes
Cowl ventilator	Yes	Yes	Yes	Yes	Yes	Yes
Engine heat indicator	On instrument board			ALL MODELS		
Gasoline and oil level gauge location	Instrument board			ALL MODELS		
Gasoline and oil level gauge - type	Electric			ALL MODELS		
Wheels - type	Wood wheels			ALL MODELS		
Sun visor	Yes	Yes	Yes	Yes	No	Yes
Radiator shutters	Yes			ALL MODELS		
Rear traffic signal	Yes			ALL MODELS		
Comb. tail and stop light - make	John Brown Lamp Co.			ALL MODELS		
Speedometer - make	Stewart-Warner			ALL MODELS		
Ignition electrolock				ALL MODELS		
Spare rim	One			ALL MODELS		
Horn - make	E. A.			ALL MODELS		
Headlamps - make	Parabeam - John Brown Lamp Co.			ALL MODELS		
Tire carrier - make	Hudson			ALL MODELS		
Storage battery - make	"Exide"			ALL MODELS		
Bumpers - front				ALL MODELS		

JULY, 1929

Dover Super Six-Standard Equipment

Car Serial No. 10,001 to _____

	Panel	*Express Express*	*Screen Canopy*	*Canopy*	*Chassis*	*Cab*
Model	1929	1929	1929	1929	1929	1929
Wheelbase	110-1/2	110-1/2	110-1/2	110-1/2	110-1/2	110-1/2
Weight	2910				1930	
No. of doors	4	2	2	2	None	2
Gear Ratios	5 6/10 to 1				ALL MODELS	
Make of Body	Biddle & Smart				ALL MODELS	
Windshield-- Type	One Piece Swing Type				ALL MODELS	
Windshield-Make	Motor Products				ALL MODELS	
Wheels-Type	Wood					
Tires - Size	30x5 Front - 30x5.50 Rear				ALL MODELS	

BODY DIMENSIONS

	Overall Length	*Overall Width*	*Overall Height*	*Inside Body Lgth.*	*Inside Body Ht.*	*Inside Body Width at Platform*	*Inside Body Wdth. Above Flare Bds.*
Panel	175¼	63½	$77^{3}/_{8}$	$79^{5}/_{16}$	50	43	50¼
Express	$170^{1}/_{8}$	63½	$72^{3}/_{16}$	71	18½	42½	50
Express-Canopy	$170^{1}/_{8}$	63½	$79^{11}/_{16}$	71	50½	42½	49¼
Screen Canopy	$170^{1}/_{8}$	63½	$79^{11}/_{16}$	71	50½	42½	49¼