

# HUDSON

## *Service Merchandiser*

Vol. 2 No. 5



May 1950

### FACTORY SERVICE SCHOOL SPECIALIZED TRAINING FOR HUDSON MECHANICS



"Since our mechanics have returned from the Factory Service School in Detroit, we can see a great improvement in their work and we cannot praise the school too highly. We feel that our cost of this training is money well spent. We are so well pleased that now we plan to send another to your school just as soon as reservation is available."

"During the 10 years we have held a Hudson Dealership this is the most splendid opportunity ever offered to train our mechanics. This not only improves their qualification but is a very potent factor satisfying owners and paving the way for future sales."

"Now we fully appreciate the value of first hand training preparatory to servicing the modern motor car. The results of just two men having completed the factory school course, is so gratifying that we intend to have every mechanic in our shop be given the opportunity of complete technical and mechanical training so as to become Hudson service specialists."

"Never before have Dealers anywhere had such an excellent opportunity to have their organization trained to successfully meet the exacting demands of modern service, as is offered by your Factory Service School. Our salesmen are keen to recognize this as an advantage to them in satisfying owners for future sales."

"Returning from the Factory Training School our mechanics were enthusiastic in their praise of the thorough course of instruction, modern equipment and latest technique in dealing with service problems. Their training is an investment to us that we know will pay dividends."

"Most impressive was the ability of the instructors to make clear the most difficult and exacting mechanical adjustments."



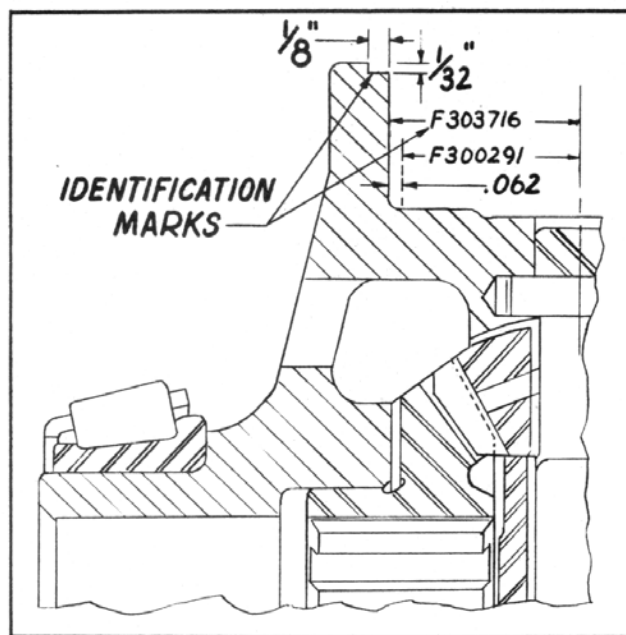
SPECIAL MECHANICAL TRAINING IS IMPERATIVE TO SATISFACTORY MAINTAINING THE  
PRESENT DAY MOTOR CAR, AS IS REFLECTED IN THE COMMENT OF MANY DEALERS.

THE HUDSON FACTORY SCHOOL PRESENTS THIS OPPORTUNITY.

HUDSON MOTOR CAR COMPANY.. DETROIT 14, MICHIGAN

### DIFFERENTIAL CASE ASSEMBLY FOR 3-9/11 TO 1 RATIO

The Drive Pinion used with the 3 $\frac{9}{11}$  to one rear axle gear ratio being so much larger in diameter than that of the other ratios, makes it necessary that the ring gear set over farther. As there is not sufficient adjustment space between the differential bearing mounts to permit this, it is necessary to machine off .062 more stock from the differential case flange to which the ring gear is mounted, as shown in illustration below.



The differential case assembly for the 4 $\frac{1}{10}$  and 4 $\frac{5}{8}$  ratios bear part F-300291 and that for the 3 $\frac{9}{11}$  part F-303716. In order that the stock keepers and mechanics may positively identify these assemblies, the differential case used with the 3 $\frac{9}{11}$  will have a  $\frac{1}{8} \times \frac{1}{32}$  chamfer at the point shown in the illustration.

As some of the first differential cases installed in cars were not so marked, the rear axle ratio may be determined by the marking on the right front side of carrier flange as 5-9, 1-10, 9-11.

### RADIATOR CORE—PACEMAKER

Beginning with Pacemaker car number 500-58924 (except 59223 thru 59461 inclusive) Radiator Core Assembly Part C 303983—2 inches thick superseded Part C 303033—2 $\frac{1}{4}$  inches thick. All orders for Pacemaker radiator cores are being filled with the present type core only Part C 303983.

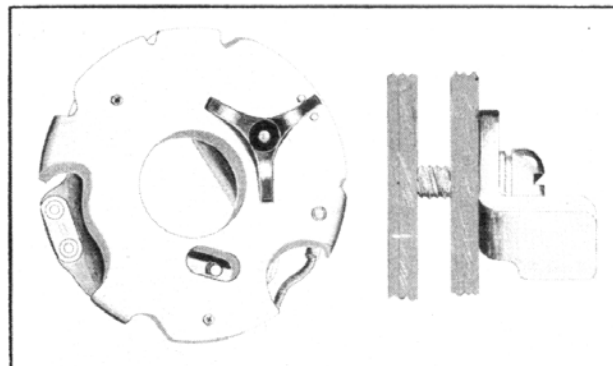
In order to obtain proper cooling efficiency it is necessary to use only the **PRESSURE TYPE RADIATOR CAP** part S.P. 302265 on ALL C 303983—2 inch Radiator Cores.

### DISTRIBUTOR VACUUM ADVANCE— PACEMAKER ONLY

In the assembly composed of the breaker plate and sub-plate, a tension spring is so arranged to provide a

constant uniform friction between the two plates which permits of a definite amount of spark advance or retard with a given amount of manifold vacuum.

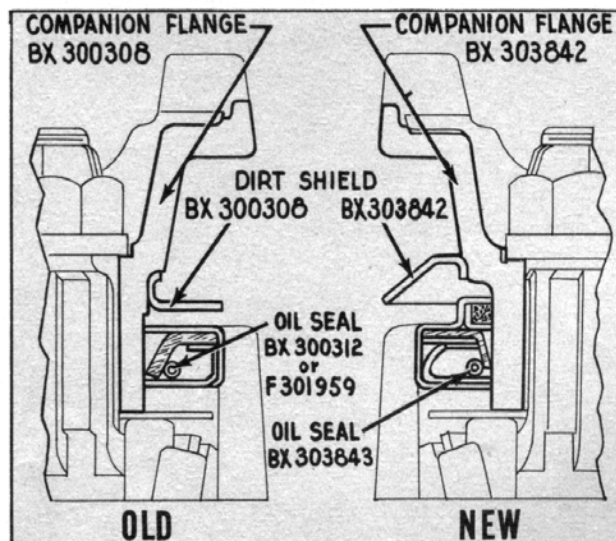
Some of the first Pacemaker Distributor breaker plate ground wire screws were sufficiently long to extend through and contact the base plate and completely lock out the movement of the breaker plate to either advance or retard the spark, note cut at right. To preclude the possibility of this condition, an oblong opening was placed in the sub-plate directly beneath the terminal screw as shown in illustration at left.



When the breaker plate is bound as shown in sketch at right there is evidence of low gas mileage, engine noise or spark knock at all speeds. Removing the breaker plate assembly should the terminal screw be found to be too long—simply grind off sufficient to allow adequate clearance.

### REAR AXLE DRIVE PINION OIL SEAL, DIRT SHIELD AND COMPANION FLANGE

The design of the Drive Pinion Oil Seal, Dirt Shield and Companion Flange has been changed as shown in the sketch below.

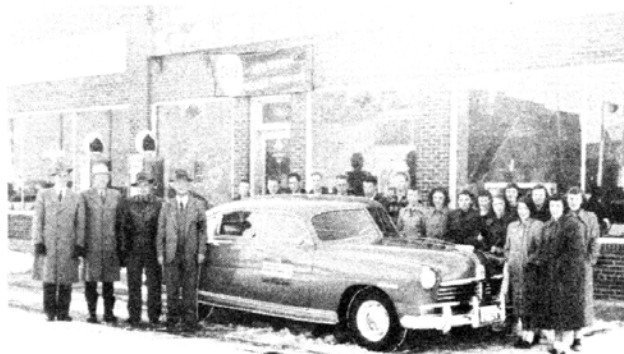


These parts must be used only as a group installation. Parts of the later design cannot be installed on the previous design and vice versa. Although the old oil seal may be used in connection with the new companion flange, this should not be done as it would defeat the object of the new improved oil seal.

### A SPLENDID BASIS FOR TRAINING

Mr. Dewey Miller, Manager of Dewey Miller Garage Inc., Albion, Nebraska and a Hudson dealer for 25 years, thoughtfully sent us the photograph of a 490 super-six Hudson sedan equipped with dual controls and used by the Albion High School in Driver Training Course instruction.

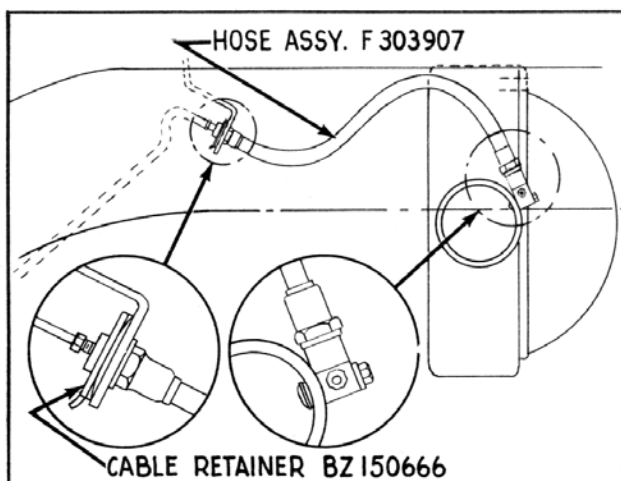
Shown in the photograph below is the car in front of the Dewey Miller Garage—with some of the driving students at right: the four standing at left rear of car, reading from right: Messrs. Dewey Miller; Kenneth Miller; Howard Schroeder, Superintendent of Schools; and Glen Hilligas, Driver Training Instructor.



Organized in 1922, they started business in a building large enough for one car. Their present building has a floor space of 14,000 square feet and a used car lot of 100 x 140 feet, with 3 full time salesmen and a total of 25 employees. We congratulate the Dewey Miller Garage Inc. and thank you Mr. Miller.

### BRAKE CONTROL HOSE ASSEMBLY REAR FOR PACEMAKER

A change in length of the Brake Control Rear Hose from an overall 13 $\frac{1}{2}$  inches of the former part



F-300790 to 13 $\frac{7}{8}$  inches of the present part F-303907 does not effect the interchangeability.

When making installation of a brake hose, front or rear—care must be exercised to prevent the hose from becoming twisted when tightening the connections.

### QUESTIONS AND ANSWERS

Following are the answers to questions that appeared in April issue of Service Merchandiser.

1. The normal cranking voltage is 5 volts.
2. It is *NOT* necessary to check coil through Ignition Switch.
3. Two important coil checks are capacity and resistance.
4. The Dwell tester is used to determine distributor resistance.
5. It *IS* necessary to remove the distributor primary wire when making condenser test.
6. Three tests for the coil are microhm (resistance) microfarad (capacity and megohm insulation).
7. The Dwell meter indicates the degree of Dwell (contact points closed), a worn shaft or bushing or worn breaker plate assembly.
8. Same answer as question No. 7.
9. Engine speed should be approximately 500 RPM while setting timing.
10. Spark should be set on top dead center.

Answers to the following questions will be given in the June issue of Service Merchandiser.

1. Why is milliampere current to spark plug tester important?  
A \_\_\_\_\_ B \_\_\_\_\_  
C \_\_\_\_\_ D \_\_\_\_\_
2. What is wrong when the meter reads double on two spark plugs when making the milliampere at the plug test? \_\_\_\_\_
3. Name in order the five tests on the generator circuit. A \_\_\_\_\_ B \_\_\_\_\_  
C \_\_\_\_\_ D \_\_\_\_\_ E \_\_\_\_\_
4. Name the two tests of a fuel pump.  
A \_\_\_\_\_ B \_\_\_\_\_
5. What testers should be used in checking carburetor?  
1 \_\_\_\_\_  
2 \_\_\_\_\_ 3 \_\_\_\_\_
6. The idle reading on the combustion tester should be \_\_\_\_\_ Per cent at \_\_\_\_\_ R.P.M.
7. The high reading on combustion tester should be \_\_\_\_\_ Per cent at \_\_\_\_\_ R.P.M.
8. The change in combustion reading with an air cleaner should be 0% \_\_\_\_\_ 2% \_\_\_\_\_ or 5% \_\_\_\_\_.
9. Explain how to check the carburetor accelerator pump.
10. Higher the engine vacuum at all speeds gives low gas mileage \_\_\_\_\_ true \_\_\_\_\_ false.

The torque specification of the rear spring clip nuts has been revised from 55-75 ft. lbs. to 75-80 ft. lbs.

### TIPS ON USE OF THE SPRAY GUN FOR BODY REFINISHING

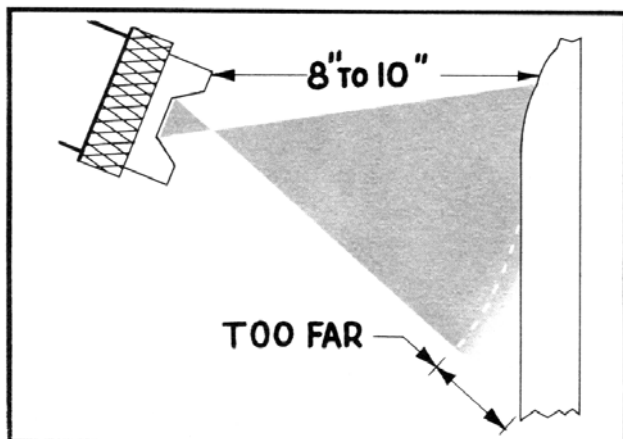
Nearly all standard spray guns are designed to give the best performance at a distance of about eight or ten inches from the surface to be sprayed. If the spraying is done from a shorter distance the high velocity of the spraying air tends to ripple the wet film especially if it is too thick. On the other hand if the distance is increased beyond that specified there will be a greater percent of the thinner evaporated in the spraying operation and the results will be orange peel or a dry film because the spray droplets will not have an opportunity to flow together.

There is no sort of a device that will keep the spray gun at a fixed distance from the work and it therefore behooves each spray operator to keep constant watch of this distance and to practice and continue to practice until he can maintain a uniform distance from the work regardless of his posture or the shape and location of the work.

If when spraying on large surfaces it is impossible to maintain the spraying distance within close limits, it is then advisable to use a different thinner. A slower evaporating thinner will permit more variation in the distance of the spray gun from the job but on the other hand it will be very apt to produce sags and runs if by any chance the gun becomes too close to the work. Excessive spraying distance also causes a loss in materials which are blown away by the air stream.

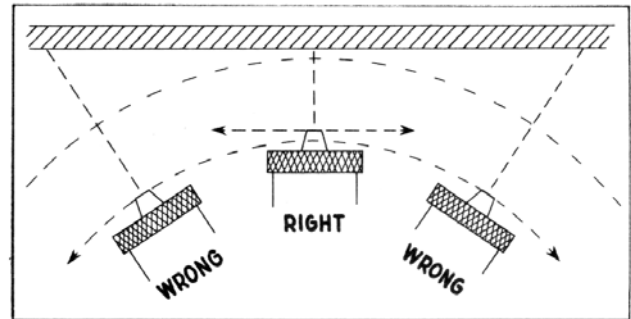
### STROKES AND OVERLAPS

From what has been said above it is obvious that if the gun is tilted toward the surface so that the fan



pattern is not uniform or if the gun is swung in an arc from right to left varying the distance from the nozzle to the work, much trouble will ensue.

The gun should be at right angles to the job in all directions and at all times. In other words do not fan the gun from left to right or do not have any up and down wrist motions if you want a uniform film.



The only time that it is permissible to fan the gun at all is on a small spot spray where you want the edges of the spot to be thinner than the center portion and even then the fanning operation should be kept at a minimum. On large surfaces where it is necessary to use many strokes to cover the area always work to a wet edge by using a fifty percent overlap and direct the center of the spray fan at the lower or nearest edge of the previous stroke.

### SUMMARY

To summarize what we have said above you will get better, smoother jobs if you:

1. Use a good spray gun and keep it clean.
2. Have sufficient air to maintain forty-five to sixty pounds of pressure at the gun.
3. Thin the paint exactly according to directions. Measure the amount of thinner required.
4. Change thinners to suit shop temperatures or spraying conditions.
5. Spray medium coats—neither heavy nor light.
6. Keep the gun between eight and ten inches from the surface being sprayed.
7. Never tilt the gun or "fan" it.
8. Watch your overlaps and work to a wet edge.
9. Use a dependable brand of paint and good thinners.

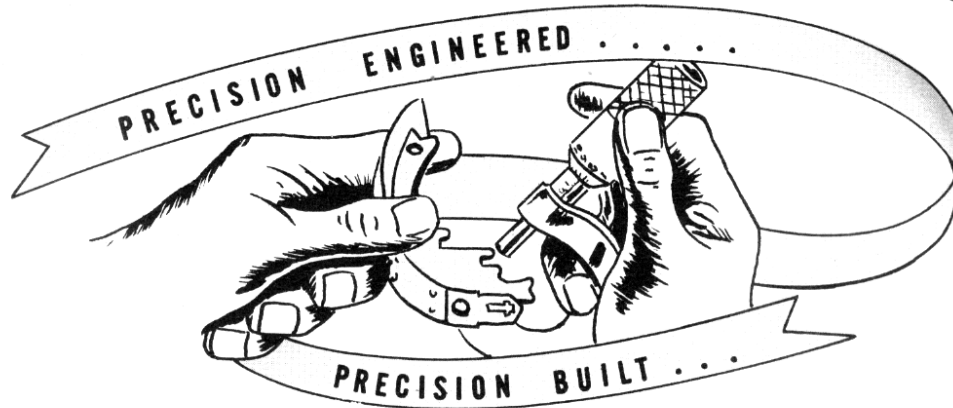
### 501-502 CARBURETOR

Model 776-S—WGD Carter Carburetor has superseded Model 647-SA—WDO. Idle adjustment is  $\frac{1}{2}$  to  $1\frac{1}{2}$  turns out from a seated position: the float level is  $\frac{3}{16}$  of one inch measured from the center or high point to the bowl cover with the gasket removed and needle valve seated. Complete detailed information will be sent to the field very soon.

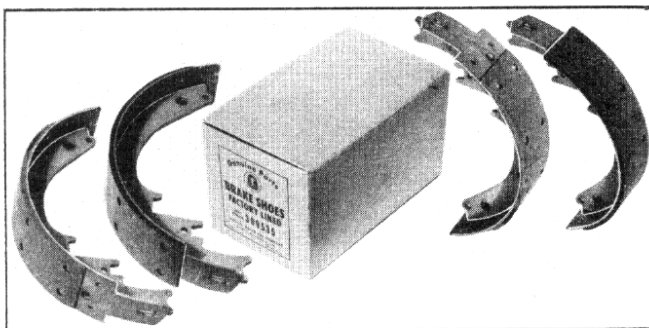
The suggestion prize contest is open to all Hudson Dealer parts and service personnel. Cash prizes are going out every month. Why not cash in on your suggestion?



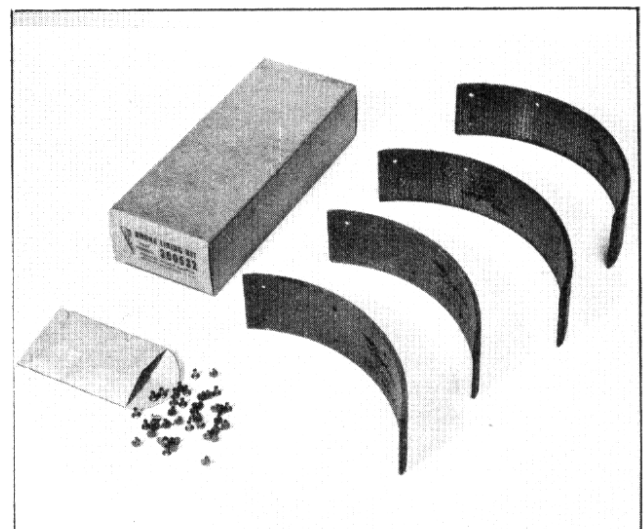
# Genuine Hudson Brake Parts Are . .



**FOR SERVICING  
HUDSON CARS**



**BRAKE SHOE LINING KIT**



**BRAKE LINING KIT AND RIVETS**



**WHEEL CYL. REPAIR KIT**



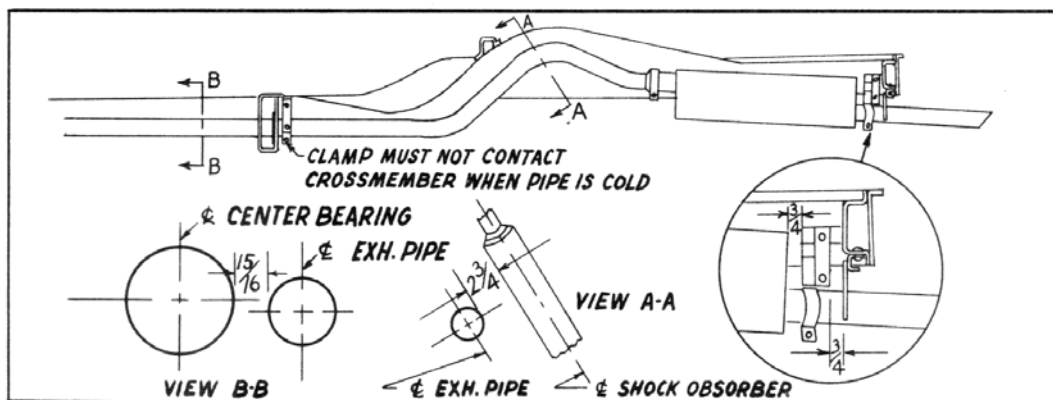
**MASTER CYL. REPAIR KIT**

**PARTS MANAGERS:**

SPRING AND SUMMER . . . IS BRAKE REPAIR TIME.  
BUILD UP YOUR INVENTORY OF BRAKE PARTS NOW.

**ONLY GENUINE HUDSON ENGINEERED PARTS ASSURE COMPLETE  
CUSTOMER SATISFACTION**

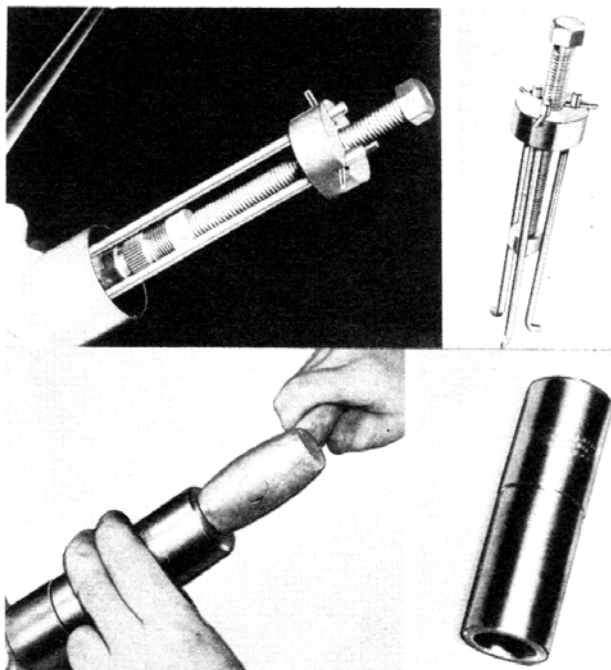
## EXHAUST PIPE AND MUFFLER CLEARANCE



Shown in the cut above are the exhaust pipe and muffler spaced in the proper position. Should the clearance between the muffler and the tail pipe bracket be less than that shown it may be due to the front and rear sections of the exhaust pipe not being fully telescoped or to the exhaust pipe not being telescoped into the muffler sufficiently.

### STEERING JACKET TUBE BEARING PULLER J-2792 AND JACKET TUBE BEARING REPLACER J-2952

Here is a set of tools that have been carefully and specifically designed to remove and install the steering jacket tube bearing of all 480-490 and 500 series, both six and eight cylinder Hudson cars. Their use in the leading Hudson Service shops has proven that the time saved in as few as 3 or 4 repair jobs will more than offset the original cost of the complete set.



Not only do these tools save both time and money on each occasion used year after year but more important the repairman is enabled to do the work with exact precision and without damaging the bearing. The job for which a special tool has been designed is one that can not be done efficiently without that tool.

If necessary, loosen the muffler clamp and shift it forward on the exhaust pipe sufficient to obtain the  $\frac{3}{4}$  inch clearance shown at the rear of muffler. The  $\frac{15}{16}$  inch clearance between the exhaust pipe and dirt shield is the minimum that should be allowed.

## PRIZE WINNERS

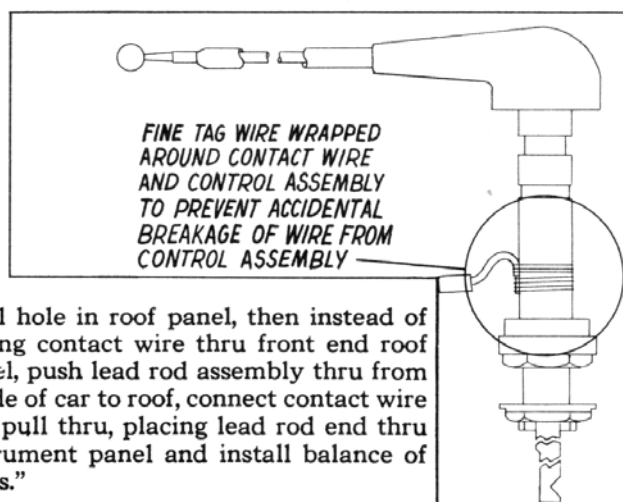
Following are the Hudson Service and Parts mens' contest prize winners for this month.

First prize is awarded to Mr. Anthony Lee, Parts Mgr. for Roto-Wallman Motors, Hudson Dealer at 6940-46 W. Fullerton Ave., Chicago, Ill., for the suggestion of having the color code marking placed on cans of paint for service in addition to the present part number. This for convenience in selecting desired color.

Mr. Carroll C. Johns, Mechanic in the tune-up Dept. of Silcott Bros. Hudson Dealer at Monrovia, Calif., wins second prize on a suggested design for a rear axle shaft puller.

Third prize goes to Mr. Schwelling, Parts Manager for Wein Motor Co., Hudson Dealer at Sharon, Pa. Here is how he does it.

"First take wire off of warranty tag which comes with radio set, wrap it tightly around contact wire and control assembly, this will keep it from breaking off accidentally.



Drill hole in roof panel, then instead of fishing contact wire thru front end roof panel, push lead rod assembly thru from inside of car to roof, connect contact wire and pull thru, placing lead rod end thru instrument panel and install balance of parts."

### RIMERSBURG SERVICE AND PARTS MANAGERS CLUB

Mr. H. Barkstrom, Zone Service Manager for Hudson Sales Corp., Pittsburgh, Pa. sends a photograph of their most recent Service & Parts Managers Club meeting at Rimersburg, Pa. Mr. Paul Winkler, President but not present.

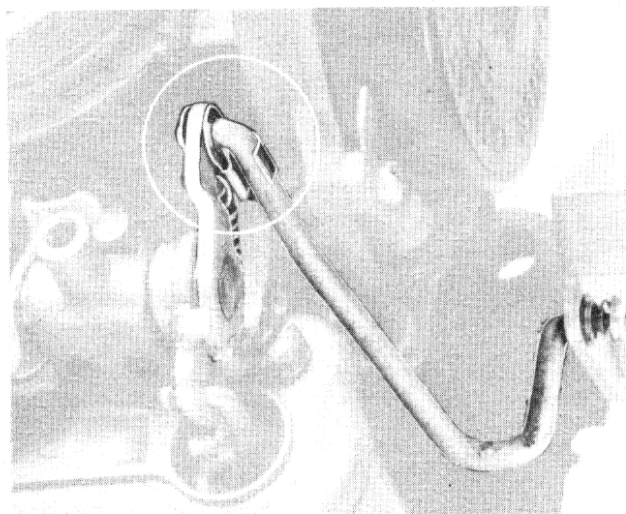


Standing—from left: Messrs. E. Robeson, C. J. Adams, C. Quinters, H. Barkstrom, F. Gould, Vice President, Sloan, T. W. Chapman, T. Armagost, Secy. Treas., and Corbett.

Sitting—from left: Messrs. Stoops, Jones, Carl Henry, T. J. O'Donnell, W. Bump, Armagost, Gatesman and Rikal.

### CARTER CARBURETOR ACCELERATOR PUMP CONTROL ROD

Should there be side movement of the accelerator pump rod at the point where it enters the pump operating lever, immediate pump action will be lost when opening the throttle. This pump lag in relation to throttle opening may cause a flat spot or slight hesitation of the engine, depending upon the amount of lost motion.



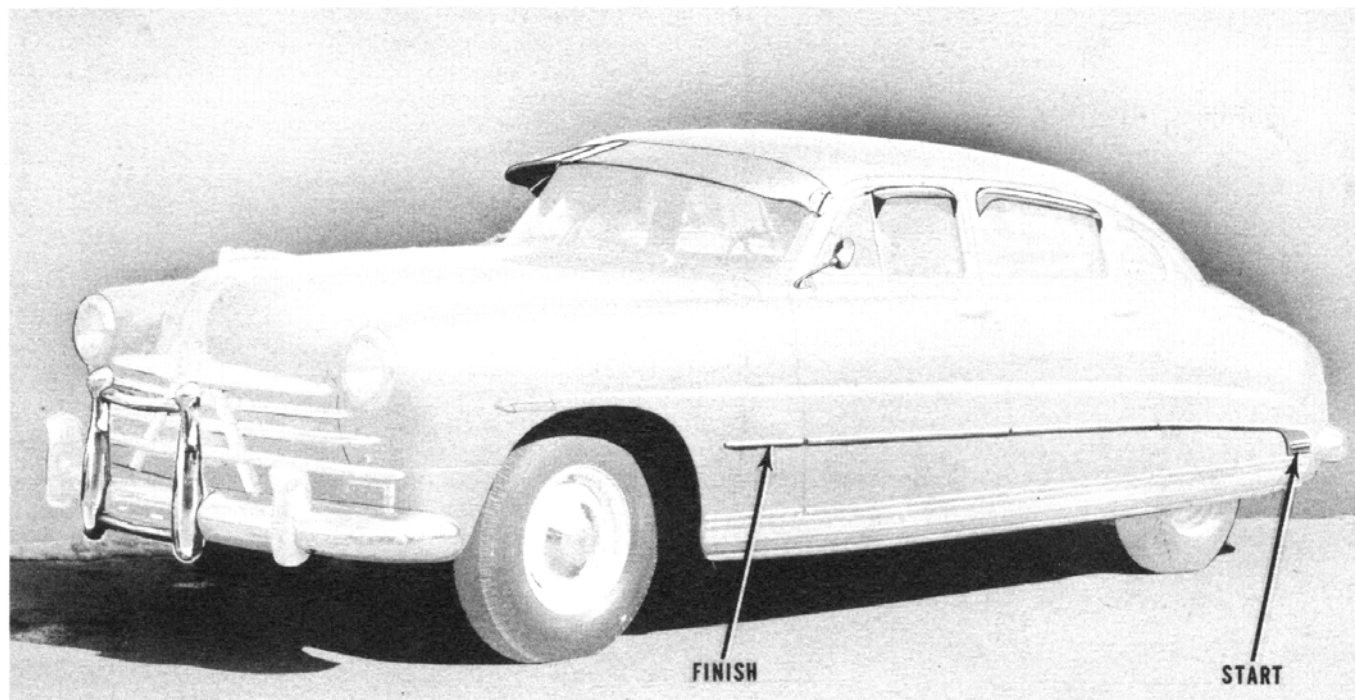
End play and lost action may be eliminated at this point by the installation of rod end clip—Carter part No. 172-21 on the upper end of accelerator pump control rod as shown in the cut above. These may be procured from the Carter Representative.

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# LOOK!

## THE 'HOTTEST' ACCESSORY FOR THE PACEMAKER... IS... FENDER & SIDE BODY MOLDINGS



ORDERS ARE POURING IN from dealers all over the country. We've been swamped but Molding Kits have been shipped in large numbers for several weeks now. By keeping a large stock on hand, you won't miss any sales— "You've gotta have 'em to sell 'em." Here's a **VOLUME** opportunity—Be sure you've got plenty on order with your Zone or Distributor to handle the big demand for installation on 480 and 490 Series cars as well.

HA-223118 Molding Kit for Sedan

HA-223119 Molding Kit for Brougham,  
Coupe and Convertible Brougham.

Remember! Every time you sell outside Molding Kits you also open the door for additional income through refinishing and painting.

**SELL MOLDING KITS IN YOUR SHOW ROOM—  
SELL MOLDING KITS IN YOUR SERVICE DEPARTMENT.**

Here are some **SUGGESTIONS** for **INSTALLATION**:

Each kit contains instructions for installation. Keep in mind the moldings and ornaments are adaptable to one side only and be sure to have the right and left sides properly identified before proceeding with work.

The following three different screws are used: 4—#170519x $\frac{1}{2}$ " long, round head screws, use two in each fender ornament lower holes. 2—#170987x $\frac{1}{2}$ " long, flat head screws, use one in each fender ornament front hole. 38—sheet metal screws #171451 used for attaching holding retainers. Use a  $\frac{1}{8}$ " diameter drill for locating screw holes in body panels.

To assure proper alignment of the molding, start at the rear by placing the ornament to butt against the rocker panel molding and locate holes so as to attain the measurement to the rocker panel molding as shown on the instruction sheet in the kit.

A careful examination of a car on which the moldings have been installed may assist in clarifying the initial installation.