HUDSON MOTOR CAR COMPANY

TECHNICAL SERVICE BULLETINS

Volume 1

TS 77-1 – TS 84-2

Introduction

In the early 1970's I began a research project aimed at collecting information about Hudson built cars, the idea being to put this information from many sources into one place. The data came from Hudson parts books, owner's manuals, outside sources, even Hudson ads through the years. In 1984 I put it all together as *"The*"

<u>Hudson, Essex and Terraplane Handbook of General Information".</u> At that time, when I sought to find an outlet for this handbook, realizing that it would receive limited distribution, it met with resounding silence. Admittedly, I did not pursue the sales of this volume - i.e., advertising it in the HET Club publication, the <u>"White Triangle News"</u>. I did, however, have some copies printed up and sent them to various chapter presidents with the idea of having them show it around to their members.

In 1993 I came across a new medium for editing and storing this data - the computer age arrived at my household. Little did I realize at the time how much work and time would be involved in the task of imputing my original handbook to a computer file. However, it was finally done and now it was possible to print copies much more easily. It also became evident that it was easier to change - and while the basic information remains the same, there have been some corrections (mostly typos) and changes in format. Several HET members have received copies of these newer computer generated handbooks for services rendered - they also, I have found, make excellent Christmas gifts. So, those several copies in member's hands may be considered, in each one, rather unique. These early computer generated handbooks were titled as above - corrected copies are now titled <u>General Information Handbook for Hudson Built Automobiles</u>, a title we feel more accurately describes our effort.

In collecting data over the years I found I had much remaining after the handbook was completed. So the next question was, what to do with this information. I drew upon an idea originally put forth by the late Art Adams while he was editor of the <u>"White Triangle News"</u> - Hudson Motor Car Technical Information Sheets. So it is, as a tribute to Art, I put this data into this into the <u>"Hudson, Essex, Terraplane Technical Service & Information Bulletins" Vol. I".</u>

As you look through these sheets you will find some material that is in the General Specifications Handbook but presented in a slightly different format and usually in conjunction with some previously unprinted data. You will also note some numbers are missing – these were "time sensitive" bulletins that pertained only to the time they were published, like lists of Automotive Publications.

Beginning in 1994 I began a series of technical bulletins, based on Art's format. These, from 1994 thru 1999 are contained in Volume II. In the meantime we continue to find material and make it into even more bulletins. The period from 2000 on will be contained in Volume III. We hope you will find something of use here in maintaining your Hudson built cars.

Dedicated to a wonderful friend and a great person, Arthur 'Art' Adams, former editor, The White Triangle News a publication of the Hudson-Essex-Terraplane Club, Inc., and the Nor' by Nor' East a publication of the New England Chapter, HET, who left us all to suddenly, Sept. 1989

HUDSON MOTOR CAR COMPANY Detroit, Mich., U.S.A.

TECHNICAL BULLETIN INDEX - Volume I

I. Hudson Technical Information Bulletins

TS 77-1 1948-1954 Dual Headlight Relay TS 77-2 Exhaust Manifold Damper TS 77-4 1948-1954 Cylinder Head Temperature Indicator Elements TS 77-7 Hudson Double Safe Hydraulic Brakes TS 77-9 Proper Clutch Flushing and Lubrication TS 77-11 Aluminum Cylinder Heads TS 77-14 1932 Essex-Terraplane Service Hints TS 77-15 1948-1956 Six Cylinder Head Gasket TS 77-16 1948-1954 All Hudson Heater Core and Hose Connections TS 77–17 1940–1957 Hudson Spark Plug Recommendations TS 77-18 1955-1956 Eng. Coding for Bore and Main and Connecting Rod Bearings TS 77-19 1928 Hudson Information Models "O" and "S" TS 77-20 1946-1954 Fuel and Temperature Dash Units TS 77-21 1950-1954 Hudson Exterior Body Lacquers & Codes TS 77-22 1948-1954 Front Seat Position All Models (except Jet) TS 77-23 1948-1949 Hudson Body Lacquers & Codes TS 78–1 1948–1954 All Models – Check Perimeter Frame TS 78-2 1948-1954 Center Steering Pivot Pin Replacement TS 78-3 1948-1954 Valve Adjustment TS 78-4 1950-1954 Exterior Body Lacquers & Code - 1950-1954 TS 78-6 1940-1942 Chassis Model Information TS 78-7 1942-1954 Speedometer Lubrication TS 78-8 1930 Hudson Trimming Specifications for 1930 Models TS 78-9 1946-1947 Model Information TS 78-10 1940-1954 Headlight Mounting Ring & Housing Interchangeability TS 78-14 1948-1954 Model Information TS 78-15 1939 Model Information TS 78-17 1938 Model Information TS 78-21 1948-1956 Engine Information, Six Cylinder (except "202") TS 78-22 Essex - Installation of Hot Water Heater in Models with Thermo-syphon Cooling TS 78-24 1948-1954 Rear Axle Identification and Usage TS 78-25 Drive-Master Service Hints TS 80-1 1924-1936 Hudson Built Cars, Year Models by Serial Number

TS 81-1 Check the Starter Solenoid

TS 81-3 Body Painting and Preparation

TS 81-4 1946-1954 - Model Year Production Numbers

TS 84–2 Rebuilding the Water Distribution Baffle – 3 x 5 Six Cylinder Engine

CABLE ADDRESS H U D S O N C A R

TECHNICAL SERVICE BULLETIN

TS 77-1 File Under: ELECTRICAL

ALL HUDSON OWNERS, 1948-54 MODELS DUAL HEADLIGHT RELAY

Reports from the field indicate that after twenty years or so of service it is not uncommon for the headlight switch to fail or the circuit breaker to cut the headlights off without warning.

The installation of a dual headlight relay will save the headlight switch and result in brighter headlights because there will be less voltage loss between the battery and the headlights.

The relay is installed between the headlights and the dimmer switch at a point close to the battery. When in operation the current flows directly from the battery through the relay to the headlights. It only takes a small amount of current to activate the relay; as a result the light switch does not become overloaded causing the circuit breaker to cut out.

Very truly yours

Art Adams

A. E Adams Technical Service Editor

CABLE ADDRESS H U D S O N C A R

TECHNICAL SERVICE BULLETIN

TS 77-2 File Under; ENGINE

All Hudson Owners Exhaust Manifold Damper

This article from the Hudson Service Merchandiser dated May 1952, is reproduced with the thought of emphasizing this point also for the benefit of any new men in the service field.

Perhaps no other important part of a gas engine is overlooked or neglected as much as the Exhaust Manifold Damper.

Although the Exhaust Manifold Damper Shaft is of a heat-resisting steel, it sometimes sticks or becomes so tight due to carbon buildup that the springs, thermostat or counterweight will fail to move it.

When the damper action become sluggish or sticks, the results are a very slow warm-up and poor performance in winter if stuck at the "heat off" position. If stuck at the "heat on" position and the atmospheric temperature is high, engine power falls off and performance becomes sluggish. A sharp, responsive Exhaust Manifold Damper is important and accentuates engine tuning.

Should the Damper Shaft be found to be stuck, remove the thermostat and springs, apply penetrating oil or kerosene and tap the shaft for end play to break the carbon and corrosion. The shaft should not be oiled. When properly freed, carefully check springs and thermostat before installing and replace them if weak.

Very truly yours,

Art Adams

A. E. Adams Technical Service Editor

HUDSON MOTOR CAR COMPANY Detroit, Mich., U. S. A.

TECHNICAL SERVICE BULLETIN

CABLE ADDRESS H U D S O N C A R

TS 77-4 File Under " ENGINE March 1977

ALL HUDSON OWNERS, 1948-54

CYLINDER HEAD TEMPERATURE INDICATOR ELEMENTS

When installing a 1951-54 type engine, 6 cyl., or an 8 cyl. head or engine in a 1948-50 car, the cylinder head must be modified to accommodate the car's original equipment type temperature indicator element.

Redesigned gauges were used starting with the 1951 models, which operate on a constant potential of 5 volts and require a different cylinder head element from that used on previous models. The newer element is 1/4" pipe thread diameter and is shorter than the 3/8" pipe part used on the earlier models, which necessitates drilling and tapping the now cylinder head. If the proper cylinder head element is not used, incorrect gauge readings will result.

To install the original element in the now cylinder head, the hole in the left side of the head must be enlarged from 1/4" pipe diameter to 3/8" pipe size by drilling out the opening with a 37/64" drill and retapping with a 3/8" pipe tap. On six cylinder engines the location of this element is changed from the front of the head to the rear, which will require shortening the wire slightly to correspond.

Very truly yours,

A. E. ADAMS, Technical Service Editor

HUDSON MOTOR CAR COMPANY Detroit, MI., U. S. A.

TECHNICAL SERVICE BULLETIN

CABLEADDRESS H U D S O N C A R

TS 77-7 File Under: TIRES, WHEELS, HUBS BRAKE SYSTEM March 1977

ALL HUDSON OWNERS HUDSON DOUBLE SAFE HYDRAULIC BRAKES

One of the exclusive Hudson safety factors for many years has been a brake design that brings the mechanical brake into operation when the brake pedal has been depressed beyond the point where the hydraulic brakes become effective. In order that this mechanical follow up becomes effective properly when the brake pedal has reached a predetermined point, it is necessary that. the mechanic who makes the final brake adjustment knows definitely where to check and what the proper adjustment should be.

When the brakes are relined or taken up (at which time the hand brake should always be reset) the mechanical safety follow up clearance should he carefully chocked and the necessary correction made very accurately, When the clearance at the point of "take up" as shown in the following sketches is accurately made and should the hydraulic brakes fail for any reason the mechanical brakes will function in a normal manner as the brake pedal movement and pressure are continued downward.

All mechanics who have to do with brake work should understand how to this adjustment properly. Complete instructions will be found in the Hudson Mechanical Procedure Manuals.





It will be noted that the adjustment for mechanical brake engagement shown in the sketches above differs somewhat due mainly to the change in design of various models. Adjust at "A" to obtain clearance at "B".

In addition to checking the mechanical follow up it is imperative that the brake lines be chocked periodically. There is danger of sudden leakage of brake fluid if the lines rust out or are otherwise damaged.

If the condition of the brake system is unknown it should be checked over at the first opportunity. A complete check-up would include the wheal cylinders, brake drums, brake lining, flexible and steel hydraulic lines, master cylinder, and the mechanical linkage and cables to the rear wheels.

It is recommended that the hydraulic brake system be checked for damage or leakage whenever the car is lubricated.

Yours very truly

A. E. Adams Technical Service Editor

Reference: Hudson Service Merchandiser, Sept 1950.

TECHNICAL SERVICE BULLETIN

CABLE ADDRESS H U D S O N C A R

TS 77-9 File Under: Clutch, Transmission Propeller Shaft

All Hudson Owners Using Fluid-Cushioned Clutch

Proper Clutch Flushing and Lubrication

Following is the method recommended in the Hudson Service Merchandiser, dated Dec., 1951, for draining and cleaning the clutches

of Hudson cars through 1954, except Jet) in order to remove gum and oxidation deposits which cause clutch sticking.

It is important that this procedure be closely followed and the engine run sufficiently to warm up the clutch parts to approximately

100 degrees before flushing. If the parts area t a low temperature, the solvent will not be effective and, on the other hand, if the

temperature is to high, much of it will vaporize.

Procedure

<u>1</u>. Remove the flywheel pan.

2. Turn flywheel until drain plug is at its lowest position. Remove plug and drain out the old clutch compound.

<u>3.</u> Turn flywheel until clutch filler hold is opposite timing opening in rear engine plate and with a filler gun, inject one pint of suitable cleaning solvent. (NOTE: In light of this directive being written in 1951 carbon tetrachloride may no longer be available - a suitable substitute will probably have to found.)

4. Replace plug and with a stick of proper length or clutch pedal depressor, hold clutch in disengaged position.

5. Drain clutch again making sure filler opening is at extreme bottom position to remove all solvent. Turn flywheel until filler opening is again exposed at the rear engine support plate. Introduce 1/3 pint of new Hudsonite compound and replace plug.

6. Replace flywheel cover.

Yours very truly,

A. E. Adams Technical Service Editor

TECHNICAL SERVICE BULLETIN

CABLE ADDRESS H U D S O N C A R

TS 77-11 File Under: Engine

All Hudson, Essex and Terraplane Owners

Aluminum Cylinder Heads

The following information from the Hudson Service Merchandiser of November, 1953, should be of interest to all who are using aluminum cylinder heads.

With the first use of aluminum cylinder heads on gas engines, it was found that unless proper precautions were taken, there was danger of corrosion between the cylinder head and studs, which made it difficult to remove the head.

To prevent such corrosion, an application of an anti rust oil was applied on all the cylinder head studs. The cylinder head gasket with copper ferrules around the water passageway holes was also replaced with one having treated steel ferrules.

It was definitely proven that the more alkaline the water used in the cooling system, the greater the tendency of corroding around the cylinder head studs. This was particularly severe if there was any water leak from the cooling system reaching the studs.

To prevent any difficulty in removing cylinder heads due to corrosion, any time the cylinder head is removed and before installing, give all studs or cap screws a coating of special oil to prevent corrosion, such as SOHI CYL #300. Avoid the use of alkali water in cooling system and always use suitable inhibitor in cooling system water, important when engine is fitted with an aluminum cylinder head.

In some instances, there is evidence of erosion or grooving, on the machined face of an aluminum cylinder head, which generally takes place between a cooling water passageway and a combustion chamber. This is the result the cylinder head not having been kept properly tightened, thus permitting a cross leak of water and steam

Yours very truly,

A. E. Adams Technical Service Editor

CABLE ADDRESS H U D S O N C A R

TECHNICAL SERVICE BULLETIN

TS 77-12 File Under: ENGINE May 1977

ALL HUDSON OWNERS, 1948-56 MODELS

VALVE ADJUSTMENT, 1948-56 SIXES, 1948-52 EIGHTS

The following procedure may be used to adjust valves or replace manifold gasket.

1948-54 Hudson Sixes and 1948-52 Hudson Eights

- 1. Remove right hand front wheel.
- 2. Remove fender side shield with side shield extension.
- 3. Remove valve covers and breather pipe.

4. Adjust tappets:	All Six (Cylinder	Eight Cylinder			
Intake valves	.010"(Hot)	(For Cold Clearance	.008"(Hot)	.010"(Cold)		
Exhaust valves	.012"(Hot)	See 1955.)	.010"(Hot)	.014" (Cold)		

1955-56 Hornet 6 Cylinder and 1955-56 Wasp with Twin-H-Power

- 1. Remove 5/8" nut from top on front engine supports and loosen the rear engine supports.
- 2. Disconnect fuel and vacuum lines to carburetors and intake manifold.
- 3. Disconnect throttle linkage. (Leave carburetors mounted.)
- 4. Remove exhaust pipe at attaching point to engine manifold.
- 5. Remove all manifold to engine attaching nuts and clamps.

6. Place a porto-power or suitable jack between front and. right hand corner of cylinder block or on water pump casting and just below the upper wheelhouse to wheelhouse cross member and the wheelhouse panel. Exert pressure to move the engine upwardly and to the left (viewed from driver's seat). This will provide needed clearance to remove the engine intake and exhaust manifold assembly. Sufficient movement in cooling hoses will permit movement without draining the cooling system.

- 7. Remove valve compartment covers.
- 8. Remove spark plugs.

9. With distributor timing set at T.D.C., attach a small six-volt light bulb (12 volt in 1956) in parallel to the breaker point terminal on the distributor housing and engine for ground. Attach the coil secondary lead to ground (remove from distributor cap). With ignition switch on, light will burn when distributor points separate to fire a cylinder.

Page 2, TS 77-12

10. Start with No. 1 cylinder and adjust valve lash (Cold.) to the following clearances:

ENGINE	"202"	1955 "308"	1956 "308"
Intake Valves	.012" (Cold)	.012" (Cold)	"0" Lash, Non-adjustable
Exhaust Valves	.016" (Cold)	.019" (Cold)	Original Equipment

1955-56 Wasp Hi-Torque 6

Clearance permits removal of the manifold without movement of the engine, other operations as listed above.

The "Cold" clearances given above for the 1955 "308" engine are suitable for all "232", "262" and "308" engines of previous years.

NOTE: Jack Clifford, HET Speed Advisor at the time this technical bulletin was written, verified the correct "Hot" clearances and recommended the "Cold" clearances

It should be pointed out that the 1952 Hudson Mechanical Procedure Manual has the correct valve lash readings. The 1954 Supplement is correct only as it pertains to the "202" engine. Other published sources often give incorrect clearances.

Yours very truly,

Technical Service Editor

References: 52 HMCC Manual AMC Ltr 7Apr55

TECHNICAL SERVICE BULLETIN

TS 77-13 File Under: Body & Frame

May 1977

All Essex Owners 1930 Essex Trimming Specifications

The following trim specs for 1930 models may be of interest to all restorers of Essex cars from this

<u>1930 Essex Models</u>								
Essex Brougham								
Headlining Side Walls Door Panels	Wood	Napped Cloth	Carolina C & W Mills	2515				
& Backs of Front Seat	Wood	Velcour	E. F. Timme & Sons	533				
Seat Cushions & Backs	Wood	Velcour	Collins & Aikman	V76C				
Carpet	Gray H. P.	Velcour	C. H. Masland & Sons	283VVRA				
Windlace	Beige	Imit. Leather		1763				
Curtains	Gray	Rex No. 3	Adams & Westlake Co.					
<u>Essex Coach</u>								
Headlining	Gray	Napped Cloth	Carolina C & W Mills	1235H				
Side Walls, Door Panels,	Gray &							
& Backs of Front Seat	Taupe	Velour	E. F. Timme & Sons	1255				
Seat Cushions, Backs	Taupe	Velour	E. F. Timme & Sons	1256				
Carpet	Gray H. P.		C. H. Masland & Sons					
Windlace	Gray	Napped Cloth	Carolina C & W Mills	1235H				
Curtains	Gray	Rex No. 3	Adams & Westlake Co.					
Essex Coupe								
Headlining	Fawn Gray	Napped Cloth	Carolina C & W Mills	1235H				
Side Walls & Door	Mottled							
Panels	Fawn Gray	Velour	E. F. Timme & Sons	S1184				
Curtain	Gray		Curtain Supply Company	3823				
Seat Cushions, Backs	Stripped Fawn Gray	Velour	E. F. Timme & Sons	V75C				
Carpet (Rumble Seat)	Mottled		W. J. Sloane	1235H				
Windlace	Gray	Napped Cloth	Carolina C & W Mills	1235J				
Essex Phaeton								
Seat Cushions	Tan	Leather #1 D. B.	American Oak Leather Co.	970				
Door Panels, Side Walls,								
Seat Arms, etc	Tan	Imit. Leather						
Carpet	Wood		C. H. Masland & Sons	V76C				
Essex Roadster								
Front Seat Cushions, Back								
Rumble Seat Cushions	Tan	Leather No. 1 D. B.	American Oak Leather Co.	970				
Back	Tan	Imit. Leather						
Side Walls, etc.	Tan	Imit. Leather						
Carpet	Wood		C. H. Masland & Sons	V76C				

1930 Essex Models (Cont'd)

Essex Standard Sedan				
Headlining	Gray	Napped Cloth	Carolina C & W Mills	1235H
Side Walls, Door Panels,				
& Backs of Front Seats	Mottled Gray	Velour	E. F. Timme & Sons	125
Seat Cushions & Backs	Gray & Taupe	Velour	E. F. Timme & Sons	125
Carpet	Gray		C. H. Masland & Sons	V76C
Curtains	Gray	Rex #2	Adams & Westlake	
Essex Sun Sedan				
Seat Cushions & Backs	Gray & Black Mottled	Leather No. 1 D. B.	Cleveland Tanning Co.	1801-91
Door Panels & Side Walls	Gray & Black	Imit. Leather	Textile Leather Company	4B954
Carpet	Gray		C. H. Masland & Son	V76C
Windlace	Gray & Black	Imit. Leather		
Essex Touring Sedan				
Headlining	Wood	Napped Cloth	Carolina C & W Mills	1235HOO
Side Walls, Panels &				
Backs of Front Seats	Wood	Velour	E. F. Timme & Sons	1250
Seat Cushions & Backs	Wood	Velour	E. F. Timme & Sons	1251
Carpet	Wood	Velour	C. H. Masland & Sons	V76C
Windlace	Beige	Imit. Leather		
Curtains	Gray	Rex No. 3	Adams & Westlake	

TECHNICAL SERVICE BULLETIN

CABLE ADDRESS H U D S O N C A R

TS 77-14 File Under: Service General July 1977

ALL ESSEX-TERRAPLANE OWNERS - 1932 MODELS

ESSEX-TERRAPLANE SERVICE HINTS

<u>CLUTCH PEDAL CLEARANCE</u>. The clutch linkage should be adjusted so that the clutch pedal can be moved down from its normal disengaged position $1\frac{1}{2}$ " before the clutch linkage is operated. This measurement should be taken by pulling the clutch pedal down from the toe board and measuring $1\frac{1}{2}$ " from the toe board down to the rubber biscuit. This clearance is adjusted by changing the position of the yoke on the clutch pedal to cress shaft lever rod.

IGNITION TIMING. The ignition timing is set in factory production to a mark on the flywheel, which is 3/4" ahead of dead center position. This is done in anticipation of wear on the distributor arm block, which will retard the ignition. You will find that with the standard head and Ethyl fuel you will be, able to maintain best performance by setting the timing near the mark, which is 3/4" ahead of dead center; while with standard gas in a standard head and Ethyl gas in the Super Power Dome head it will be necessary to retard the spark nearer to the dead center position to prevent excessive detonation. All ignition timing setting should be checked by road test.

<u>REAR WHEEL PULLER.</u> Do not under any consideration use a "knock-out" type of wheel puller, or strike the end of the Essex-Terraplane axle shaft with a hammer, as this throws an excessive load on the thrust spacer and differential gear pin.

<u>WHEEL HUB CAP.</u> It is recommended that a small amount of grease be put on each of the hub cap retaining springs to prevent squeaks from a slight motion which may develop between tire hub cap and the hub.

TIRE PRESSURE. The tire pressure recommended are 28 lbs. front and rear for average driving and 36 lbs. front and rear for high speed driving. This recommendation supersedes the one carried in Instruction Books and on windshield stickers and will be found to be much more desirable from a standpoint of comfortable riding. Front tire pressures must be equal.

HORN WIRE LOCATION. In order to relieve the ignition circuit of the comparatively heavy amperage drawn by the horn, it is recommended that the horn to ignition coil wire be shortened and reconnected from the horn to the terminal on the starting motor.

(From 9AUG1932 Hudson-Essex Service Bulletin, Original courtesy of Alex Burr.)

WTN TECHNICAL SERVICE

TECHNICAL SERVICE BULLETIN

CABLE ADDRESS H U D S O N C A R

TS 77-15 File Under: ENGINE

July 1977

ALL HUDSON OWNERS,, 1948-56 Sixes

THE CYLINDER HEAD GASKET

Some reports from the Field relative to difficulty with blown cylinder head gaskets prompts us to bring attention to the following article presented in the February 1953, Hudson Service Merchandiser.

Perhaps one of the most critical points in connection with the present stepped up compression and highly stressed engines is that of the cylinder head gasket seal

When a cylinder head has been removed for any reason, there is much in the care exercised in the installation that will have to do with preventing a blown cylinder head gasket.

With the use of a straight edge, a careful check should be made of the top face of cylinder block for bulge or slightly raised metal around stud holes. Such raised points may be dressed off with a fine mill file. A cylinder head that is warped in excess of .010, should be milled or planed Off just sufficient to clean up over the entire surface.

Examine cylinder head gasket for any broken spots; also check for all water hole alignment. Carefully wipe off both cylinder head and cylinder block face with a clean cloth. Cap screw threads must be clean and turn freely in threaded block openings. Use two J-2969 Locating Studs to properly position the gasket and cylinder head.

The cylinder head gasket has been treated by the manufacturer with an effective sealing agent. However, Hudson Perfect Seal Gasket Paste, Part No. 164848 may be used without detrimental effect on this sealer,

Proper tightening of the cylinder head is very important and this alone can determine the success of a cylinder head gasket holding as it should, following is a recommended installation tightening procedure for the aluminum cylinder head

Illustrated below is an order of tightening. The initial tightening should be very gradual, going over all cap bolts three or four times until the torque wrench indicates a uniformity of 75 to 80 foot pounds.



Engine should be idled slowly until it reaches normal operating temperature when all cap bolts should be retightened to 75 to 80 foot pounds. Run engine again until it reaches normal operating temperature-this time allow it to cool - and again torque all cap bolts to 75 to 80 foot pounds in the order shown in the illustration.

It is important to again re-tighten a cylinder head after 800 to 1000 miles. An aluminum or cast iron cylinder head should be tightened to 75 to 80 foot pounds - cold.

TECHNICAL SERVICE BULLETIN

CABLE ADDRESS H U D S O N C A R

TS 77-16 File Under: ENGINE COOLING & WEATHER CONTROL

July 1977

ALL HUDSON OWNERS, 1948-54 MODELS

WEATHER CONTROL CORE AND HOSE CONNECTIONS

Beginning with series A production the Weather Control core and hose connection arrangement was identical to that of the 500 series. On September 12, 1950, after a total of 539 cars - Model 4-A with Weather Control and Weather Control with Remote Control, also series 5A-6A-7A-8A with Weather Control and Remote Control, the radiator core thickness was changed from 3.12 inches, part number 166736, to 3 inches, part number 305233.

With this new core, the inlet hose (from Ranco valve) must be connected to the LOWER heater core tube and the outlet hose (to the water pump) to the UPPER tube. This is just the reverse of the manner of connecting to the former heater core. Shown in the illustration below are the former and present methods of connections.



The air vent has been eliminated from, the new heater core upper tank and it is therefore very important that connections be made correctly to avoid possibility of air trap resulting in impaired heating efficiency,

Connections at the Ranco Heat Valve are the same as heretofore. Should the connections here be reversed an occasional noise in the heater is apt to result due to balanced pressure caused by thermostat effort. on one side and water flow resistance on the other side of the poppet type valve.

Yours very truly

A. E. Adams Technical Service Editor

Reference: Hudson Service Merchandiser December, 1950 & February, 1953

TECHNICAL SERVICE BULLETIN

CABLE ADDRESS H U D S O N C A R

TS 77-17 File Under; ENGINE

July 1977

ALL HUDSON OWNERS, 1940-1957 MODELS

SPARK PLUG RECOMMENDATIONS

The following spark plugs are factory recommended for average operating conditions. If the car is Operated under conditions resulting in consistently high engine temperatures, a colder plug should be used. If the car operates under conditions resulting in consistently low engine temperature, a hotter plug may be indicated.

Spark Plug For Models

Champion J-7 - 1940-47, All Models with Standard Cylinder Head. (Formerly J-9)

Champion H-8 - 1948-50, All Models, 1951-52, Models 4A, 5A, 6A, 8A, 4B, 5B, 6B, 8B.

Champion H-10- 1946-47, All Eight Cylinder with Aluminum Cylinder Head, 1953-54, Models IC, 2C, 4C, 5C, ID, 2D, 3D, 4D, 1955-56 Wasp 1955 Hornet V-8 Beginning with Engine #P-1001 and Prior to Engine \$P-6001.

Champion H-11 - 1951-56 All Hornet Six Models,

Autolite AG-5 - 1955 Hornet V-8 beginning with Engine #P-0001, Prior to Engine #P-0500 and beginning with #P-6001.

Champion N-18 - 1956 Hornet V-8

AutoLite AG-7 - 1956-57 Hornet Special 0-8,

Yours very truly,

A. E. Adams, Technical Service Editor

TECHNICAL SERVICE BULLETIN

CABLE ADDRESS H U D S O N C A R

TS 77-18 File Under: ENGINE

July 1977

ALL HUDSON OWNERS USING 1955-56, "308" & "202" ENGINES

ENGINE CODING FOR SIZE OF BORE, MAIN BEARINGS, AND CONNECTING ROD BEARINGS

An ABC code was effective after Engine Number F-2814 and M-3616. 1955 Hudson Hornet "308" and Wasp "202" engines to identify oversize cylinder bores or undersize crankshaft bearings. The code follows the Engine Number. Engines that are not marked are standard in all respects. The letters are decoded as follows:

First Letter - - - Size of Bore Second Letter--- Size of Main Bearings Third Letter - - - Size of Connecting Rod Bearings

Letter "All - - - - Standard Letter "B" - - - - .010" Undersize Letter "C" - - - .010" Oversize Letter I'D" - - - .001" Undersize

For example, an engine with standard bore, standard main bearings, and 010" undersize connecting rod bearings is coded "AAB". With .001" undersize crankpin, it would be coded "AAD".

Where oversize bores are listed, all bores are plus .010".

The main bearing journals, crankpins, or both may be minus .010". In the case of .001" undersize, one or more bearings may be used.

In no case will an individual engine have oversize bores arid undersize crankshaft journals.

Yours very truly

Reference: AMC Letters dated 17Mar55 and 30Jun55

A. E. Adams Technical Service Editor

TECHNICAL SERVICE BULLETIN

CABLE ADDRESS H U D S O N C A R

TS 77-19 File Under: SERVICE GENERAL

August 1977

ALL HUDSON OWNERS, 1928 MODELS 1928 HUDSON INFORMATION, MODELS "O" & "S',

Engine: 6 Cylinder. bore 3 ¹ / ₂ ", stroke 5".	Transmission: Fill to level of filler plug on right side of case.
Piston Displacement: 288 cu. in.	Rear Axle: Fill to level of filler plug in housing cover.
Firing Order: 1, 5, 3, 6, 2, 4.	<u>Clutch</u> : ¹ / ₄ pint mixture of 1/8 pt light motor oil & 1/8 pt kerosene
Spark Plugs: Metric, gap .028"	Brakes: Drums 14" dia., front and rear. Internal expanding shoes
Contact Points: Opening .020"	2" wide.
Valve Tappet Clearance:	Springs: Ft, 39" long, 21/4" wide; Rear, 57-11/16" long, 21/4" wide
Intake .004" to .006" Hot.	Spring Bolts: Rear spring front end bolt ³ / ₄ " diameter, shackle bolts
Exhaust .006" to .008" Hot.	11/16" diameter.
Oil Reservoir and Troughs, holds 9 qts.,	<u>Tires:</u> 31 x 6.00", Balloon, Inflate Front tires 35 lbs., rear tires 38 lbs.
Reservoir only, 7 qts.	Lamp Bulbs: 6-v, double filament, 21 cp each filament; dome, side,
Fan Belt: "V" Type.	and instrument lights, 6-v, 3 cp, single contact; stoplight 6-v, 15
Cooling System: Capacity 5 ¹ / ₂ gals.	cp, single contact.
Gasoline Tank: Capacity 19 gals.	Storage Battery: 6-volt, 15 plate
Storage Battery: 6-V, 15 plate	
	MODEL "O" MODEL "S"

127 3/8"	118 1/2"
21 Feet	20 Feet
8 1/4"	8 81/4"
4 5/11 to 1	4 1/12 to 1
	3525 Lbs.
	3575 Lbs.
3720 Lbs.	3645 Lbs,
3710 Lbs	
3780 Lbs.	
3945 Lbs.	
	127 3/8" 21 Feet 8 1/4" 4 5/11 to 1 3720 Lbs. 3710 Lbs 3780 Lbs. 3945 Lbs.

SPEEDOMETER & VACUUM TANK supplied by	HORN, E. ALaboratories, Inc.,
Stewart-Warner, Chicago, Ill.	Brooklyn, N. Y.
BATTERY., The Electric Storage Battery	CARBURETOR, Marvel Carburetor Company
Co., Philadelphia, Pa.	Flint, Michigan.
GASOLINE GAUGE, King-Seeley Corp.,	WINDSHIELD CLEANER, Trico Products
Ann Arbor, Michigan.	Company, Buffalo, N. Y.
STARTING MOTOR, GENERATOR, DISTRIBUTO	R STABILATORS, J.W.Watson Co Phila. Pa.
IGNITION COIL AND SWITCH, The Electric	TIRES, Goodyear or Miller Tire Co.,
Auto-Lite Co., Toledo, Ohio.	Akron, Ohio.

WTN TECHNICAL SERVICE

CABLE ADDRESS ABLE ADDRESS H U D S O N C A R

TECHNICAL SERVICE BULLETIN

TS 77-20 File Under: INSTRUMENT PANEL & RADIO

August 1977

ALL HUDSON OWNERS, 1946-1954 MODELS

FUEL AND TEMPERATURE DASH UNITS

Listed below are the fuel and temperature dash units also their corresponding sending units that are, mounted on the fuel tank or cylinder head

	Mfg.'s				Sending	Voltage
Model	Dash Unit	Part No.	Color	Function	Unit	Regulator
1946-1947	209028	41050	Black &	Fuel	159110	None
1946-1947	209029	41053	White	Temp	159058	Required
482-84; 492-94	213207	42135	Black &	Fuel	302709	" "
482-84; 492-94	213208	42140	White	Temp	159058	" "
(lst) 491-91; 481-83	213202	42120	Black &	Fuel	302709	" "
(1st) 491-93; 481-83	213203	42125	White	Temp	159058	" "
(2nd) 491-93	217154	42741	Black	Fuel	302709	" "
(2nd) 491-93	217156	42743	Black	Temp	159058	" "
1950	220791.	42916	Black	Fuel	302709	" "
1950	220790	42918	Black	Temp	159058	" "
1941-53 (exc Jet) Jet)	225948	45674	Green	Fuel	304503	226575
1951-53 (exc Jet) Jet)	225948	45675	Green	Temp	304502	(45677)
1953-54 Jet	236976	46193	Black	Fuel	308508	236977
1953-54 Jet	236966	46197	Black	Temp	304502	(46283)
1954 (Ex Jet)	241382	-	-	Fuel	304503	241384
1954 (exc Jet)	241383	-	-	Temp	304502	241384

When required, only one voltage regulator is used for both fuel and temp gauges. The number given in parenthesis under "Regulator" column is the manufacturers number for the part listed above.

Yours very truly

A. E. Adams, Technical Service Editor

TECHNICAL SERVICE BULLETIN

CABLE ADDRESS H U D S O N C A R

TS 77-21 File Under: BODY & FRAME

August 1977

ALL HUDSON OWNERS, 1950-54 MODELS

EXTERIOR BODY LACQUERS & CODE

NAME	CODE	MODELS	NAME	CODE	MODELS
Ebony Black	5	All	Corinthian Cream	85	1951
Bright or Rocket Red	21	1949-50	Admiral Blue	87	1951
Twilight Gray-Opalescent	23	1950	Boston Ivory	92	1952
Gray Mist-Opalescent	24	1950	Symphony Blue Green(Light	t) 93	1952
Oriental Green-Opal	25	1950	Jupiter Gray	95	1952
Peacock Green-Opal	26	1950	Broadway Blue	96	1952
Texas Tan-Opal	27	1950-53	Southern Blue	97	1952
Revue Red-Opal	28	1950	Gulf Green	115	1952
Golden Gray-Opal (Light)	29	1950	Symphony Blue Green(Dark) 123	1952
Golden Gray-Opal (Dark)	30	1950	Pearl Gray-Opal	128	1953
Lagoon Blue-Opal	35	1950	Meadow Green-Opal	132	1953
Legion Blue-Opal	36	1950	Surf Green	133	1953
Cornish Cream	37	1950-51	Robins Egg Green	134	1953
Rivard Blue	38	1950	Honey Cream	135	1953
Deep Maroon-Opal	44	1950	Blue Grass Green	136	1953
Bali Blue	45	1950-51	Seal Gray	137	1953
Riviera Blue	46	1950	Beret Blue-Opal	158	1954
Field Gray-Opal	48	1950	Silver Blue	159	1954
Hawaii Green-Opal	49	1950	Clair Blue	160	1954
Dark Maroon	58	1950-51	Spring Green	161	1954
Pacific Blue	59	1951	Pacific Blue Green	162	1954
Northern Gray Opal	60	1951	Palm Beach Green	163	1954
Newport Grey-Opal	61	1951	Pasture Green-Opal	164	1954
Jefferson Green-Opal	62	1951-52	Roman Bronze	165	1954
Naples Green-Opal	63	1951-52	Coronation Cream	166	1954
Toro Red (Light)	64	1951-53	Royal Red	167	1954
Dark Platinum-Opal	66	1951	Algerian Blue-Opal	168	1954
French Gray	72	1951-52	Green Gold	181	1954
Neptune Blue Green-Opal	82	1951	Lipstick	182	1954
Burgundy Maroon	83	1951	Velchrome		

Two Color Combinations for these models will be listed in later Bulletins.

Ref: TS 77-23 - 1948-1948 Body Lacquers

TS 78-4 – 1950-1954 Two-Tone Body Lacquers

WTN TECHNICAL SERVICE

TECHNICAL SERVICE BULLETIN

CABLE ADDRESS H U D S O N C A R

TS 77-22 File Under: BODY & FRAME

August 1977

ALL HUDSON OWNERS 1948-54 MODELS (Except Jet)

FRONT SEAT POSITION

The front seat tracks used on all Hudson cars, 1948 through 1954, except Jet, provide a fore-and-aft seat movement of 4 inches, obtained by raising tile lever on the left side and sliding the seat to the most comfortable position for the driver.

In addition, further provision is made for changing the position of the seat itself on the tracks to accommodate persons of unusually tall. or short stature., This is done by simply removing the 4 screws holding the seat base to the tracks,, moving the seat backward or forward 1 inch and replacing the bolts through the extra set of holes in the seat base. Those two bolts securing the front seat adjusting handle must also be shifted in order that the adjusting control remains in the same relation to the track,

The height and angularity of the front seat can also be changed to enhance driver comfort by raising the seat tracks at the front and/or rear, ends. This is accomplished by inserting front seat spacers, part #123405 and washers part #70746 singly or in combination on both sides between the bottom of the seat tracks and the floor panel until the most suitable position is found.

Yours very truly

A. E. Adams, Technical Service Editor

TECHNICAL SERVICE BULLETIN

CABLE ADDRESS H U D S O N C A R

TS 77-23 File Under: BODY & FRAME

August 1977

ALL HUDSON OWNERS, 1948-49 MODELS

BODY LACQUERS USED ON 480 AND 490 CARS

Color option letter or number is stamped on right front door upper hinge and may be seen when door is open.

NAME	CODE	MODELS
Ebony Black.	K or 5	All
Quartermaster GrayOpale	scentQ	All to 482-65778
Gallant GrayOpalescent .	G	All to 482-65778
Harness TanOpalescent .	H	All to 482-41192
Banner BlueOpalescent .	B	All to 482-68732
PlatinumOpalescent	CC.	All
Savoy GreenOpalescent .	S	All
Piedmont GreenOpalescen	nt P	All
Navahoe BronzeOpalesce	ntN	All to 482-41192
Jockey BlueOpalescent	J	All to 482-68732
Deep MaroonOpalescent	M	All
Ruby RedOpalescent	RR	All
Queenstown GrayOpalesc	entQ	All from 482-65778 exc. 65800-66458 incl.
Glowing GrayOpalescent	G	All from 482-65778 etc. 65800-66458 inch
Brigantine Blue-Opalescent	tB	All from 482-68732 exc. 68900-69397 inch
Jersey BlueOpalescent	J	All from 482-68732 exc. 68900-69397 inch
Holster TanOpalescent	H	All from 482-41192 etc 41401-41902 inch
Nomad BronzeOpalescen	tN	All from 482-41192 exc. 41401-41902 inch
Pacemaker GreenOpalesc	ent8	All
Sierra GreenOpalescent .	10	All
Hardwood TanOpalescent	t 3	All
Jet BlueOpalescent	4	All
Brazilian BlueOpalescent	1	All
Burgundy MaroonOpalese	cent 6	All (Very limited usage)
Quebec Gray-Opalescent	9	All
Gull GrayOpalescent	2	All
Radiant RedOpalescent	16	All
Gray Gold-Opalescent	17	All
Brigade BlueOpalescent .	18	All
Roman RedBright	19	All
Bright Red	21	All

Page 1 of 2

NAME	CODE	MODELS
Piedmont Green	unner	
Savay Green	lower	Duo Tono SD All
Savoy Green	lower	Duo-Tone SF All
Banner Blue	upper	
Jockey Blue	lower	Duo-Tone JB - All to 482-68732
Brigantine Blue	upper	
Jersey Blue	lower	Duo-Tone IB - All after 482-68732 exc. 68900-69497 incl
Gallant Gray	unner	
Quartermaster Grav	lower	Due Tone ΩG All to $482,65778$
Qualtermaster Oray	10wei	Duo-101e QO - All to 482-03778
Glowing Gray	upper	
Queenstown Gray	lower	Duo-Tone QG - All from 482-65778 exc. 65880-66458 incl.
Navahoe Bronze	unner	
Harness Tan	lower	Duo-Tone HN - All to $482-41192$
Trainess Tan	10 w C1	Duo-Tone IIIV - All to 402-41172
Nomad Bronze	upper	
Bolster Tan	lower	Duo-Tone HN - All after 482-41192 exc. 41401-41902 incl.
Deep Maroon	upper	
Ruby Red	lower	Duo-Tone RM - All
Burgundy Maroon	unner	
Radiant Red	lower	Duo Tone 15 All
Radiant Red	10wc1	Duo-Tolie 15 - All
Pacemaker Green	upper	
Sierra Green	lower	Duo-Tone 14 - All
Gull Gray	upper	
Quebec Gray	lower	Duo-Tone 13 - All
Radiant Red	unner	
Poman Pad	lower	Duo Tone 20 All
Koman Keu	10wei	Duo-Tone 20 - An
Radiant Red	upper	
Bright Red	lower	Duo-Tone 22 - All
Brazilian Blue	unner	
Iet Rhue	-lower	Duo-Tone 12 - All
	10 W CI	

One number is assigned to one color or Duo-Tone combination and will always identify that color or combination only. Subsequent colors and combinations will receive new numbers as they are used. This will eliminate further need for supplying the exact serial numbers when colors change.

Yours very truly,

A. E. Adams Technical Service Editor

Reference: Hudson Service Merchandiser Mar 1950 Ref: TS 77-21 – 1950-1954 Body Lacquers TS 78-4 – 1950-1954 Two-Tone Body Lacquers

CABLE ADDRESS H U D S O N C A R

TECHNICAL SERVICE BULLETIN

TS 78-1 File Under: Body and Frame January 1978

ALL HUDSON OWNERS, 1948-54 MODELS CHECK THE PERIMETER FRAME

Before placing in service or restoring any car it should be placed on a lift and the frame carefully checked for accident or rust damage, The frame is perhaps the most critical part of the car, for like a building if the foundation is faulty the integrity of the whole structure is in doubt.

On the Hudson "step-down" models of 1948-54, rust damage to the perimeter frame may be found when the car has been used for many years in humid areas and on winter roads where salt, was used. The perimeter frame covered externally on the sides by the rocker panels, is a steel box frame that extends from the cowl completely around the. body at a lire just below the door sills. Welded to it are cross members floor pans, seat pans, etc., so that the frame and the body are welded into one unit, which Hudson called "Monobilt" construction. The body and frame reinforce one another. Convertible and Hollywood hardtop models have an additional box member welded inside the regular box frame side rails to compensate for the loss of strength provided by the sedan or club coupe body structure.

If inspection shows rusted out areas caused by the buildup of silt on the inside of the box frame, and you are not familiar with welding, it is suggested that expert advice be obtained before proceeding. Usually rusted-out areas can be repaired provided enough of the frame remains solid enough to weld. Remember the perimeter frame need not be as heavy as a frame on a "separate body frame" car because with Monobilt design the body reinforces the frame.

The frame may be inspected further by removing the door sill scuff plates, and by removing the rocker panels, which are bolted on the 1948-53 models and the 1954 convertible. The 1953-54 Jet and the other 1954 models have welded-on rocker panels.

The perimeter frame and cross-members should be periodically cleaned cut and rust proofed to prevent rust damage. The drain holes should he kept open.

Yours very truly,

A. E. Adams Technical Service Editor

HUDSON MOTOR CAN COMPANY

DETROIT, MICH., U.S.A.

TECHNICAL SERVICE BULLETIN

TS 78-2

January 1978

File Under: FRONT & REAR SUSPENSION

ALL HUDSON OWNERS, 1948-54 MODELS AXLES, STEERING GEAR

Center Steering Pivot Pin Replacement

The installation of the Center Steering Kit, Part Number F 306164, for all Hudson Cars-1948 to 1954, inclusive, seemingly has baffled some mechanics. Therefore us are presenting this information from the February, 1953 Hudson Service Merchandiser.

The pivot pin is a press fit in the center steering arm, secured by a No. 5 taper pin. The cross section of the center steering arm pivot pin and support bracket, illustrated below.



When them is occasion for replacing center steering arm or pivot pin, disconnect tie rod ends, unbolt and remove center am pivot support bracket. Remove nut "H" shown in illustration and take out steering am and pivot assembly. Drive cut taper pin and press pivot pip. out of steering am.

The pivot pin is not drilled because it is much easier to drill it in position than to try to maintain the dimension, as -shown in the illustration, and, at the some time, have the holes coincide.

After pressing the new pivot pin in position in center steering am holding the dimension 2.055-2.053, as shown above, and with a good center punch mark pin for drill start through the large taper opening.

Pivot pin is hardened over the bearing area only, and way be drilled quite easily-using a 1/4" inch drill, followed by reaming with a No. 5 taper reamer.

WTN TECHNICAL SERVICE

TECHNICAL SERVICE BULLETIN

TS 78-3 File Under: ENGINE

ALL HUDSON OWNERS 1948-54 SIXES (EXCEPT JET) January 1978

Valve Adjustment

The following is a valve adjustment chart furnished by Jack Clifford for use on all "232", "262" and "308" six cylinder engines when setting valve lash with a cold engine. Jack says it is faster and more accurate than following the procedure outlined in TS 77-12, dated May 1977.

Adjust valves in the "DN" position.

Va	alve	No.	12	11	10	9	8	7	6	5	4	3	2	1
Тур	e of	Valve	EX	IN	EX	IN	IN	EX	EX	IN	IN	EX	IN	EX
Step	1		DN			DN					UP			UP
"	2				UP		UP			DN		DN		
"	3			DN				DN	UP				UP	
"	4		UP			UP					DN			DN
"	5				DN		DN			UP		UP		
"	6			UP				UP	DN				DN	

When any two valves are up there will be two valves DN, so by the time you rotate the engine one revolution you will have adjusted all the valves exactly. REPEAT this procedure three times.

Cold Valve a lash Adjustment: Intake .012" Exhaust .019"

Yours very truly,

A. E. Adams Technical Service Editor

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U.S.A.

CABLE ADDRESS H U D S O N C A R

TECHNICAL SERVICE BULLETIN

TS 78-4

File Under: Body & FRAME

January 1978 ALL HUDSON OWNERS

Exterior Body Lacquers & Code - 1950-1954

1950 TWO COLOR COMBINATIONS

<u>Code</u>

- Legion Blue-upper 31 Lagoon Blue-lower Gray Mist-upper
- 32 TwiLight Gray-lower Peacock Green-upper
- 33 Oriental Green-lower Golden Gray-upper (Light)
- 34 Golden Gray-lower (Dark) Legion Blue-upper
- 39 Rivard Blue-lower Rivard Blue-upper
- 40 Legion Blue-lower

1951 TWO COLOR COMBINATIONS

Pacific Blue-upper

- 67 Bali Blue-lower
- Northern Gray-upper 69 Newport Gray-lower
- Naples Green-upper
- 69 Jefferson Green-lower Pacific Blue-upper
- 73 French Gray-lower Northern Gray-upper
- 74 French Gray-lower Dark Maroon-upper
- 75 French Gray-lower
- Bali Blue-upper
- 78 French Gray-lower

Page 1 of 2.

<u>Code</u>

- Twilight Gray-upper
- 41 Gray Mist-lower Oriental Green-upper
- 42 Peacock Green-lower
- Golden Gray-upper (Dark)
- 43 Golden Gray-lower (Light) Oriental Green-upper
- 56 Hawaii Green-lower
- Riviera Blue-upper 54 Bali Blue-lower
- Twilight Gray-upper
- 55 Field Gray-lower
- Naples Green-upper
- 79 French Gray-lower
- Newport Gray-upper 80 French Gray-lower Toro Red-upper
- 81 French Gray-lower Burgundy Maroon-upper
- 84 French Gray-lower Jefferson Green-upper
- 86 Corinthian Cream-lower Admiral Blue-upper
- 38 Bali Blue-lower Admiral Blue-upper
- 89 French Gray-lower

1952 TWO COLOR COMBINATIONS

Decton Islams upper
Boston Ivory-upper
Free ab Creation and
French Gray-upper
101 Broadway Blue-lower
Boston Ivory-upper
102 Southern Blue- lower
Boston Ivory-upper
133 Jefferson Green- lower
Naples Green-upper
104 Jefferson Green-lower
Boston Ivory-upper
105 Texas Tan-lower
French Gray-upper
106 Toro Red-lower
Ebony Black-upper
107 French- Gray-lower
Toro Red-upper
108 French Gray-lower
Southern Blue-upper
109 French Gray-lower
Jefferson Green-upper
110 French Gray-lower
Boston lvory-upper
111 Symphony Blue Green (Light)-lower
1953 TWO COLOR COMBINATIONS
Broadway Blue-upper
122 Southern Blue-lower
Honey Cream-upper
139 Robins Egg Green-lower
Toro Red-upper
130 Seal Gray lower

- 139 Seal Gray-lower Honey Cream-upper 140 Texas Tan-lower
- Honey Cream-upper
- 141 Black-lower Honey Cream-upper142 Southern Blue-lower
- Texas Tan-upper
- 143 Honey Cream-lower Robins Egg Green-upper
- 144 Blue Grass Green-lower Meadow Green-upper Ebony
- 145 Surf Green-lower Black -upper
- 147 Seal Gray-lower
- (TS 77-23: 1948-49 Colors)
- (TS 77-21: 1951-54 Single Colors)

Symphony Blue Green(Light)-upper

- 112 Boston Ivory-lower Texas Tan-upper
- 113 Boston Ivory-lower Jefferson Green-upper
- 114 Boston Ivory-lower Gulf Green-upper
- 116 Naples Green-lower Gulf Green-upper
- 117 Jefferson Green-lower Naples Green-upper
- 118 Gulf Green-lowerJefferson Green-upper119 Gulf Green-lower
- Ebony Black-upper
- 120 Boston Ivory-lower Ebony Black-upper
- 121 Symphony Blue Green (Light) -lower Broadway Blue-upper
- 122 Southern Blue-lower Symphony Blue Green (Light)-upper
- 124 Symphony Blue. Green (Dark)-lower Symphony Blue Green (Dark)-upper
- 125 Symphony Blue Green (Light)-lower
- Black-upper 148 Seal Gray-lower Honey Cream-upper 149 Broadway Blue-lower Honey Cream-upper
- 150 Meadow Green-lower Meadow Green-upper
- 151 Honey Cream-lower Black-upper
- 152 Robins Egg Green-lower Honey Cream-upper
- 153 Surf Green-lower Black-upper
- 154 Toro Red-lower Surf Green-upper
- 155 Meadow Green-lower Black-upper
- 156 Pearl Gray-lower
 - Blue Grass Green-upper
- 157 Robins Egg Green-lower

HUDSON MOTOR CAN COMPANY

DETROIT, MICH., U.S.A.

TECHNICAL SERVICE BULLETIN

ALL HUDSON OWNERS, 1940-1941-1942 MODELS

TS 78-6 File Under SERVICE. GENERAL

January 1978

Chassis Model Information

Chassis Woder Information					~ .
		No.	Bore &	Wheel-	Starting
<u>Model</u>		<u>Cyis</u> .	<u>Stroke</u>	Base	<u>Car No. **</u>
<u>1940</u> 40T Hudson Six Traveler Series	*	6	$3 \times 1 \frac{1}{8}$ "	113"	40101
401 Hudson Six Del uye	*	6	$3 \times 4 = 1/8$	113	40101
400 Hudson Six Business Car	*	6	$3 \times 4 - 1/8$ "	113	40101
41 Hudson Super Six		6	3 x 5"	118"	41250
43 Hudson Country Club Six		6	3 x 5"	125"	43370
44 Hudson Fight		8	$3 \times 4 - 1/2"$	118"	44294
45 Hudson Eight DeLuxe		8	$3 \times 4 - 1/2$	118"	4551752
47 Hudson Country Club Fight		8	$3 \times 4 - 1/2$	125"	47167
48P Hudson Big Boy		6	3 x 5"	125"	4816302
480 Hudson Big Boy Business Car	S	6	3 x 5"	125"	4816302
1941					
10T Hudson Six-Traveler Series	*	6	3 x 4-1/8"	116"	10101
10P Hudson Six DeLuxe	*	6	3 x 4-1/8"	116"	10101
10C Hudson Six Business Cars	*	6	3 x 4-1/8"	116"	10101
11 Hudson Super Six		6	3 x 5"	121"	11201
12 Hudson Commodore Six		6	3 x 5"	121"	12202
14 Hudson Commodore Eight		8	3 x 4-1/2"	121"	14203
15 Hudson Commodore Custom 8	Coupe	8	3 x 4-1/2"	121" 1	515490
17 Hudson Commodore Custom 8	Sedan	8	3 x 4-1/2"	128"	17205
18P Hudson Big Boy		6	3 x 5"	128"	1812548
18C Hudson Big Boy Business Car	ſS	6	3 x 5"	128"	1812548
<u>1942</u>					
20T Hudson Six	*	6	3 x 4-1/8"	116"	20131
20P Hudson Six Deluxe	*	6	3 x 4-1/8"	116"	20101
20C Hudson Six Business Cars	*	6	3 x 4-1/8"	116"	20101
21 Hudson Super Six		6	3 x 5"	121"	211324
22 Hudson Commodore Six		6	3 x 5"	121"	221322
24 Hudson Commodore Eight		8	3 x 4-1/2"	121"	241318
25 Hudson Commodore Custom 8	Coupe	8	3 x 4-1/2"	121"	255755
27 Hudson Commodore Custom 8	Sedan	8	3 x 4-1/2"	128"	271319
28 Hudson Big Boy Business Cars		6	3 x 5"	128"	28101

* NOTE-The 3 x 4-1/8" engine is standard for models 40, 10, and 20. Starting with car No. 4052323, the 3 x 5 engine was optional equipment for model 40. The 3 x 5 engine is also optional for models 10 and 20. Models 10 and 20 cars equipped with the optional 3 x 5 engine are identified by the letter "L" stamped in lower left hand comer of car number plate.

Page 1 of 2

Page 2 - TS 78-6

The 3" x 5" engine may be identified by a 1/2" projection on right side of oil pan tray, 5-1/2" to the rear of oil suction pipe.

SPECIAL 1941 HUDSON SIX MODEL FOR CANADA my be identified by the absence of the letters - T, P, or C - on the car serial number plate. The principal points of difference are the use of the $3" \times 5"$ engine as standard equipment, the use of friction type front door window wings and outside body mouldings.

PLATED BODY MOULDINGS FOR 1942 CARS, as well as trim mouldings and ornaments, were discontinued and superseded by painted or polished parts on care built after January 15, 1942, effective with car no. 37067.

BODY MODELS	CHASSIS MODELS
Two door Sedan	40T,40P,41,44,45,10T,10P,11,12,14,20T,20P, 21,22,24
Four door Sedan or 7 Passenger	40T,40P,41,43,44,45,47,48P,I0T,10P,II,I2, 14,17,18P,20T,20P,21,22,24,27
Four door Sedan Passenger	40T,40P,41,43.44,45,47,10T,10P,11,12,14, 17,20T,20P,21,22,24,27
Four door Sedan-7 Passenger	43,47,48P,17,18P
Three passenger Coupe	4OT,40P,41,44,10T,10P,11,12,14,15,20T,2OP 21,22,24
Victoria Coupe	40T,40P,41,44
Club Coupe	10T,IOP,11,12,14,15,20T,20P,21,22,24,25
Convertible Coupe	40P,41,44
Convertible Sedan 4	0P,41,44,10P,11,12,14,20T,20P,21,22,24
Utility Coach	40C,IOC,20T
Utility Coupe	40C,10C,20T
Carryall	48P,18P
Chassis with Cab	40C,48C,10C,18C,20C,28C
Cab Pickup	4OC,48C,10C,18C,2OC,28C
Panel Delivery	40C,48C
Station Wagon	11,14,21

All-Purpose Delivery 10C

CALENDAR YEAR SHIPMENTS FROM FACTORY

1940 - 86,965 cars - 1,035 commercial - 87,900 Total 1941 - 78,717 cars - 812 commercial - 79,529 Total 1942 - 5,396 cars - 67 commercial - 5,463 Total

HUDSON MOTOR CAR COMPANY

DETROIT, MICH., U.S.A.

CABLEADDRESS H U D S O N C A R

TECHNICAL SERVICE BULLETIN

TS 78-7

File Under: INSTRUMENT PANEL & RADIO January 1978

ALL HUDSON OWNERS, 1942-54 MODELS

Speedometer Lubrication

Perhaps the most neglected point about the car from a standpoint of lubrication, is the speedometer. This may be accounted for by the fact that the point of applying lubricant cannot be easily seen and is not as accessible as most other points about the car.

There is an oil hole and wick provided on the 1948-1954 models speedometer, just behind the head, for lubricating the pinion shaft to which the drive cable connects. This should be lubricated every 10,000 miles with a few drops of fine oil equivalent to a S.A.E. 10.

The speedometer cable should be removed, cleaned free of all old grease and given a coating of light graphite grease. The cable may be checked for kinks or bends by laying out straight on a clean flat surface.

It is not unusual that after a season or two of operation the speedometer registering pointer becomes unsteady or perhaps cable noise develops - both of which may be corrected by lubrication.

The 1942-46 and 47 speedometers may be lubricated only after removal from the instrument board and taking out the oil hole plug.

Yours very truly,

A. E. Adams, Technical Service Editor

Reference: Hudson Service Merchandiser. September 1950

TECHNICAL SERVICE BULLETIN

TS 78-8 File Under; BODY & FRAME January 1978

ALL, HUDSON OWNERS

Hudson Trimming Specifications For 1930 Models

The following trim specs for 1930 models may be of interest to all restorers of Hudson cars from that year through the mid-thirties. (Cont'd from TS 77-13)

	Color	Material	Manufacturer	Mfg.'s No.
HUDSON PHAETON (119")				U
Seats	Two-tone	Leather		
& Backs	Gray	D. B. No. 1	Eagle Ottawa Co.	350771
Side Walls, Door			-	
Panels, etc	Gray	Imit. Leather		
Carpet	Gray	C. H. Masland	& Sons	B76C
<u>HUDSON ROADSTER (119")</u>				
Seat Cushions	Gray &	Leather		
and Backs	Black	D. B. No. 1	Cleveland Tanning Co	1801-92
Side Walls, etc	Gray &			
	Black	Imit.Leather		
CarpetRumble	Gray		C. H. Masland & Sons	V76C
	10")			
HUDSON STANDARD SEDAN (1.	<u>[9]</u> Ton	Normad Clath	Amaglaga Mfg. Co	2508
Side Wells, Deer Derels	1 an	Napped Cloth	Amoskeag Mig. Co.	2308
Side Walls, Door Panels,				
Seat Cushion & Backs,	т	N C 1 · " A "		524
Backs of Front Seat	Tan	Mohair "A"	Collins & Aikman	534 1/7/0
Carpet	Gray	·····	W. & J. Sloane	V/6C
Windlace	Tan	Rayon	Bridgeport Coach Lace Co.	5-581RA
Curtain	Gray		Adams & Westlake	Rex No. 3
HUDSON SUNSEDAN (119")				
Seat Cushions & Backs	Brown &			
Side Walls etc	Grav Stripe	Bedford Cord	Rockanum Mills	6006 5
Carnet	Gray	Dealora Cola	C H Masland & Sons	V760
Windlace	Brown	Imit Leather	C. II. Masiand & Sons	• 700
Windlace	DIOWII	IIIIt.Leather		•••••
HUDSON BROUGHAM (126")				
Headlining	Gray	Napped Cloth	Amoskeag Mfg. Co.	
Upper Side Walls	Gray	Plain	e e	
- II		Broadcloth	Wm. Wiese & Co.	3797
Lower Side Walls. Seat	Two-tone			
Cushions, Backs, etc.	Grav	Cloth	Wm. Wiese & Co.	3796
Carpet	Grav		W. & J. Sloane	V76C
Windlace	Beige	Imit Leather		.,
Curtains	Grav		Adams & Westlake	Rex No. 3
	J			

Page 1 of 2

Color Material	Manufactur	er Mfgr's.	No.		
HUDSON PHAETON - 7 Pass. ((126")				
Seats and	Two-tone	Leather			
Backs (All)	Gray	D.B.No.1	Eagle Ottawa Co.	3-50771	
Side Walls,	Two-tone		-		
Door Panels	Gray	Imit.Leather			
Carpet	Gray		C. H. Masland & Sons	V76C	
HUDSON SEDAN - 7 Pass. (126	6") Car No. 46702	2 to 47129			
Headlining	Fawn	Napped Cloth	Amoskeag Mfg. Co.	2424	
Side Walls, Door Panels,		**	0 0		
Backs of Front Seats	Fawn	Broadcloth	Wm. Wiese Co.	3371	
Seat Cushions, Backs	Fawn	Broadcloth	Wm. Wiese Co.	3370	
Carpet	Fawn	Wool	Bigelow-Hartford	223-4	
Windlace	Fawn	Worsted	Vogt	3034	
Curtains	Fawn		Adams-Westlake		
HUDSON SEDAN - 7 Pass. (126	6") Car No. 47129	9 to			
Headlining	Gray	Napped Cloth	Amoskeag Mfg. Co.	2589	
Side Walls, Door Panels,					
Back of Front Seat,					
Seat Cushions & Backs	Gray	Broadcloth	Glenside Woolen Mills	101	
Carpet	Gray	Wool	W. & J. Sloane	M140C	
Windlace	Gray	Rayon	Superior Felt Products	10140	
Curtains	Gray		Adams & Westlake	Rex No. 3	
HUDSON TOURING SEDAN	(126")				
Headlining	Gray	Napped Cloth	Amoskeag Mfg. Co	2515	
Seat Cushions, Backs,					
Side Walls, Door					
Panels, etc	Gray	Mohair "A"	Collins & Aikman	533	
Carpet	Gray		W. & J. Sloane	V76C	
Windlace	Gray	Rayon	Bridgeport Coach Lace Co	283WRA	
Curtains	Gray		Adams & Westlake	Rex No 3	

(From Hudson Reference Sheet No. 42, March, 1930 Courtesy of Jack Miller)

This Bulletin was continued from TS 77-13, May 1977

DETROIT, MICH., U. S.A.

CABLEADDRESS H U D S O N C A R

TECHNICAL SERVICE BULLETIN

TS 78-9 File Under: SERVICE GENERAL January 1978

ALL HUDSON OWNERS 1946-1947 MODELS

1946-1947 Model Information

Mod	el	Wheel-	No. of	Bore &	Starting	Corresponding
No.	Model Name	base	Cyls.	Stroke	Car No.	1942 Model
51	Hudson Super 6	121"	6	3 x 5"	31101	21
171	Hudson Super 6	121"	6	3 x 5"	171101	
52	Hudson Commodore 6	121"	6	3 x 5"	32101	22
172	Hudson Commodore 6	121"	6	3 x 5"	172101	
53	Hudson Super 8	121"	8	3 x 4½"	3316269	24
173	Hudson Super 8	121"	8	3 x 4½"	173101	
54	Hudson Commodore 8	121"	8	3 x 4½"	3416285	25
174	Hudson Commodore 8	121"	8	3 x 4½"	174101	
58	Hudson Business Cars	128"	6	3 x 5"	38215	28
178	Hudson Business Cars	128"	6	3 x 5"	178101	

CAR NUMBERING SYSTEM FOR 1946 Hudson cars: The first two figure of the car

number denote the chassis model, according to the following plan -

	-			
31 - denotes Model 51		33 - denotes Mod	el 53	38 - denotes Model 58
32 - denotes Model 52		34 - denotes Mod	el 54	

CAR NUMBERS OF THE 1947 Models use the first three figures to denote tile chassis model instead of the first two as on previous models. The. remaining figures in the car number comprise the actual serial number of the car, and these figures run in a single series, regardless of model.

The car number is stamped on a metal plate located on the rear of the right front body pillar, and may be seen by opening the right front door. The engine number, which is the same as the car number, is stamped on the top of the cylinder block, right side, between numbers one and two exhaust ports.

BODY MODELS	CHASSIS MODELS
Two door Brougham	51-171
Four door Sedan	51-52-53-54-171-172-173-174
Three Passenger Coupe	51-171
Club Coupe	51-52-53-54-171-172-173-174
Convertible Brougham	51-54-171-174
Chassis with Cab	58-178
Cab Pickup	58-178

CALENDAR YEAR SHIPMENTS FROM FACTORY

1946 90,766 cars	3,104 commercial
1947 100,393 cars	2,917 commercial

93,870 Total 103,310 Total

WTN Technical Service

CABLEADDRESS H U D S O N C A R

TECHNICAL SERVICE BULLETIN

TS 78-10 File Under: ELECTRICAL ALL January 1978

HUDSON OWNERS 1940-54 MODELS

Headlight Mounting Ring & Housing Interchangeability

Headlamp Housing Assembly, #220703, as shown in Figure #1, may be used as a replacement Housing for all Models from 1940 through 1954.

When used as a replacement on models prior to 1948, Clips "B" in illustration Figure #1, are used to engage the retaining springs of Mounting Ring #141855, Figure #3, used on all Models 1940 through 1947.



Mounting Ring, #220704, Figure #2 is used on all Models from 1950 through 1954 and uses a single retaining spring, retained by Clip "A" in the Headlamp Housing Figure #1.

Mounting Ring, #220704, may also be used as a replacement for #141855 on earlier Models, by the addition of a Retaining Spring, #141857, the springs then being relocated the same as shown in Figure #3, as provided for on the new Mounting Ring.

Yours very truly,

A. E. Adams Technical Service Editor

Reference: Hudson Service Merchandiser January 1951

HUDSON MOTOR CAR DETROIT 14, MICH., U.S.A.

TECHNICAL SERVICE BULLETIN

TS 78-21 File Under: ENGINE

ALL HUDSON OWNERS, 1948-56, SIX CYL (EX. "202")

ENGINE INFORMATION, SIX CYLINDER, 1948-56 (EXCEPT "202")

All 1948-56 Hudson six cylinder engines, except the "202" engine, are basically the same except as noted below. In addition to the information on this page, this bulletin contains illustrations showing all the parts of the engine and identifies each part to facilitate the ordering of parts.

Cu.In. <u>Disp.</u>	Bore & Stroke	Used in Chassis Models
308 -	3 13/16" x 4 1/24 -	7A, 7B, 7C, 6D, 7D, 35560, 35660
262 -	3 9/16" x 4 318" -	481, 482, 491, 492, 501, 502, 5A, 6A, 5B, 6B, 5C, 5D. (Optional 4A, 4B, 4C, 4D.)
232 -	3 9/16" x 3 7/8" -	500, 50A, 4B, 4C, 4D.

THE CYLINDER WATER JACKETS were modified, beginning with the first production of the 1951 Models ("A" Series), to make for a more uniform distribution of water on both sides of cylinder bores. This affected a change in the position of the water passageways between the cylinder head and the block. In addition, the block was increased in width. Therefore, the 1948-50 Cylinder heads and gaskets are not interchangeable with the 1951-56 models.

THE STEEL TYPE OIL PUMP GEAR was replaced with an aluminum bronze gear during 1950 production, so that any wear would be transferred from the camshaft to the more easily replaced oil pump gear. This aluminum bronze gear was used through 1956. The condition of this gear should be checked if mileage is unknown or if it has been used over 40,000 miles. The amount of wear will vary considerably, depending upon driving conditions.

THE TIMING CHAIN should be checked after 40,000 miles, or possibly be replaced every 40,000 miles if top performance is desired, according to reports from the, field. Timing chain cover assembly 301342, having chain shoe welded to it was used in "D" series to serial numbers 4D-4286275, 5D-5285985, 7D-7285812. In subsequent serial numbers cover 300188 is used with 310880 Snubber & Oil Trough Assembly bolted to front of cylinder block. 300188, 310880 may be used for service by removing plug bolt in cylinder block and attaching snubber assembly in same.

HYDRAULIC VALVE LIFTERS were used only in 1956 (Model 35660).







ENGINE - UPPER SECTION

H2-1	Cylinder and piston assembly
H2-15	Pipe - water distribution
H13-1	Cylinder head
H3-5	Gasket - cylinder head
H3-10	Cap screw - cylinder head
H3-11	P/Washer - Cylinder head cap screw
H3-14	Water outlet - cylinder head
H3-16	Gasket - cylinder head water outlet
H3-17	Bolt - water outlet front
H3-18	L/Washer - water outlet bolt
H3-20	Thermostat
H3-30	Spark plug
H4-1	Exhaust - Manifold assembly
H4-10	Damper - exhaust
H4-23	Stud - intake to exhaust
H4-24	Stud - exhaust manifold
H4-26	Nut - exhaust manifold
H4-27	P/Washer - exhaust manifold
H4-35	Elbow - exhaust manifold
H4-36	Gasket - elbow to manifold
H4-37	Nut - exhaust manifold
H5-1	Intake manifold
H5-15	Clamp - manifold
H5-32	Nut
H5-34	Plain washer
H5-35	Gasket
H11-35	Cover - valve chamber
H11-40	Screw - valve cover
H11-45	Breather tube
H11-49	Gasket - breather tube
H11-53	Screw- breather tube
H13-1	Oil nump assembly
H13-2	Gasket - oil numn
H13-5	Can screw - oil nump
H14-1	Water numn
H14-2	Bolt - pump to cylinder
H14-3	Bolt - pump to cylinder
H14-13	Gasket - nump to cylinder
H14-26	Pulley - water nump
H14-30	Fan belt
H14-31	Fan blade
H14-32	Can screw
H 14-33	Lock washer
N1-1	Carburetor assembly
N1-4	Gasket - carburetor
N1-6	Deflector - heat
N1-9	Nut - carburetor
N1-14	Tube and cover assembly
N4-1	Fuel pump
N4-8	Sleeve - pump to cylinder
N4-9	Bolt - pump to cylinder
	r r · · · · · · · · · ·

N4-18 Spacer - fuel pump

ENGINE - LOWER SECTION

1	Crowleakatt
H0-1	Cranksnall Dolt flowshool
H0-2	Bolt - Hywneel
H0-3	Busning - mainsnaft pilot
H6-4	Retainer
H6-11	Screw - main bearing cap
H6-13	Lock plate - main bearing cap
H6-19	Dowel - main bearing cap
H8-6	Bearing - connecting rod
H9-1	Piston
H9-2	Pin - piston Ring
H9-3	Piston pin
H9-4	Lock - piston
H9-7	Ring - piston upper
H9-1	Ring - piston upper - oil
H9-14	Ring - piston lower - oil
H10-3	Vibration dampener
H10-4	Hub
H10-5	Facing - front
H10-6	Plate - cover
H10-7	Bolt - cover
HI0-10	Spacer
H10-1	Key
H12-1	Pan assembly
H12-2	Flange - suction pipe
H12-6	Plug - oil drain
H12-7	Pipe - oil suction
H12-12	Screen - oil pan
H12-13	Gasket - oil pan
H 12-17	Seal - oil pan
H12-25	Bolt - oil pan
H12-28	Lock washer - oil pan boll
H15-2	Sprocket - crankshaft
H15-6	Key - sprocket
H15-8	Timing chain
H6-23	No. 1 bearing - crankshaft
H6-24	No. 2 bearing - crankshaft
H6-25	No. 3 bearing - crankshaft
H6.26	No. 4 bearing - crankshaft
H6-40	Seal - rear main bearing
H6-80	Flywheel
H6-81	Starter gear - flywheel
H6-82	Plug - flywheel drain
H6-83	Gasket - drain plug
H8-1	Connecting rod
H8-2	Bolt - connecting rod
H8-3	Nut - connecting rod bolt
H8-4	Companion nut
H8-5	Bushing - piston pin

ENGINE CAMSHAFT AND VALVES

H7-1 Camshaft

- H7-7 No. 1 bearing camshaft
- H7-8 No. 2 bearing camshaft
- H7-9 No. 3 bearing camshaft
- H7-1 No. 4 bearing camshaft
- H7-21 Thrust plate camshaft
- H7-22 Bolt thrust plate
- H7-23 Lock
- H11-1 Valve inlet
- H11-3 Valve exhaust
- H11-6 Guide inlet
- HI 1-8 Guide exhaust
- HII-11 Spring valve
- HII-13 Seat valve spring

- H11-15 Retainer valve seat
- H11-18 Tappet
- H11-20 Adjusting screw
- H15-1 Sprocket camshaft
- H15-5 Bolt sprocket
- H15-9 Trough oil
- H15-10 Bolt
- H15-11 Cover timing chain
- H15-12 Shoe timing cover
- H15-13 Rivet cover shoo
- H15-14 Bumper timing chain
- H15-18 Oil seal timing cover
- H15-19 Gasket timing cover
- H 15-21 Bolt timing cover
- H15-23 Lock washer

Page 6, TS 78-21



_

TECHNICAL SERVICE BULLETIN

TS 78-22 File Under: ENGINE COOLING & WEATHER CONTROL

ALL ESSEX OWNERS, MODELS WITH THERMOSYPHON COOLING

INSTALLATION OF HOT WATER HEATER

Reports from the field indicate that many owners of Essex and other cars using thermosyphon cooling systems are unaware of how to install a hot water heater in these models. D. C. Daugherty has supplied the following instructions for such an installation.

- 1. If the hot water heater you wish to install is an early model, probably has an air release valve in the toy). Remove this valve, leaving the valve body in the tank.
- 2. Epoxy cement a piece of loose-fitting copper tubing in the valve body opening. Since there is no strain at this point, the use of epoxy cement is recommended

If heater has no air outlet, drill hole in top or tank and epoxy tubing in place.

- 3. Drill a hole in the extreme top of the radiator tank the size or the copper tubing. Put a 90 deg. angle in this tube then epoxy cement to tank opening.
- 4. Install heater as high as being careful not to interfere with wiring etc.
- 5. Install a piece of plastic or wiper tubing from the top of the radiator tank to the top of the heater as illustrated on page two of this bulletin.
- 6. Hose clamps, as illustrated were furnished with universal type hot water heaters made for cars not equipped for heaters. These clamps simplify the installation. If they are not available, drill water manifolds and braze a short piece of pipe into the hole. The diameter and

TECHNICAL SERVICE BULLETIN

TS 78-23 File Under: SERVICE GENERAL

November 1978

ALL HUDSON OWNERS, 1937 MODELS 1937 MODEL INFORMATION

Model No.	Model Name	No. Cyls.	Bore & Stroke	Wheel- base	Starting Car No.
70	Terraplane Commercial	6	3 x 5	21.6	70-101
71	Terraplane Deluxe	6	3 x 5	21.6	71-101
72	Terraplane Super	6	3 x 5	21.6	72-101
73	Hudson Custom 6	6	3 x 5	21.6	73-101
74	Hudson Deluxe 8	8	3 x 4½	28.8	74-101
75	Hudson Custom 8	8	3 x 4½	28.8	75-101
76	Hudson Deluxe 8	8	3 x 4½	28.8	76-101
77	Hudson Custom 8	8	3 x 4½	28.8	77-101
78	Terraplane Commercial	6	3 x 5	21.6	78-101

CAR NUMBERING SYSTEM:

In the car numbering system used in 1937 Hudson production, the first figure of the car number denotes the year, the second number denotes the model. The remaining number comprises the actual serial number. These numbers run in sequence regardless of model.

CHASSIS MODELS
71, 72, 73
71, 72, 73, 74, 75
71, 72, 73, 74, 75
71, 72, 73, 74, 75
71, 72, 73, 74, 75, 76, 77
71, 72
71, 72, 73, 74, 75, 76, 77
71, 72
73, 74, 75
73, 74, 75
70, 78
70, 78
70, 78
70
70
78
70

CALENDAR YEAR SHIPMENTS FROM FACTORY:

Passenger Cars (Hudson) - 39, 848; Passenger Cars (Terraplane) - 83,436; Commercial Cars - 8,058

TECHNICAL SERVICE BULLETIN

TS 78-24

File Under: FRONT & REAR SUSPENSION AXLES STEERING GEAR

ALL HUDSON OWNERS, 1948-54 MODELS REAR AXLE IDENTIFICATION AND USAGE, 1948-1954

Two types of rear axles were used in Hudson cars during 1948-]954, The first type axle was used in 1948-1952 and is denoted in this Bulletin by "H". It is identified by a housing with a welded cover. The second type was used in 1952-154 and is denoted in this Bulletin by "P". It is identified by a housing with a bolted cover. The first car manufactured with the "P" axle was 7B-159456.

To identify the ratio of the "H" type rear axle a number is stamped on the flange of the differentia] carrier where it is bolted to the housing. For the "P" type rear axle an identifying number is stamped on a tag which is attached to the axle by one of the cover bolts.

STANDARD USAGE RATIOS:

Year Used	Туре	Ratio	Identification
1948-1952	"Н"	4.10-1	1-10
1948-1952	"Н"	4.55-1	5-9
1950	"H"	3.82-1	9-11
1951-1952	"Н"	3.58-1	7-12
1952-1954 (exc. Jet)	"Р"	4.09-1	45/11
1952-1954 (exc. Jet)	"Р"	4.55-1	50/11
1952-1954 (exc. Jet)	"Р"	3.07-1	43/14
1953-1954 Jet	"Р"	4.10-1	41/10
1953-1954 Jet	"Р"	4.27-1	47/11
1953-1954 Jet	"P"	3.54-1	46/13
1953-1954 Jet	"Р"	3.31-1	43/13

SEVERE USAGE RATIOS:

-

For All 1952-1954 Except Jet Models	For all Jet Models
3.07-1	4.89-1
3.31-1	4.27-1
3.92-1	4.09-1
4.27-1	3.92-1
4.55-1	3.54-1
3.53-1	3.31-1
4.09-1	



FIGURE 1

- 1. Drive shaft nut
- 2. Drive shaft nut washer
- 3. Drive shaft key
- 4. Adjusting cap bolt nut
- 5. Adjusting cap bolt nut lockwashers
- 6. Brake backing plate
- 7. Adjusting cap bolt
- 8. Wheel bearing cup
- 9. Wheel bearing cone
- 10. Axle housing
- 11. Spring mounting pad
- 12. Differential carrier gasket
- 13. Differential carrier to housing bolt lock washer
- 14. Differential carrier to housing bolt nut
- 15. Differential carrier to housing bolt

- 16. Differential carrier to cap assembly
- 17. Differential case left half
- 18. Drive pinion
- 19. Rear pinion bearing cup
- 20. Pinion bearing spacer
- 21. Front pinion bearing cup
- 22. Pinion oil seal
- 23. Rear axle companion flange
- 24. Rear axle companion flange nut
- 25. Rear axle companion flange washer
- 26. Drive pinion oil washer
- 27. Front pinion bearing cone
- 28. Rear pinion bearing cone
- 29. Rear pinion bearing shim
- 30. Differential pinion shaft locating screw

"H" REAR AXLE



FIGURE 2

- 31. Differential pinion assembly
- 32. Differential pinion bushing
- 33. Differential bearing cup
- 34. Differential bearing cone
- 35. Drive shaft thrust spacer
- 36. Drive shaft nut cotter
- 37. Wheel bearing adjusting cap
- 38. Wheel bearing adjusting cap oil seal
- 39. Wheel bearing adjusting cap shims
- 40. Wheel bearing grease hole plug
- 41. Drive shaft oil seal assembly
- 42. Drive, shaft
- 43. Rear axle housing stabilizer bracket cotter
- 44. Rear axle housing vent assembly
- 45. Differential pinion thrust washer
- 46. Drive shaft thrust button
- 47. Differential gear

- 48. Differential gear thrust washer
- 49. Drive gear bolt
- 50. Drive gear bolt lockwasher
- 51. Drive gear
- 52, Differential pinion shaft
- 53. Differential care screw lockwasher
- 54. Differential case screw
- 55. Differential case right half
- 56. Housing cover
- 57. Housing cover drain plug
- 58. Differential bearing adjusting cap
- 59. Differential bearing adjusting nut lock
- 60. Differential bearing adjusting nut lock
- 61. Differential bearing adjusting nut
- 62. Differential bearing adjusting cap screw





FIGURE 4

1. Axle Shaft Nut	27. Differential Side Bearing Shim
2. Axle Shaft Washer	28. Differential Side Bearing Cup
3. Axle Shaft Key	29. Differential Side Bearing Cone
4. Wheel Bearing Adjusting Cap Oil Seal	30. Housing Cover Gasket
5. Wheel Bearing Oil Seal Cap	31. Housing Cover Bolt Lockwasher
6. Wheel Bearing Adjusting Shims	32. Housing Cover Bolt
7. Wheel Bearing Cup	33. Differential Housing Cover
8. Wheel Bearing Cone	34. Differential Side Bearing Cap
9. Wheel Bearing Inner Oil Seal	35. Differential Bearing Cap Bolt
10. Axle Shaft	36. Differential Gear
11. Carrier and Tube Assembly	37. Housing Cover Filler Plug
12. Companion Flange	38. Differential Gear Thrust Washer
13. Drive Pinion Washer	39. Differential Case
14. Drive Pinion Nut	40. Differential Pinion
15. Drive Pinion Dirt Shield	41. Differential Pinion Thrust Washer
16. Drive Pinion Oil Seal	42. Axle Shaft Spacer
17. Drive Pinion Oil Seal Gasket	43. Differential Pinion Shaft
18. Drive Pinion Felt Wick	44. Drive Gear
19. Drive Pinion Oil Slinger	45. Differential Pinion Shaft Locating Pin
20. Drive Pinion Front Bearing Cup	46. Drive Gear Bolts
21. Drive Pinion Front Bearing Cone	47. Drive Gear Bolt Lock
22. Drive Pinion Front Bearing Shims	48. Wheel Bearing Grease Hole Plug
23. Drive Pinion	49. Wheel Bearing Oil Seal Cap Gasket
24. Drive Pinion Rear Bearing Shims	50. Wheel Bearing Adjusting Cap Bolt
25. Drive Pinion Rear Bearing Cup	51. Wheel Bearing Adjusting Cap Nut
26. Drive Pinion Rear Bearing Cone	52. Brake Backing Plate

_

REAR AXLE USEAGE, 1948-1954

MODEL	STANDARD TRANSMISSION	SUPER- MATIC	DRIVE- MASTER	OVERDRIVE	HYDRA-MATIC
1948-1949	4.10-1 Std. 4.55-1 Opt	4.10-1 Std. 4.55-1 Opt	4.10-1 Std.	4.55-1 Std. 4.10-1 Opt.	n/a
1950	4.10-1 Std. 4.55-1 Opt. 3.82-1 Opt.	4.55-1 Std. 4.10-1 Opt.	4.10-1 Std. 4.55-1 Opt. 3.82-1 Opt.	4.55-1 Std. 4.10-1 Opt.	n/a
1951	4.10-1 Std. 4.55-1 Opt. 3.58-1 Opt.**	4.55-1 Std. 4.10-1 Opt.	4.55-1 Std. 4.10-1 Opt.	4.55-1 Std. 4.10-1 Opt.	3.58-1* Only
1952 Early	4.10-1 Std. 4.55-1 Opt. 3.58-1 Opt.**			4.55-1 Std. 4.10-1 Opt.	3.58-1 Only
1952 Late	4.09-1 Std. 4.55-1 Opt.			4.55-1 Std. 4.09-1 Opt.	3.07-1 Only
1953-1954 Exc. Jet	4.09-1 Std. 4.55-1 Opt.			4.09-1 Std. 4.55-1 Opt.	3.07-1 Only
1953-1954 Jet	4.10-1 Std. 4.27-1 Opt. 3.58-1 Opt.			4.27-1 Std. 4.10-1 Opt. 3.51-1 Opt. 3.31-1 Opt.	3.54-1 Std. 3.31-1 Opt.

* Available in Commodore and Hornet Models only.

** Optional in Hornet Models only

WTN TECHNICAL SERVICE

TECHNICAL SERVICE BULLETIN

TS 78-25 File Under! CLUTCH, TRANSMISSION PROPELLER SHAFT

All, HUDSON OWNERS, USING DRIVE-MASTER

Drive-Master Service Hints

DRIVE-MASTER POWER CYLINDERS MUST BE LUBRICATED. When the power cylinders are assembled both the felt and the packing (leather) are well saturated with vacuum cylinder oil and one ounce of vacuum cylinder oil is placed in each cylinder.

Even though the oil is not exposed or there may be no leakage whatsoever, this small amount of oil eventually becomes dissipated. Dry power cylinders result in sluggish action of clutch release and gear shifting This is particular manifest in the gear shift power cylinder, which if dry and sluggish will not complete the shift fully and results in contact failure in the selector switch.

It is recommended that every 10,000 miles, one ounce or shock absorber fluid be placed in each of the power cylinders. The oil may be injected through tile pipe plug opening of the clutch power cylinder. This connection at the rear of tile gear shift power cylinder should be removed for lubrication, If possible the oil. should be sprayed in the cylinder so as to be deposited over the entire cylinder circumference.

Shock absorber fluid may be obtained at speed and racing shops or at a long established local garage

DRIVE-MASTER FUSE is of a 10 ampere capacity and is located on the back side of the Drive-Master dash switch.

ENGINE IDLE SPEND for Drive-Master equipped cars is 580 to 600 R.P.M.

THE SHIFT STRAP TO POWER CYLINDER CAP SCREW - 480-490 AND 500 SERIES

Referring to all 480-490 and 500 Series, cars fitted with Drive-Master the Shift Strap to power cylinder is secured to the piston rod by a cap screw and star washer.

It is important that this cap screw be kept tight. Erratic shifting and gear clashing will result, should this cap screw become loose,

WTN TECHNICAL SERVICE

Reference; Hudson Service March. Dec 149, Jan, Jul '50

GENERAL TECHNICAL

AND

INFORMATION BULLETIN

TS 80-1 File Under: SERVICE GENERAL

October 1980

ALL HUDSON, ESSEX & TERRAPLANE OWNERS 1924-1936 HUDSON-BUILT CARS, YEAR MODELS BY SERIAL NUMBERS

ESSEX AND TERRAPLANE

Year Serial Number 1924-5-6 Essex 100000 to 500000 1927 Essex 500001 to 706269 1928 Essex 706269 to 928658 1929 Essex 928658 to 1165674 1930 Essex 1165674 to 1234266 1234267 to 1281684 1931 Essex, 113" Wheelbase 1931 Essex. 11911 Wheelbase 200001 and up 1932 Essex Pacemaker 1281685 and up 1932 Terraplane 350000 to 364124 1933 Terraplane, 106" Wheelbase 364125 to 372899 1933 Terraplane, 113" Wheelbase 5001 to 21495 1933 Terraplane 65001 to 78250 1934 Terraplane, 112" Wheelbase 373000 to 416991 1934 Terraplane, 116" W[heelbase 21500 to 28593 1935 Terraplane Special, 112" Wheelbase 51-101 to 51-37772 1935 Terraplane DeLuxe, 112" Wheelbase 52-101 to 52-11362 1936 Terraplane DeLuxe, 115" Wheelbase 61-101 to 61-69752 1936 Terraplane Custom 115" Wheelbase 62-101 to 62-17041 HUDSON

1924-5-6 Hudson 500000 to 750000 1927 Hudson, 127" Wheelbase 750001 to 803568 1927 Hudson, 118" Wheelbase 1000 to 12269 1928 Hudson, 127" Wheelbase 803569 to 825406 1928 Hudson, 118" Wheelbase 12269 to 41383 1929 Hudson, 122" Wheelbase 825407 to 893401 1929 Hudson, 139" Wheelbase 41383 to 46598 1930 Hudson, 119" Wheelbase, 8 Cylinder 893402 to 914292 46599 to 57115 1930 Hudson, 126" Wheelbase, 8 Cylinder 1931 Hudson, 119" Wheelbase, 8 Cylinder 914291 to 930769 1931 Hudson, 126" Wheelbase, 8 Cylinder 57115 to 62883

> (continued) Page 1 of 2

Page 2

HUDSON (Continued)

1932 Hudson, 119" Wheelbase, 8 cylinder	930770 to 936702
1932 Hudson, 126" Wheelbase, 8 cylinder	62884 up
1932 Hudson, 132" Wheelbase, 8 cylinder	250001 up
1933 Hudson, Standard 8	936703 to 938029
1933 Hudson, Major 8	251117 to 251600
1933 Hudson, Super Six	1300501 to 1301462
1934 Hudson 8, 116" Wheelbase	950000 to 968679
1934 Hudson 8, 123" Wheelbase	252000 to 256151
1935 Hudson 6, 116" Wheelbase	53-101 to 53-7724
1935 Hudson 8 Special, 117" Wheelbase	54-101 to 54-7250
1935 Hudson 8 DeLuxe, 117" Wheelbase	55-101 to 55-3197
1935 Hudson 8 Custom, 124" Wheelbase	56-101 to 56-1560
1935 Hudson 8 Special, 124" Wheelbase	57-101 to 57-1066
1935 Hudson 8 DeLuxe, 124" Wheelbase	58-101 to 58-821
1936 Hudson 6, 120" Wheelbase	63-101 to 63-9820
1936 Hudson 8 DeLuxe, 120" Wheelbase	64-101 to 64-5456
1936 Hudson 8 Custom, 120" Wheelbase	65-101 to 65-2514
1936 Hudson 8 DeLuxe, 127" Wheelbase	66-101 to 66-3543
1936 Hudson 8 Custom, 127" Wheelbase	67-101 to 67-5004

(Compiled from the January 1937, Hudson Terranlane Service magazine.)

Serial number information for the 1937 through 1954 models was published in WTN/HET Technical Service Bulletins during 1978, as follows:

> 1937 Models, TS 78-23, November, 1978 1938 Models, TS 78-17, May, 1978 1939 Models, TS 78-15, March, 1978 1940-1-2 Models, TS 78-6, January, 1978 1946-47 Models, TS 78-9, January, 1978 1948-54 Models, TS 78-14, March, 1978.

GENERAL TECHNICAL

AND

INFORMATION BULLETIN

TS 81-1 File Under: ELECTRICAL

February 1981

ALL HUDSON, ESSEX AND TERRAPLANE O'CATERS

CHECK THE STARTER SOLENOID

Reports from the field indicate that in some instances, after many years of service, difficulty is encountered in starting the engine, especially after it warms up. When the starter does not turn the engine over fast enough, it is recommended that the starter solenoid be checked.

The starter solenoid may be tested in the following manner:

1. Connect the negative lead of a voltmeter to battery terminal of starter solenoid switch and the positive lead to the starting motor terminal of the starter solenoid switch, as shown in the illustration (typical 1951-54).



2. Close the solenoid electrically to crank the engine; if the reading is more than 0.2 volts, replace the solenoid switch.

GENERAL TECHNICAL

AND

INFORMATION BULLETIN

TS 81-3 File Under: BODY April 1981

ALL HUDSON, ESSEX & TERRAPLANE OWNERS

BODY PAINTING & PREPARATION

This bulletin contains details on body surface preparation and finish application, suggestions on avoiding sand scratches in body finishes, and tips on the use of the spray gun. These articles were originally published in the Hudson Service Merchandiser in 1949 and 1950.

HET TECHNICAL SERVICE

BODY SURFACE PREPARATION AND FINISH APPLICATION

In compliance with requests from the field for details covering body finish, the following hits been prepare(] as a guide to those who may not have had extensive experience in the line of re-finishing.. To those who have had years of successful experience, this may serve as a refresher or supplement to their present knowledge.

It has been noted that there is one outstanding reason for paint failures, namely, an un-cleaned or improperly cleaned surface. Too much care cannot be taken to insure a surface free from oil, wax, dust, and rust before starting a paint job.

Always complete all body work, as sheet metal straightening and replacement, door fitting, etc., before starting a refinish job.

Step One -- Wash

The car should be given a good wash job, using a good grade of non-alkaline soap, similar to ethyl cleaner. An alkali soap may leave a deposit on the old film which hinders adhesion to your original paint film. The wash job should extend to the underside of fenders of the car to remove all loose dirt. Steam cleaning, of course, is the ideal preparation.

Step Two -- Remove Film

Completely and carefully clean the surface of the car with a good Film Remover. This insures removal of oil and wax films which otherwise would be ground into the old finish in the sanding operation.

Step Three -- Sanding

All loose paint, rust, dirt, road scum, etc., should be completely sanded from the car before applying Hudson Primer Surfacer. This sanding operation should be applied to the entire surface to be prime(]. By doing this, one is assured of two things; a clean surface and a surface which will provide "bite" or mechanical linkage for the paint film.

The sanding may be accomplished by any of the following methods:

1. Use of a "Jitter-Bug" with 280 sand paper.

2. The use of a power sander using No. 24 grit open coat disc for an overall job.

3. The use of water sanding using 280 sand paper.

The use of a coarser grit than 280 makes more work in the later finishing stages and isn't recommended for a superior refinishing operation.

Step Four -- Acid Wash

The entire surface to be primed should be carefully cleaned with a weak acid preparation after sanding to insure it neutral film and add a chemical linkage for your primer surfacer.

Step Five -- Masking

The car is now ready to be masked, using masking tape of the necessary size for the best job.

Step Six -- Tack-Ragging

The car is now ready for the spray booth. Carefully remove all loose dust and dirt with air pressure, then go over entire surface with a *tack-rag* to insure the utmost cleanliness.

Step Seven

The car is now ready for a primer surfacer.

a. Thoroughly stir the primer surfacer.

b. Reduce primer surfacer with Lacquer Thinner. Reduction is 2 parts of primer surfacer to 3 parts of Lacquer Thinner.

c. Although the primer surfacer is filtered at the factory, for the best results it is suggested that the reduced primer surfacer be strained to remove any foreign matter which might have been picked up before application.

d. Bleed all air lines and compressor tank to remove any water and oil in lines. This is very important as any condensation or moisture that may come through the air line is apt to cause paint to blister and peel.

e. Air pressure should be about 55 pounds.

f. Always apply wet coats of primer surfacer, this insures the maximum in chemical and mechanical linkage. Apply a minimum of *two coats* with *four coats* recommended for best filling results. A time period of ten to fifteen minutes between applications is suggested.

g. Allow a minimum of one hour for drying of the primer surfacer film.

Step Eight

The car is now ready for the final sanding operation. The use of water sanding with the 320 paper is recommended to produce a fine, smooth, scratch free film with the minimum amount of time and effort. Using a coarser paper may speed your sanding operation slightly, however, it is felt that the loss of smoothness and the increased porosity do not warrant the slight saving in time. Primer Surfacers are designed to give the maximum hold-out when sanded with 320 paper either wet or dry to produce the best working properties and results.

Step Nine

The car is now ready for the color or finish coat. The following steps are suggested:

a. It is of utmost importance that the car be completely dry. Blow excess water from seams, around doors and any spots which might trap moisture.

b. Completely and carefully "tack-rag" the entire surface to be painted. A good job is essential.

c. Select color, thoroughly stir or agitate the lacquer. Use a Red Devil mixer if available. Omission of this step causes more unnecessary complaints than all other factors combined.

d. Reduce as specified on the label.

e. Again bleed air lines and compressor.

f.. Air pressure should be 50-55 pounds.

Step Ten

Applying the finish. This phase can only be learned through spraying experience, but the following ideas are suggested as aids to a good job.

a. Lacquers

1. Reduce Lacquers with Lacquer thinner as specified on the label.

2. Apply a minimum of four wet coats of lacquer-six coats suggested for best results.

3. The use of one part Retarder to one Part lacquer thinner, in the last coat, is recommended for more flow and higher initial gloss.

4. When the film is *completely dry*, wet sand with 400 sand paper, *never try to rush the drying time on your finish coat*. You have spent a good deal of time and effort preparing your car properly and all of your previous work may be wasted if the film is not allowed to dry completely.

5. Use hand rubbing compound to bring out the fullness and richness of gloss of the lacquer.

6. Buff the car completely, using clean bonnets as the need for a change is indicated, otherwise smearing will be evident.

7. To give the lacquer its final touch, polish the car with a good grade of polish and cleaner to remove any buffing haze.

The foregoing procedure applies to refinishing any single panel or partial panel. The same care with respect to cleaning and preparation of surface should always be followed, just as is done when refinishing on entire body.

Following the above suggestions, plus the use of approved Lacquers, Thinners, and Primers will give you the personal satisfaction of a job well done and even more important, a satisfied customer.

AVOIDING SAND SCRATCHES IN BODY FINISHES

Outline by Ditzler Color Division)

One of the most disappointing things to a painter is to find that his otherwise beautiful paint job is ruined by sand scratches showing through the new finish. The worst part of it is that these sand scratches do not show up until the final coat is applied and the job is thoroughly dry, and then it is too late to correct them.

Sand scratches can of course be produced in the final finish by the use of an inferior rubbing compound, one in which the abrasive particles are not well graded or in which there are some hard particles. However, most of these surface scratches can be eliminated by further compounding with a good compound.

The first and prime requisite for a good paint job is smooth metal. The metal finisher or bump-man can make it doubly hard for the painter if the metal is not properly finishedcareless filing or bearing down too hard on the coarse disc will leave furrows that are hard to fill. The best practice is to use the coarse disc for ruffing out the job, getting rid of weld spots and high areas only. Then do the major part of sanding with the 24 disc and finally finish off the metal with a No. 50 or No. 80 disc.

Modern lacquer primer surfacers are very versatile materials and will do a lot of filling but none of them do all of the filling in one coat. It isn't hard to understand that the thicker the coat the slower the drying, so spray several medium coats with 15 to 30 minutes between them and you will actually save time over spraying a real heavy coat and having to wait a long time for it to dry through. It is difficult to tell when a thick coat is really dry because the surface will appear to be dry while there is still a lot of thinner below the surface and shrinkage is still going on.

After the primer surfacer has dried thoroughly the next thing to consider is the sanding operation. The use of coarse sand paper such as No. 220 or No. 240 will produce scratches in the primer surfacer that will be hard to fill by the final finish because finish coats do very little filling. The only reason the painter uses these coarse sand papers is to speed up the sanding rate.

When a lacquer finish coat is sprayed over surfacer the lacquer thinner penetrates and swells the lacquer undercoat and where the undercoat is the heaviest the swelling will be the greatest. If the finish coat is sanded or compounded and polished before all of the thinner has evaporated from the swollen areas there will be further shrinkage at the point of deepest fill. Therefore it is important to give the finish coat of lacquer plenty of drying time before sanding and polishing. Some of the tendency toward swelling can be eliminated if the first coat or two of color is sprayed very lightly.

When fresh lacquer is applied to an old lacquer surface that has been sanded the lacquer solvent will penetrate the scratches and cause a swelling of the disturbed part of the old lacquer film. This raising or swelling of the sand scratches is particularly noticeable on certain makes of cars and especially during cold weather when the lacquer solvents remain longer in contact with the old film causing an excessive amount of swelling.

In fact there are some old finishes that it is practically impossible to paint over without getting sand scratches and to prevent this difficulty some Automotive Paint Manufacturers have developed gloss sealers that can be used as in intermediate coat and which will prevent the penetration of the strong solvents into the old lacquer finish. Besides eliminating sand scratches these gloss sealers improve the lustre of the final coat because they prevent any soak-in or penetration into the old finish. Use of gloss sealers will not slow up the job because they dry very rapidly and their use requires no more time than is required for very careful sanding.

If you are doing a touch-up job on enamel you will be obliged to use a thinner carrying a good percentage of strong slow solvents so that the over-spray will blend and flow into the surrounding enamel. In a case like this you will have to be very careful to eliminate all of the other sources of sand scratches because the thinners you are obliged to use will cause excessive swelling of the undercoats.

If you are repainting an old lacquer job you should not use a thinner with strong solvents

because it will cause the old lacquer to swell and you will magnify the sand scratches. Some Automotive Finish Manufacturers have special non-penetrating thinners for this purpose. Keep in mind what transpires when you spray one coat over another and also remember that the temperature in your shop and also the humidity of the air are determining factors in the evaporation of thinners.

To sum up the whole matter here are the factors that influence sand scratches and if you keep them in mind you will save many headaches.

- 1. Grade of sand paper.
- 2. Thickness of new coats.
- 3. Kind of thinner.
- 4. Drying time between coats.
- 5. Temperature and humidity, of shop.
- 6. Kind of old finish.

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. 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.

GENERAL TECHNICAL AND INFORMATION BULLETIN

TS 81-4 File Under: General Service June 1981

ALL HUDSON OWNERS 1946-54 Hudson Model Year Production Run

By Serial Number and Month of Manufacture

This information bulletin contains Hudson model year production run figures by serial number and month of manufacture for 1946-54, supplied by Ron Hewitt of Indianapolis, Indiana. He points out that Hudson produced cars on a continuing serial number basis. As each car came off the assembly line it was given the next numerical sequence number regardless of body style or model.

In order to accurately determine when a car was made, one must add the model prefix (481, 491, 7A, 1C, etc.,) to the serial number. Therefore; to aid in this determination, model numbers and names with starting serial numbers are shown for each model year, 1946 through 1954.

HET INFORMATION SERVICE

1946		1947								
	Month	l	Units			Month	Units			
Serial Number	r Mfg.		Built	Serial N	umber	Mfg.	Built			
101-132	Aug 19	945	31	101-4	491	Dec 1946	4390			
None (Strike)	Sep 19	45		4492-1	5343	Jan 1947	10852			
133-1159	Oct 194	45	1027	15344-	26100	Feb 1947	10757			
1160-3343	Nov 19	945	2184	26101-	37413	Mar 1947	11313			
3344-5179	Dec 19	45	1836	37414-	47480	Apr 1947	10067			
5180-10917	Jan 194	16	5738	47481-	58608	May 1947	11128			
10918-16779	Feb 19-	46	5862	58609-	68699	Jun 1947	10091			
16780-24243	Mar 19	46	7464	68700-	80413	Ju1 1947	11714			
None Made	Apr 19	46		80414-	89414	Aug 1947	9001			
24244-33191	May 19	946	8948	89415-	95101	Sep 1947	5687			
33192-43561	Jun 194	46	10370	Total:			95,000			
43562-54929	Ju1 194	46	11368							
54930-63209	Aug 19	946	8280							
63210-73012	Sep 19-	46	9803							
73013-82623	Oct 194	46	9611							
82624-92548	Nov 19	946	9925							
92549-95101	Dec 19	46	2553							
Total:			95,000							
Model No.	Name	Sta	rting Ser. No.	Model No.	Name	Startin	<u>g Ser. No.</u>			
51	Super 6		31-101	171	Super 6	17	1-101			
52	Commodore 6		32-101	172	Commodore	6 17	2-101			
53	Super 8		33-16269	173	Super 8	17	3-101			
54	Commodore 8		34-16285	174	Commodore	8 17	4-101			
58	Business Cars		38-215	178	Business Car	rs 17	8-101			

Hudson Model Year Production Run by Serial Number and Month of Manufacture

Car Numbering System for 1946 Hudson cars: The first two figures of the car number denote the chassis model, according to the following plan -

31 - denotes Model 51	33 - denotes Model 53	38 - denotes Model 58
32 - denotes Model 52	34 - denotes Model 54	

Car Numbers of the 1947 models use the first three figures to denote the chassis model instead of the first two as on previous models. The remaining figures in the car number comprise the actual serial number of the car, and these figures run in a single series, regardless of model.

The car number is stamped on a metal plate located on the rear of the right front body pillar, and may be seen by opening the right front door. The engine number, which is the same as the car number, is stamped on the top of the cylinder block, right side, between numbers one and two exhaust ports.

1948			1949			
	Month	Units			Month	Units
Serial Number	er Mfg.	Built	Serial 1	Number	Mfg.	Built
101-860	Oct 1947	759	101-21	76	Oct 1948	2075
861-5023	Nov 1947	4163	2177-2	2177-20603		18427
5024-13282	Dec 1947	8259	20604-	39793	Dec 1948	19190
13283-21238	Jan 1948	7956	39794-	57741	Jan 1949	17948
21239-32374	Feb 1948	11136	57742-	72795	Feb 1949	15054
32375-45032	Mar 1948	12658	72796-	87255	Mar 1949	14460
45033-57029	Apr 1948	11997	87256-	101735	Apr 1949	14480
57030-69696	May 1948	8 12667	101736	5-112911	May 1949	11176
69697-84119	Jun 1948	14423	112912	2-124248	Jun 1949	11337
84120-95687	Ju1 1948	11568	124249	-133919	Ju1 1949	9671
95688-96217	Aug 1948	530	133920)-145765	Aug 1949	11845
96218-10432	7 Sep 1948	8110	145765	5-156206	Sep 1949	10442
104328-1173	01 Oct 1948	12974	156207	-159201	Oct 1949	2995
Total:		117,200	Total:			159,100
Model No.	Name	Starting Ser. No.	Model No.	Name	Starting	Ser. No.
481	Super 6	481-101	491	Super 6	491	-101
482	Commodore 6	482-101	492	Commodor	re 6 492	-101
483	Super 8	483-101	493	Super 8	493	-101
484	Commodore 8	484-101	494	Commodor	e 8 494	-101
1950			1951			
1750	Month	Units	1751		Month	Units
Serial Numbe	er Mfø	Built	Serial N	Number	Mfg	Built
		Duit				Dunt
101-127	Sep 1949	26	1001-4	950	Sep 1950	3949
128-4325	Oct 1949	4198	4951-1	6357	Oct 1950	11407
4326-14149	Nov 1949	9824	16358-	29401	Nov 1950	13044
14150-23155	Dec 1949	9006	29402-	44902	Dec 1950	15501
23156-34619	Jan 1950	11464	44903-	64687	Jan 1951	19785
34620-44902	Feb 1950	10283	64688-	81377	Feb 1951	16690
44903-57753	Mar 1950	12851	81378-	100191	Mar 1951	18814
57/54-69269	Apr 1950	11516	100192	2-111664	Apr 1951	11473
69270-81137	May 1950	11868	111665	-116933	May 1951	5269
81138-98145	Jun 1950	17008	116934	-118144	Jun 1951	1211
98146-11261	I Jul 1950	14466	118145	-119452	Jul 1951	1308
112612-1215	09 Aug 1950	8898	119453	-122517	Aug 1951	3065
Total:		121,408	122518	3-125964	Sep 1951	3447
			125965	-132915	Oct 1951	<u>6952</u>
			Total:			131,915
Model No.	Name S	Starting Ser. No.	Model No.	Name S	tarting	Ser. No.
500	Pacemaker	500-101	4A	Pacemaker	Custom	4A-101
50A	Pacemaker Deluxe	50A-101	5A	Super 6 Cu	stom	5A-101
501	Super 6	501-101	6A	Commodor	e 6 Custom	6A-101
502	Commodore 6	502-101	7A	Hornet		7A-101
503	Super 8	503-101	8A	Commodor	e 8 Custom	8A-101
504	Commodore 8	504-101				

Page 4, TS 81-4

1952

1952				1953			
	I	Month	Units			Month	Units
Serial Num	ber	Mfg.	Built	Serial Nu	umber	Mfg.	Built
132916-133	3708 N	Nov 1951	792	202917-2	08037	Nov 1952	5121
133709-138	3235 E	Dec 1951	4527	208038-2	14589	Dec 1952	6552
138236-145	5267 J	an 1952	7032	214590-22	21170	Jan 1953	6581
145268-152	2064 F	Feb 1952	6797	221171-2	29669	Feb 1953	8499
152065-160)796 N	Aar 1952	8732	229670-2	39912	Mar 1953	10243
16079716	7780 A	Apr 1952	6984	239913-2	51452	Apr 1953	11540
167781-173	3240 N	May 1952	5460	254153-2	59300	May 1953	7848
173241-179	9411 J	un 1952	6171	259301-2	65490	Jun 1953	6190
179412-186	5480 J	ul 1952	7069	205491-2	69005	Jul 1953	3515
186481-192	2466 A	Aug 1952	5986	269006-2	69059	Aug 1953	54
192467-199	9206 S	Sep 1952	6740	Total; 66,	143		
199207-202	2916 C	Oct 1952	3710				
Total:			70,000				
Model No.	Name		Starting Ser. No.	Model No.	Name	S	tarting Ser. No.
4B	Pacemaker		4B-101	1C	Jet		1C-203865
5B	Wasp		5B-101	2C	Super Jet		2C-203543
6B	Commodore	6	6B-101	4C	Wasp		4C-202928
7B	Hornet		7B-101	5C	Super Wast)	5C-202919
8B	Commodore	8	8B-101	7C	Hornet		7C-202917

1954

1954

Sorial Number	Month Mfa	Units Duilt	Madal Na	Nomo	Starting Sor No.
Serial Nulliber	wing.	Dullt	Iviouel Ino.	Indille	Starting Ser. NO.
269060-272845	Aug 1953	3785	1D	Jet 1	269062
272846-278789	Sep 1953	5944	1D	Jet Family Sedan	1296953
278790-282939	Oct 1953	4150	2D	Super Jet	2269060
282940-288198	Nov 1953	5259	3D	Jet Liner	3269070
288199-291688	Dec 1953	3490	4D	Wasp	4269069
291689-293766	Jan 1954	2078	5D	Super Wasp	5269075
293767-295068	Feb 1954	1302	6D	Hornet Special	6295720
295069-298053	Mar 1954	2985	7D	Hornet	7269066
298054-299862	Apr 1954	1809			
299863-302331	May 1954	2469			
302332-306009	Jun 1954	3678			
306010-308875	Jul 1954	2866			
308876-312733	Aug 1954.	3858			
312734-316250	Sep 1954	3517			
316251-319720	Oct 1954	3470			
Total:		50,660	(AMC Re	egistry Began 1 May 1	.954.)

GENERAL TECHNICAL

AND

INFORMATION BULLIETIN

TS 84-2 File Under: ENGINE

August 1984

Rebuilding the Water Distribution Baffle - Hudson 3x5 Six Cylinder Engine

Warm weather driving provides a thorough test for the cooling system of any motor vehicle. Once outside temperatures reached the high eighties, the 3 x 5 six in my '47 began exhibiting some disturbing temperature fluctuations. If the vehicle was operated between 50 and 55 mph for sustained periods, the engine temperature would gradually rise to nearly 212 degrees Fahrenheit, although an actual boll-over never occurred. This trend could be reversed by dropping the vehicle speed to about 45 mph whereupon the engine temperature would hover in the 180 to 190 degree region. Unfortunately, this behavior did not inspire much confidence for taking extended trips in this car.

Initially, I tried the usual remedial steps such as a chemical treatment of the cooling system, a check on the operation of the new 160 degree thermostat, clearing the external radiator fins of debris, checking for collapsing hoses etc., to no avail. After convincing myself that air and coolant flow were probably not the cause of the difficulty, I began to seriously consider possible problems with coolant flow distribution. In my recollection, all of the 3 x 5 Hudson sixes (and the 3 x $4\frac{1}{2}$ eights) built from the early thirties up to 1947 (1952 for eights) employ a pressed steel coolant distribution cover and baffle assembly bolted to the left side of the engine block. The baffle (Fig. 1) is designed to develop adequate coolant flow in all sections of the cylinder block and head.

After removing this assembly from my engine, I noted that a roughly 2 x 3 inch section in the center of the baffle was completely rusted away. Thus, the coolant, taking the path of least resistance, was flowing mainly across the center of the block with reduced flow at the ends. The temperature sensor, being located at the extreme rear end of the cylinder head was, no doubt, detecting this condition. The assembly was obviously in need of replacement. At about this point I discovered that new assemblies for the sixes are nearly impossible to obtain. Moreover, I was not even successful in locating a used unit in better condition than my original. Since the cover pans of my assembly were reasonably intact,, (there were a few pinholes which could be soldered) I decided to construct a new baffle.

First, a few words about the cover removal. The coolant was drained, the generator and connecting hose were taken off On the 3 x 5 sixes, the cover is secured with 18 5/16-18 cap screws. The11 cap screw holes on the top and sides of the cover go directly into the water jacket and have the greatest probability of being "frozen" with corrosion products. I found that working the screws back and forth (i.e. alternately tightening and loosening) while applying penetrating oil allowed the removal of all but one of these which did finally did snap off. The bottom seven screws are in "blind" holes and gave little trouble in removal.

Among these lower seven is the pivot shaft for the accelerator linkage which is locked in place by metal tabs bent against the flats on the screw head. These tabs had to be bent away with a small chisel before unfastening the pivot. I was now faced with the prospect of drilling out the broken cap screw. The reader's will no doubt appreciate that drilling into the water Jacket must be done with some care if a leak-free result is to be achieved. In my experience, I find that an important part of "drilling out" is locating the center of the broken fastener fairly accurately. In this case, I re-attached the cover to the block with three or four cap screws using three flat washers between the cover and the block. The holes in the cover thus become a "guide" for an 11/32 inch drill bit which was used to indent the broken screw at its center (See Fig 2). 1 find that a variable speed drill motor gives excellent control for this operation. Having thus located the center, I bored through the broken screw, first with a 1/8 inch bit and then with a 17/64 inch bit, while maintaining the bits as perpendicular as possible to the side of the block. The hole was tapped 5/16-18 in the final step. Returning to the cover-baffle assembly, the original baffle is spot-welded to the cover recess in eight or nine places. Before removing the baffle, I took measurements on the locations and sizes of the baffle

holes. The corroded baffle was readily broken away from the cover with a pair of pliers. Accumulated corrosion products were scraped from the inside and the cover held up to a strong light to locate pinholes. Pinholes were enlarged to reach solid metal and closed off from the outside using 50/50 solder and an acid flux. A few of the larger holes required small plates of 22 gauge steel soldered in place to cover them adequately. The cover was leak-checked by closing the coolant inlet tube with a cork, positioning the cover horizontally and filling it with a 50/50 antifreeze-water solution.

I had two options for reconstructing the baffle. I could either replicate the original baffle and have it spot-welded into the cover recess or I could construct a full-sized unit to be interposed between the block and the cover as shown in Figure 3. The corroded condition of the baffle recess led me to doubt that good spot welds could be achieved. Thus, I settled for the second option. The cover itself was used as a template for tracing the baffle outline and screw holes on a piece of 18 gage mild steel. Due to the electrochemical nature of corrosion in automotive cooling systems I would caution against using a more corrosion-resistant material such as stainless steel for the baffle. While such a baffle will be long-lived, it may serve to intensify corrosion in other parts of the cooling system, particularly in the cover itself With the use of modem corrosion inhibitors, a mild steel baffle will probably last twenty years or more.

The appropriate coolant flow holes were cut into the new baffle and an air bleed slot (to assure that the cover fills completely with coolant) formed by cutting away the metal between a series of closely spaced 3/32 inch holes according to the dimensions shown in Figure 3. Prior to the installation of this rebuilt assembly, I used high-pressure water in the block opening to flush all loose scale and other debris from the engine block. The new baffle was "sandwiched" between the block and cover and sealed with two 1/32 inch velurnoid gaskets coated with Permatex Aviation Cement. The cap screw threads were also coated with this cement to prevent coolant seepage and reduce the probability or "frozen" screws in the future. The cap screws were torqued to 12 foot-pounds.

Since the new baffle has been installed, the temperature fluctuation problem has been essentially eliminated even when ambient temperatures approached 100 degrees. If the gasket cement is carefully applied, the interposed baffle plate is barely noticeable. After about 300 miles of driving, the cap screws were retorqued.



