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Hudson - Essex

DEALER SERVICE BULLETINS

I N D E X

- D.S.2003 - Operations & Inspections for Spring (Apr. 30, 1930)
- D.S.2006 - Hudson & Essex Gasoline & Oil Level Gauge
- D.S.2010 - Rear Axle Lubricant Reduction (Sep. 6, 1930)
- D.S.2011 - Clutch Throwout Bearing Lubrication (Oct. 4, 1930)
- 1930 - Sept - Gabriel Triple-Hydraulic Shock Absorber Maintenance
(Hudson Great 8) (Oct. 18, 1930)
- D.S.2015 - Anti-Freeze & Winter Preperations (Nov. 18, 1930)
- D.S.2016 - Lubrication Rear Axle Gear & Bearings (Nov. 19, 1930)
- D.S.2017 - Unloading & Care of New Automobiles (Dec. 4, 1930)
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HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U. S. A.

CABLE ADDRESS
HUDSONCAR

April 30, 1930

SERVICE LETTER

TO DOMESTIC DISTRIBUTORS AND DEALERS:

Attention: Service Manager

With the advent of spring the following operations and inspections are recommended on cars that have seen extensive service during the winter months to guard against overheating and other complaints attendant upon warm weather operation.

1. Clean out and thoroughly flush cooling system. Disconnect radiator hose and flush through radiator until all traces of rust and sediment are removed. Renew any hose connections which have collapsed or show signs of deterioration.
2. Dissolve two cups full of soda ash in warm water and pour into radiator together with enough clear water to fill cooling system. Run engine for 1/2 hour with shutters adjusted so this solution remains near the boiling point, then drain and flush out thoroughly with clear water to remove all traces of soda.
3. Remove all deposits of mud and grease from the air cells of the radiator which would obstruct the free flow of air through these passages.
4. Examine radiator shutters and make sure they are wide open when the operating knob is pulled all the way out. A drop of kerosene applied to the hinge pins at the top and bottom of each blind will improve their operation. When a tendency toward overheating is developed due to fast driving and hot climatic conditions, it is sometimes advisable to change the location of the front license plate to the bottom of the radiator or front bumper.
5. Inspect fan and fan belt, straighten blades if they are bent so fan does not wobble excessively and make sure they have sufficient curve for proper cooling. Renew fan belt if necessary and adjust Essex belt so the two sides can be drawn together within 3/4" of each other. The Hudson belt should be adjusted so the section between the fan and water pump pulleys can be moved up and down 5/8". Tighten support arm look stud securely.
6. Inspect water pump, making sure that drive pulley and impeller are tight on shaft. Packing nut should be drawn up finger-tight; if this is insufficient to stop leaks, renew the packing.

7. Remove louvre covers from bonnet side panels.
8. Drain water and sediment from gasoline tank and vacuum tank and carburetor strainers. Tighten inlet manifold and carburetor stud nuts and renew gaskets where necessary.
9. Set carburetor heat control adjustment in "medium" position when average air temperature is from 85 to 900 and in the "cold" position when higher.
10. Remove and thoroughly clean spark plugs. Set gaps to exactly .022" by bending outer electrodes. If plugs are in poor condition or have seen more than 10,000 miles service, they should be renewed.
11. Inspect distributor contact points, smooth up faces if necessary and adjust to .020" opening.
12. Check generator charging rate. If output has been increased to take care of cold weather driving, reset third brush so maximum output will be 10 amperes with hot generator or 13.5 amperes cold.
13. Inspect storage battery and add distilled water to cover plates. See that connections are tight, clean and protected with grease.
14. Drain motor oil and replenish with new oil of medium heavy or heavy body. Elevate front end of car when draining to remove all old oil.
15. Drain clutch oil and refill with 1/8 pint of light motor oil and 1/8 pint kerosene. If clutch action is harsh, use 1/4 pint light motor oil.
16. Drain and flush transmission and rear axle and refill with good, heavy bodied or summer transmission and differential oils. Do not use grease.

Yours very truly,

HUDSON MOTOR CAR COMPANY

D.S.2003

Service Department.

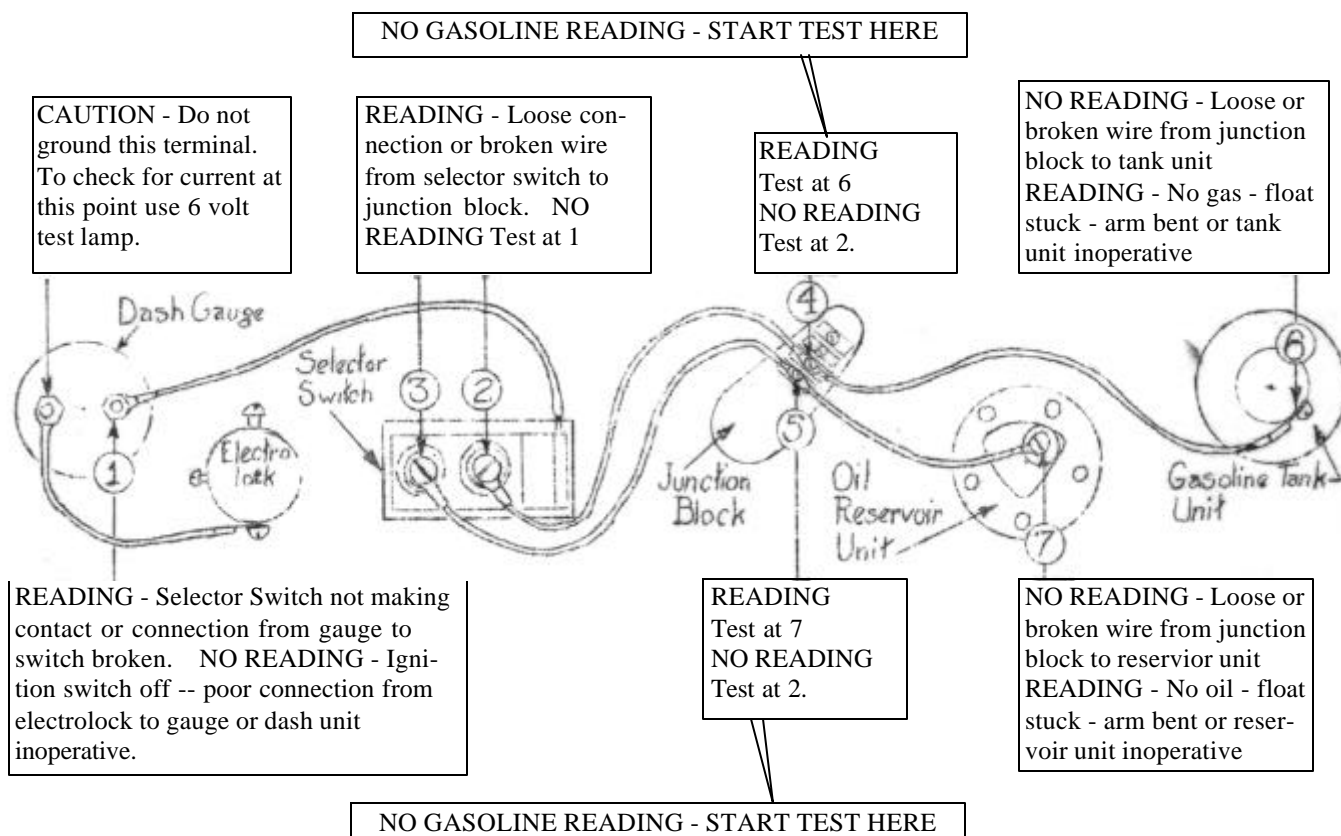
HUDSON AND ESSEX GASOLINE AND OIL LEVEL GAUGE - 1930

A complete test of this equipment can easily be made since a short circuit at any point in the system should cause the dash gauge to give a "full" reading. A screw driver or a piece of heavy wire is the only equipment necessary.

If the circuit is "shorted" at any point and the gauge does not give a "full" reading, the fault in the circuit is between the point "shorted" and the source of current at the electrolock. If the gauge is not operating and a "short" causes it to indicate "full", the fault in the circuit is between the point "shorted" and the "ground" at the gasoline tank unit or the oil reservoir unit.

Follow the instructions given on the wiring diagram. "Reading" means gauge indicates "full" when shorted at the point indicated. "No Reading" means gauge indicates "empty" when shorted at the same point.

Turn on ignition switch before sitting tests. Push selector switch button when testing points 3, 5, and 7.



It is advisable to test individual units after removal from the car and before installation. Although a test for operation of the dash unit can be made by connecting it direct to a battery (should show full) it is advisable to connect a tank or reservoir unit in series so that the gauge reading can be varied and the operation watched.

Do not connect a tank or reservoir unit directly across a battery as this will permit a heavy amperage to flow and destroy the unit. When testing a reservoir or tank unit always connect a dash gauge unit in series so that operating conditions are duplicated. The unit can be tested for proper contact throughout the float movement in this manner.

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U. S. A.

CABLE ADDRESS
HUDSONCAR

September 6, 1930

SERVICE LETTER

TO DOMESTIC DISTRIBUTORS AND DEALERS:

Gentlemen:

The quantity of lubricant recommended for the rear axle assembly of all Hudson and Essex cars built during the year 1930 has been reduced from four pounds to three pounds.

The level of the lubricant when three pounds is used is approximately three quarters of an inch below the bottom of the filler plug opening. Care should be taken when adding lubricant to the rear axle not to bring the level higher than this as it may cause a grease leak at the rear wheel bearing.

Yours very truly,

HUDSON MOTOR CAR COMPANY

D.S.2010

Service Department.

(THIS LETTER HAS BEEN SENT TO YOUR DEALERS)

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U. S. A.

CABLE ADDRESS
HUDSON CAR

October 4, 1930

SERVICE LETTER

TO DOMESTIC DISTRIBUTORS AND DEALERS:

Subject: - CLUTCH THROWOUT BEARING LUBRICATION.

Former recommendations for lubrication of the Clutch Throwout Bearing should be discarded and the following substituted:

Inject one (1) ounce of No. 3 Yellow Cup Grease into bearing through hole provided in clutch throwout collar. (See page sixteen, 1930 Hudson or Essex Instruction Book for location of hole.)

This operation should be done at 1500 mile intervals in conjunction with every clutch lubrication. Care should be taken not to over lubricate as excess grease may work into the clutch and cause slippage.

A six inch length of 1/8" pipe fitted with a connection for attaching to the grease gun can be screwed into the grease hole in the throwout collar to facilitate lubrication.

Replace the pipe plug after lubrication as any fitting which might be installed at this point will restrict the clutch throwout movement.

The quantity of clutch lubricant required remains unchanged, 1/8 pint of light motor oil and 1/8 pint of kerosene being necessary for both Hudson and Essex.

Very truly yours,

HUDSON MOTOR CAR COMPANY

D.S.2011

Service Department.

(THIS LETTER HAS BEEN SENT TO YOUR DEALERS)

OCT 18 1930

HUDSON GREAT EIGHT MAINTENANCE DATA

**GABRIEL
TRIPLE-HYDRAULIC SHOCK ABSORBER**

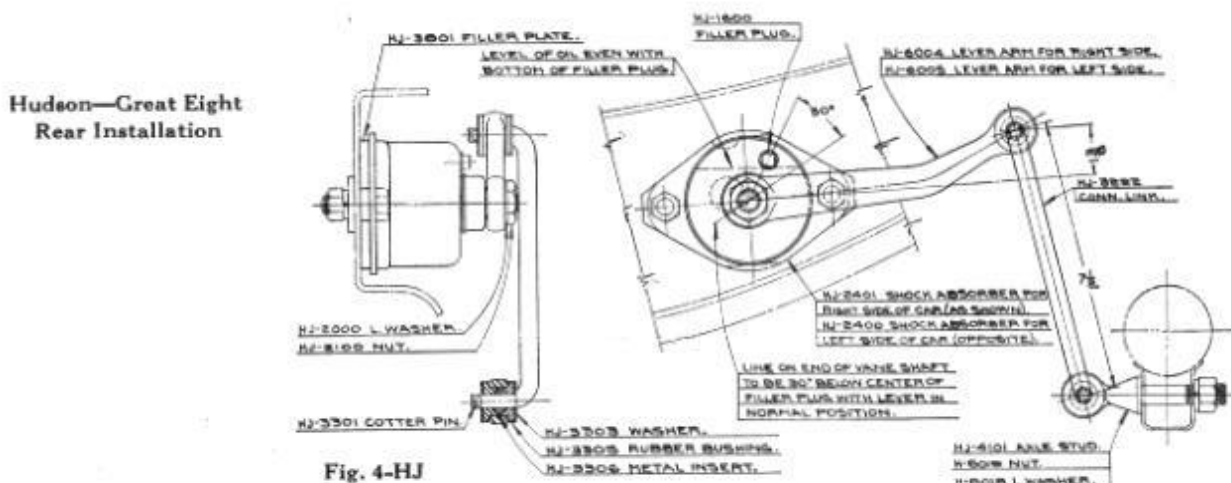
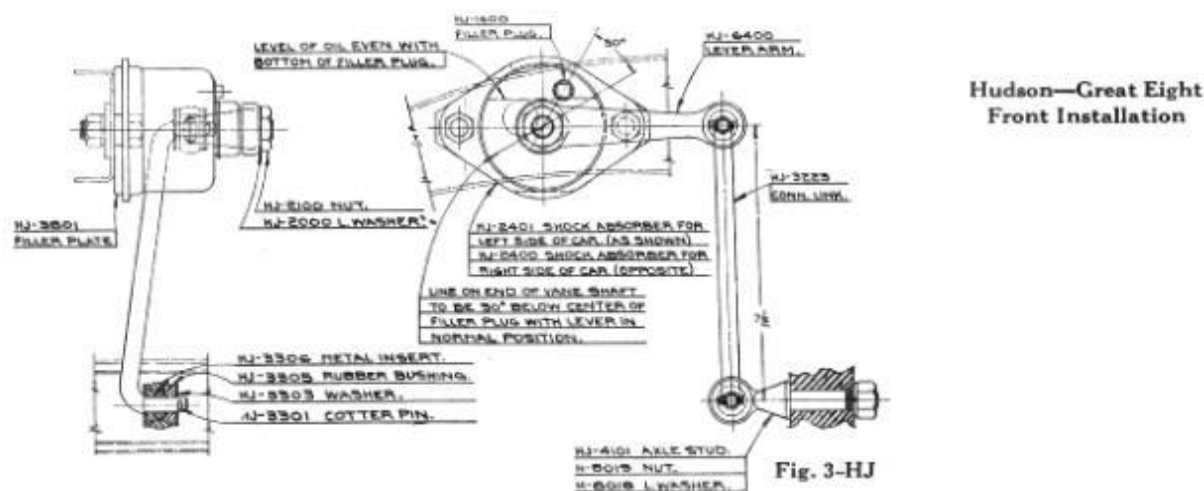
Service Information on Gabriel Triple-Hydraulic Shock Absorbers

TO OBTAIN A GOOD RIDE

It is imperative that you make certain that all shackles are free, springs are properly lubricated with a good grade of penetrating oil—not lubricating oil—and that the tires are inflated to the proper pressure. A good ride can only be obtained when the car is in condition to ride.

SHOCK ABSORBER ATTACHMENT

Make certain that the shock absorbers are bolted tight to the frame of the car and the ball studs through the axle are also bolted securely in place. The Filler Plug (HJ-1600) in the Shock Absorber Body (See Fig. 3-HJ) must be on the same side of vertical center line as the Lever Arm and above the center of the shock absorber—never below.



LEVER ARM AND CONNECTING LINK

Before placing Lever Arm in permanent position on the shock absorber Vane Shaft, set the Vane Shaft so that the line across the end of the Shaft is in the position shown on Figs. No. 3-HJ and No. 4-HJ. The Lever Arm should then be placed on the Vane Shaft in the position shown on Figs. No. 3-HJ and No. 4-HJ. This should be done with spring under normal load.

These instructions are offered for your guidance and assistance when it is not possible to consult an official Gabriel Service Station.

The Lever Arm should be tapped with a hammer as nut is drawn up to make certain that it is securely fitted on the tapered serrations of the shaft. The Lever Arm should be placed on the center line as shown on Fig. 3-HJ on front installations, and with the outer end of lever approximately $1\frac{3}{8}$ " above horizontal center line as shown on Fig. No. 4-HJ for rear installations. Sufficient clearance should be maintained so that the end of the Lever Arm does not strike any part of the car when the car spring is fully compressed.

Assemble connecting link to lever arm and axle bracket, as shown in Figs. 1 and 2. This should be done before assembling arm to shock absorber. The ends of the connecting link should be given a light coating of graphite grease before assembling.

TO ADJUST SHOCK ABSORBER

1st Remove Plug HJ-1600 with adjusting wrench.

NOTE: Level of oil in Reserve Chamber should not be above lower edge of Plug Hole. See Fig. 3-HJ.

2nd Insert Adjusting Wrench to fit over end of Adjusting Screw and turn clockwise until screw is down fairly tight. **Do not exert extra force to tighten this screw.**

3rd Note position of Wrench and turn counter-clockwise required number of turns.

4th Clockwise rotation of Adjusting Screw gives more brake action. Counter-clockwise rotation gives less brake action.

5th When replacing plug, be certain plug is tight.

Recommended Adjustment:

Front: $\frac{1}{2}$ Turns Out; Rear $\frac{3}{4}$ Turns Out.

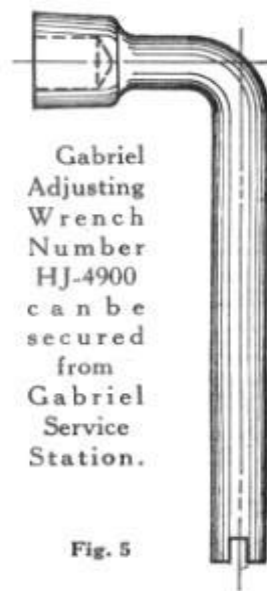


Fig. 5

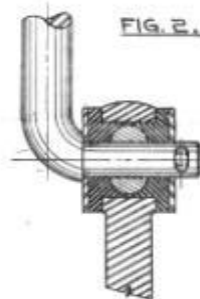
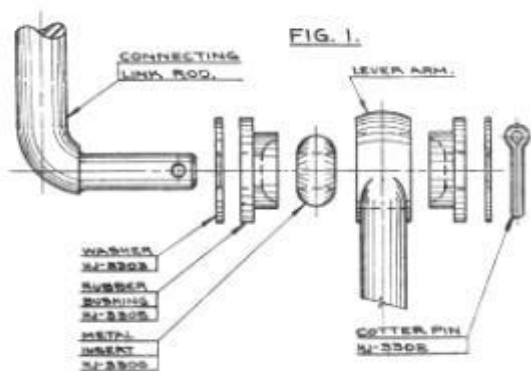
Gabriel
Adjusting
Wrench
Number
HJ-4900
can be
secured
from
Gabriel
Service
Station.

OPERATION

After proper adjustment is made, work Lever Arm up and down several times through entire stroke to be certain that Vane will not strike Segment in actual operation, and to make sure high pressure chamber is entirely full of fluid, and free from air pockets.

Before replacing Plug HJ-1600, see that Reserve Chamber has a supply of fluid, but that fluid is not above level of plug hole. (See Fig. 3-HJ).

The supply of oil in the Reserve Chamber should be checked over once a year or after each 5,000 miles of driving. If necessary to replenish fluid in Reserve Chamber it is imperative to use **Gabriel Special Processed Fluid** only, to insure proper functioning of instruments. This can be secured from nearest Gabriel Distributor.



PARTS

Parts for replacement should be ordered through official Gabriel Service Stations, or The Gabriel Company, Cleveland, Ohio.

List of Gabriel Distributors on page four of this Bulletin.

GABRIEL MAIN DISTRIBUTORS

E. V. Holt Corp.
111 Central Avenue,
Albany, New York.

Gabriel Snubber Sales & Service,
1323 Turner Street,
Allentown, Pa.

Eaton Bumper & Spring Ser. Co.,
752 Spring Street, N. W.,
Atlanta, Georgia.

L. S. Jullien Co. Inc.,
431 East 25th Street,
Baltimore, Maryland.

Keefe Automotive Supply Co.,
2915 1st Avenue, North,
Billings, Montana.

Birmingham Elec. Battery Co.,
2031 Avenue B,
Birmingham, Alabama.

W. J. Connell Company,
121 Brookline Avenue,
Boston, Massachusetts.

Blue Ribbon Tire Service, Inc.,
John St. and Park Ave.,
Bridgeport, Connecticut.

Automotive Devices Co. Inc.,
1045 Atlantic Avenue,
Brooklyn, New York.

Gabriel Buffalo Sales, Inc.,
1887 Main Street,
Buffalo, New York.

Gabriel Snubber Sales & Service
19 Virginia Street, West,
Charleston, West Virginia.

Lancaster Brothers,
4th St. at Broad,
Chattanooga, Tenn.

Gabriel Snubber Company,
2636 Indiana Avenue,
Chicago, Illinois.

Wm. Mathers, Inc.,
1635 Reading Road,
Cincinnati, Ohio.

Gabriel Sales & Service, Inc.,
7211 Carnegie Avenue,
Cleveland, Ohio.

Gabriel Sales & Service,
188 E. Spring Street,
Columbus, Ohio.

H. H. Whelan Co.,
2210 Live Oak Street,
Dallas, Texas.

Wick's Equipment Co.,
12 N. Jefferson St.,
Dayton, Ohio.

Central Supply Company,
1344 Lincoln Street,
Denver, Colorado.

Des Moines Wheel & Rim Co.,
1427 Walnut Street,
Des Moines, Iowa.

Gabriel Sales & Service,
6936 John R Street,
Detroit, Michigan.

Central Battery & Electric Co.,
395 Main Street,
Dubuque, Iowa.

Gabriel Snubber Sales & Service,
1030 Texas Street,
El Paso, Texas.

G. J. Miller Auto Supply,
1012 Liberty Street,
Erie, Pennsylvania.

Gabriel Ft. Wayne Co.,
719 Fulton Street,
Ft. Wayne, Indiana.

Howard B. Richardson,
101 S. Cameron Street,
Harrisburg, Pa.

Gabriel Snubber Sales & Service,
147 High Street,
Hartford, Connecticut.

Beard & Stone Electric Company
San Jacinto & Polk Streets,
Houston, Texas.

Gabriel Sales & Service Corp.,
1111 No. Illinois Street,
Indianapolis, Indiana.

Gabriel Snubber Sales & Service,
1102 Hogan Street,
Jacksonville, Florida.

Gabriel Snubber Sales & Service,
514 Vine Street,
Johnstown, Pa.

Beach-Wittmann Company,
1820 McGee Street,
Kansas City, Mo.

R. T. Clapp Company,
412 W. Magnolia Avenue,
Knoxville, Tenn.

Gabriel Snubber Sales & Service,
3rd and Broadway,
Little Rock, Arkansas.

Pacific Automotive Service,
727 Venice Blvd.,
Los Angeles, Calif.

Gabriel Snubber Sales & Service,
722 South First Street,
Louisville, Kentucky.

McGregor Battery Engineering Co.,
Union and Marshall Avenues,
Memphis, Tenn.

Reed & Company, Inc.,
Juneau Ave. at 7th St.,
Milwaukee, Wisconsin.

Lansing-Neilson, Inc.,
819 First Ave. North,
Minneapolis, Minn.

Johnson Motor Service,
440-17th Street,
Moline, Illinois.

Gabriel Snubber Sales Co.,
1227 Broad Street,
Nashville, Tennessee.

Gabriel Snubber Sales & Service,
7-9 Hoyt Street,
Newark, New Jersey.

Gabriel Snubber Sales & Service,
134 Park Street,
New Haven, Connecticut.

Stewart-Warner Sales Co.,
1140 Carondelet Street,
New Orleans, La.

Smith & Gregory of N. Y., Inc.,
426 West 65th Street,
New York City.

W. V. H. Williams,
21st and Granby Streets,
Norfolk, Virginia.

M. E. Way, Inc.,
706 N. Broadway,
Oklahoma City, Okla.

Fred Burbeck Tire Co., Inc.,
2619 Farnam Street,
Omaha, Nebraska.

Peoria Washington Machine Co.,
805 Franklin Street,
Peoria, Illinois.

H. P. Schade Co., Inc.,
1329 No. 15th Street,
Philadelphia, Pa.

Dunbar Spring Service Co.,
4th Ave. at Adams St.,
Phoenix, Arizona.

I. W. Danforth, Inc.,
434 Melwood Street,
Pittsburgh, Pa.

Gabriel Sales & Service,
12th and Couch Streets,
Portland, Oregon.

A. R. Tiller,
1800 W. Broad St.,
Richmond, Virginia.

Gabriel Snubber Sales & Service,
730 University Avenue,
Rochester, New York.

H. C. Merry, Inc.,
3920 Lindell Blvd.,
St. Louis, Mo.

Wasatch Battery Co., Inc.,
267 South State Street,
Salt Lake City, Utah.

Gabriel Snubber Sales & Service,
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Northwest Auto Equipment Co.,
1601 East Pike Street,
Seattle, Washington.

Taylor's Tire Service,
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South Bend, Indiana.

Gill & Fahey,
167 South Lincoln St.,
Spokane, Washington.

Gabriel Snubber Sales & Service,
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Tampa, Florida.

M. C. Lessing Co.,
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Toledo, Ohio.

Beach-Wittmann Company,
210 East Tenth Street,
Tulsa, Oklahoma.

C. H. Collins,
1205 Mohawk Street,
Utica, New York.

L. S. Jullien Co., Inc.,
1439 P Street, N. W.,
Washington, D. C.

Wilcoxon-Searcy Co.,
225 North Market St.,
Wichita, Kansas.

W. B. Lewis Company,
1217 Wick Street,
Youngstown, Ohio.

Canadian Distributors

Montreal Service & Sales, Ltd.,
1376 Dorchester Street, West,
Montreal, Quebec, Canada.

Auto Starter Co., Ltd.,
409 Yonge Street,
Toronto, Ont., Canada.

Export Distributors

Gabriel Sales & Service Co., Ltd.,
135 Cricklewood Broadway,
London, N. W. 2, England.

Fratelli Levi,
18 Corso Raffaello,
Turin, Italy.

Denes & Friedmann,
11 Mitterbergasse,
Vienna, Austria.

Denes & Friedmann,
23 Zizkova,
Prague-Smichov,
Czechoslovakia.

Denes & Friedmann,
VI Dessewffy-utca 29,
Budapest, Hungary.

Helberg Caspary & Co.,
Raadhugaten 26,
Oslo, Norway.

H. Dalgaard & Co.,
Vesterbrogade 2,
Copenhagen, Denmark.

Aktielieläget Stockmann,
Hagastadgatan 2,
Helsingfors, Finland.

A. Wiklund,
Maskin & Velocipedfabrik,
Stockholm, Sweden.

Soc. Meribar,
Calea Victoriei 51,
Bucarest, Roumania.

Auto-Electricidad,
Diputacion 234,
Barcelona, Spain.

Paul Romans,
Mijas iela 36,
Riga, Latvia.

Urania Accessoires,
Uraniastrasse 14,
Zurich, Switzerland.

C. Santos, Ltda.,
Rua do Crucifixo 55,
Lisbon, Portugal.

Auto-Product, G. m. b. H.,
Katharinenstr. 17-18,
Berlin-Halensee, Germany.

Maurice Martens,
75 Boulevard Gouvion St. Cyr.,
Paris, France.

M. Alderighi & Cia. Ltda.,
Rua D. Jose de Barros 46,
Sao Paulo, Brazil, S. A.

Manuel Guell y Cia.,
Montevideo, Uruguay, S. A.

Booker Bros. McConnell & Co. Ltd.,
Georgetown, British Guiana, S. A.

Corporacion Venezolana Del Motor,
Calle Comercio,
Maracaibo, Venezuela, S. A.

Varwerk & Co.,
Calle Blanco 954,
Valparaiso, Chile, S. A.

Horvilleur y Teyssyre,
Ave. Campo de Marte,
Managua, Nicaragua, C. A.

The West Indies Trading Co.,
Port-Au-Prince, Haiti.

Elite Motor Sales Co.,
Calle Altamira 73,
Tampico, Mexico.

Lucas Blanco & Co.,
75 Tetuan,
San Juan, P. R.

Motor Specialties Ltd.,
Emily Place,
Auckland, N. Z.

W. A. Scott, & Sons,
183 George Street,
Dunedin, N. Z.

Messrs. G. North & Son, Ltd.,
P. O. Box 316,
Durban, S. A.

Messrs. Gower & Co.,
Box 51,
Gwelo, S. Rhodesia, S. A.

Atkinson's Mtr. Garages Inc.,
Charles St.,
Bloemfontein, S. A.

Messrs. Kimpton's Garage,
Box 541,
Salisbury, S. Rhodesia, S. A.

Roy Hill & Co. Ltd.,
Adelaide, Australia.

Goodyear Tyre Depot,
882 Hay Street,
Perth, Australia.

Edward Henleketi,
P. O. Box 778,
Alexandria, Egypt.

Spence Ltd.,
23, Convent Road,
Calcutta, India.

Piara, Paniza & Terra,
Viamonte 1269,
Buenos Aires, Argentine, S. A.

Gabriel Snubber Sales & Service,
516 Broadway,
San Antonio, Texas.

Pacific Automotive Service,
895 O'Farrell Street,
San Francisco, Calif.

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U. S. A.

CABLE ADDRESS
HUDSONCAR

November 18, 1930
SERVICE LETTER

TO DOMESTIC DISTRIBUTORS AND DEALERS:

With the advent of colder weather you can perform a real service for your owners and by proper handling obtain a good profit for your shop. The cold weather troubles can be prevented to a large degree by preparing the cars to meet the conditions which will be encountered.

It is suggested that you circularize your owners by letter, phone and personal contact, quoting flat rate prices for various group operations. It is further suggested that your service salesmen endeavor to sell a complete tune--up and cooling system flush with each call for anti-freeze.

In addition to the original servicing for winter a periodic inspection program can also be inaugurated to keep the cooling system properly filled with anti-freeze and maintain proper lubrication and adjustments for easy starting and maximum performance.

PREPARING FOR ANTI-FREEZE SOLUTION

The cooling systems of all cars in service more than six months should be reverse flushed by disconnecting the lower radiator hose and inserting a hose with the nozzle plugged tightly into the lower radiator connection. On the Hudson the hose connection from the cylinder block to the pump should also be removed to permit free exit of the water from the block. (Special equipment is available through several sources for reverse flushing under air pressure).

On cars which have been in service more than a year it is advisable to wash out the system with one pound of Sal Soda dissolved in five gallons of water. (This should be strained before pouring into radiator). Run the engine slowly for five minutes to heat water and circulate it through the system.

Drain cooling system and reverse flush. It is important that all traces of Sal Soda be removed due to its detrimental action if left in the system too long.

Check radiator core for leaks -- repair by soldering.

Install new hose connections if the old ones show cracks, bulges or collapse. A small amount of grease spread on the inside of the hose at both ends will help maintain a good

seal.

Check cylinder head stud nuts to see that they are tight.

Check for leaks at cylinder side plates and welch plugs.

FILLING WITH ANTI-FREEZE SOLUTION

The anti-freeze solution should be poured into the radiator and enough water added to bring the level just above the top of the radiator core with the engine running. Allow engine to warm up and add water to bring the level four inches below the top of the radiator tank in the Essex and three inches below on the Hudson.

ANTI-FREEZE SOLUTIONS

The only anti-freeze solutions recommended are Alcohol, Radiator Glycerine or Prestone. The two latter are preferable since they do not evaporate and can be put into the system before cold weather has set in without any danger of loss. They also guarantee protection throughout the winter barring loss due to leaks. Although their initial cost is more, the cost per season is usually less.

QUANTITIES

Since Alcohol lowers the boiling point it is necessary to govern the quantity by the temperature expected and increase the quantity as the weather becomes colder. When using Radiator Glycerine or Prestone it is advisable to use sufficient at the initial filling to give protection in the coldest weather expected during the winter. This makes it unnecessary to add to the solution as the weather becomes colder and saves the owner considerable annoyance.

The following table gives the quantities of the various solutions necessary in Hudson and Essex cooling systems:

Temperature	Radiator Glycerine	Prestone	Alcohol
32° to 10° above 0°	9-1/2 qts.	4 qts.	6-2/3 qts.
10° to 0°	11-1/2 qts.	6 qts.	8-2/3 qts.
0° to 10° below 0°	13-2/3 qts.	7 qts.	10 qts.
10° to 20° below 0°	15-1/3 qts.	8 qts.	11-1/2 qts.
20° to 30° below 0°	*Undiluted	9 qts.	

*Radiator Glycerine is diluted in its commercial form so that it can be used without further dilution if necessary. Do not use other solutions undiluted.

Direct reading hydrometers are available to show the temperature to which protection is given by the solution in the radiator. These should be used regularly -- preferably weekly -- to check the contents of the radiator as this is the only means of accurately determining if there has been any loss.

OTHER WINTER PREPARATIONS

LOURVE COVERS. The louvres should be covered with heavy fibre board to retain the engine heat for most efficient operation. . The boards may be painted dull black on the side next to the hood.

GASOLINE SYSTEM. During cold weather there is always an accumulation of water in the vacuum tank filter bowl, carburetor, and gasoline tank. If this is allowed to accumulate in quantities it may obstruct the flow of fuel when frozen. Drain at these points at least monthly during cold weather.

ENGINE LUBRICATION. Light motor oil of good quality with a zero cold test should be used. Because of dilution, especially on cars which are continuously started and stopped, the oil should be changed more frequently.

CLUTCH LUBRICATION. Instead of a half and half mixture of kerosene and oil a mixture of three parts kerosene to two parts of oil may be used if the clutch tends to spin after disengagement.

TRANSMISSION LUBRICANT. If it is difficult to move the gears into mesh when cold add sufficient motor oil to the transmission lubricant to permit proper shifting.

REAR AXLE LUBRICANT. The lubricant in the rear axle should flow freely at low temperatures to insure proper flow to the pinion bearings. If a good gear oil with low cold test can not be obtained use three pounds of gear oil and one pound (pint) of motor oil.

GENERAL LUBRICATION. Keep all chassis parts well lubricated to prevent entrance of water. All brake rod pins and yokes should be covered with grease to prevent an accumulation of ice

ENGINE TUNING TO INSURE EASY STARTING

1. Clean spark plugs - set gap at .020" to .022".
2. Clean distributor contact points and set at .018" maximum opening.
3. Check compression - adjust tappets - grind valves if necessary.
4. Clean gasoline system of sediment and water.
5. Adjust carburetor - see that choke is fully closed by dash control.
6. Set carburetor accelerating well needle (Essex only) in the "Winter" position.
7. Set heat control on "Warm".

ELECTRICAL INSPECTION

1. Clean generator commutator.
2. Set charging rate with lights off to peak at 13.5 amperes when cold or 10 amperes hot.
3. Clean Bendix screw with kerosene. (Do not oil.)
4. See that fuse clips are clean and hold fuse securely.
5. Check all wires and connections to see that they are in good condition and tight.
6. Remove battery terminals, clean off corrosion, and wipe with cloth moistened with ammonia. (Do not permit ammonia to enter cells.) Scrape terminal posts and terminals to insure good contact. Replace terminals, tighten and coat exposed parts with vaseline, See that battery ground is bolted tight to the frame.

OPERATION 1 Flush cooling system and refill with anti-freeze.

OPERATION 2 Tune Engine -- Includes cleaning and adjusting spark plugs, distributor breaker points, generator and carburetor. Cleaning gasoline lines and vacuum tank -- adjusting tappets and checking battery and terminals. Valve grinding when necessary at extra charge.

OPERATION 3 Complete lubrication -- Chassis including brake rods. Change to winter lubricant in motor, clutch, transmission and rear axle.

OPERATION 4 Install Louvre Covers.

OPERATION 5 Checking quantity of anti-freeze in cooling system and tune engine.

Very truly yours,

HUDSON MOTOR CAR COMPANY

D.S.2015

General Service Manager.

(THIS LETTER HAS BEEN FORWARDED YOUR DEALERS)

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U. S. A.

CABLE ADDRESS
HUDSONCAR

November 19, 1930
SERVICE LETTER

TO DOMESTIC DISTRIBUTORS AND DEALERS:

-- Attention of the Service Manager --

To insure adequate lubrication of the rear axle gears and bearings during the break-in period, four (4) pounds of lubricant is being introduced into the housing of the new 1931 model Hudson and Essex cars at the time of assembly.

This amount is in excess of the Instruction Book recommendations of three (3) pounds, which is the quantity required to bring the level to the bottom of the filler plug opening in the housing cover. It is important that your New Car Department be properly instructed in this matter so that a minimum loss of lubricant will occur when the plug is removed during the new car inspection.

It is necessary that this extra quantity of lubricant be present during the break-in period, particularly in • cold weather and every new car should be closely checked before delivery. After the first one hundred (100) miles, however, the level may be reduced to the bottom of the filler plug and maintained at that level thereafter.

Very truly yours,

HUDSON MOTOR CAR COMPANY

D.S.2016

Service Department.

(THIS LETTER HAS BEEN FORWARDED YOUR DEALERS)

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U. S. A.

CABLE ADDRESS
HUDSONCAR

December 4, 1930

SERVICE LETTER

TO DOMESTIC DISTRIBUTORS AND DEALERS:

RE: UNLOADING OF NEW AUTOMOBILES

During the winter months, Detroit practices the plan of sprinkling salt on street intersections to retard the formation of ice. New cars driven to the loading docks, therefore, may unavoidably be spattered with a saline spray which would prove harmful to the finish and plating if it were permitted to remain on the cars for an extended period of time.

As soon as possible after unloading shipments of new automobiles, wash them completely, paying special attention to rear panels, undergearing and all chromium plating.

Very truly yours,

HUDSON MOTOR CAR COMPANY

D.S.2017

Service Department.

(THIS LETTER HAS BEEN FORWARDED YOUR DEALERS)

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U. S. A.

CABLE ADDRESS
HUDSONCAR

December 4, 1930
SERVICE LETTER

TO DOMESTIC DISTRIBUTORS AND DEALERS:

Shatterproof windshields are an available option on new car shipments. As cases may occur in which changes may be desirable after delivery from the factory, we are supplying you with necessary information for ordering.

Part No. 89898 Windshield Frame and Glass Assembly (Plate Glass)	\$11.00
Part No. 90406 Windshield Frame and Glass Assembly (Shatterproof Glass)	25.00

Those prices cover sale and not exchange of windshields or frames by us and are subject to regular parts discount.

Very truly yours,

HUDSON MOTOR CAR COMPANY

D.S.6036

Service Department.

(THIS LETTER HAS BEEN FORWARDED YOUR DEALERS)