

# HUDSON

## MAINTENANCE NOTES

1940-1942 Models



## 1940-1942 Hudson

### Special Service Notes

**NOTE: Through-out this document reference will be made to "Special Tools". While these tools are available, in most cases suitable replacements will have to be utilized.**

### 1940-1942 MODELS

#### Hood

**ENGINE HOOD LOCK:** - Alligator type hood (hinged at front) with integral side panels and instrument panel lock. To raise hood, push forward on lock handle located under edge of instrument panel to left of steering column, lift rear of hood.

**HOOD Removal** -Unlock and raise hood. Disconnect hood light wires from terminals on fender junction block. Remove hood-to- hood support bolts and hood-to-hood hinge bolts. Lift hood straight up and remove from car. Align Hood and Front Fenders as directed below

**Radiator Louver Panel Removal** - Remove panel- to-fender bolts from under fender. Remove front bumper bolt and loosen rear bolt permitting bumper assembly to be lowered, Remove center front screw from under panel and lift panel off.

### 1940-1941 MODELS

**HOOD AND FRONT FENDER ALIGNMENT:** -U- shaped hood hinge consisting of cross-bar in back of grille with an upright arm at each end which attach to each side of hood. Hinge cross-bar equipped with loose fitting bracket at each end which is attached to frame bracket by screws. Frame and hood hinge brackets have serrated faces. Thick F and thin hinge positioning washers assembled on each end of hinge cross-bar and are retained by a large cotter pin. Each front fender positioned by brace rod anchored to frame at lower end and to fender bracket on upper end by means of positioning nuts.

**HOOD Adjustments** - Hood alignment can be adjusted at three points as follows: For full fore-and-aft hood movement, loosen hood-to hood hinge bolts (three on each side along lower edge of hood). For slight sidewise or lengthwise movement, loosen hood hinge frame bracket-to-frame bolts. To position hood hinge assembly for sidewise movement, take out large cotter pin in each end of hinge cross-bar and add or remove washers for correct fit.

**Fender Adjustment** - Fender fit can be adjusted by means of positioning nut on each side of fender bracket at upper end of brace rod. Separate brace rod for each fender located under hood behind radiator louver panel.

**Radiator Louver Panel Adjustment** - Louver panel fit can be adjusted by loosening louver-to-fender bolts on outer ends of panel. Bolts on back side of panel and are accessible from behind panel with hood raised. Louver panel should be pushed forward as far as possible for correct fit.

### 1942 MODELS

**HOOD AND FRONT FENDER ALIGNMENT:** - Hood alignment can be obtained by loosening fender bracket bolt at hood hinge (lower end of each hood hinge arm behind radiator louver panel). Bolt hole in each fender is enlarged which permits hood being shifted until fitted properly. Hinge to fender bracket bolt should be installed as follows: Place flat washer on bolt, then rubber shouldered washer and assemble in hood hinge hole (see that rubber washer seats properly). slide second rubber shouldered washer, plain washer and spring over bolt, screw bolt in fender bracket and install locknut.

**Front Fender Alignment** - Fenders can be fitted for sidewise movement at front end by means of adjusting nut and locknut on fender brace rods under hood behind radiator louver assembly. Adjust fenders to obtain proper fit along hood.

### FRONT FENDERS 1940-1941 MODELS

**FRONT FENDER REMOVAL:** - Unlock and raise hood. Disconnect headlamp wires at junction block, unclip wires from fender and dash and push headlamp cables through hole in fender (remove battery if left fender to be removed). Remove fender bolts at following points: running board, brace rod top nut, louver panel, fender cross member (with spacers), brace to cross member screw, core baffle to fender screws (right fender only), radiator lower tank shield screws, hood support screws, apron support to inspection cover screw, and horn bracket to frame screws. Lift fender off.

## Front Fender (Cont'd)

**Right Front Fender Inspection Hole Plate Removal:** - This Plate replaces fender dust shield (now welded to fender) used on 1939 models for access to valve tappets, fuel pump, and oil pump. To remove, unlock and raise hood, remove horn mounting bolts and push horns forward (in engine compartment). Raise front end of car, remove right front wheel and 12 cap screws along the top, bottom and front edge of plate (under fender).

### 1942 MODELS

**FRONT FENDER REMOVAL:** - Remove wheel, raise hood and support in open position. Remove battery (if left fender being removed). Disconnect light wires at junction block on left fender (if right fender being removed pull wires back through hole in fender and remove grommet). Take off dust shield hole cover (right fender only). Remove fender screws and bolts as follows: 2 bolts at hood support, 2 Phillips head screws at radiator tank lower shield, all screws in radiator baffle and remove baffle, 2 hex head bolts in louver end bracket, 1 hex head bolt at frame bracket (under car), 2 hex head bolts at frame cross member, 4 hex head bolts at front bumper splash guard, 6 hex head bolts at cowl, 2 hex head bolts at hood hinge bracket, and fender brace rod nut. Lift fender off car. Mouldings, lamp and brace can be disassembled from fender after fender removed from car.

**NOTE** - When installing fender, assemble headlamp after fender installed on car. Fender to cowl bolts should not be tightened until hood fitted to fender.

### CYLINDER HEAD

**CYLINDER HEAD INSTALLATION:** Use a Torque Wrench to tighten cylinder head stud nuts, tighten in correct sequence as shown in the diagrams. Procedure for tightening Cast Iron and Aluminum heads is as follows:

**Cast Iron Heads** - With engine cold, tighten all nuts evenly to correct tension. Then run engine until it is thoroughly warmed up and recheck all nuts (additional tightening may be necessary for correct tension).

**Aluminum Heads** - With the engine cold, tighten all nuts to correct tension. Run engine until thoroughly warm, allow engine to cool off, and then recheck all nuts. Do not tighten aluminum heads when warm.

**Tightening Torque** - See Tightening (Torque Wrench) Specifications below.

### TORQUE SPECIFICATIONS

#### 1940 Models

	Ft. Lbs.		Ft. Lbs.
Cylinder Head Stud Nuts (6)	45	Main Bearing Stud Nuts	91-2/3
Cylinder Head Stud Nuts (8)	55	Connecting Rod Bolt Nuts	52½

#### 1941-1942 Models

	Ft. Lbs.		Ft. Lbs.
Cylinder Head Stud Nuts (6)	40	Differential Carrier Nuts	37
Cylinder Head Stud Nuts (8)	50	Axle Shaft Nut	95
Spark Plugs (14 MM. Type)	28	Wheel Nuts	65
Main Bearing Bolts	75	Brake Anchor Pin Nuts	85
Connecting Rod Bolt Nuts	40	Clutch & Brake Pedal Nuts	22
Flywheel to Crankshaft	45	Steering Wheel Nut	25
Water Jacket Cover Bolt	15	Pitman Arm Nut	140
Front Engine Support Bolt	45	Steering Arm Nut	105
Clutch Cover Mounting Bolts	22	Steering Center Arm Bolt Nut	65

### ENGINE REMOVAL

#### 1940-1942 MODELS

**Removal:** - All engines can be removed as follows: Remove hood (see Hood Removal), front seat cushion, accelerator pedal, front floor mat, transmission hole cover, clutch housing to engine bolts, engine ground strap, radiator core (see Radiator Core Removal), radiator stay rods and horns. Disconnect generator, starter, temperature gauge, and oil check valve wires and remove wiring harness from clips on left side of engine. Disconnect flexible fuel pump feed line and remove fuel

## Engine Removal (Cont'd)

line to carburetor. Disconnect throttle linkage leading from accelerator cross shaft and remove cross shaft (pull shaft toward spring and slip out of opposite bracket). Disconnect windshield wiper hose at manifold. Remove spark plug wires and bracket, distributor cap, carburetor and air cleaner. Disconnect exhaust pipe at manifold. Remove front engine support bolts and nuts. Hoist engine out of car (use Tool J-917 attached to engine) move engine forward carefully to disconnect from transmission mainshaft. Finally, remove distributor, generator, fuel pump and clutch.

**Installation** - Reverse procedure listed above and note following point. Wrap a piece of soft wire around clutch throwout bearing oil seal with ends of wire extending up through clutch housing, lower engine in place (use care not to damage clutch driving plate assembly when engaging transmission mainshaft), pull wire out (this will prevent edge of seal from curling over).

### ENGINE MOUNTINGS 1940-1942 MODELS

**ENGINE FRONT SUPPORT REMOVAL:** - Drain cooling system. Remove generator, fan belt, radiator outlet hose and raise front end of car. Remove radiator lower tank shield, vibration dampener (see Vibration Dampener Removal) and timing gears (see Timing Gear Removal). Block up front end of engine and remove front engine mounting bolts and nuts. Take out engine support bolt and locks and remove plate.

**Installation** - Reverse procedure listed above, note the following points: Clean front face of cylinder block thoroughly and use new gaskets. When replacing engine mounting bolts, tighten nuts until upper and lower plates are against spacer.

### ORIGINAL BORE 1940-1942 MODELS

**ORIGINAL BORE SIZE:** - Original production (new engine) bore size indicated by code mark stamped on lower edge of valve chamber opposite cylinders. See table below for size and code marks.

Code Mark	Cylinder Diameter	Code Mark	Cylinder Diameter
A	3.000"	AO	3.010"
B	3.0005"	BO	3.0105"
C	3.001"	CO	3.011"
D	3.0015"	DO	3.0115"
E	3.002"	EO	3.012"

Note - Recondition cylinders to size for which replacement pistons and rings available (see below).

**Original Piston Size** - Sizes and markings for original pistons same as for Replacement Pistons. See Replacement Piston Table and Piston Markings.

### PISTONS 1940-1942 MODELS

**REPLACEMENT PISTONS:** - Standard and oversize pistons marked by letter stamped on head and furnished for cylinder diameter sizes listed below. See Replacement Rings (following) for ring sizes.

Piston Mark	Piston Size	Cylinder Size
B	2.9985"	3.000" & 3.0005"
D	2.9995"	3.001" & 3.0015"
F	3.0005"	3.002" & 3.0025"
J	3.0025"	3.004"
L	3.0035"	3.005"
BO	3.0085"	3.010" & 3.0105"
DO	3.0095"	3.011" & 3.0115"
FO	3.0105"	3.012" & 3.0125"
LO	3.0135"	3.015"
BB	3.0185"	3.020"
DD	3.0195"	3.021"
FF	3.0205"	3.022"

## Pistons (Cont'd)

**Piston Markings** - Code marks stamped on head of piston indicate the following: Letter Indicates piston size and cylinder size for which piston to be fitted (see table below). Number indicates piston weight in ounces (if 2 numbers used, one over the other, to number indicates weight in ounces, lower number ¼ ounces).

All pistons in one engine should be of same weight (carry same weight marks on head).

**NOTE** - original factory installed pistons carry two additional numbers, one number indicates cylinder in which piston installed, second number indicates cylinder block number.

### PISTON RINGS 1940-1942 MODELS

**REPLACEMENT RINGS:** - Use standard or oversize rings for replacement pistons listed above. Ring size and pistons for each size as follows:

Ring Size	Piston Mark	Ring Size	Piston Mark
3.000"	B, D, F	3.010"	BO, DO, FO
3.003"	J	3.015"	LO
3.005"	L	3.020"	BB, DD, FF

**Note** - If rings filed, keep clearance at pin uniform with end gap (.005" minimum).

### PISTON PINS 1940-1942 MODELS

**PISTON PIN SERVICING:** - When replacing pins car manufacturer recommends that oversize piston pins be fitted to the piston boss and new piston pin bushings be installed in rod. Piston pin bosses are diamond-bored and should not be reamed.

**Replacement Piston Pins** - Furnished in standard size and .002", .005", .010" oversize.

**Fitting Pins** - Pins should be a hand press fit in piston with piston heated to 2001F. (heat in boiling water or electric furnace - do not use torch or direct heat). Replace pin bushing in rod and ream or burnish to .0003" greater diameter than pin (giving desired .0003" clearance on pin). To check pin fit in rod bushing, hold piston with rod in horizontal position, rod should just turn on pin of own weight.

**CAUTION** - Do not ream piston pin bosses in piston.

### ORIGINAL BEARING SIZES 1940-1942 MODELS

**CRANKSHAFT SIZE CODE:** - Cars equipped with .010" undersize main bearing pins and connecting rod pins identified by marks stamped on left front corner of cylinder block on bottom face beside oil reservoir gasket (visible without removing oil reservoir) as follows:

MU - .010" undersize main bearing pins.

PU - .010" undersize connecting rod pins.

PMU - .010" undersize main and connecting rod pins.

**NOTE** - These pins require .010" undersize bearings.

### CONNECTING ROD & BEARINGS 1940-1942 MODELS

**CONNECTING ROD AND MAIN BEARING PALNUTS:** - Palnut (locknut or companion nut) used in place of cotter pin to lock connecting rod bolt nuts (starting with 1938 models), and main bearing cap stud nuts (starting with 1941 models). Palnut consists of a small single thread nut stamped from light gauge tempered steel.

**Installation** - After tightening regular nuts (refer to Tightening Specifications - Torque Wrench data on preceding pages), install palnut with smooth face toward nut, turn palnut up finger tight, then lock in place with wrench an additional 1/4-1/3 turn.

**NOTE** - Palnuts should not be re-used.

## CRANKSHAFT & MAIN BEARINGS 1940-1942 MODELS

**CRANKSHAFT REMOVAL:** - Crankshaft can be removed with engine in chassis as follows: Remove hood (see Hood (Hood) Removal above), radiator (see Radiator Core Removal following), vibration dampener (see Vibration Dampener Removal following), timing gears (see Removal instructions following), transmission and clutch (see Hudson 6 and 8 Car articles for data). Remove flywheel and engine oil pan and tray. Remove connecting rod bearing caps and push rods up clear of crankshaft. Remove front and rear main bearing caps with Puller Tool J-377. Remove center main bearing cap with care and take out crankshaft.

**Installation** - Reverse removal procedure listed above. Install new oil seals at front and rear main bearing cap (see Front and Rear Main Bearing Cap Installation following) and new palnuts on main and connecting rod bolts (see Connecting Rod and Main Bearing Pallet Installation above).

### 1940 MODELS

**MAIN BEARINGS:** - Adjustment - Laminated shims provided on top of caps. Remove caps and remove shims until clearance is .001". See Crankshaft Installation

**Replacement Bearings:** - Finished bearings (with attaching screws) furnished standard and .010" undersize (see Crankpin Size Code for original bearing sizes). Unfinished bearings furnished with 1/32" extra stock and must be line-reamed (see below).

**Removal:** - Bearing shells are removable type and are held in case and caps by screws. To replace bearings, crankshaft must be removed (see crankshaft removal above). With shaft out, take out screws securing shells in cap and case.

**Installation:** - crankshaft removed, secure bearing shells in case and cap with machine screws. If unfinished bearings installed, line-ream as directed below. Install crankshaft (see Crankshaft Installation). Add or remove shims on bearing caps until .001" clearance obtained. Secure caps in place.

**Line-Reaming Main Bearings:** - Where unfinished bearings used for replacement, bearings must be line-reamed to size as follows: Install bearings in cap and case, place .021" shims between case and cap and tighten cap, then line ream bearings. Thrust flange on center (Six), #3 (Eight) bearing must be faced for .006" endplay.

### 1941-1942 MODELS MAIN BEARINGS

**MAIN BEARINGS:-Removal and Installation (with engine in car).** Bearing halves are retained in crankcase and caps by a machine screw in each half, requiring removal of crankshaft for access to screw in upper half. Remove crankshaft (see Crankshaft Removal above), take out machine screw in each bearing half in crankcase and caps, remove bearings. Reverse removal instructions to install bearings.

**NOTE** - No shim pack used on 1941-42.

**Replacement Bearings** - Hudson replacement bearings furnished reamed (standard size or .010" undersize) and not reamed (see Line-Reaming data below). Reamed bearings carry punch marks on one side and when installed these marks should be together and on the same side for all bearings so that they will be in the same position as when reamed.

**IMPORTANT** - Lower half of bearing shell extends .002" above surface of cap (allows bearing to seat in cap and crankcase when stud nuts tightened).

**Fitting Bearings** - See Replacement Bearings above. Bearings can be fitted with shims (do not file caps) as follows: Install bearing shells in caps and case and oil bearing surface. Fit each bearing separately. Install crankshaft and bearing cap (on front and rear bearings, caps should be centralized on studs by inserting 1/4" drill rod in vertical packing holes on each side of cap), tighten stud nuts to 75 ft. lbs. Test bearing fit by using two hands pull on crankshaft, shaft should start hard but be able to be turned over. If shaft cannot be moved, insert .005" shim between cap and case (trim shim flush with bearing shell). Repeat

test until shaft turns easily. Shims are furnished .003" and .005" thick.

**Line-Reaming Bearings** - See Replacement Bearings above. Semi-finished bearings available for service which must be line-reamed on engine as follows: Place bearing shells in place in caps and crankcase, and secure with machine screws (see that screws are seated in countersink hole in shells), bearing shell in cap should project .002" above cap while shell in case should be flush, tighten caps to 75 ft. lbs. (front and rear caps should be centralized on studs by inserting 1/4" drill rod in vertical packing holes on each side of cap). Line-ream bearings for .001" maximum clearance on crankshaft and face flange on center bearing for .006" shaft endplay.

## Main Bearings (Cont'd)

**Front and Rear Main Bearing Cap Removal and Installation** - These caps fit in machined openings in crankcase. Front cap has vertical and horizontal grooves, rear cap vertical grooves only, with packing installed in these grooves to seal caps in place. After caps removed, grooves in caps and crankcase must be cleaned of all old packing. If old packing not removed from crankcase, oil passages may be clogged. When installing main bearing caps, insert new packing in horizontal grooves in upper end of front cap first, then install packing in vertical grooves on each side of front and rear caps (horizontal grooves not used on rear cap). Lower half of oil retainer on rear cap should be a tight fit against upper half to prevent oil leaks at this point.

### **VIBRATION DAMPENER 1940-1942 MODELS**

**VIBRATION DAMPENER REMOVAL:** - Dampener can be removed from beneath car without removing radiator louver panel or radiator (radiator must be removed on Eight only) as follows: Remove radiator louver panel center moulding, front bumper bracket bolts permitting bumper to drop down, and fan belt. On Eight only, remove radiator (see Radiator Core Removal data above). Unscrew crankshaft starting jaw from end of crankshaft. Install jaw of special vibration dampener removal tool (or appropriate replacement tool) over dampener and place screw of tool through starting crank hole. Withdraw dampener by turning screw of dampener tool and remove from beneath car (6), or above (8).

### **CAMSHAFT & BEARINGS 1940 MODELS**

**CAMSHAFT REMOVAL:** - Remove hood (see Hood Removal), radiator (see Radiator Core Removal), radiator louver panel assembly, vibration dampener (see Vibration Dampener Removal), fan blades, fan belt, timing gear cover, camshaft gear (3 bolts), valve chamber cover, cylinder head, valves, tappets, oil pump, fuel pump and distributor (on Six cylinder cars, remove distributor shaft and support assembly). Loosen front engine support and raise front end of engine until camshaft clears radiator tank lower shield. Withdraw camshaft with thrust button and spring.

**CAUTION** - Two special washer head timing gear cover bolts used at lower left corner of cover and must be re-installed in same holes when cover replaced.

**Camshaft Bearing Removal:** - Remove camshaft as directed above. Remove oil pan and bearings. See Rear Camshaft Bearing Installation for Six Cylinder Engines following.

**Replacement Camshaft Bearings:** - Finished bearings available which are reamed sufficiently oversize to provide correct running fit when installed in engine without reaming or scraping. Standard bearings with added wall thickness provided for installations where reaming equipment to be used. These bearings must be line-reamed for .001" clearance.

**Rear Camshaft Bearing Installation (Six Cylinder only):** - Due to new location of distributor at top rear of cylinder block, distributor gear is now cut in rear bearing journal with a special cut-out machined in camshaft rear bushing for the distributor support shaft gear. Whenever rear bearing replaced, this cut-out must be made in bearing after installing in engine as follows: With distributor driveshaft and support assembly off engine, remove driveshaft from support, insert cutting tool in support (making up cutting tool by mounting 1 1/8" hole saw on end of 12" length of 1/2" cold rolled stock, thread opposite end for hex nut), install support (with cutting tool) on engine and tighten support anchor bolt. Cut bearing (use nut on end of cutting tool and turn with ratchet wrench) using light pressure to give a clean cut.

**IMPORTANT** - Place oil soaked rag under bearing to catch chips (avoiding necessity of removing crankshaft). Remove support (together with cutting tool). Drill hole in side of bearing for anchor plug by using 3/8" drill inserted in camshaft anchor plug hole on right side of engine. Install new anchor plugs. Remove oil soaked rag and use extreme care to remove all bearing chips and cuttings.

### **1941 MODELS**

**CAMSHAFT CHANGE ON 3" x 4-1/8" SIX CYLINDER ENGINE:** - New design camshaft used on Model 10 engine after car no. 6848. Cams machined to new contour, intake and exhaust cams alike, which requires new valve timing and tappet clearance (see 1941 Hudson Six car article for data).

**Identification** - New camshaft used after car no. 6848 and may be identified by letter "X" stamped on front face of shaft behind camshaft gear. Engines with this camshaft carry a decalcomania on valve cover stating "Tappet Clearance Hot, Inlet .010", Exhaust .012".

## Camshaft (Cont'd)

**Interchangeability** - This new type camshaft can be installed on early 1941 engines and all 1940 engines with a bore of 3" and stroke of 4-1/8" but must not be used in the 3" x 5" six cylinder engine, When this camshaft installed on engines originally equipped with old style camshaft, a decalcomania with the new tappet clearance figures of .010" Inlet and .012" Exhaust Hot, should be installed on cover plate.

### 1941-1942 MODELS

**CAMSHAFT SERVICING:** - Camshaft Removal. Remove hood (see Hood (Hood) Removal above), radiator (see Radiator Core Removal following), radiator louver panel, vibration dampener (see Vibration Dampener Removal above), fan blades, fan belt, timing gear cover and gasket, vibration dampener spacer, camshaft gear (3 bolts and lock wire), valve chamber cover, valves, tappets, oil pump, fuel pump, and distributor. Camshaft with thrust button and spring can then be withdrawn from engine by pressing down on radiator lower tank shield

**Camshaft Installation** - See Timing Gear data below - (note CAUTION on cover bolt installation)

**Camshaft Bearings** - New thin type steel-backed babbitt-lined bushings used (cannot be used for service on earlier cars). Factory reamed bearings available for replacement which require no reaming or scraping, Standard bearings with extra wall thickness permitting line-reaming on engine also available (line-ream for .001" bearing clearance).

**Camshaft Bearing Removal & Installation** - Bearings can be removed as follows: Remove camshaft (see Camshaft Removal above), remove oil pan and tray, press old bearings out. New bearings can be installed as follows: Press new bearings in place with locating notch on front edge at top (back of bearing has 1/16" chamfer so that bearings can be readily installed in crankcase, bearing material on front of bearing has light chamfer at front). Coat bearings with light engine oil, install camshaft.

### TIMING GEARS 1940-1942 MODELS

**REPLACEMENT TIMING GEARS:** - New Type Gears Starting with 1941 engines timing gears have new design 20° pressure angle teeth (formerly 14½°) providing increased gear life and quieter operation. All other specifications (material and size) same as for preceding gears These new type gears can be used for replacement on 1940 & earlier cars in sets

**Identification Marking** - Figure '20' used to mark these new design gears. Cast on spoke of camshaft gear (also carries mark 'FRONT'), and moulded on front face of camshaft gear.

**Timing Gear Backlash** - .002-.004".

### 1940-1942 MODELS

**TIMING GEAR REMOVAL:** - Drain cooling system. Remove fan belt, radiator outlet hose, vibration dampener (see Vibration Dampener Removal), timing gear cover bolts, cover, cover gasket and vibration dampener spacer. Turn engine over until timing marks (2 teeth mark on camshaft gear, 1 tooth mark on crankshaft gear) coincide. Remove camshaft gear (retained by 3 capscrews and lock wire). Remove crankshaft gear using Puller Tool J-471.

**Gear Installation** - Reverse removal procedure above (use Tool J-483) to replace camshaft gear). Use new timing cover gasket and check leather oil seal in timing gear cover. If new seal to be installed, coat seal seat in cover with red or white lead and press seal securely in place. Do not curl edge of seal over when cover installed.

**CAUTION** - On 1940-41 engines, two special washer head timing gear cover bolts used at lower left corner of cover and must be re-installed in same holes when cover installed. All bolts are washer head type on 1942 engines.

**Replacement Camshaft Gear:** - A special .008" oversize camshaft gear (marked with daub of yellow paint on front face of gear) available for service. Gear backlash .002-.003" (Six), .004-.005" (Eight), .002-.004" (all 1942 engines).

### VALVE SYSTEM 1940-1942 MODELS 1940-1942 MODELS

**VALVE LIFTER REMOVAL:** - Tappets (lifters) may be removed without removing cylinder head as follows:

Right Front Fender Inspection Hole Plate on '40-'42 cars (see first page). Remove valve cover, break loose tappet adjusting screws, remove spring seat retainer using Tool J-915, remove tappet adjusting screw, spring seats, spring dampeners, tappet guide clamp screws and clamps. Take out tappet and guide assemblies.

**OILING SYSTEM**  
**1940-1942 MODELS**

**CHECKING OILING SYSTEM:** - See that oil lines securely in place and not bent or damaged. Drop oil reservoir and clean thoroughly every six months. When installing oil reservoir, check flapper valve on rear main bearing oil return tube (soldered in rear of reservoir). Valve must work freely and should be slightly open with reservoir level. Holes in gaskets between crankcase and oil dipper tray and between tray and reservoir must align with oil return tube and register with hole in bearing cap.

**NOTE** - On 1942 engines, oil suction pipe has been redesigned to bring lower end into center of oil reservoir which insures constant supply to oil pump.

**OIL SUCTION PIPE SEAL:** - Synthetic rubber suction pipe oil seal fitted in counter-bore in cylinder block flange at point where suction pipe passes through oil pan flange. Seal fitted around pipe and compressed by pan (pan gasket widened at this point).

**NOTE** - Use new seal whenever pan installed.

**RADIATOR**  
**1940-1942 MODELS**

**RADIATOR CORE REMOVAL:** - Drain radiator and remove upper and lower hoses. Disconnect radiator stay rod bolts at radiator and remove 2 radiator mounting bolts. Lift core out of car.

**CLUTCH NOTES**  
**1940-1942 MODELS**

**CLUTCH OIL:** - Servicing-Hudsonite (oil) in clutch must be renewed every 5000 miles. Turn engine over until hexagonal drain plug on front face of flywheel is visible in timing inspection hole on left side of motor rear support above starting motor. Remove hex head drain plug with a socket wrench, turn engine over 1/3 revolution until star on flywheel is at inspection hole, allow engine to stand in this position one minute to drain old oil, turn engine over until filler plug is again at inspection hole, insert 1/3 pint Hudsonite (use J-485 gun – or appropriate replacement) replace plug.

**Capacity & Oil** - 1/3 pt. Hudsonite Clutch Compound.