

# TERRAPLANE HUDSON

## *Service*

TECHNICAL INFORMATION  
PARTS—ACCESSORIES  
MERCHANDISING

Issue 10

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1935 Series

### A Message from the President



The ideal motor car would need no service. However, human beings and mechanisms are delicate instruments and must have care. The average automobile owner who is not skilled in machinery never realizes how marvelous is the piece of equipment he is operating. We have designed our cars to be as fool-proof as possible. However, the owner so often unintentionally abuses his car that the great Hudson dealers' service organizations are his haven when trouble occurs.

Each year we build Hudsons and Terraplanes better. Each year I am sure that our field service organizations improve their methods, their efficiency, and their ability to speedily get the owner on the road again. In this connection, I hope that the 1936 season will see all of our dealers with sufficient stocks of parts to overcome any owner's criticisms of any long delays in getting replacements. I further would like to see a completion of the equipment program started early this year, particularly as it relates to special tools. We shall do everything possible at the factory to cooperate with our dealers in this respect.

Congratulations to all of you who have made real service progress this season. Keep up the good work—for good work it is.

ROY D. CHAPIN  
President

# Servicing the Water Pump

The water pump should be inspected and lubricated every 1000 miles. Lubrication is important due to the temperature under the hood and also the possibility of water reaching the needle roller bearing due to spillage or leakage. The lubricant should therefore be a water resistant grease\* which will not melt and run off the bearing surfaces at under hood temperatures.

The inspection consists of adjusting the packing gland finger tight or repacking the gland if leakage exists or the gland has been turned down near the ends of the threads.

## Repacking

Service Packing Ring No. 45277 is of the split foil type. It can be inserted after the gland nut is backed off of the thread by spreading to pass over the shaft.

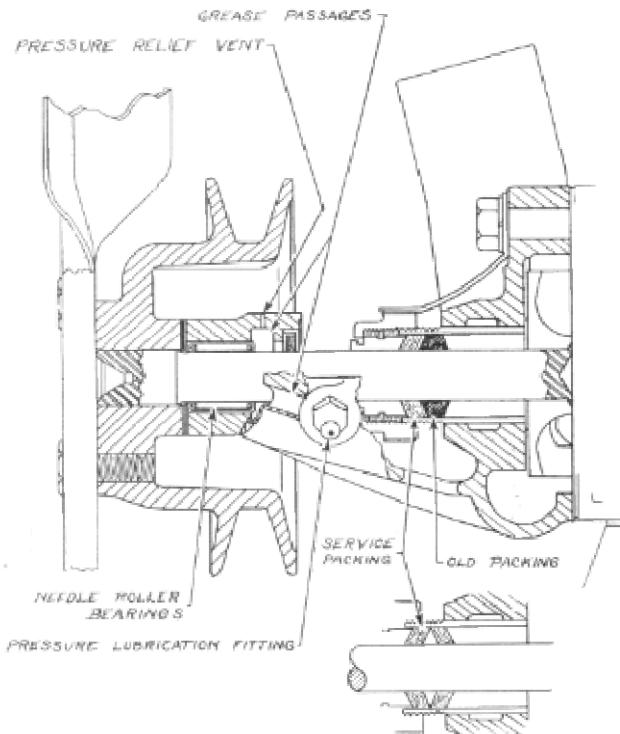


Figure 1

Figure 1 shows the proper method of adding one new packing ring to an old packing, while the insert shows a complete repacking by using two service packing rings.

## Fan Belt Tension

The fan belt tension should also be checked. Proper adjustment permits the section of the belt

\*Correct specifications for Water Pump grease:

Aluminum Soap 7.5—8.5%

Mineral Oil 91.5—92.5%

(Mineral oil to have a saybolt viscosity of 400 seconds at 100° Fahrenheit and a zero Fahrenheit cold test)

Ash content not over 1.5%

Melting point of grease not less than 190° Fahrenheit. This grease must be workable at zero degrees Fahrenheit

between the water pump and generator pulley to be pushed downward from  $1\frac{1}{4}$ " to  $1\frac{3}{4}$ " below a straight line with the pressure of one finger. A tight belt will overload the bearings and cause them to cut out or get rough, causing chattering and scoring of the shaft and in addition to causing noise will make it impossible to prevent leakage at the packing gland.

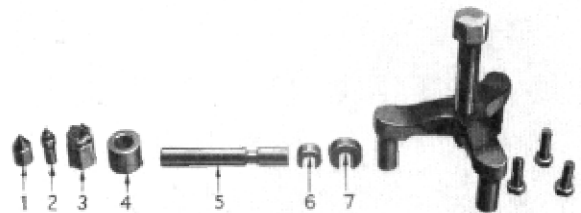


Figure 2

The use of a lubricant which will not stay on the surfaces of the needle roller bearing will also cause the same conditions as a tight fan belt. After such a condition has been permitted to develop it is necessary to disassemble the pump and replace the worn parts.

## Rebuilding

Water Pump Reconditioning Tool Set No. J-694 (available through Hinckley-Myers Company, Jackson, Mich.) is shown in Figure 2. This set provides an easy means of disassembling and reassembling the water pump without damage to parts and insures proper alignment of bearings after rebuilding.

## Disassembling

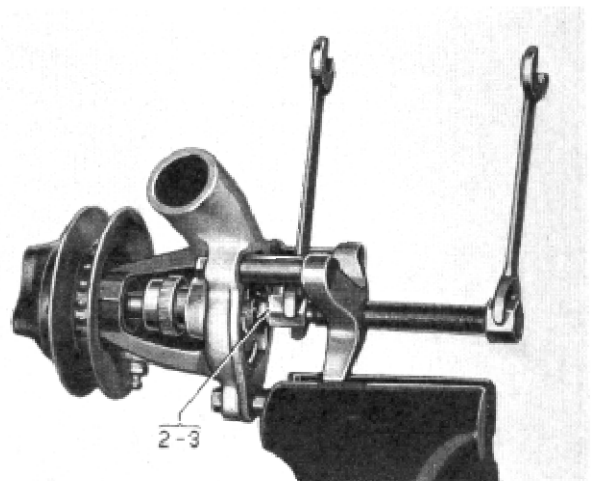


Figure 3

(1) After the water pump is removed from the engine, attach the fixture to the water pump with the three cap screws. Fig. 3.

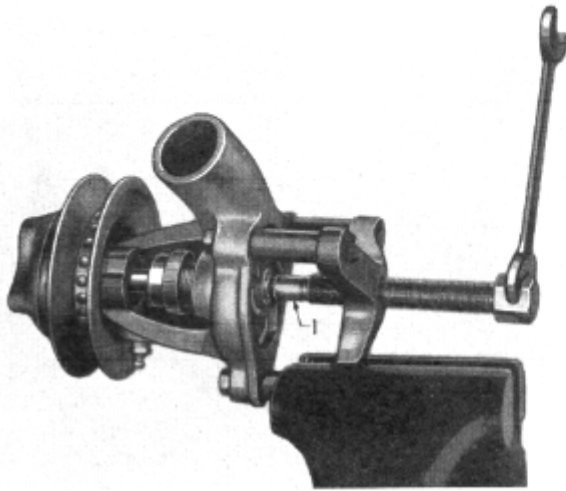


Figure 4

(2) Insert the pilot (2—Fig. 2) in the cutter 3 and assemble on end of screw. Tighten screw so that pilot enters center of pump shaft and teeth of cutter come against shaft.

(3) Turn cutter with wrench (Fig. 3) while feeding with screw until swaged flange is cut off shaft. Remove cutter and center.

(4) Fig. 4—Assemble large pilot (1) to end of screw. Tighten screw and force shaft through impeller. Remove impeller and shaft.

(5) Remove packing nut and gland.

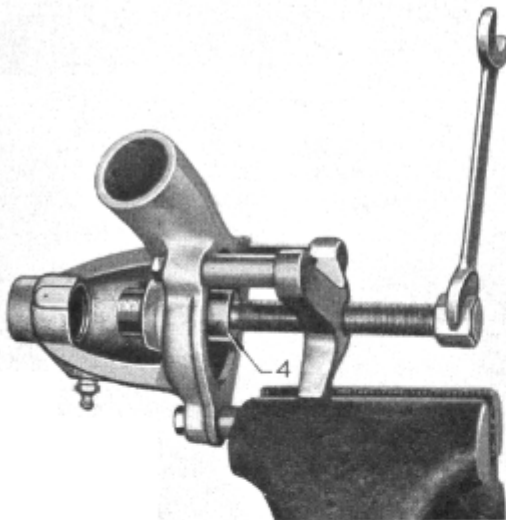


Figure 5

(6) Fig. 5—Assemble round pilot (4) to end of screw and push out rear bearing by tightening screw.

(7) Fig. 6—Pry out front bearing oil seal with screwdriver.

(8) Fig. 7—With round pilot (4) still in position on screw, insert shaft (5) through front bearing and into hole in pilot (4). Put small horseshoe (6) in shaft and tighten screw, forcing out front bearing.

With all parts now removed an inspection should

be made to determine what replacements should be made.

If the shaft is not scored or worn the shaft and pulley assembly can be reinstalled. The bushing and the needle roller bearing should be inspected for wear or damage. A new impeller must be used to insure a proper press fit on the shaft.

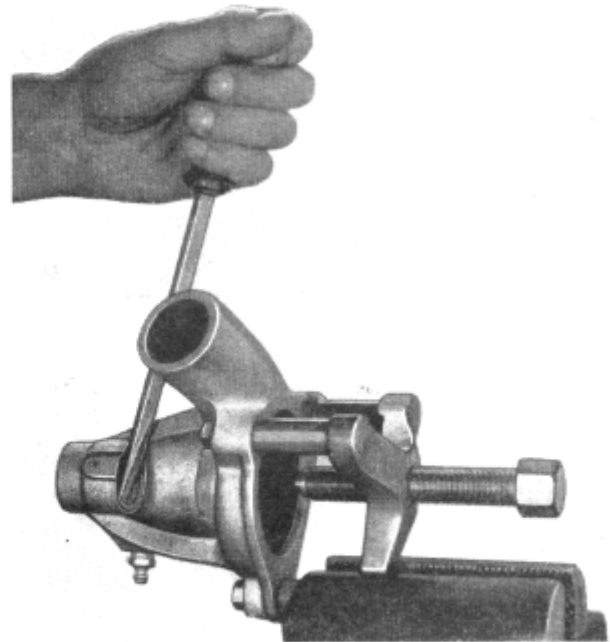


Figure 6

### Reassembling

(9) Fig. 8—Assemble pilot (3) on the screw. Insert shaft (5) through the front bearing support, slipping the needle roller bearing on the shaft from the rear. Enter the shaft (5) in the pilot (4). Move the bearing forward and put the small horseshoe (6) in place in the groove in the shaft. Guide the bearing into the support while tightening the screw until the front of the bearing is flush with the front of the support. Back off screw and remove horseshoe (6).

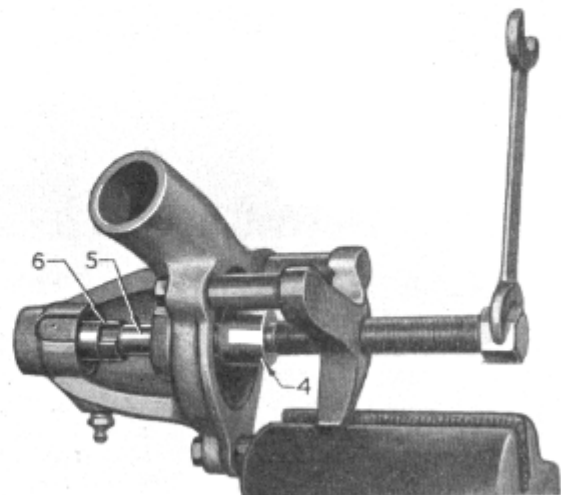


Figure 7

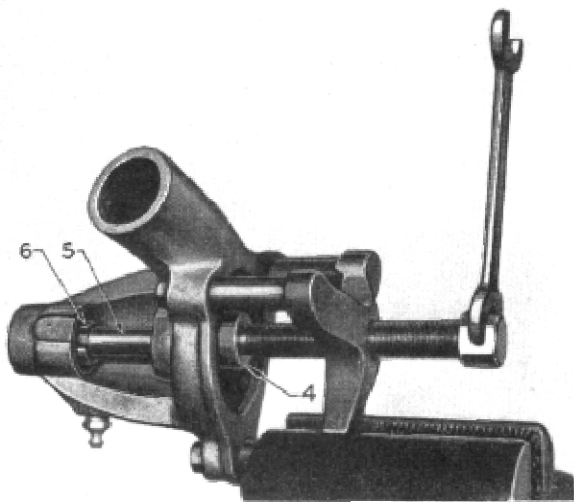


Figure 8

(10) Fig. 9—Put a new oil seal on the shaft (5) and put the large horseshoe (7) in place in the groove in the shaft. Tighten screw until oil seal is forced into place. Back off screw and remove horseshoe and push shaft forward into roller bearing.

(11) Fig. 10—Put rear bearing into housing from rear. Assemble pilot (4) to screw and push shaft (5) back into pilot (4) to act as a guide for the bushing. Tighten screw until rear of bearing is flush with rear of support. Back off screw and remove shaft.

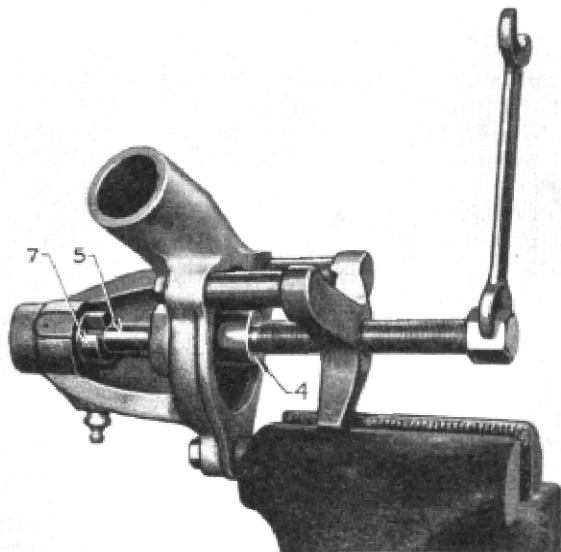


Figure 9

(12) Put front thrust washer on pump shaft and insert shaft through bearings from front. Clamp shaft in assembly with large C clamp as shown in Fig. 11 or by placing in jaws of vise. (If vise is used, protect machined face of pump housing against damage.) Put rear thrust washer and impeller on shaft. With pilot (4) in place, tighten screw to press impeller on shaft. Back off screw and remove fixture from pump.

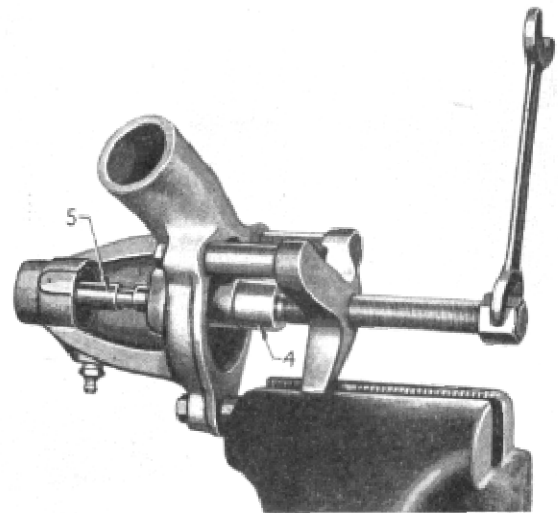


Figure 10

(13) Fig. 12—Rest water pump pulley on anvil of vise. Peen impeller end of shaft with a ball peen hammer.

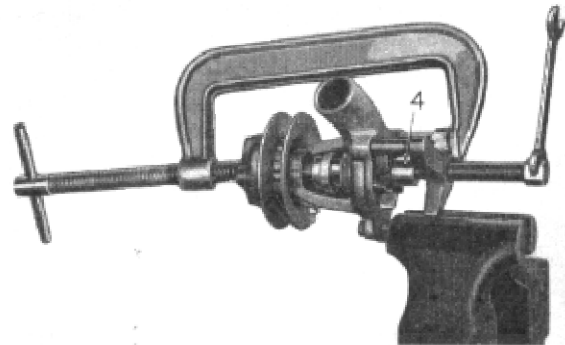


Figure 11

(14) If peening draws impeller on shaft so that all end play is taken up, support pump housing between jaws of vise and put a blunt drift into shaft center.

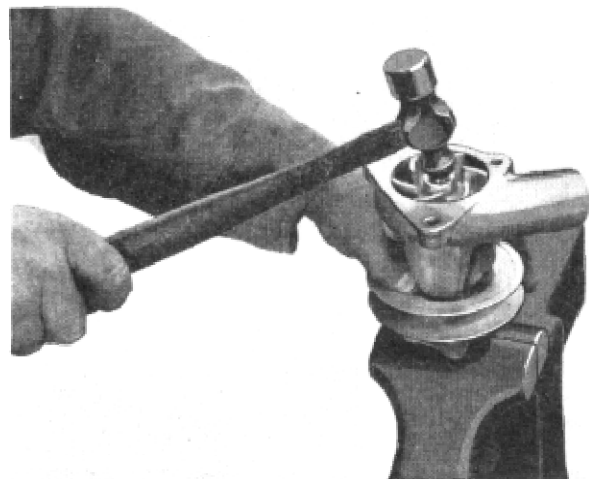


Figure 12

Strike drift with hammer to obtain a slight end play. End play should be from .005" to .009".

(15) Lubricate needle roller bearing with water pump grease.

# Congratulations to Albany

*For the first six months of 1935, E. V. Stratton Corporation at Albany, New York, took first place in accessory merchandising. Believing that their plan would be of interest to the entire organization, we asked Mr. E. N. Henderson, Service Manager, "How did you do it?" His answer is printed below.*

## Accessory Merchandising

"In order to sell accessories, the first requisite is to have a line of quality merchandise competitively priced. Without doubt, our accessory set-up is the most complete any car dealer has today.

"The accessory program sponsored by our factory requires the cooperation of each distributor and it is his responsibility to furnish the enthusiasm and the push for his organization, employees and dealers. The distributor with the aid of his wholesale, service and parts men should acquaint the dealers with the items which comprise the accessory list together with the profit which goes with the sale of each item. The dealer, in his turn, must, in order to "cash in" on the program, have an organization behind him which is accessory-minded.

"However, the distributor and dealer cannot consider his job begun until an adequate display of accessories is made. The display boards illustrated on pages 22 and 24 of the December issue of TERRA-PLANE-HUDSON SERVICE MAGAZINE have proved to be of great assistance in merchandising accessories during 1935. The accessory display must be backed up by a stock sufficiently large to care for all sales made as the purchaser's desire will wane rapidly during the time that is necessary to allow the item to come from the factory or distributor. In other words, immediate delivery must be made of almost any accessory sold. A greater loss will be incurred due to an under-stock of accessories than an over-stock, as cost can always be obtained during clean-up periods, but a sale lost due to an inadequate stock represents a real loss of profit to all concerned.

"So much for the moves necessary by distributors and dealers which will allow them to profit by the sale of accessories. Now, how to get the item out of stock and the cash in the register is the real problem.

"The retail sales force has the first and best opportunity to talk accessories to the new car purchaser. In addition, they have the distinct advantage of being able to finance the accessories over the same period as that which the car is being financed.

"If there is no additional remuneration, the retail salesman will not bother to take his purchaser to the accessory board, but a flat 10% commission on the installed price of an accessory will result in accessory sales to people who have just purchased a G model because 'transportation' is all that he needs. The retail department should also be allowed the full profit on the accessory sale which in many cases has been sufficient to care for all of the new car or gratis service the owner gets during his warranty period. The profit on the car sale, therefore, remains intact to pay for showroom, demonstrating and retail sales expenses. In addition, the retail sales manager will always be an aggressive accessory merchandiser.

"The service department has an ideal opportunity to retail accessories, due to the frequent contacts that they make with the owner as he comes in for

inspection, lubrication, and service. Here again a flat 10% commission to service men is necessary to obtain accessory volume. A great many plans are possible to promote the sale of accessories on the service floor, but unless a decided over-stock of certain items exists, the best method is to have the service men accessory-minded and to provide them with an accessory price list and display board.

"Now, in conclusion, I would like to become a little personal and briefly outline the major reasons why E. V. Stratton Corporation stands No. 1 distributor in the sale of accessories:

1. Mr. Stratton's real interest in the accessory program and the enthusiasm he has built up in his organization;
2. The excellent support and cooperation given by our dealers, both large and small;
3. The alertness of the wholesale men and the retail sales force, as well as the service and parts organization;
4. And finally, the fact that we have been unafraid of a new item or an over-stock. We have consistently maintained a balanced and adequate stock of accessories during the year.

Our sales have been approximately as follows:

- 65% Wholesale to Dealers
- 15% Retail Sales Department
- 10% Service Department
- 10% Parts Department over Counter."

(Signed) E. N. HENDERSON.

## Install Heaters Now

We are now into the season when aggressive plans for selling heaters should be put into effect.

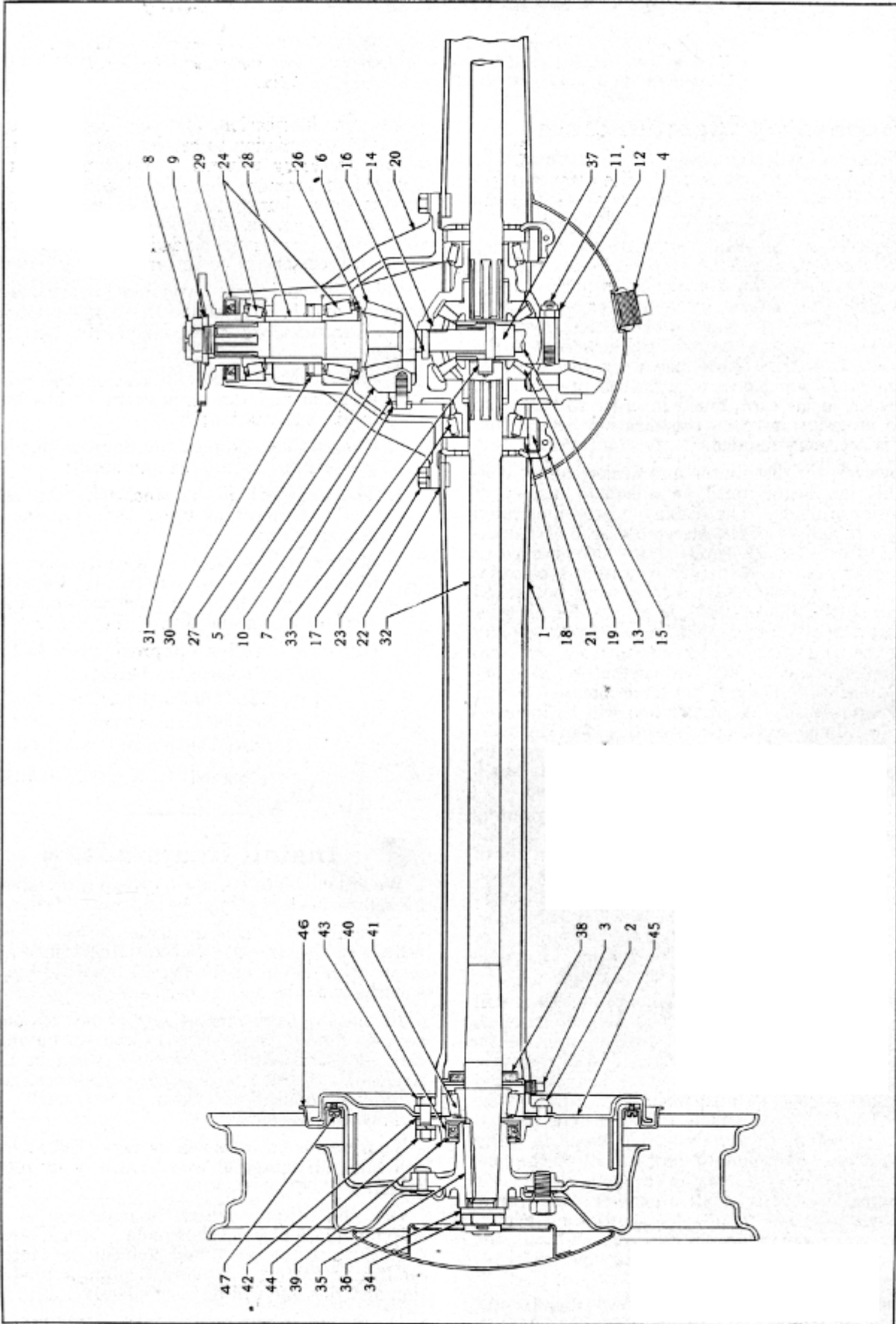
A number of distributors are already installing heaters in all new cars. Several others have notified us of their intention to install heaters in all cars starting with the new models.

In heater territories, there is no reason why heaters cannot be sold to customers buying new cars. It is so simple to include them in the car payments, together with other accessories, and the additional monthly payment is too small to discourage the customer.

Your heater business will be very profitable if you will take advantage of every angle in its merchandising.

Get your display stands in operation in a conspicuous place in your showroom. Attach streamers or ribbons to the doors and connect the motor to a rectifier or battery. Moving displays attract attention and this one will be very effective.

Don't pass up any opportunity to talk heaters. It means real profit to you.



REAR AXLE

# Rear Axle Overhaul

The semi-floating type rear axle used on Hudson and Terraplane cars carries a pressed steel banjo housing, welded into a one-piece structure. This design, coupled with scientific distribution of metal and the use of high-grade heat-treated alloy steels throughout, makes possible a unit of compact design and maximum strength and lends itself to easy servicing. Following is the procedure recommended in making rear axle repairs and adjustments:

## Disassembly of Axle

(1) Jack up rear of car, remove hub caps and take off rear wheels.

(2) Remove axle shaft nuts (34) and washers (36), using axle shaft nut wrench J-351.

(3) Remove rear wheel hubs and brake drums from axle shafts, using wheel pullers J-446 for Terraplane and Hudson short wheelbase models, and J-350 for

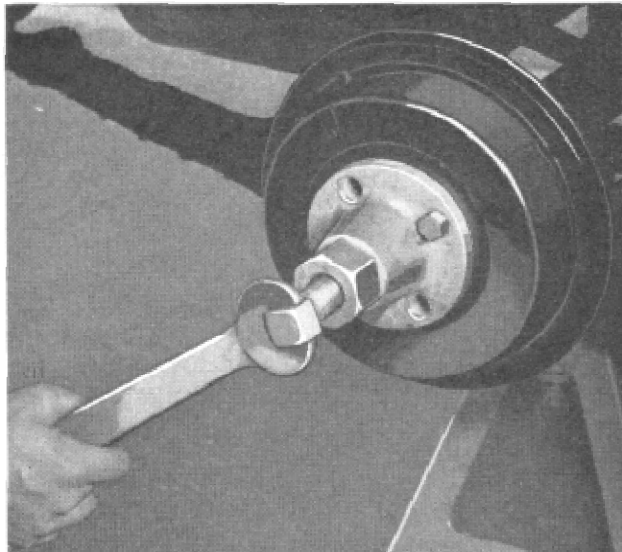


Figure 1

Hudson long wheelbase models (Fig. 1). **CAUTION:** Under no circumstances should the knockout type of wheel puller be used, as serious damage may be done to the differential parts.

(4) Remove 4 nuts (44) holding wheel bearing adjusting caps (39) and shims (42) and take off caps. To renew adjusting cap oil seal:

(5) Remove old oil seal assembly (40) from cap (39) and install new one, using bearing cap oil seal replacer J-353-1 (Fig. 2).

(6) Remove rear wheel bearing cups (41) and axle shafts (32), using axle shaft and bearing puller J-352 (Fig. 3).

(7) Remove rear wheel bearing cone and rolls (41) from axle shafts, using bearing remover J-358.

## To Renew Axle Shaft Thrust Button

(8) Grind off thrust button (33) on emery wheel flush with end of shaft. Center punch thrust button and drill  $\frac{11}{32}$ " hole through center. Tap out button

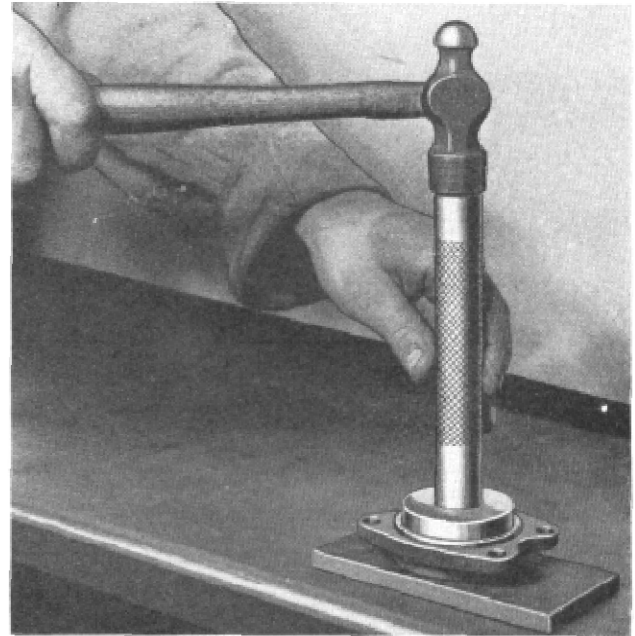


Figure 2

with  $\frac{3}{8}$ -16 tap and screw in  $\frac{3}{8}$ -16 hex cap screw  $1\frac{1}{2}$  or 2" long. Place head of screw in vise and tap end of axle shaft with soft hammer, removing button. Clean out hole and drive in new thrust button, making sure button is firmly seated in shaft.

## Removing Broken Axle Shaft

(9) If axle shaft is broken off in housing it can be removed by using broken axle shaft remover HM-540 (Fig. 4).

(10) Remove axle shaft oil seal and retainer (38), using rear axle and pinion shaft oil seal remover J-489 (Fig. 5).

(11) Disconnect brake conduits and cables at backing plates and remove brake shoe assemblies.

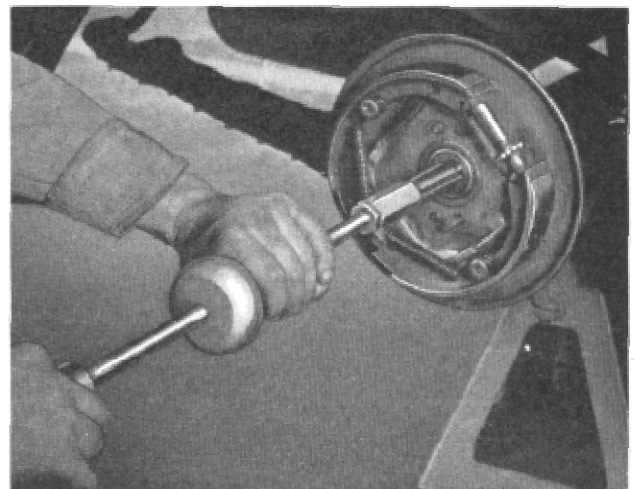


Figure 3

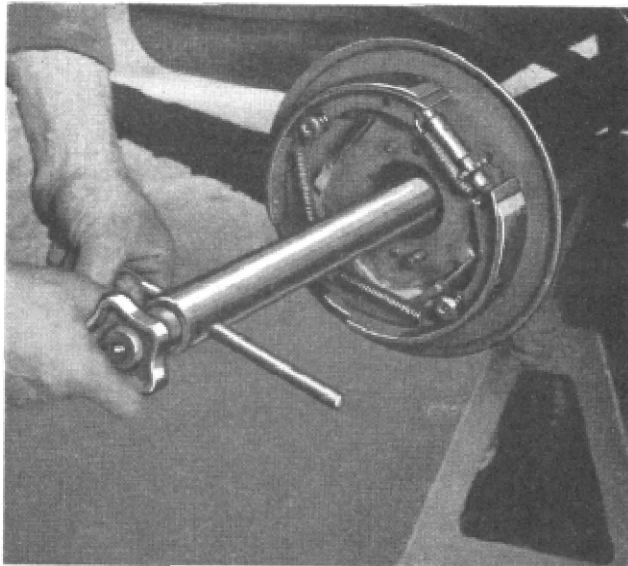


Figure 4

(12) Cut heads off rivets holding backing plates to axle, using sharp cold chisel. Install new backing plates and re-rivet to axle housing.

(13) Remove bolts holding rear universal joint to companion flange and drop rear end of propeller shaft.

(14) Remove 8 nuts from studs holding differential carrier to axle housing and take out differential carrier and gear set assembly.

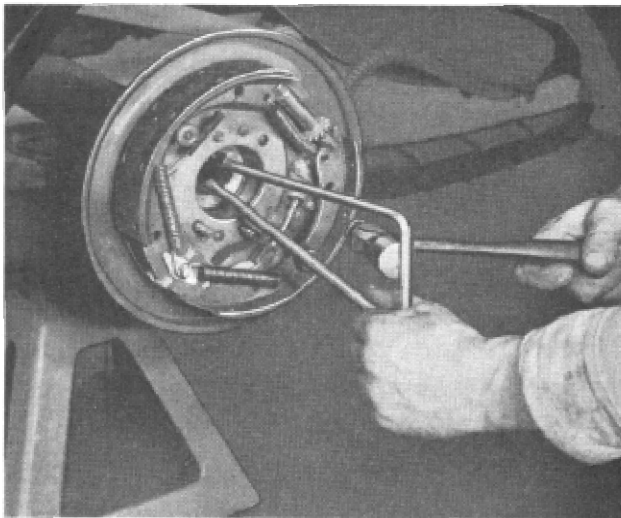


Figure 5

### Removing Rear Axle Housing

(15) Jack up rear of car and place stand jacks under frame side members just ahead of the rear springs. Place roller jack under center of axle housing.

(16) Remove cotter pins and disconnect rear shock absorbers at bottom.

(17) Remove nuts and lock nuts from rear spring clips or "U" bolts.

(18) Lower roller jack and remove axle housing assembly from under car.

### Disassembling Differential Carrier and Gear Set

(19) Remove cotter pins from differential bearing adjusting nut locks and take out locks (19).

(20) Remove cap screws from differential bearing caps and take off caps and adjusting nuts. This will permit the differential assembly and drive gear to be removed from the carrier.

(21) Take out cotter pin and remove pinion shaft nut (8) and washer (9).

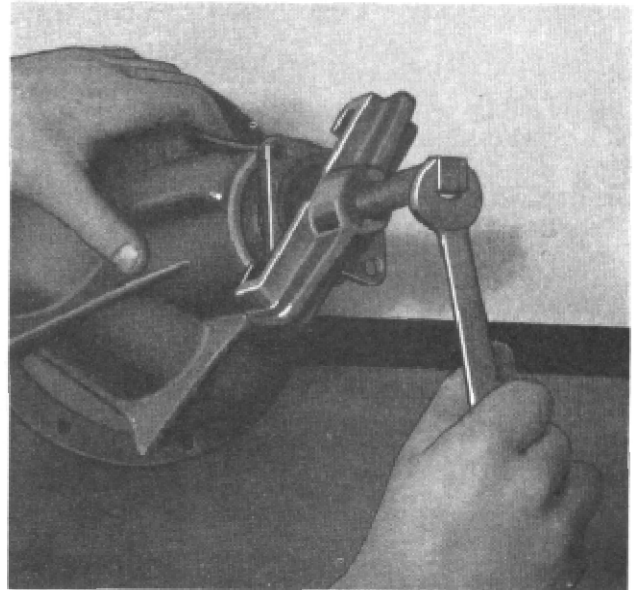


Figure 6

(22) Remove pinion shaft companion flange (31), using flange puller J-456 (Fig. 6). This will allow removal of pinion (6), bearing spacer (28) and shims from the carrier.

(23) Remove rear pinion shaft bearing cone and rolls (24) from pinion shaft, using pinion shaft bearing remover J-358 (Fig. 7).



Figure 7



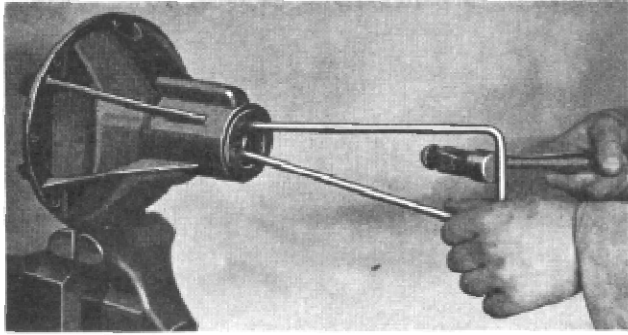


Figure 8

(24) Remove pinion shaft oil seal (29) from carrier, using pinion shaft oil seal puller J-489 (Fig. 8). This permits the removal of the front pinion shaft bearing cone and rolls (24).

(25) Remove front and rear pinion shaft bearing outer cups from carrier, using pinion bearing cup remover HM-63 (Fig. 9).

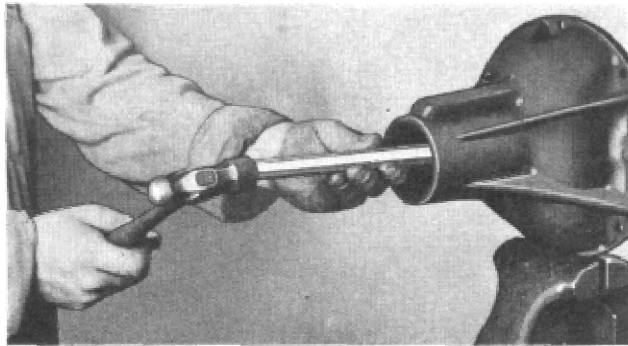


Figure 9

### Disassembling Differential

(26) Remove differential bearing cone and rolls (17) from differential case hubs, using bearing puller

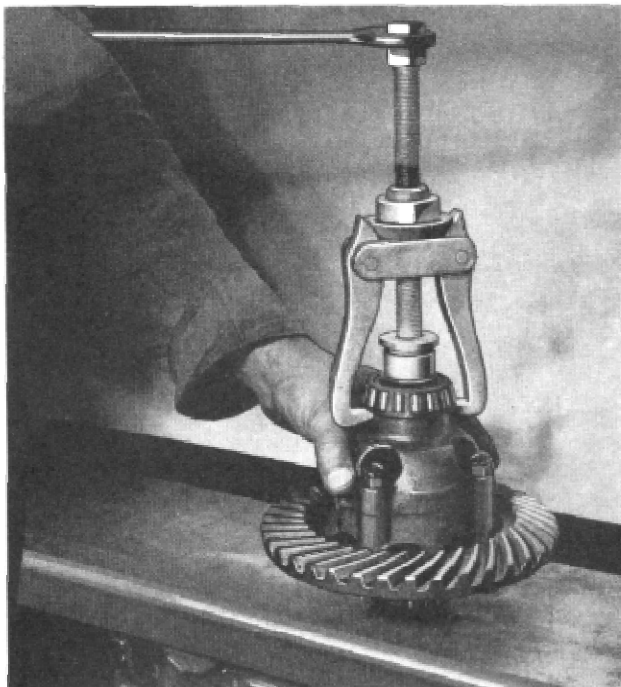


Figure 10

J-354 (Fig. 10). Be sure to enter puller fingers in notches provided in differential case.

(27) Bend back ears on drive gear screw locks, remove drive gear screws (7) and take off drive gear (5).

(28) Remove cotter pins and four nuts (12) from differential case, and separate right and left cases. This will permit removal of the differential pinion shaft (15), differential pinions (14), differential gears (13), drive shaft thrust spacer (37), differential pinion thrust washers and differential gear thrust washers.



Figure 11

### To Reassemble Differential

(29) First thoroughly wash all parts in gasoline. Inspect parts carefully for wear, roughness and signs of cracks or fractures. Replace any worn or suspicious-looking parts with new ones.

(30) Carefully check ring gear bolting flange on differential case for eccentricity and side run out, using dial indicator J-390-X, and placing hubs of case in Vee blocks. If greater than .002" it will be necessary to true up flange in lathe or renew left hand case.

(31) Place differential gear and thrust washer in left hand differential case.

(32) Assemble differential pinions (14), spacer (37) and thrust washers on differential pinion shaft (15) and place in position in left hand differential case so that the hole in shaft will line up with the pin (16) in case.

(33) Place differential gear thrust washer and differential gear in right hand differential case, and assemble to left case.

(34) Replace nuts (12) on differential case studs (11) and draw up securely. Insert and spread cotter pins in studs.

(35) Place drive gear in position on differential case flange so that holes will line up properly. Start screws (7) in drive gear, using new drive gear screw locks under the screw heads. Draw up screws tightly and bend over ears on locks. **CAUTION:** Make certain that drive gear and differential case flange are free from nicks and burrs and that no dirt or foreign matter finds its way between gear and flange or noisy operation will result.

#### Reassembling Pinion and Bearings

(36) Install differential bearing cone and rolls (17) on differential case hubs, using differential bearing driver J-355 (Fig. 11).

(37) Install pinion shaft front and rear bearing cups in carrier, using pinion bearing cup replacer J-270-1-6 (Fig. 12).

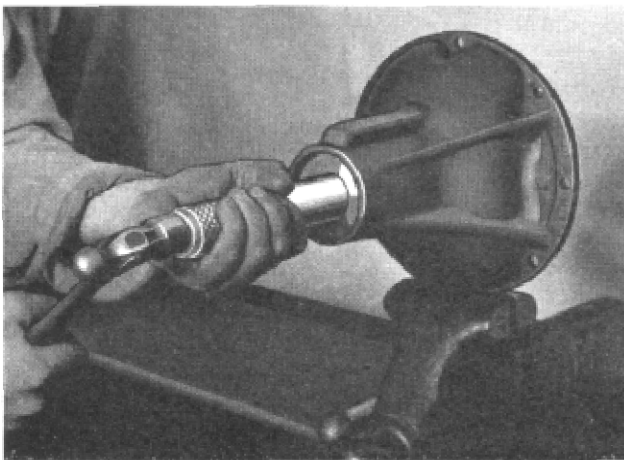


Figure 12

(38) Place front pinion shaft bearing cone and rolls (24) in position in cup and install pinion shaft oil seal (29), using pinion shaft oil seal replacer J-353-1. Make sure leather of oil seal is smooth and not worn through at retaining spring.

(39) Assemble shim pack (26) and pinion shaft rear bearing cone and rolls (24) on drive pinion (6), using pinion shaft bearing remover and installer J-358. Be sure to use same number and thickness of shims as removed in disassembling.

(40) Assemble bearing spacer (28) on pinion shaft ahead of rear bearing cone and rolls and place pinion bearing adjusting shims on pinion ahead of spacer.

(41) Place pinion and assembled parts in position in carrier, inserting forward end of pinion through pinion shaft front bearing cone and rolls.

(42) Place companion flange (31) on front end of drive pinion and assemble pinion shaft nut (8) and washer (9). Draw up nut as tightly as possible, using a long wrench such as J-351. **NOTE:** If the correct number of shims have been used between the pinion shaft front bearing cone and rolls (24) and the spacer (28), it should be just possible to turn the pinion shaft with one hand. Should the adjustment be tighter than this, add one thin shim at a time, and, if looser, remove one shim at a time until the correct adjustment is obtained. Insert cotter pin in pinion shaft and bend over.

#### Drive Gear and Pinion Adjustment

(43) Place differential and drive gear assembly in carrier and assemble differential bearing cups and differential bearing adjusting nuts (18) so that drive gear and drive pinion teeth bottom.

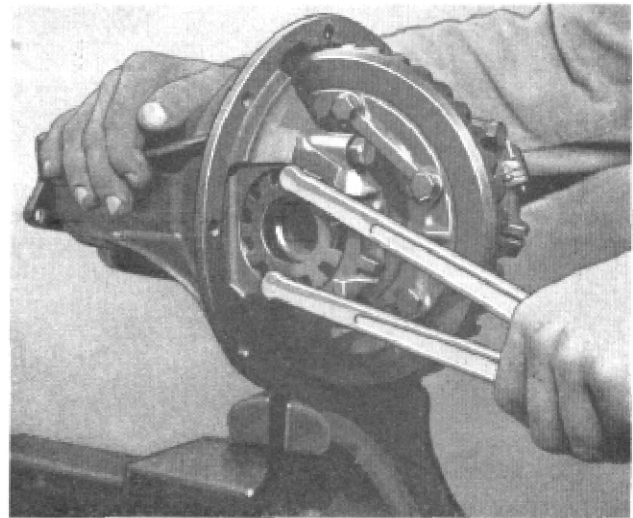


Figure 13

(44) Install differential bearing caps in place and insert cap screws, drawing them up finger tight, and engaging threads on the differential bearing adjusting nuts. Make sure lock washers are in good condition and under cap screw heads.

(45) Turn left hand adjusting nut to right or clockwise until no play can be felt between drive gear and pinion teeth.

(46) Next turn right hand adjusting nut in right hand or clockwise direction, drawing it up tightly, using differential bearing adjusting nut wrench HM-576 (Fig. 13).

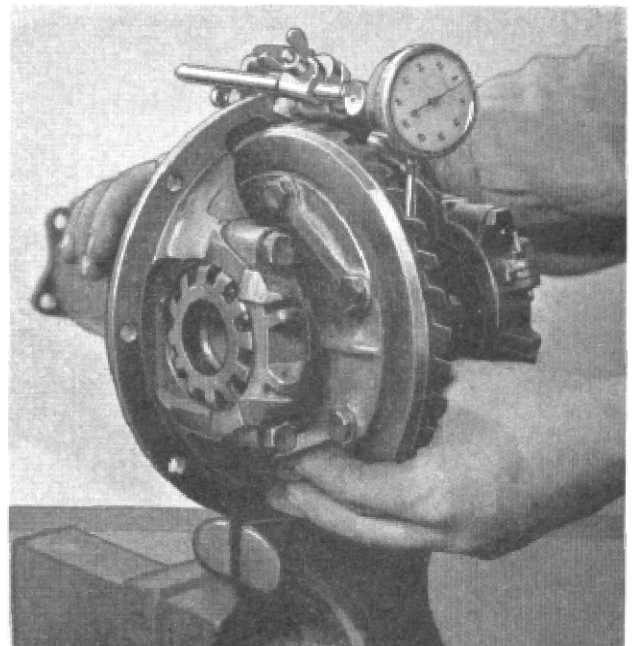


Figure 14

(47) Mount dial indicator J-390-X (Fig. 14) on differential carrier flange and turn left hand adjusting nut to left or anti-clockwise one-half notch and turning right hand adjusting nut to right or clockwise a similar amount.

(48) With plunger of dial indicator resting on outer edge of drive gear tooth as shown in Fig. 14, rock drive gear and note play or backlash between drive gear and pinion teeth on indicator. This backlash should range between .002" and .005". If this is not obtained, turn adjusting nuts one-half notch at a time until backlash is correct.

(49) Tighten differential bearing cap screws securely on left bearing cap and turn right hand differential bearing adjusting nut to the right one full notch. This additional tightening provides the necessary "spread" to the differential carrier for proper operation.

(50) Draw up cap screws tightly on right hand differential bearing cap.

(51) Install differential bearing adjusting nut locks (13) and cotter-pin them securely in place.

### Installation of Differential Carrier and Gear Set in Housing

**CAUTION:** Before installing carrier and gear set in axle housing carefully clean out interior of housing and inspect to make sure no dirt, chips, or other foreign matters remain to cause damage to gears and bearings.

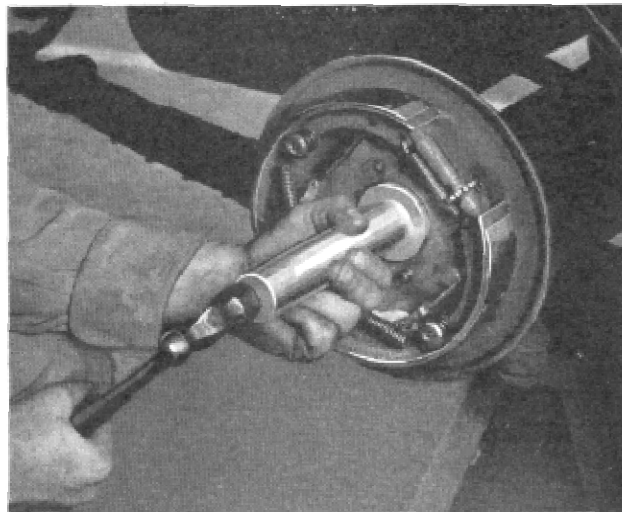


Figure 15

(52) Install new differential carrier to axle housing gasket, placing gasket over studs and against housing.

(53) Place differential carrier and gear set assembly in position and tighten carrier stud nuts. Use lock washers under nuts.

(54) Reassemble rear universal joint to companion flange, using new nut locks. Tighten nuts and bend lock ears over.

(55) Reassemble rear brake shoe assemblies to backing plates.

(56) Assemble brake conduits to backing plates and connect brake cables to operating levers.

(57) Install axle shaft oil seal assemblies, using oil seal replacer J-353-2 (Fig. 15).

(58) Install rear wheel bearing cone and rolls on axle shafts, using bearing replacer J-358.

(59) Install axle shaft and bearing cone and rolls in housing and assemble rear wheel bearing outer cup in axle. Pack bearing with wheel bearing lubricant.

(60) Place rear wheel bearing adjusting shims (42) between adjusting cap (39) and end of housing. Draw up nuts (44) tightly, using lock washers under them.

### Adjusting Axle Shaft End Play

(61) Clamp dial indicator gauge J-390-X to brake backing plate so that dial plunger rests against end of axle shaft. Next check end play, which should be from .004" to .010". This is obtained by moving the shaft in and out and by taking out or adding shims (42) between axle housing and bearing adjusting cap.

(62) Install axle shaft keys in keyways and rear wheel hubs and brake drums on axle shafts.

(63) Place drive shaft nut washers (36) and nuts (34) on axle shafts and tighten nuts securely, using axle shaft nut wrench J-351, which has an extra long handle.

(64) Place roller jack under center of axle, raise jack and remove the two stand jacks under frame.

(65) Install rear wheels and tires, drawing up wheel bolts tightly.

(66) Lower roller jack, placing car weight on tires and apply hand brake.

(67) In this position apply extra tightening operation to axle shaft nuts, then insert cotter pins and spread. Replace hub caps.

(68) Fill axle housing to level of filler plug opening in housing cover, using high-grade gear lubricant having extreme pressure characteristics and an SAE-90 viscosity for winter and SAE-110 for summer. **NOTE:** If backing plates have been removed it will be necessary to readjust brakes.

(69) Road test car to check axle operation.

Following is a list of the special tools, together with their part numbers and prices, referred to in this article:

Tool No.	Tool	Price
J-350	Wheel puller (5 bolt type) . . . . .	\$4.10
J-446	Wheel puller (4 bolt type) . . . . .	2.75
J-351	Axle shaft nut wrench . . . . .	1.75
J-353-1	Bearing cap oil seal replacer . . . . .	2.15
J-352	Axle shaft puller . . . . .	4.70
HM-540	Broken axle shaft remover . . . . .	6.00
J-489	Pinion shaft oil seal remover . . . . .	.95
J-456	Companion flange puller . . . . .	2.25
J-358	Pinion shaft bearing remover . . . . .	4.60
HM-63	Pinion bearing cup remover . . . . .	1.15
J-354	Differential bearing puller . . . . .	5.50
J-355	Differential bearing driver . . . . .	1.70
J-270-1-6	Pinion bearing cup replacer . . . . .	2.00
HM-576	Differential bearing adjusting wrench . . . . .	2.25
J-390-X	Dial indicator assembly . . . . .	9.00
J-353-2	Rear axle inner oil seal replacer . . . . .	1.25

All of these tools may be obtained directly from our tool and service station equipment source, the Hinkleley-Myers Company, of Jackson, Michigan, with whom orders should be placed.

## September Service Program

The August Safety Campaign has come to an end but some of its real benefits are still to be derived. Follow up the leads obtained from the Safety Inspections for Service Sales.

The sales departments have their prospect files and will work them for new car sales. The service department's prospect files should be even larger than those of the sales department since every car owner is a prospect for service in the immediate future.

Your owner follow-up system should be up-to-date, including all owners who came in for the Safety Inspection. The card for each owner whose car had a Safety Inspection should show the service the car requires.

Definite information on the condition of a car such as was obtained from the Safety Inspection makes it easy to sell service intelligently—use these records and call on all these owners—you know what they need and a little salesmanship will give you the job.

Start your campaign in September to service all the cars that you have record of requiring a particular service. Clean this work up now as you will have big months following getting the cars ready for winter driving—and it's time for you to think about that service and to get your customers thinking about it too—and thinking about your doing it for them.

Remind all your September customers about the service their cars should have in October—Engine tune-up and electrical test for easy starting—Brakes and steering for safety—Cooling system cleaned and anti-freeze, heaters, defrosters, etc. If you make them think about these things now they will be easier to sell when the time comes for these services—and when they think of these services they will think of you.

Your volume of service business during the late fall and early winter will depend to a great extent on what you tell your owners now. Talk winter service now and you will sell it when needed.

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## Heaters in 1936 Cars

The installation of heaters in 1936 cars has been simplified by the incorporation of a tapped hole in the cylinder head for a heater connection. Remove the  $\frac{3}{8}$ " pipe plug from this hole and install nipple furnished in package. Connect heater hose from this point to the top water tube of heater.

The rheostat switch furnished with the heater can be installed by drilling a  $\frac{3}{16}$ " hole in the instrument panel to the right of the compartment door. The bracket is not necessary when this installation is used.

The installation of the Standard and De Luxe models has been further simplified by the use of knockout plugs in the dash. These features will reduce the installation time considerably and should contribute to a larger volume of business.

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**SELL A HEATER WITH EVERY  
1936 HUDSON AND TERRAPLANE**

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## Coach Trunks Installed on Sedans

Our stock of 1935 Sedan accessory trunks is entirely exhausted but we have a limited number of 1935 Coach trunks still available. A method of mounting these on 1935 Sedans has been devised which is very satisfactory.

If you have Sedans in stock which will sell more readily with trunks installed, place your order at once. Orders will be accepted only in the order received and subject to prior sale.

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## Accessory Activities at Houston, Texas

Jim Bond, our District Service Supervisor in the southwest area, has passed us the following information in connection with the accessory activities of the Welty Motor Car Company at Houston, Texas:

"Mr. Welty has been selling an accessory kit with Special Terraplane models, which kit consists of twin horns, visors, vanity mirrors, windshield wiper extension, extra tail lamp, cigar lighter, and an assist cord. This effort has led to an increase in sales of all of his accessories and his only regret is that he did not start this plan a long time ago."

We think that all our selling outlets may take a page from Mr. Welty's book and considerably increase their net profit through the promotion of accessories in a systematic way during the coming selling season.

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## Fall Radio Sales

In the tapering off of a given year's production and in everybody's desire to move as many cars as possible we may get wholly car-minded, to the detriment of other profit-bearing items or factors in this business.

We doubt if there has been any accessory in the entire industry which has enjoyed such a success as radio during this last and present selling season.

Statistics indicate a greater interest in baseball than ever has been displayed before, and we do not make this statement simply because of the influence which the environment of Detroit might have on us. Baseball is national. There will be a World Series coming into the picture pretty soon, in which everybody is interested, no matter which team wins. It will not be very long before we get into the football season which, naturally, has another national interest and, as everyone can attend neither all the football or baseball games, the medium of the radio is about the only thing which can give them the game as a substitute.

We should talk radio to every new car buyer; we should keep after our customers who purchase cars without radio and refinance the papers so that radio may be included in the payments.

The period of getting people radio-minded has entirely passed. Therefore, it devolves itself into the matter of salesmanship as to the number of units which we dispose of at retail.