Replenish Your Stock for FALL and WINTER...

FALL and WINTER Best Sellers

- Weather Control Heaters
- Under Seat Heaters
- Hudson Anti-Freeze
- Radiator Hose
- Hudson Refinishing Lacquers
- Brake Lining Kit
- Spark Plugs
- Fan Belts
- Mufflers
- Gaskets (all types)

Use only Genuine Factory-Approved parts for complete customer satisfaction.
WHEN ORDERING PISTONS 480 AND 490

Please note the reference to number 302562 cast inside the skirt of piston as outlined on page 8, first column of July issue, was for identification only. Pistons must not be ordered by this number.

The change in finishing the cylinder top face which started April 20, 1949, with car number 491-95958, necessitates the use of a different piston, but for use in all those engines previous to this change order pistons as you have heretofore.

Following is listed the pistons and sizes that may be ordered for six cylinder engines after the above number.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Piston Size</th>
<th>Code Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-302712</td>
<td>3.560</td>
<td>B</td>
</tr>
<tr>
<td>F-302713</td>
<td>3.561</td>
<td>D</td>
</tr>
<tr>
<td>F-302714</td>
<td>3.562</td>
<td>F</td>
</tr>
<tr>
<td>F-302715</td>
<td>3.564</td>
<td>J</td>
</tr>
<tr>
<td>F-302716</td>
<td>3.565</td>
<td>L</td>
</tr>
<tr>
<td>F-302717</td>
<td>3.567</td>
<td>P</td>
</tr>
<tr>
<td>F-302718</td>
<td>3.570</td>
<td>BO</td>
</tr>
<tr>
<td>F-302719</td>
<td>3.571</td>
<td>DO</td>
</tr>
<tr>
<td>F-302720</td>
<td>3.572</td>
<td>FO</td>
</tr>
<tr>
<td>F-302721</td>
<td>3.575</td>
<td>LO</td>
</tr>
</tbody>
</table>

Piston code size marking is a large letter stamped on the head. The cylinder bore code size marking is a large letter stamped on the gasket surface of lower face of the valve chamber.

HAVE YOU AN IDEA THAT MIGHT HELP THE OTHER FELLOW

Beyond doubt there is a rich store of good information available from Hudson field service men—that would be of real interest to the thousands of readers of SERVICE MERCHANDISER.

Someone may have worked out an idea of effective owner contact—a short cut for performing a certain operation—a special tool that simplifies a job—please do not hesitate to let us have these with any photos, sketches or cuts.

Give us the story complete or sufficient data and facts to form the basis of the story, and if appropriate it will be run in the SERVICE MERCHANDISER with credit to the party supplying such material. Address to the Company and mark for the attention of Mr. Glen S. Potter, Service Manager.

—HAVE YOU RETAINED IT?—

Perhaps one of the best tests to determine just how much of what we have read is retained, is revealed in presenting a series of questions. It is only that which one can retain accurately that is immediately available, when there is occasion to use it.

To keep abreast of the rapid advance in mechanical design and changes, it becomes increasingly necessary to read, especially that which deals with our work. Moreover, to clearly understand, absorb and retain it. One of the most effective means of doing this is to write it down, make notes of important facts and figures.

Resuming a practice that was followed with much field interest in the Hudson Service Magazine before the war we will devote a column each month to questions, the answers to which have appeared in current model service literature. The correct answers and the location reference will be given to each group of questions in the following issue of SERVICE MERCHANDISER.

Service Managers may wish to use these questions in conjunction with other material they may have prepared when holding school or mechanical clinics. Be assured your questions will be included with these also, but the correct answer must have appeared in current Hudson Service literature, please do not fail to give the page reference.

1. What is the correct clearance between fan blade and radiator core? Circle one—\frac{1}{4}" or \frac{3}{8}".

2. What is the recommended intake and exhaust valve seat width—480 and 490 series? Circle one—
   - Six cylinder: Inlet $\frac{1}{8}$, $\frac{3}{64}$, $\frac{1}{16}$, $\frac{3}{64}$, $\frac{3}{32}$
   - Exhaust $\frac{1}{64}$, $\frac{3}{32}$, $\frac{1}{64}$, $\frac{3}{64}$, $\frac{1}{32}$

3. What is the correct carburetor float level for six cylinder? Eight cylinder?

4. At what temperature should the standard thermostat begin to open? And be fully opened?

5. What change was made in provision for lubricating the timing chain—six cylinder engine?

6. What change was made in the vacuum and mechanical spark advance 480 and 490 six cylinder engine?

7. Why is it important to start the proper end of manifold studs?

8. How many different transmission ratios in 480 and 490? What gears are affected and what equipment are they used?

9. What is the correct end play to allow drive pinion shaft?

10. What is the correct end play for rear axle shafts?
YOUR KEY TO INCREASED PARTS VOLUME

HIGH TEMPERATURE THERMOSTATS—used in connection with the Hudson Weather Control produces plenty of heat promptly on cold winter mornings. This thermostat fits 1946-7 eight cylinder and all 480-490 models. They are adaptable for use with permanent type anti-freeze such as Prestone, etc., but should not be used with an alcohol base anti-freeze. See page 29.

RADIATOR HOSES—Inlet and Outlet—also all hose clamps should be carefully checked for worn or weakened condition when winterizing customers’ cars. A damaged radiator hose can cause additional expense and trouble to a car owner through the loss of anti-freeze and failure to operate his automobile.

SPARK PLUGS—A SPARK for increased dealer profits! Car owners who are having their cars winterized are live prospects for a set of Hudson Champion Spark Plugs. Remind owners that new spark plugs will insure quick starts in cold weather and improve engine operation.

FAN BELTS—Fan Belts that are frayed and lack resiliency will reduce the operating efficiency of the generator and water pump. This is another item that dealers should carefully check and, if defective, bring to the customer’s attention. Replace fan belts . . . BEFORE . . . they break!

MUFFLERS—Leaky or defective mufflers and exhaust pipes may prove hazardous during the winter months as car owners drive with their windows closed and the escaping fumes may in some instances reach the interior of the car, causing discomfort to the occupants.

GASKETS—All Types—Replacement of broken and leaky gaskets, such as exhaust, cylinder head and water jacket cover gaskets, etc., is another step in assuring car owners of miles of carefree winter driving.

HUDSON REFINISHING LACQUERS—The majority of car owners are CAR APPEARANCE CONSCIOUS. Dealers can build goodwill and enjoy additional profits by bringing to the attention of car owners any scratches or chipped finish that developed during the months of summer driving.

HUDSON WEATHER CONTROL HEATER—Hudson owners can "PERSONALIZE THE WEATHER" through the installation of a Hudson Weather Control Heater. Dealers should not fail to point out the following advantages of a Hudson Weather Control Heater:

A pleasant supply of fresh air circulating at all times. Uniform heating and ventilating at all car speeds. Elimination of steaming and frosting windows. Automatic temperature control maintains uniform heat. Evenly distributed heat throughout . . . eliminates . . . direct blasts of hot air.

These are just a few of the many items on which Dealers can realize increased parts volume during the fall winterizing period.

For Dealers to realize their maximum parts volume in the coming fall and winter months, they must have a definite fall and winter parts program with entire organization manpower participating. In planning their fall and winter parts programs, Dealers should increase their stock and merchandise the parts that have fall and winter demand.

IMPORTANT—Do not overlook the potential parts business that is available from independent garages, gas stations, bumph shops, etc. They will find that a well stocked supply of sheet metal items, or parts that can be classified as "CRASH" items, will prove profitable at this time.

REMEMBER YOUR CUSTOMERS THAT ONLY GENUINE HUDSON APPROVED PARTS ASSURE COMPLETE SATISFACTION AT ALL TIMES.
During the six months of Hudson Mechanical Training School, Zone, Distributors and Dealers' men—representative of every state in the Union, from coast to coast—men from South America and far-away India have successfully completed the course of instruction.

Regional Service Supervisors and Zone Service Managers formed the first class. Though experienced and seasoned Hudson men, the course served not only as a refresher but also a preview of the very latest in Hudson Service.

There is no lack of interest and enthusiasm. The course is strenuous and the men must be on their toes. The response as well as the reaction to this excellent opportunity for Hudson mechanical training is evidenced on every hand.

The oil bath air cleaner should be filled to proper level with S.A.E. 50 engine oil for temperatures above +32 degrees and S.A.E. 20 for temperatures below +32 degrees. The oil wetted air cleaner may be clogged from summer's dirt, and this should be checked to see that it is properly cleaned and oiled. The gasoline filter screen and bowl must be cleaned and the carburetor climatic control checked for proper setting. If equipped with an oil filter, the cartridge should be replaced when changing to winter engine oil.

For the steering gear an S.A.E. 90 E.P. is recommended for summer or winter. See that housing is filled. The rear axle of the 480 and 490 series requires an E.P. 90 Hypoid or all-purpose lubricant, summer and winter—check for proper level. The E.P. 90 transmission lubricant as recommended for summer must be drained and the transmission refilled with an E.P. 80 lubricant for winter.

Wheel bearing lubrication which necessitates removal of bearings—washing and repacking with sodium soap lubricant is neglected by most car owners.

Become familiar with the lubricating schedule and point out to car owners those lubrication operations at five-and ten-thousand miles as wheel bearings, Drive-Master and Vacuum cylinder lubrication. Remember that every Hudson car owner, whether his car is a current model or ten-years old, is your rightful customer. He is entitled to the benefit of your knowledge of his car, and you more than anyone else are deserving of his service work.

**WINTER LUBRICATION**

Proper winter lubrication can spell the difference between satisfactory and safe operation during the most severely cold weather, or possible damage to those parts that require uninterrupted lubrication.

Every Hudson dealer is in a better position than any one else to give owners of Hudson cars a more lasting and correct winter lubricating change over. Why? First, because they have complete direct factory information on correct application and the necessary precautions—second, the dealer is primarily interested in the satisfactory operation of the product that he sells and which he hopes to continue to sell.

The average winter temperature varies, depending upon the latitude, and so that the proper engine oil may be selected, the following temperature chart will serve as an accurate guide:

**FOR**

| 90 degree average temperature | S.A.E. 30 oil |
| 32 degree minimum temperature | S.A.E. 20 oil |
| 10 degree minimum temperature | S.A.E. 20 W oil |
| -10 degree minimum temperature | S.A.E. 10 W oil |
| Below -10 degree temperature | S.A.E. 10 W plus 10% kerosene |

**USE**

NOTE: Kerosene should be added to engine oil only when temperatures below -10 degrees are expected for long periods.
THE WINTER PREPARATION

If it were possible to visualize the amount of sediment, rust and deposit in the average cooling system resulting from summer driving, the necessity for cleaning would be more apparent. Before any anti-freeze is placed in the cooling system, it should be given a thorough cleaning and check-up.

Preparatory for cold weather operation, the entire cooling system should be cleaned and flushed out. Hudson Radiator Rust Dissolve and Radiator Flush are not only effective but also non-injurious. Any obstruction of the frontal area of the radiator core should be brushed and washed off. Evidence of leak or seepage at studs—core plugs—water jacket side cover or cylinder head gasket should be corrected, as the anti-freeze and temperature range of cold weather will result in such leaks becoming more pronounced.

Carefully examine all hose connections for external cracks or internal decomposing. Remove the water outlet from the cylinder head and examine thermostat. The standard thermostat may be tested by placing it in a container of water with a thermometer, gradually heating the water until the thermostat begins to open, when the temperature should read 150 to 155 degrees Fahrenheit. Continue heating the water until the temperature rises to 185 degrees, when the thermostat valve should be wide open.

A high-temperature thermostat, part number 161664, is available, and may be procured on regular parts order. This thermostat beings to open at 160 to 165 degrees and is fully open at 195 degrees. It may be identified by the stamped number 165 on the bellows support strap. It is recommended that this thermostat be used only when permanent type anti-freeze is used. The high-temperature thermostat provides for increased weather control heat output.

Replace any thermostats that open at a temperature too low or too high or do not open fully. A thermostat that opens too early will cause engine to operate at a low temperature, and if it sticks or opens beyond the maximum temperature the results may be overheating. Be sure that the thermostat is well cleaned and properly installed.

Do not neglect to check Weather Control, motor and shut-off valve for proper operation, also be sure the heater core was drained and flushed. The heater hose must be connected as shown in the illustration. Examine the fan belt and adjust to proper tension if necessary.

THE COOLING SYSTEM

Use a torque wrench and tighten cylinder head, water pump and water jacket side cover nuts to proper tension while the engine is hot. Loose hose clamps are a common source of leak, tighten these securely.

A pressure type radiator filler cap, part number 302265, is available that is adaptable to both the 480 and 490 series where sealed cooling is desired. When this cap is used the solution will not escape from cooling system until a pressure of seven pounds has been built up in the system. Sealed cooling is advantageous with the use of a volatile anti-freeze, or in altitude, or for drivers who operate at high speeds.

Avoid the use of any anti-freeze the merits of which are not known, as much damage is caused every winter by the use of solutions containing kerosene, chlorides or other harmful chemicals. Practically all established brands of anti-freeze contain the necessary inhibitors to prevent rust, corrosion and clogging. Do not use a permanent anti-freeze in conjunction with a temporary or volatile anti-freeze.

Use only a known accurate anti-freeze tester. In the use of Hudson Protective anti-freeze there is the assurance of giving Hudson owners a product that has been tested and approved by their engineering laboratory. IMPORTANT—After installing anti-freeze, always operate engine until warmed up in order to relieve any air trap due to closed thermostat. The anti-freeze level should be maintained at $\frac{3}{4}$" below the shoulder in filler neck. Water (without anti-freeze) level should be at $\frac{1}{2}$" below shoulder. See illustration.
A PROVEN WAY TO INCREASE SERVICE BUSINESS

We have recently investigated a plan which has proven to be a tremendous business getter for dealers who have been unable to get customers in for lubrication. This plan is a very simple one and its cost is very low. All you have to do is mail out penny post cards telling your customers that for the next 30 days you are replacing, free of charge, any lubrication fittings found missing on their car.

An investigation shows that there is an average of two fittings missing or damaged on every car and, therefore, it is impossible to perform a correct lubrication job without replacing those fittings.

This offer has a tremendous appeal, as very few corner gas stations replace fittings when performing lubrication work on automobiles. The price of a fitting is very small, and the goodwill created by replacing missing units by far offsets the cost involved.

Any printer can set up a card similar to the one shown below. Why not give it a try?

![Diagram of engine front mounting left side]

To prevent damage to the ground strap terminal at left engine mount, a plain washer, part number 171096, supersedes the lock washer heretofore used at this point.

The battery hold down bolt nuts should be drawn up not tighter than 2 to 3 foot-pounds torque. This low tension is ample to hold the battery securely, yet is not liable to result in cracked battery cells on account of being too tight.

LACQUER AND UPHOLSTERING CLOTH ORDERS

Two things that must match up properly or they cannot be used are lacquer and upholstering cloth. Yet it is surprising how often orders are received with insufficient information to assure accurate shipment.

When ordering trim or upholstering cloth that must be cut to the desired size, be sure to specify car number—body type—where to be used—as headlining, side cloth, cushion or back upholstery ... also full description. This will not only expedite filling and shipping of the order but also eliminate the return and attendant loss in connection with cut cloth.

When ordering lacquer do not fail to give the code letters and/or numbers that are stamped on the right front door upper hinge. Should the car have been repainted a color other from that of the original, do not fail to state color desired on the order.

Wheel finish is of a consistency that permits use in a spray gun with very little thinning. Body finish (excepting 3 oz. cans for brushing) is in a heavy state and must be reduced by adding approximately 50% thinner.
BERKELEY ZONE SERVICE & PARTS CLUB HOLDS MEETING

A report from Messrs. Ray C. Olsen and Frank Hart, Zone Service Manager and Zone Parts Manager respectively, advises that the first meeting of the Berkeley Zone Chapter of Hudson Parts and Service Managers Club was held August 11 in the Green Room of the Leamington Hotel for election of officers.

The following were elected:

Martin De Grange, President.
Eric Wolf, Vice-president.
Edward J. Wright, Secretary-Treasurer.

Congratulations, and we all join with the Berkeley Zone personnel in wishing success for the new officers and for the club itself. We will look forward with interest to news of your next meeting.

Reports of Service Managers Clubs indicate clearly that, properly directed, they are a means of coordinating service activities and a more clear understanding of policies and practices in the field. Not only does the service organization of every dealer benefit, but also Hudson owners likewise.

Will the secretaries of all Hudson Parts and Service Managers Clubs please advise us of their Club activities, as date, minutes of meetings, where held, etc., Do not fail to use the membership cards as shown below. A supply of these membership cards will be mailed upon request to the Service Promotion Department.

PROPER CARE OF THE CLUTCH

The clutch when functioning properly must engage smoothly and hold without slipping at maximum engine power or car speed. The clutch must disengage fully when the clutch pedal is depressed. Hudson's fluid-cushioned, triple sealed, single-plate type clutch with cork inserts has proven highly efficient over a long period of service.

Lack of proper material, equipment and know-how at the many lubricating stations has resulted in improperly cared for clutches. First of all, the clutch should be drained and refilled with 3/8 pint of Hudsonite at every 5,000 mile period. When there is gum or grease in the clutch it is evidenced by slipping or grabbing, and should be flushed well.

Under no circumstances should kerosene be used. The factory recommends that a solution of 1/2 pint of 50% carbon-tetrachloride and 50% acetone be placed in the clutch. Following this, the engine should be operated for 15 to 20 minutes, and at the same time the clutch should be disengaged frequently. This should be done preferably when the clutch is cool rather than when hot.

After a thorough washing, drain the clutch and refill with exactly 3/8 pint of Hudsonite. There is no satisfactory substitute for Hudsonite clutch compound. Developed by Hudson engineers and manufactured under their supervision assures uniformity of quality.

The clutch release bearing must not be over-lubricated. Either excessive pressure or too great a quantity may result in this lubricant being forced past the clutch seal into the clutch itself, which results in slipping and grabbing and otherwise unsatisfactory operation.

IMPORTANT

Efficient cooling requires that the water level be maintained at a height of 1/2 inch below the shoulder or stop in the radiator filler neck—with anti-freeze solution the level should be at 3/4 of one inch below the shoulder. See illustration under caption of Winter Preparation of Cooling System.
UNDERSEAT HEATER IS COMFORT ENGINEERED

The Underseat Heater combined with the Hudson Weather Control offers Hudson owners the ultimate in winter driving comfort. This unit has been developed to provide a more uniform temperature throughout the car and an even greater degree of comfort than heretofore possible for rear compartment passengers. No family man would refuse to buy. Have you asked him?

ACCESSORY HINTS

Let your customers have access to your accessories.
Prospects will buy if you
(1) DISPLAY accessories properly
(2) DEMONSTRATE at close range

THOUGHT-OF-THE-MONTH-CLUB:
"One Radio on display is worth six on the shelf!"

Factory Approved ANTI-FREEZE

Endeavoring to be of further service to Hudson Dealers, the Company has made arrangements to have the Supplier warehouse ANTI-FREEZE in the principal cities of the United States. The material has already been shipped, so hurry up and get yours before winter sets in.

In addition to the 54-gallon drum, Hudson Anti-Freeze is available in one-gallon cans complete with protection chart. As far as we know, Hudson Anti-Freeze is the only anti-freeze that has a protection chart on the drum for convenience in dispensing the material.

It's those little extra services that count.

ENGINE REAR MOUNTING

The engine rear mounting must be kept properly tightened.

A loose rear mounting manifests itself in engine roughness and noise, and can be checked by pressure between the clutch housing and No. 3 cross member.

To tighten or remove the engine rear mounting proceed as follows:

Remove nuts, lockwashers and bolts attaching mount to cross member. Jack-up rear end of engine so that there is a one inch clearance between the base of engine mount and top of No. 3 cross member, see illustration.

NOTE: Place a block of wood between head of jack and oil pan to distribute pressure and avoid damaging the oil pan.

Insert a box wrench or short socket on ratchet handle through the clearance and apply on head of cap screw that holds mount to clutch housing and tighten or remove. Always examine mount for possible damage if it has been loose.

Both front and rear engine mount bolt nuts should be tightened to 40 to 45 foot-pounds torque.