

QUICK REFERENCE INDEX To use: Bend manual back to expose black spots on Pages of the various sections. Then, by means of the index arrows on this page, locate the corresponding black spots on the pages of the section you desire to find.

SIMCA

SERVICE MANUAL

VEDETTE

MODELS

TRIANON, VERSAILLES, REGENCE, MARLY - 1955-1957
CHAMBORD, BEAULJEU - 1958

FOREWORD

This manual is prepared for the Simca Dealer's service technicians who are sincerely interested in their responsibility to the motoring public, constantly improving their knowledge for new service methods in the increasingly complicated skill of modern day auto mechanics—in order to provide a better and more economical service to their community. Each section contains practical disassembly, repair and assembly procedures. Some references and illustrations in this manual refer to previous models.

A number of the Illustrations contained herein, are in French. However, the American Translation of these Illustrations will be located directly below in the text copy.

The customer's description of a service condition, when brought to the attention of the dealer's Service Department, should be verified by a road test, unless the condition is obvious by visual examination.

The Service Tools referred to in this manual, or their equivalent, are necessary for efficient servicing of the Simca cars. All tools listed are available.

To obtain extra copies of this Manual, order by Part Number D-17023.

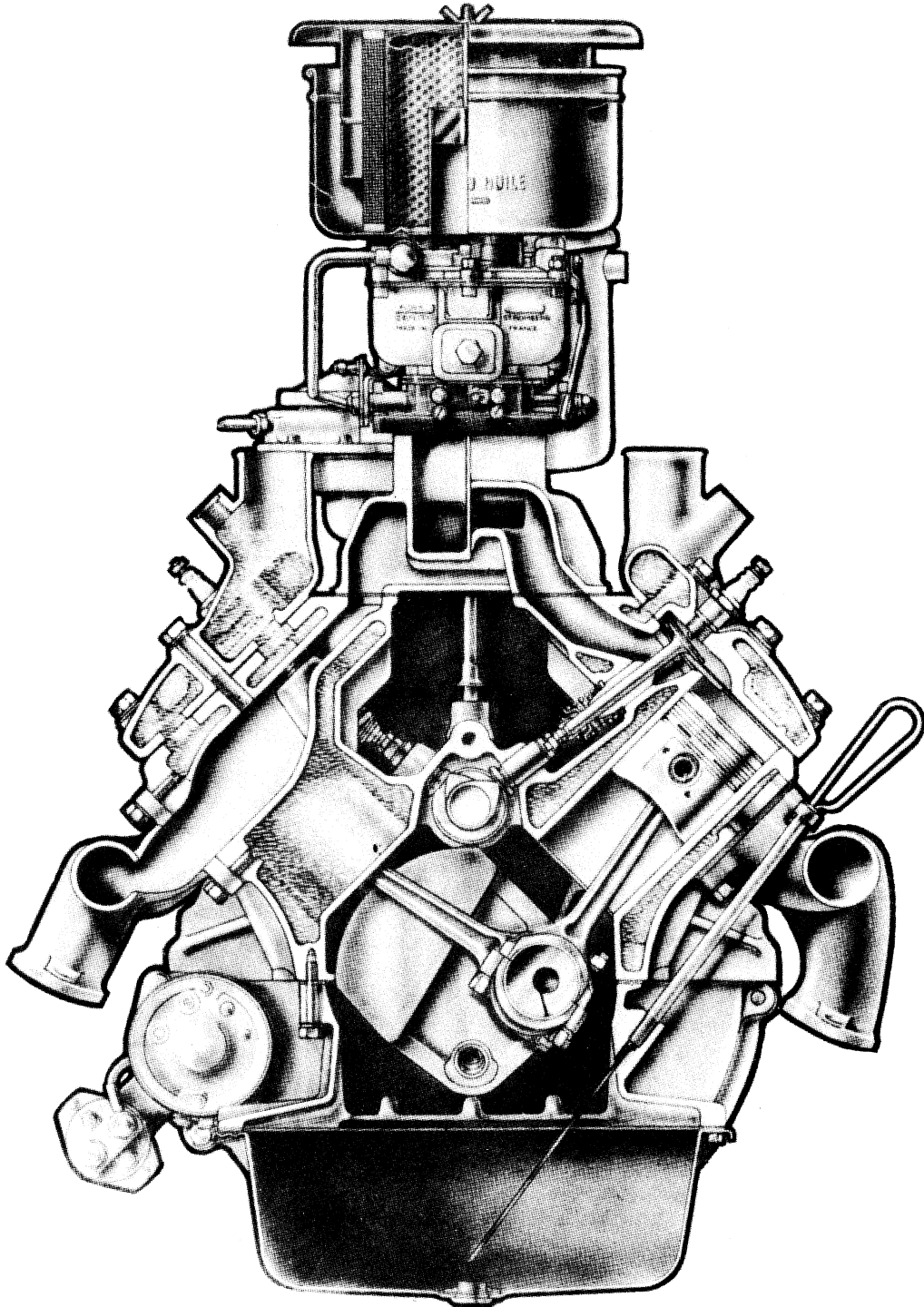
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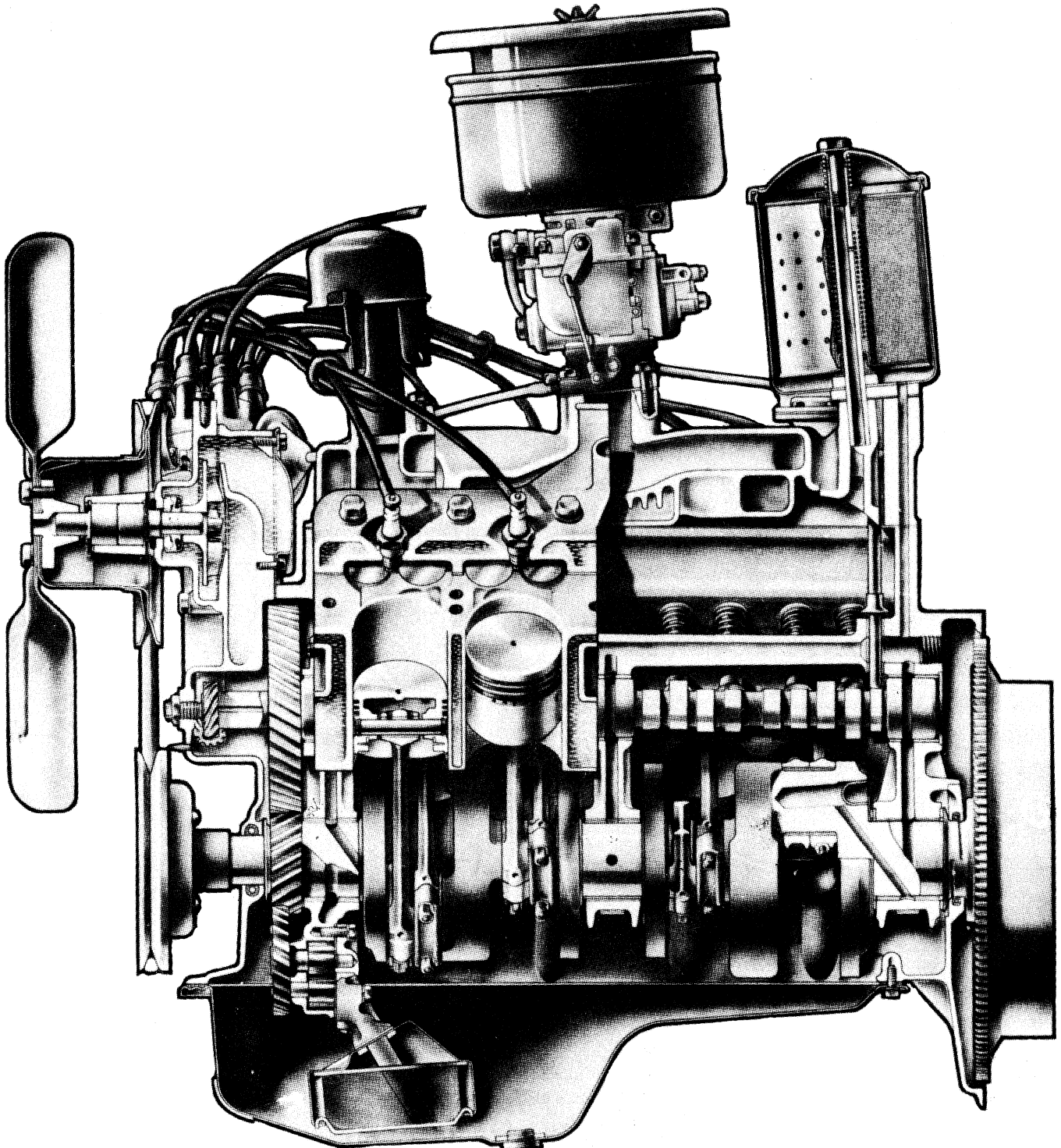
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Cross section of engine

Fig. A



Longitudinal section of engine

Fig. B

CONVERSION OF MILLIMETERS TO DECIMALS OF INCHES

Mm	In.	Mm	In.	Mm	In.	Mm	In.
1	0 03937	26	1 02362	51	2 00787	76	2 99212
2	0 07874	27	1 06299	52	2 04724	77	3 03149
3	0 11811	28	1 10236	53	2 08661	78	3 07086
4	0 15748	29	1 14173	54	2 12598	79	3 11023
5	0 19685	30	1 18110	55	2 16535	80	3 14960
6	0 23622	31	1 22047	56	2 20472	81	3 18897
7	0 27559	32	1 25984	57	2 24409	82	3 22834
8	0 31496	33	1 29921	58	2 28346	83	3 26771
9	0 35433	34	1 33858	59	2 32283	84	3 30708
10	0 39370	35	1 37795	60	2 36220	85	3 34645
11	0 43307	36	1 41732	61	2 40157	86	3 38582
12	0 47244	37	1 45669	62	2 44094	87	3 42519
13	0 51181	38	1 49606	63	2 48031	88	3 46456
14	0 55118	39	1 53543	64	2 51968	89	3 50393
15	0 59055	40	1 57480	65	2 55905	90	3 54330
16	0 62992	41	1 61417	66	2 59842	91	3 58267
17	0 66929	42	1 65354	67	2 63779	92	3 62204
18	0 70866	43	1 69291	68	2 67716	93	3 66141
19	0 74803	44	1 73228	69	2 71653	94	3 70078
20	0 78740	45	1 77165	70	2 75590	95	3 74015
21	0 82677	46	1 81102	71	2 79527	96	3 77952
22	0 86614	47	1 85039	72	2 83464	97	3 81889
23	0 90551	48	1 88976	73	2 87401	98	3 85826
24	0 94488	49	1 92913	74	2 91338	99	3 89763
25	0 98425	50	1 96850	75	2 95275	100	3 93700

CONVERSION OF FRACTIONS TO DECIMALS OF AN INCH

DECIMAL EQUIVALENTS

$\frac{1}{64}$ —.015625	$\frac{17}{64}$ —.265625	$\frac{33}{64}$ —.515625	$\frac{49}{64}$ —.765625
$\frac{1}{32}$ —.03125	$\frac{9}{32}$ —.28125	$\frac{17}{32}$ —.53125	$\frac{25}{32}$ —.78125
$\frac{3}{64}$ —.046875	$\frac{19}{64}$ —.296875	$\frac{35}{64}$ —.546875	$\frac{51}{64}$ —.796875
$\frac{1}{16}$ —.0625	$\frac{5}{16}$ —.3125	$\frac{9}{16}$ —.5625	$\frac{13}{16}$ —.8125
$\frac{5}{64}$ —.078125	$\frac{21}{64}$ —.328125	$\frac{37}{64}$ —.578125	$\frac{53}{64}$ —.828125
$\frac{3}{32}$ —.09375	$\frac{11}{32}$ —.34375	$\frac{19}{32}$ —.59375	$\frac{27}{32}$ —.84375
$\frac{7}{64}$ —.109375	$\frac{23}{64}$ —.359375	$\frac{39}{64}$ —.609375	$\frac{55}{64}$ —.859375
$\frac{1}{8}$ —.125	$\frac{3}{8}$ —.375	$\frac{5}{8}$ —.625	$\frac{7}{8}$ —.875
$\frac{9}{64}$ —.140625	$\frac{25}{64}$ —.390625	$\frac{41}{64}$ —.640625	$\frac{57}{64}$ —.890625
$\frac{5}{32}$ —.15625	$\frac{13}{32}$ —.40625	$\frac{21}{32}$ —.65625	$\frac{29}{32}$ —.90625
$\frac{11}{64}$ —.171875	$\frac{27}{64}$ —.421875	$\frac{43}{64}$ —.671875	$\frac{59}{64}$ —.921875
$\frac{3}{16}$ —.1875	$\frac{7}{16}$ —.4375	$\frac{11}{16}$ —.6875	$\frac{15}{16}$ —.9375
$\frac{13}{64}$ —.203125	$\frac{29}{64}$ —.453125	$\frac{45}{64}$ —.703125	$\frac{61}{64}$ —.953125
$\frac{7}{32}$ —.21875	$\frac{15}{32}$ —.46875	$\frac{23}{32}$ —.71875	$\frac{31}{32}$ —.96875
$\frac{15}{64}$ —.234375	$\frac{31}{64}$ —.484375	$\frac{47}{64}$ —.734375	$\frac{63}{64}$ —.984375
$\frac{1}{4}$ —.25	$\frac{1}{2}$ —.5	$\frac{3}{4}$ —.75	1—1.

ENGINE

DESCRIPTION

A new V8 engine, with the following data, is built in the vehicle :

Type : V8 - 90°

Bore : 2.601" (66,065)

Stroke : 3.375" (85,725)

Piston displacement : 143.4 cu.in (2,351 liters)

Compression ratio : 7.2 to 1

Brake horsepower : 75 hp at 4600 RPM (1955-1956-1957)

84 hp at 4.800 RPM (1958)

Maximum torque : 110 ft. lbs (15,2m.kg) at 2600 RPM

(1955-56-57) - 112 ft. lbs (15,5m.kg) at 2600 RPM (1958)

Firing order : 1-5-4-8-6-3-7-2

Location of cylinder n°1 : RH front

CYLINDER BLOCK

The new cylinder block in cast iron mainly shows the following different features compared with earlier type :

1. Lubricating system - The cylinder block oil tube is not of the inserted type, but integral cast and drilled in the block. The discharge valve of the oil pump is fitted to the oil pump cover.

2. Cooling system - Cooling provided by a single centrifugal type water pump built in the timing gear cover, at the front of this latter.

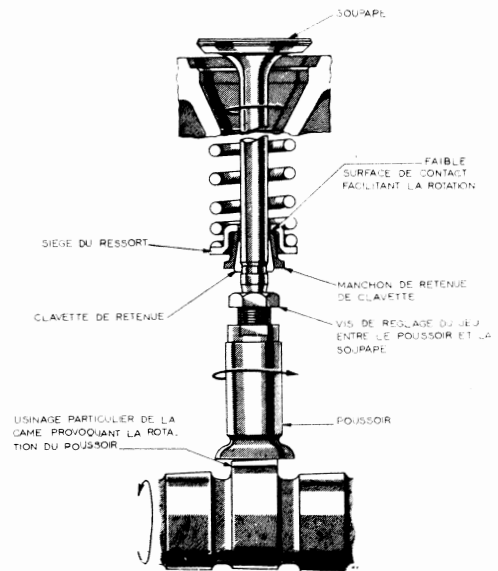


Fig. 1

Siege du ressort
Clavette de retenue
Usinage particulier
de la came provoquant
la rotation du poussoir

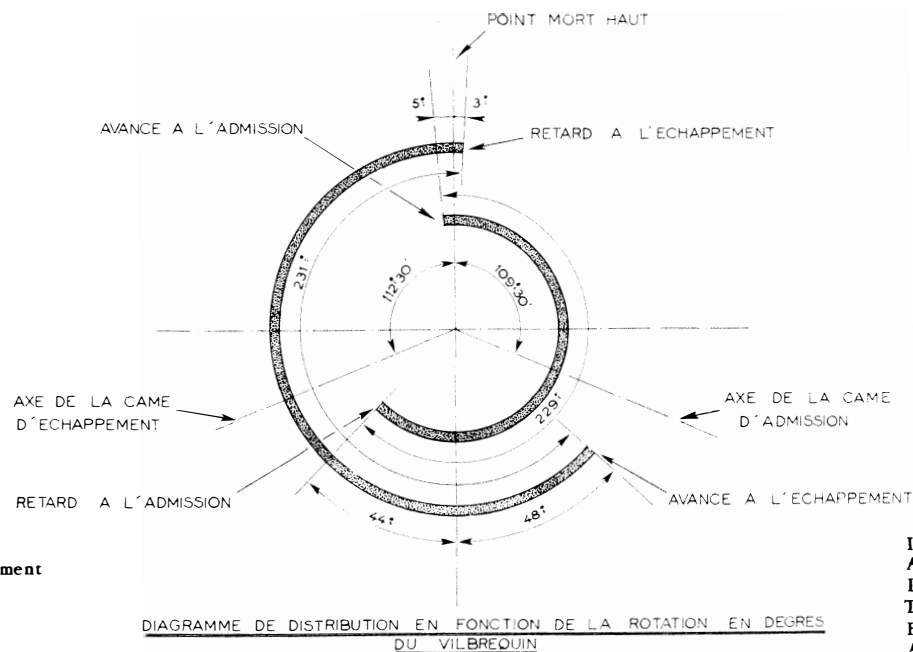
Soupape
Faible surface de
contact facilitant la
rotation
Manchon de retenue
de clavette
Vis de réglage du
jeu entre le poussoir
et la soupape
Poussoir

Spring seat
Retainer lock
Special machining of
camlobe for rotation
of the valve

Valve
Small contact surface
for easy rotation

Valve spring seat
retainer
Valve lift adjusting
screw

Push rod (tappet)



Avance à l'admission
Axe de la came d'échappement
Retard à l'admission
Point mort haut
Retard à l'échappement
Axe de la came d'admission
Avance à l'échappement

Diagramme de distribution en fonction
de la rotation en degrés du vilebrequin

Intake advance
Axis of exhaust cam
Intake retard
Top dead center
Exhaust retard
Axis of intake cam
Exhaust advance

Fig. 2

Timing diagram in relation with crankshaft
revolution in degrees

3. Valve guides. Of the one piece type, press-fitted in the guide bores using liquid air.

VALVES

The diameter of the intake valve heads was increased for better filling of the cylinders. The valves during their lift are rotating around their axis. This rotative motion is caused by a special machining of the cam lobes which in turn causes the push rods to rotate (see fig. 1). The valve spring seat design allows the valve to rotate.

The valve push rods are of the adjustable type.

PISTON

The pistons are of the autothermic, non slotted type in aluminium alloy. Three piston rings are located above the wrist pin hole, 2 compression and 1 oil ring of the expander type. The pistons are of the flat dome design. The piston pins of the tubular type are off-set and held laterally by 2 retainers.

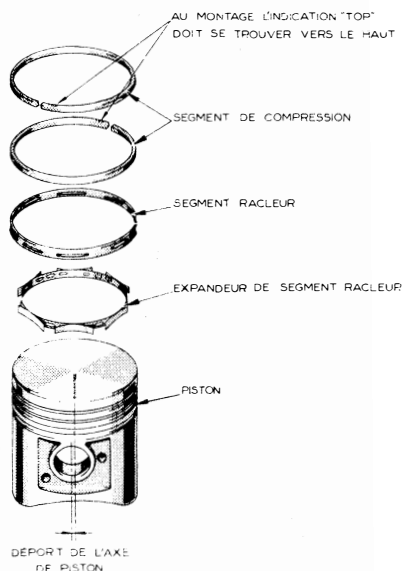


Fig. 3 -

Au montage l'indication «top» doit se trouver vers le haut
Segment de compression
Segment racleur
Expandeur de segment racleur
Déport de l'axe de piston
Piston

Assemble the side marked «top» upwards

Compression rings
Oil ring
Oil ring expander
Offset of the piston pin
Piston

CONNECTING ROD

The big ends are drilled to allow lubrication of the cylinder bores by

splashing from the crankpins. Four holes are drilled in the piston pin end and provide piston pin lubrication.

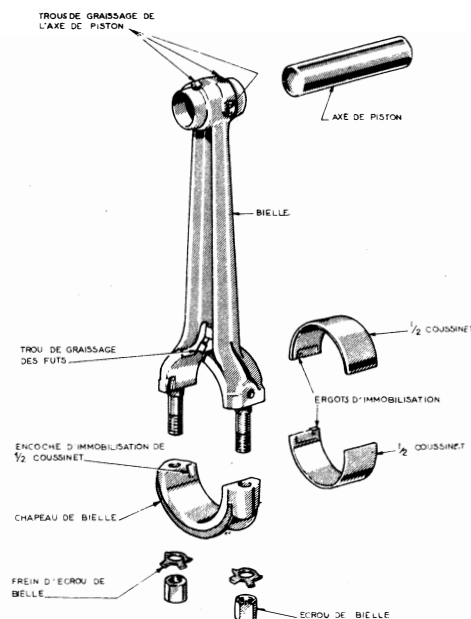


Fig. 4 -

Trous de graissage de l'axe de piston
Trou de graissage des futs
Encoche d'immobilisation de 1/2 coussinet
Chapeau de bielle
Frein d'écrou de bielle
Axe de piston
Bielle
1/2 coussinet
Ergots d'immobilisation
Ecrou de bielle

Oil holes for pin lubrication
Cylinder bore lubricating hole
Bearing retaining notch
Connecting rod cap
Nut retainer
Piston pin
Connecting rod
Connecting rod bearing half
Retaining lug
Connecting rod nut

BEARING LINERS

- The connecting rod bearing liners are locked in place in the connecting rod big end. They are of the tri-metal type, i.e. a steel shell backing a layer of copper lead alloy with a superficial electrolytic coating. The connecting rod cap to rod nuts are locked by sheet metal retainers.
- The main bearing liners are of the removable type with a babbit layer inside a thin steel shell. The main bearing caps are assembled with stud bolts and nuts locked by sheet metal retainers.

CRANKSHAFT

The crankshaft is of cast steel design and balanced out with 6 balancing weights cast integral with the shaft.

The end play is adjusted on the rear main bearing.

Four half washers, located on both sides of the rear bearing journal and between the front and rear flanges of this journal allow for adjusting.

The cast iron type crankshaft timing gear is assembled by key way on the crankshaft trunnion.

CAMSHAFT

The camshaft is of cast steel design. It is driven from the crankshaft pinion by the aluminium type camshaft timing gear which is assembled on the front end of the camshaft by 4 screw positioned in such a manner that timing errors are prevented.

Both the crankshaft and the camshaft gears are marked for setting the timing gear. The cam profile provides the rotation of the valve push rods.

ENGINE ASSEMBLY

Two rubber insulators or mounts, positioned in the engine transverse center plane, provide for securing the engine to the front tubular cross-member.

ENGINE OIL PAN VENTILATING

Ventilating is provided by the oil filter tube located in the front of the engine on the intake manifold and furthermore by an exhausting tube draining out the oil vapours built up in the pan.

The oil filler tube is acting as an exhauster; fresh air is thrown by the fan and delivered in the valve chamber and in turn in the oil pan proper. The oil vapours are drained in a stalk located in front of the block and then discharged outside thru a tube adapted to the bank.

ENGINE LUBRICATING SYSTEM

The engine lubrication is effected by a high pressure oil pump, which is driven from the crankshaft gear in the front of the engine. The pump includes a discharge valve which is calibrated for a pressure of 4,5 kg/cm² (64 p.s.i.) at 3000 engine RPM measured with ESSO EXTRA MOTOR OIL N° 1 at a temperature of 80° C (176° F).

The normal pressure is 3.5 to 4.5 kg/cm² (50 to 64 p.s.i.) at 3000 engine RPM measured with ESSO EXTRA MOTOR OIL N° 1 at 80° C (176° F). The intake suction of the pump takes place inside a strainer which is easily accessible by disassembling the engine oil pan. The lubrication steps are unchanged compared with the earlier type cylinder block.

REMOVING THE ENGINE

1. Protect the body of the vehicle with dust covers.
2. Drain the cooling system and the oil pan.
3. Remove the engine compartment lamp.

4. Remove the hood, when the 4 securing screw at RH & LH are unscrewed and after location of the hinge pads has been referenced.

5. Disconnect battery cables and remove the battery.

6. Remove the mud pans.

7. Disconnect the 2 upper and the lower hose from the radiator as well as the radiator to climatizer hoses.

8. Remove the 6 radiator securing screws and remove the radiator.

9. Remove the fan and the fan pulley.

10. Remove the generator and belt adjusting arm.

11. Remove the air cleaner from the carburetor.

12. Disconnect the fuel lines, the electric wiring and the throttle and choke control rods from the parts built out integral with the engine.

13. Remove the carburetor, replacing same with the lifting hook plate.

14. Remove distributor.

15. Disconnect the exhaust pipes from the exhaust manifold flanges.

16. Unscrew and remove the RH & LH engine mount securing screws.

17. Unscrew and remove the clutch housing to engine screws; the two upper screws may be reached from inside of the body after stripping the front floor panel.

18. Rest the transmission on a jack.

19. Lift the engine slightly with a hoist and disengage from the transmission.

20. Lift out the engine while turning the front end towards the left side of the engine compartment for facilitating the removal.

REASSEMBLE THE ENGINE

Proceed in the reversed sequence compared with the «removing».

DISMANTLING THE ENGINE

1. Remove the exhaust manifolds, the engine mounts and the starting motor.
2. Assemble the engine on a standard support.
3. Remove the oil filter, the oil filler tube and the oil pan ventilating tube, the ignition coil, the fuel pump, and the spark plugs.

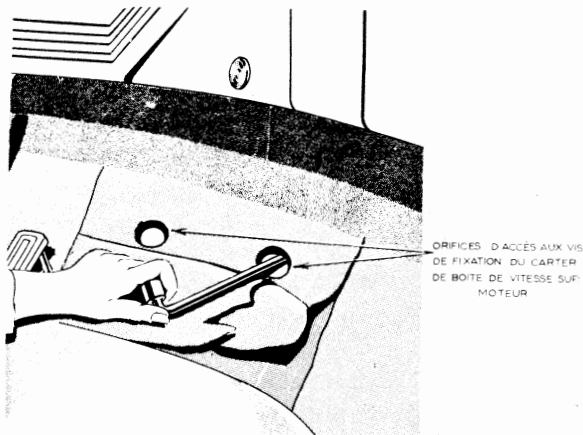
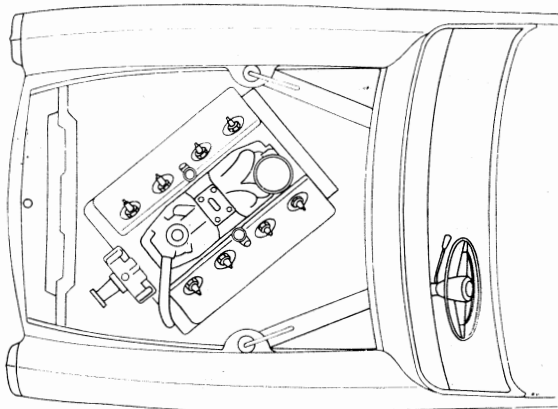


Fig. 5

Orifices d'accès aux vis de fixation du carter de boîte de vitesse sur moteur

Access holes for upper engine to clutch housing screws.

4. Remove the intake manifold (valve chamber cover) and gasket and the fuel pump push rod.
5. Unscrew the cylinder head screws and remove screws, washers, heads and gaskets.
6. Use a crank handle and attach a hexagonal head screw socket to the crankshaft pulley securing screw in order to allow for rotating the crankshaft during the dismantling process.



DÉPOSE DU MOTEUR

LE MOTEUR UNE FOIS DÉACCROUPLÉ DE LA BOÎTE DE VITESSE, LE TOURNER L'AVANT VERS LA GAUCHE POUR EN FACILITER SA SORTIE.

Fig. 6 -

Dépose du moteur

Le moteur une fois désaccouplé de la boîte de vitesse, le tourner, l'avant vers la gauche pour en faciliter sa sortie.

Removing engine

When engine is disassembled from the transmission, turn the front end towards the left side to facilitate the removal.

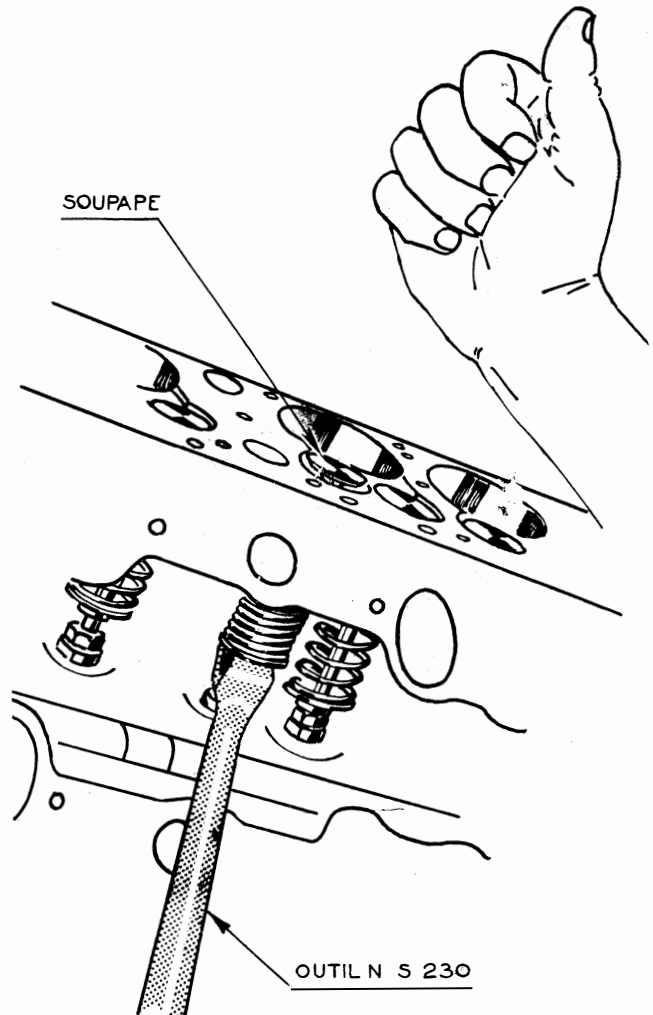


Fig. 7 -

7. Remove the valves by compressing the spring using the valve remover N° S-230, give a sharp tap on the valve hand, lowering it on its seat in order to loosen the spring seat retainer locks. Then remove the spring thru the valve chamber, the spring seats, the retainers and the locks. The various components should be placed on a bench and referenced in order to reassemble each part as a matched set in the original location.

8. Turn the engine by 90° in order to position the flywheel upwards.

Remove the clutch pressure plate by untightening gradually the 6 securing screws (those screws are made from special steel and as they are transmitting the engine torque, never replace these screws by any other type). Introduce spacers 3,5 mm (.138") thick between the plungers and the plate in order to maintain the springs in proper condition and physical properties.

9. Remove the clutch disc assy.

10. Unscrew the flywheel attaching screws and remove the flywheel.

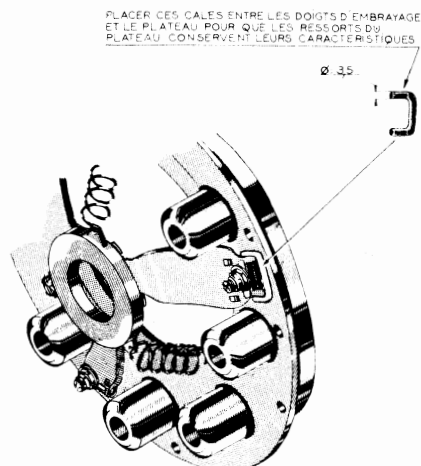


Fig. 8 -

Placer ces cales entre les doigts d'embrayage et le plateau pour que les ressorts du plateau conservent leurs caractéristiques

Insert these spacers between the plungers and the plate in order to retain the physical properties of the springs.

11. Turn the engine on the fixture by 90° so that the oil pan assembly is on the top.
12. Unbend the retainer lugs on the front main bearing cap screws and remove the cap and oil pump assembly.
13. Unbend the lugs on the connecting rod cap nut retainers, remove the cap and rod assembly taking care to prevent cylinder bores from scratching. Keep the caps and rods in matched sets after dismantling.
14. Unscrew the crankshaft pulley attaching screw. Remove the crankshaft pulley, the washer and the lock.
15. Unbend the lugs on the center and rear main bearing cap screw retainers, remove the bearing caps, the crankshaft and the half washers for end play adjusting on the rear main bearing journal.
16. Remove the water pump assembly.
17. Remove the engine front cover.
18. Remove the camshaft assembly.
19. Remove the valve push rods.
20. Remove the oil line plugs.

DISMANTLING PISTON AND CONNECTING ROD ASSY

1. Remove the piston rings.
2. Remove the piston pin retainers.
3. Drive out piston pin.

DISMANTLING CAMSHAFT ASSY

1. Remove the distributor driving pinion.
2. Unbend the lugs on the camshaft gear attaching screw retainer.

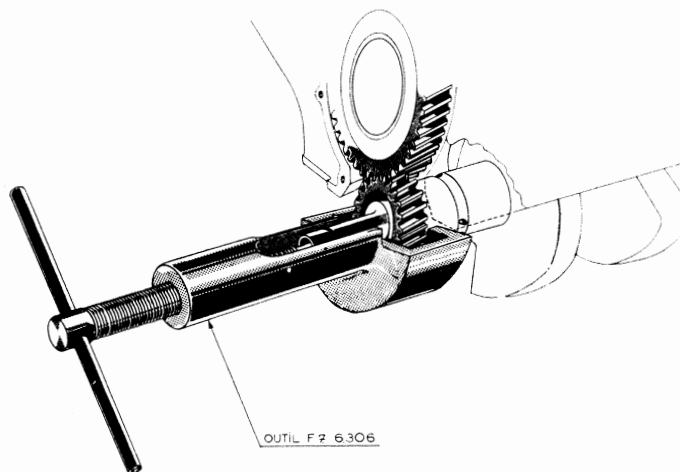


Fig. 9 -

Outil N° F7-6306

Tool N° F7-6306

3. Remove camshaft gear after unscrewing the screws.

DISMANTLING CRANKSHAFT

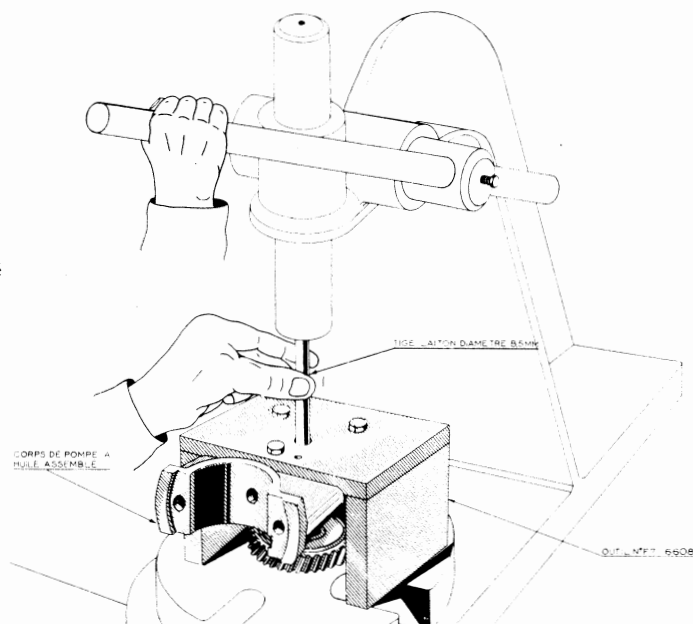
1. Remove oil slinger.
2. Pull the crankshaft gear using tool N° F7-6306, save the key.

REMARK: When the crankshaft must be reground or when oil circuit should be cleaned properly, removal of the oil line plug on the crankshaft is required.

DISMANTLING THE OIL PUMP

1. Remove the strainer retaining spring and strainer.
2. Remove the strainer cover and strainer tube retaining screws, the strainer tube and gasket, the strainer cover and its gasket.
3. Unbend the lug, remove the discharge valve screws, the spring and the valve.
Starting with engine N° 105027, the oil pump discharge valve tapered plug is replaced by a hexagonal head plug N° 352986 SM with a retainer N° 358393 SM. The oil pump cover has been modified to suit this new type plug accordingly.
4. Remove the 4 cover to pump screws and remove the cover and the gasket.
5. Remove the oil pump driven gear.
6. Drive out the oil pump driving gear shaft, using tool N° F7-6608 remove the driving gear and shaft assembly.

Corps de pompe à huile assemblé
Tige laiton diamètre: 8,5 mm
Outil N° F6 6608



Oil pump body assy
Brass rod Ø 8,5 mm (.33")
Tool N° F7 6608

Fig. 10 -

Pignon d'entraînement
Pignon entraîneur
Cloche de crépine
Bague d'arbre de commande
Corps de pompe à huile
Pignon entraîné
Couvercle
Clapet de décharge
Tûbe d'aspiration
Crépine

Driving gear
Drive gear
Strainer cover
Bushing
Oil pump body
Idler gear
Cover
Discharge valve
Strainer tube
Strainer

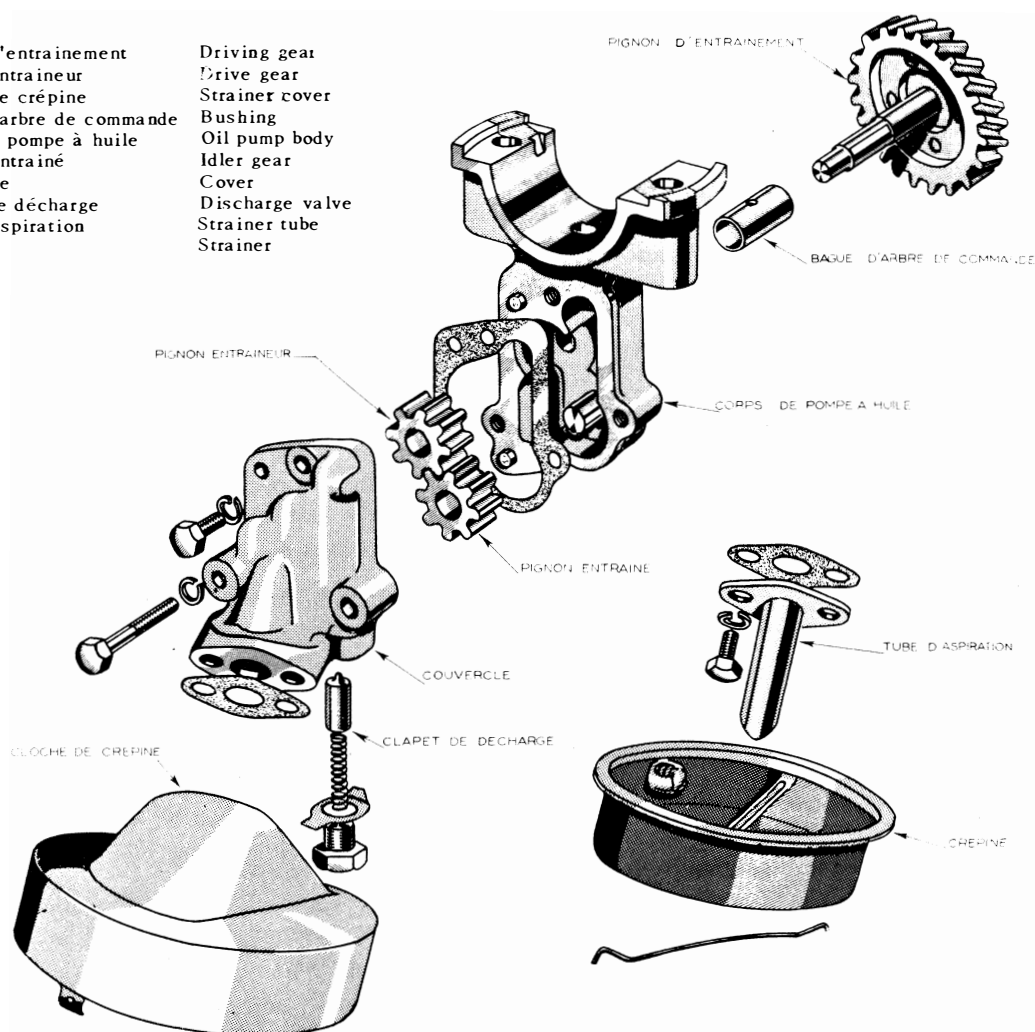


Fig. 11 -

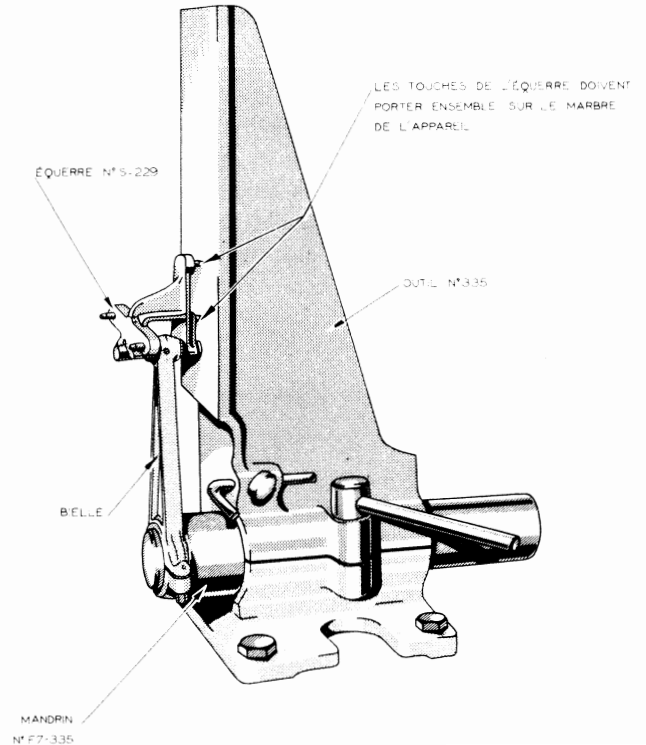
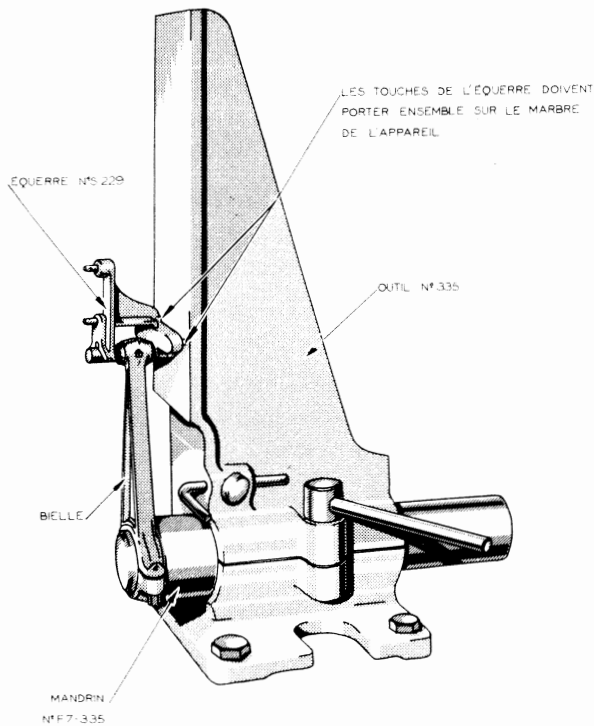


Fig. 12 -

Equerre N° S 229
Bielle
Mandrin N° F 7 335
Les touches de l'équerre doivent porter ensemble sur le marbre de l'appareil.
Outil N° 335

Square N° S 229
Connecting rod
Arbor N° F 7 335
The gauging points must be applied on the plate all together
Tool N° 335

PISTON AND CONNECTING ROD ASSEMBLY

In order to obtain proper engine operation, it is essential that :

1. The connecting rods are properly trued up.
2. The pistons are properly fitted in the cylinder bores.

1. In order to check the connecting rod trueing, proceed as follows :

After assembling the piston pin in the connecting rod small end, position the connecting rod in the N° 335 fixture as shown in Fig. 12.

Position the V on the piston pin, the gauging points located in the horizontal axis of the V should be touching the vertical checking plate of the fixture; if there is no contact, the connecting rod should be trued up, using a claw-tool.

Turn over the V block on the piston pin, the gauging points located in the vertical axis of the V should be touching the vertical checking plate of the fixture; if there is no contact, the connecting rod should be trued up using a claw tool.

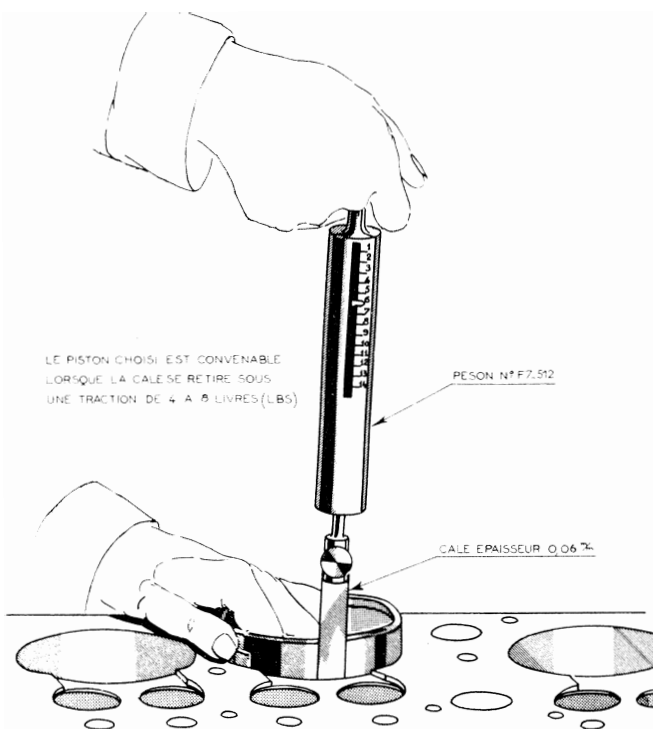


Fig. 13 -

Peson N° 512
Cale épaisseur 0,06 mm

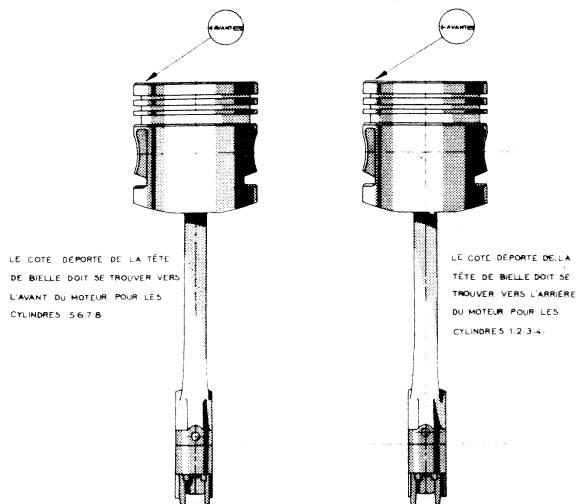
Scale N° 512
Feeler gauge 0,06 mm (.0025")

2. In order to fit the pistons in the cylinder bores, proceed as follows :

Place a piston in the bore while inserting a 0,06 mm (.0025") feeler gage between the piston skirt and the cylinder wall, the feeler gage should be in contact with the skirt according to an axis perpendicular to the piston pin and being attached to a N° 512 scale. The piston fit is correct when a pull of 4 to 8 pounds is required for pulling the scale with the feeler.

ASSEMBLING CONNECTING ROD AND PISTON

Due to the dissymetry of the connecting rod big



ends and the offset of the piston pins, assembling pistons to the connecting rods should be done as follows :

The connecting rods for the bores N° 1, 2, 3, 4, should be assembled with the «front» of the piston opposite to the offset of the connecting rod big end.

The connecting rods for the bores N° 5, 6, 7, and 8, should be assembled with the «front» of the piston same side as the offset of the connecting rod big end.

For this purpose the pistons are stamped with an arrow and letters «AVANT» on the dome.

The piston having been dilated, should be placed as indicated above on the connecting rod and the pin assembled. Assemble the piston pin retaining clips.

REMARK: In order to dilate the piston, use a hot Plate or immerse the piston in hot water

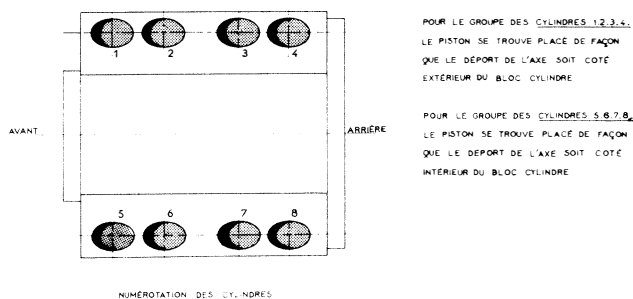
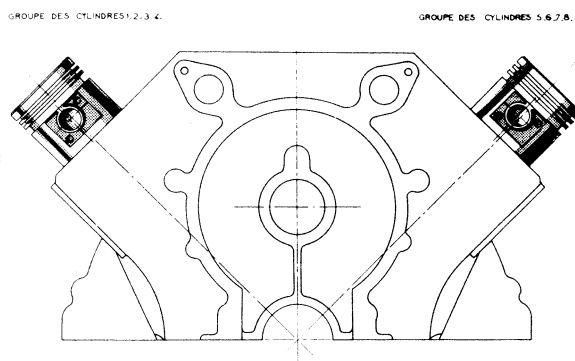


Fig. 14 -

Avant
Groupe des cylindres 1 - 2 - 3 - 4
Groupe des cylindres 5 - 6 - 7 - 8
Le côté déporté de la tête de bielle doit se trouver vers l'avant du moteur pour les cylindres 5-6-7-8

Le côté déporté de la tête de bielle doit se trouver vers l'arrière du moteur pour les cylindres 1-2-3-4.

Avant
Arrière
Pour le groupe des cylindres 1 - 2 - 3 - 4 - le piston se trouve placé de façon que le déport de l'axe soit côté extérieur du bloc cylindre.

Pour le groupe des cylindres 5 - 6 - 7 - 8 le piston se trouve placé de façon que le déport de l'axe soit côté intérieur du bloc cylindre.
Numérotation des cylindres.

Front
Cylinders 1 - 2 - 3 - 4 bank
Cylinders 5 - 6 - 7 - 8 bank
The offset side of the connecting rod big end should be towards the front of the engine for cylinders N° 5-6-7-8.
The offset side of the connecting rod big end should be towards the rear of the engine for cylinders N° 1-2-3-4
Front
Rear
For the bank of cylinders N° 1 - 2 - 3 - 4, piston is located so as offset of pin hole is towards the outside of the block.

For the bank of cylinders N° 5 - 6 - 7 - 8 piston is located so as offset of pin hole is towards the inside of the block.
Numbering of the cylinders.

ASSEMBLING PISTON RINGS

The piston rings should be assembled after checking the clearance of the end gap and also the clearance in the corresponding grooves.

The oil ring is provided with an expander and it is essential that the expander be made interdependent with the oil ring when rotating. For that reason the expander should be stopped on the oil ring as shown in Fig. 15. This figure shows also the gap of the expander located on the opposite side of the ring gap and furthermore the ends of 2 springs on the expander bearing against 2 undercuts on the inner face of the ring; first assemble the expander in the groove.

The compression rings have letters «TOP» stamped on one face; this face should be assembled upwards in the piston.

When assembling the pistons in the bores, the gap of the oil ring should be turned towards the valves while the compression ring gaps should be shifted by 120°.

REASSEMBLING THE CRANKSHAFT

When the oil line plugs have been removed, install new plugs and lock them in place, after pressing in, with equally spaced punch marks.

Install the woodruff key in the key slot and press the gear using tool N°F7 6306 A. Position the gear so as timing mark will be apparent.

ASSEMBLING CAMSHAFT GEAR TO SHAFT

Install the camshaft timing gear in place with 4 screws and do not forget setting the screws retainer; the screw locations are not equally spaced thus preventing from faulty assembling. Bend over retainer lugs.

Assemble the distributor driving pinion after dilating it in hot oil; the reference marks should line up.

ASSEMBLING OIL PUMP

1. Install the driving gear and shaft assembly in the oil pump body.
2. Press fit the drive pinion in the driving gear shaft, using a piece of tubing applied to the driving pinion flange.
3. Install the idler gear on its shaft.
4. Install the oil pump cover and gasket on the oil pump body.
5. Install the oil pressure discharge valve and the spring in place. Set the retainer and tighten up the screw. Bend over retainer lug.

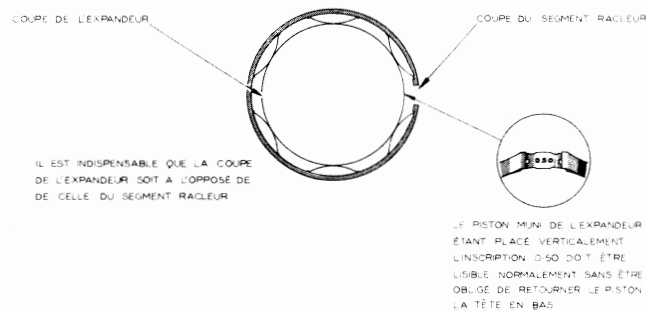


Fig. 15 -

Coupe du segment racleur
Coupe de l'expandeur
Le piston muni de l'expandeur étant placé verticalement l'inscription D-50 doit être lisible normalement sans être obligé de retourner le piston la tête en bas.

Oil ring gap.
Expander gap.
When the piston and expander are vertically positioned, letters D-50 should appear normally readable without reversing the piston.

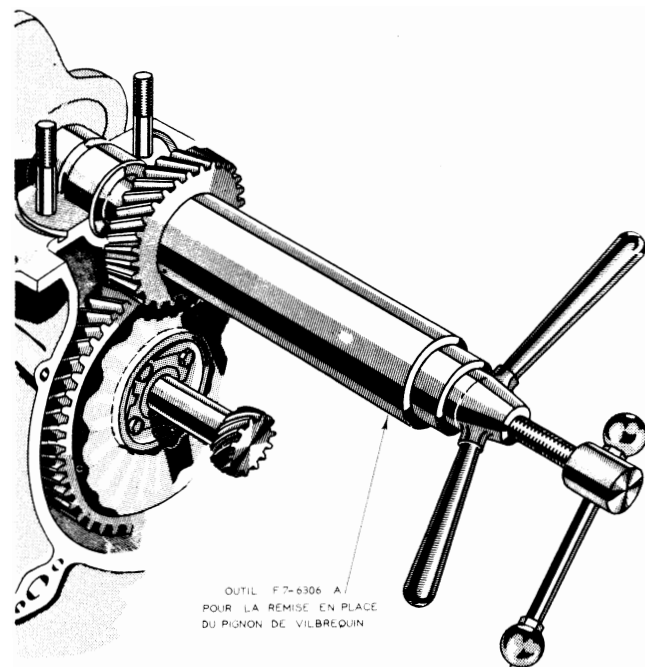


Fig. 16 -

Outil F7-6306 A pour la remise en place du pignon de vilbrequin

Tool N° F7-6306 A for installing crankshaft gear.

6. Install a gasket on the suction orifice secure the strainer cover, the suction tube and its gasket with 2 screws and lock washers.
7. Install the strainer and secure it in place with the retaining spring.

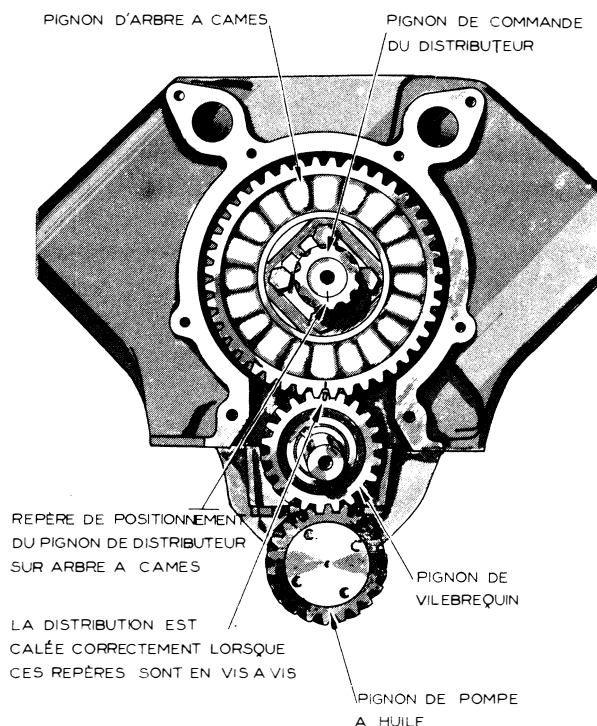


Fig. 17 -

Pignon d'arbre à cames
Repère de positionnement du pignon de distributeur sur arbre à cames.
La distribution est calée correctement lorsque ces repères sont en vis à vis.
Pignon de commande du distributeur.
Pignon de vilebrequin
Pignon de pompe à huile.

Camshaft timing gear
Timing mark on distributor drive pinion and camshaft end.
Timing properly adjusted when the timing marks are lined up.
Distributor drive pinion.
Crankshaft gear
Oil pump driving gear and shaft assy.

ASSEMBLING THE ENGINE

Prior to proceeding with assembling the engine, it is essential :

To clean thoroughly the cylinder block and to flush the oil lines with detergent fluid, using an oil gun and to blow out the lines with compressed air.

To replace all components which, due to wear or otherwise bad conditions, may be detrimental to proper engine operation.

IMPORTANT:

Use new gaskets only and lubricate all components as they are to be re-assembled. Tighten up all screws and nuts to specified torque.

To reassemble the engine, it is recommended to proceed as follows :

1. Screw on the 2 plugs of the oil gallery after coating them with sealing compound
2. Screw on the drain cocks after coating them with sealing compound, the draining crifice directed downwards.
3. Install the valve push rods assembly in the corresponding bores.
4. Install the camshaft with care to prevent from damaging the babbitt lined bearings; rotate the camshaft for disclosing hard spots.
5. Install the bearing liner halves in the main bearings.
6. Install the crankshaft rear oil packing retainer including the packing which should be previously soaked in oil for 2 hours. The oil retainer should be assembled in the block with the contact face coated with sealing compound.
7. Install the crankshaft positioning same in order to have the timing mark on the gear aligned with the timing mark on camshaft gear (Fig.17).
8. Install center bearing cap with liner installed.
9. Select the end play limiting half washers so as to obtain 0,05 - 0,23 mm (.002 - .009") clearance. Select identical half washers for the cap and stick them to rear bearing cap using grease with the retaining lug in its location, then assemble the rear bearing cap with the liner.

REMARK - The oil grooves in the end thrust half washers should be towards the crankshaft (Fig. 18).

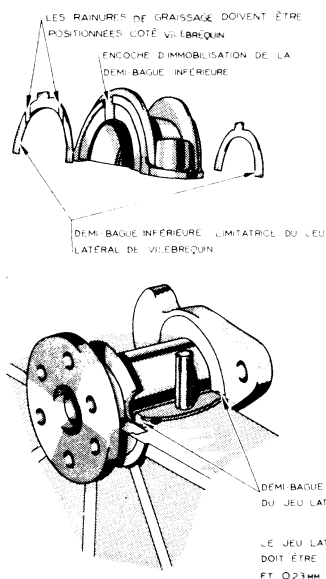


Fig. 18 -

Les rainures de graissage doivent être positionnées côté vilebrequin	The oil grooves should be against the crankshaft
Demi-bague inférieure limitatrice du jeu latéral de vilebrequin	Half thrust washer for adjusting end play lower vilbrequin
Le jeu latéral du vilebrequin doit être compris entre 0,05 mm et 0,23 mm.	Crankshaft end play should be 0,05 - 0,23 mm (.002" to .009").

It is advisable to check again the end play of the shaft after assembling the rear main bearing cap.

10. Install the oil slinger in front of the crankshaft gear, with the large outer diameter against the engine front cover.

11. Stick the engine front cover gasket in place, using sealing compound. Install the crankshaft pulley woodruff key.

12. Assemble the engine front cover with oil packing installed on the pulley hub, thus preventing packing from damage. Present the crankshaft pulley and timing gear cover assembly on the front end of the cylinder block. Tighten up the screws fixing the timing gear cover to specified torque.

13. Tighten up the crankshaft pulley securing screw with washer installed. Use a crank handle with hexagonal socket for rotating the crankshaft during the assembling operation.

14. Install in the corresponding cylinder bore, the piston and connecting rod assemblies, the reference mark «A-VANT» of the piston being directed towards the front of the engine. The oil ring gap should be located towards the valves, the compression ring gaps being shifted by 120°.

15. Install the bearing insert on the connecting rod, compress the piston rings using tool N° F7-6149 and lower the piston in the bore by slightly tapping with a mallet on the dome, guiding the connecting rod big end in order to prevent the crankpin journals from being damaged by the connecting rod studs.

IMPORTANT:

Each crankpin journal is stamped with letter

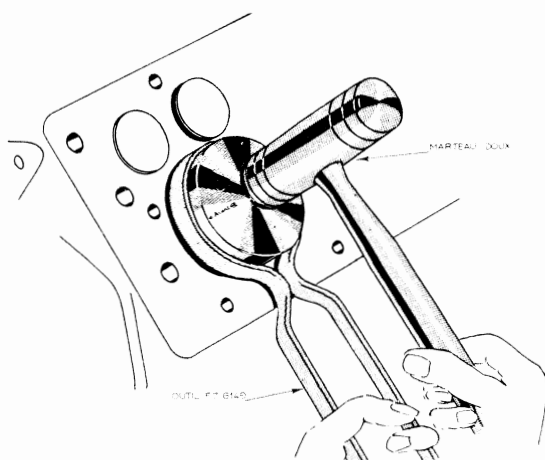


Fig. 19 -

Marteau doux
Outil F7-6149

Soft hammer
Tool N° F7-6149

«B» or «C» near the counterweight, these reference marks indicate the type of inserts to be assembled relative to the actual size of the crankpin, although the crankpins are always within the specified standard manufacturing limits.

Consequently, 2 types of bearing inserts are furnished as standard equipment with the stamped mark «B» or «C».

Inserts marked «B» will be installed on crankpins marked «B».

Inserts marked «C» to be installed on crankpins marked «C».

On one crankshaft you may find crankpins referenced «B» as well as «C» in any sequence.

16. Install the connecting rod caps with inserts selecting corresponding numbers for each rod. Install the nut retainer and tighten the nuts moderately.

17. Check the end play of the connecting rods and crank the shaft to make sure that all parts are well positioned.

18. Tighten up the connecting rod caps to specified torque and bend over the retainer lugs.

19. Install the front main bearing cap and oil pump assembly. Tighten up the main bearing caps studs to specified torque and bend over the retainer lugs.

20. Install the flywheel with clutch pilot bushing on the rear crankshaft flange, assemble screw retainer and 6 screws.

Tighten up to specified torque and lock the screws.

REMARK - When replacing the starting gear is required, this should be cut off. The new starting gear should be diluted prior to assembly.

21. Assemble the upper and lower oil pan assembly with oil packings and gasket installed. Tighten up all screws to specified torque. Install the drain plug.

22. Tilt the engine by 180° and proceed with valve installation. In this purpose :

Place the spring, the spring seat, the retainer and the retainer locks, after coating with grease in order to allow the valve system to penetrate, in the tool N° F7-6313.

Present this assembly in the valve chamber while loading the spring, en-

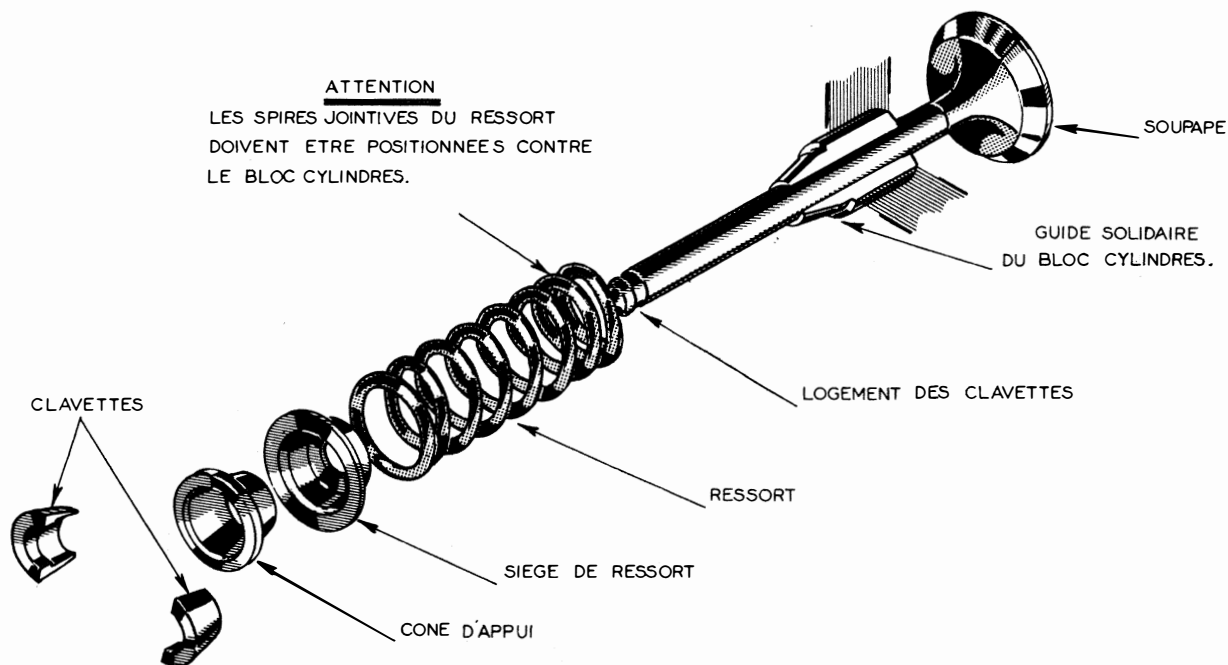


Fig. 20 -

ATTENTION Les spires jointives du ressort doivent être positionnées contre le bloc cylindres

Clavettes
Soupape
Guide solidaire du bloc cylindres

Logement des clavettes
Ressort
Siège de ressort
Cône d'appui

CAUTION The closed coils of the spring to be turned towards the cylinder block.

Locks
Valve
One piece type valve guide inserted in the block
Lock grooves
Spring
Spring seat
Seat retainer

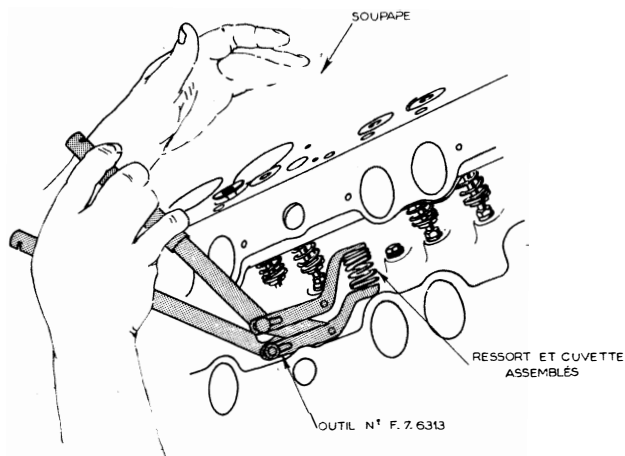


Fig. 21 -

Soupape
Ressort et cuvette assemblés
Outil N° F7-6313

Valve
Spring and retainer assembly
Tool N° F7-6313

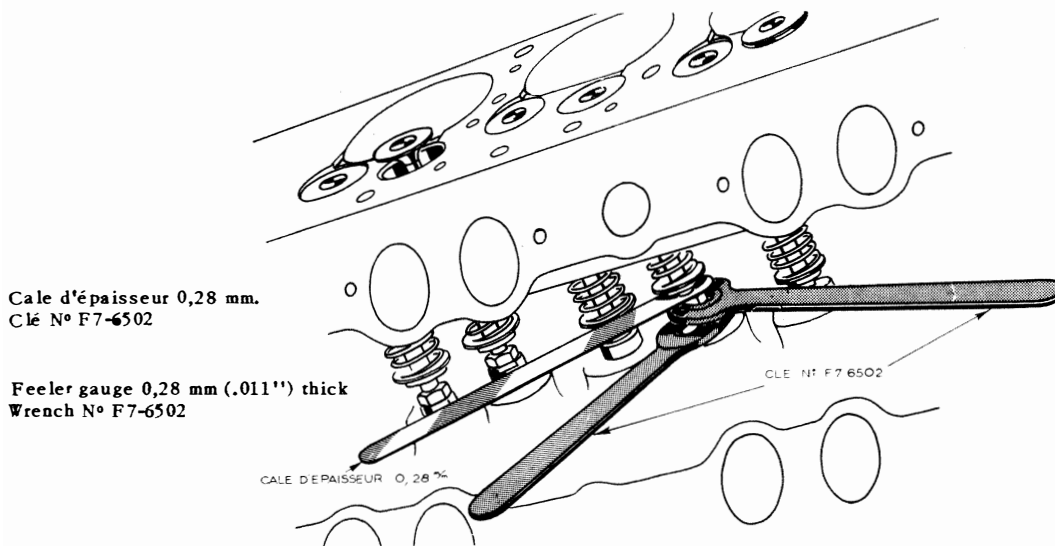


Fig. 22 -

gage the valve in the corresponding guide bushing and lower the valve by a sharp tap; remove the tool.

REMARK - The closed coils should be turned towards the cylinder block.

23. Proceed with adjusting the tappet to valve clearance; for this operation the tappets should be in contact with the cam heel or base.

Hold the tappet using wrench N° F7-6502 and turn the adjusting screws as required, using a second wrench N° F7-6502, in order to obtain a clearance of 0,28 mm (.011") on all valves.

REMARK - A lock nut is not used; the screw is of the self locking type.

24. Install the fuel pump push rod (Assemble the intake manifold with gasket. Tighten up all screws to specified torque).

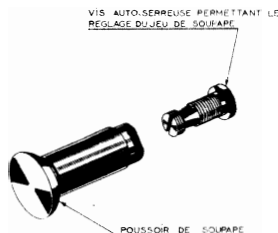


Fig. 23 -

Vis auto-serreuse permettant le réglage du jeu de soupape
Poussoir de soupape

Self locking screw for adjusting valve clearance
Valve push rod or tappet

25. Install one cylinder head gasket coated with sealing varnish and the head, tightening up all screws in the recommended order and to specified torque after removing the guide pins and replacing same by screws.

Repeat the same procedure for the second bank.

26. Install and secure the oil filler and breather tubes.

27. Install the fuel pump, the oil filter with a new filter and the ignition coil.

28. Install the lifting hook plate on the carburetor flange in place of carburetor

29. Install and center the clutch disc, using a pilot shaft with the long end of the disc hub towards the rear.

30. Install the clutch pressure plate with 6 special screws and lock washers. Tighten up gradually to specified torque at points diametrically opposite. Remove the spacers inserted between the plungers and the plate.

31. Remove the engine from the standard support, assemble the exhaust manifolds, the engine mounts and the starting motor.

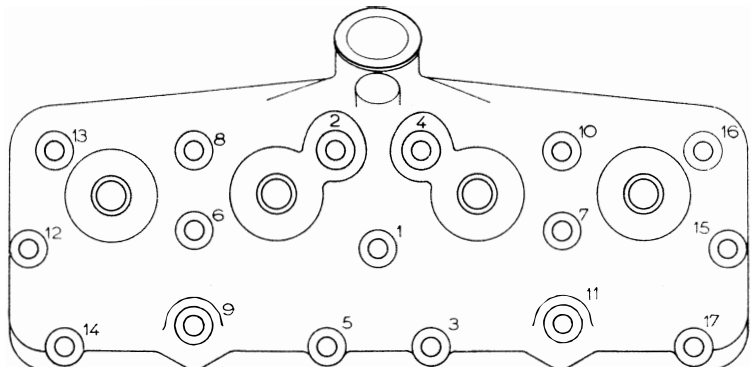


Fig. 24 -

Ordre de serrage des vis de culasse Tightening order for cylinder head screws

SPECIFICATIONS

Type : V8 - 90°
Bore : 2.601" (66,065)
Stroke : 3.375" (85,725)
Piston displacement : 143.4 cu.in (2,351 liters)
Compression ratio : 7.2 to 1
Brake horsepower : 75 hp at 4600 RPM (1955-1956-1957)
 84 hp at 4.800 RPM (1958)
Maximum torque : 110 ft. lbs (15,2 m.kg) at 2600 RPM
 (1955-56-57) - 112 ft. lbs (15,5 m.kg) at 2600 RPM (1958)
Firing order : 1-5-4-8-6-3-7-2
Location of cylinder n°1 : RH front
Lubrication : force-feed to crankshaft bearings, connecting rod bearings and camshaft bearings.
Lubrication pressure : 50 to 64 lbs/sq.in. (3,5 to 4,5 kg/cm²) at 3.000 RPM with ESSO EXTRA MOTOR OIL N° 1 at 176°F (80°C)
Crankcase : Ventilated
Grade of oil :
 ESSO EXTRA MOTOR OIL N° 1 under 14°F (-10°C)
 ESSO EXTRA MOTOR OIL N° 3 for average temperatures above 14°F (-10°C)
Capacity of oil pan : 7.9 pts (4,5 liters), .88 pts of which (0,5 liters) are held in the filter.
Intake valves : chrome-molybdene steel
 dia. of head : 1.336" 35,204 mm
 gauge line of seat : 1.360" 34,544 mm
 dia. of stem : .314-.315" 7,987-8,012 mm
 angle of seat (on valve) : 91° to 91°30'
Exhaust valves : austenitic steel
 dia. of head : 1.166" 29,616 mm
 gauge line of seat : 1.140" 28,956 mm
 dia. of stem : .314-.315" 7,975 - 8 mm
 angle of seat (on valve) : 91° to 91°30'
 angle of seat (on block) : 89° - 90°
Intake and exhaust
Valve springs :
 Approximative free length 1.85" (47 mm)
 Length under 27-33 lbs (12,26-14,98 kg) 1.57" (39,88 mm)
Valve lift (intake and exhaust) .3" (7,62 mm)
Clearance between valve and push rod (on cold engine) .011" 0,28 mm
Distribution diagram

intake	opens	5° before TDC
	closes	44° after BDC
exhaust	opens	48° before BDC
	closes	3° after TDC

Crankshaft :
 dia. of main bearings 2.0977-2.0983" (53,283-53,298 mm)
 dia. of pins 1.7546-1.7555" (44,566-45-590 mm)
 end play .002-.009" (0,05-0,23 mm)
Piston play in cylinder :
 .0012-.0017" (0,03-0,043 mm)

Thickness of feeler gauge :
 .002" (0,06 mm)
Width of feeler gauge :
 .47" (12 mm)
Traction on gauge : 4-8 lbs (1,8-3,6 kg)
End play of camshaft :
 .002-.012" (0,05-0,30 mm)
Side play of connecting rods on pin total per pin :
 .005-.010" (0,137-0,267 mm)
Play at gap of oil control ring :
 .010-.019" (0,25-0,48 mm)
Play at gap of compression ring :
 .010-.019" (0,25-0,48 mm)
Side play of n°1 compression ring in groove :
 .001-.003" (0,039-0,077 mm)
Side play of n°2 compression ring in groove :
 .001-.002" (0,026-0,064 mm)

TIGHTENING TORQUES

	ft. lbs	m.kg
Crankshaft bearing cap screws	51-54	7-7,5
Connecting rod bearing cap nuts	22-23	3-3,2
Intake manifold screws	13-14	1,8-2
Exhaust manifold screws	13-14	1,8-2
Timing gear cover plate screws	13-14	1,8-2
Water pump screws	13-14	1,8-2
Fan to pulley screws	8-9	1,2-1,3
Cylinder head attaching screws	29-30	4-4,2
Camshaft gear screws	12-13	1,6-1,8
Oil pump cover plate screws	5-6	0,7-0,8
Oil pump strainer screws	5-6	0,7-0,8
Crankshaft pulley screws	26-29	3,6-4
Flywheel screws	76-84	10,5-11,7
Clutch screws	11-12	1,5-1,7
Clutch housing to upper oil pan screws	23-25	3,2-3,4
Engine support to cylinder block screws	12-13	1,6-1,8
Engine support pad to support screws	25-27	3,4-3,8
Clutch housing to cylinder block screws	36-40	5-5,5
Distributor locking screws	3-4	0,5-0,6
Distributor locking screws check nut	2-3	0,3-0,4
Oil strainer cover plate screws	10-12	1,4-1,7
Oil strainer bowl screws	18-22	2,5-3
Drain plug	25-29	3,5-4

MISCELLANEOUS INFORMATION

ENGINE OIL CONSUMPTION
ALL VEGETTES

Some cases of oil consumption considered high were brought to our attention in the course of the last few weeks, causing the Service Department to have some engines turned in in order to judge by itself

After running tests with the specified grade of oil it was found that the consumption of the engines incriminated was within the limits allowed. It appears therefore, that the owners' complaints were not inquired into with all desirable precautions.

The following basic principles will help in handling complaints of that kind.

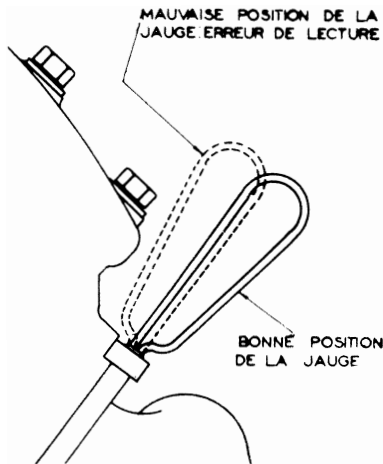


Fig. 25 -

Mauvaise position de la jauge :
erreur de lecture. Wrong position of dipstick
Bonne position de la jauge erroneous reading.
Right position of dipstick.

Preliminary precautions

The following points should be given consideration when checking the level of oil.

- The car should rest on fairly level ground.
- Do not check level before the engine has been motionless half an hour at least, so that all the oil held in the pipes and the filter, representing 1.7 pints, has dripped down.
- Before pulling out the dipstick, make sure it has been pushed down all the way down, with the loop located as shown on fig. 25.

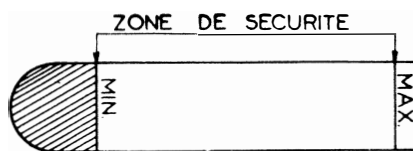


Fig. 26 -

Zone de sécurité. Safety zone.

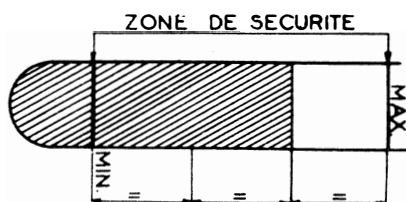


Fig. 27 -

- The owner should be advised never to add oil during the trip the moment the engine has stopped, if the level is above the «mini» notch (fig. 26). At that time, the oil held in the lines and the filter has not dripped yet, completing the level therefore, will cause splashing of oil along the cylinders and profitless elimination of oil added.

This will result in erroneous appreciation of oil consumption together with all the troubles caused by excessive lubrication of cylinders.

On the other hand, if the level has been gauged half an hour at last after the engine has stopped, no oil should be added unless the level reading is between «mini» and one third at least under «maxi» (Fig. 27)

- When changing oil never fill above the «maxi» mark - since any excess will burn out fast without profit and cause carbon deposit in combustion chambers

3°) Measuring consumption

Whenever an owner's allegations about oil consumption have to be checked, the following routine is recommended :

Bring up oil level to «max.» after allowing 30 minutes at least for dripping, and supply the test driver with a can of oil the weight of which has been noted down beforehand

After 200 to 500 Km, reinstate the oil level by means of the can which shall subsequently be weighed again.

The specific gravity of oil, viz .88 will help determine the volume

The effective volume and mileage figures should be quoted in the report of both tests.

4°) Oil grades specified

The following grades are specified

For temperature under + 14° F. • ESSO extra motor Oil n° 1.

For temperature above + 14° F. • ESSO extra motor Oil n° 3.

These oils by the way are the Multigrade type.

With these oils consumption may show a slight increase as compared with the grades formerly used the viscosity of which was slightly higher.

However, this increase in consumption is by far compensated by better lubrication of parts, resulting in greater resistance to wear and a slight decrease in fuel consumption.

5°) Consumption tolerances

In general terms, oil consumption of an engine should be a determined percentage of fuel consumption.

With «VEDETTE» engines, percentages allowed are :

up to 40.000 Km	• 1.1 %
above 40 000 Km	• 1.4 %

Translated into volumes these percentages amount to :

up to 40.000 Km 3.68 pts per 1.000 miles

above 40.000 Km 4.55 pts per 1.000 miles

However, during the running in period, consumption may normally reach 4 pts per 1.000 miles

PECULIAR FEATURES OF MODEL 1957

ENGINE

1.- Clutch housing

In the old starter motor, the pinion used to travel forward; the reverse is now true with the solenoid starter; consequently, the stamping on the clutch housing has been replaced by a cover plate (fig.28).

2.- Flywheel ring gear

For the same reason, the engaging or levelled side of the ring teeth is now on the forward side of the gear: however, it is not possible to use the old ring by fitting it with its rear face foremost, because the bevel of the teeth would slant the wrong way (fig.29).

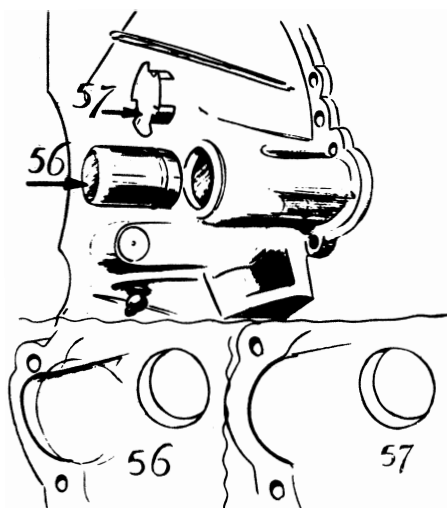


Fig. 28 -

3. Intermediate oil pan

This differs from the former type by the location of the starter motor attaching points. Also, the circular hole in the pan does not have a lateral cutout any more. (fig.30).

4.- Cylinder block

The difference lies in the location of the generator attaching holes (see «Generator»).

The intermediate oil pan and the cylinder block, old and new, are not optional just now, but parts common to both types are being designed.

Starting with engine n° 182 968, the oil pump driving pinion shaft was improved. The shank to flange blending radius is increased from .02" to .08 to 10"

Furthermore, an additional boss .03" thick and .8" diameter increases the strength of the pinion end flange (see fig. 31).

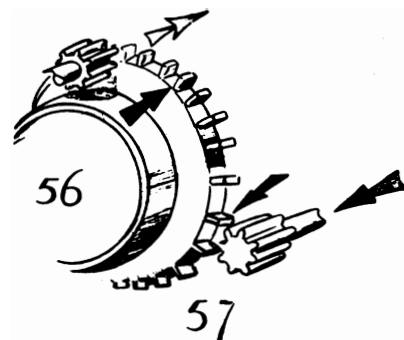


Fig. 29 -

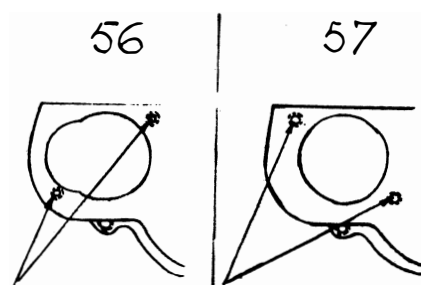


Fig. 30 -

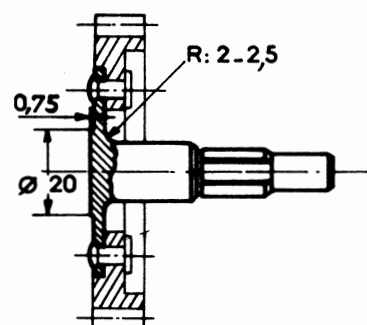


Fig. 31 -

MODIFICATION OF THE OIL DIPSTICK - ALL "VEDETTE" MODELS

To avoid errors in the readings or estimations when checking the oil level in the oil pan, the length of the dipstick was increased up from engine N° 182.480. The new dipstick of 16.9" total length is optional with the old design (15.5").

MODIFIED OIL PUMP - ALL «VEDETTE» TYPES

Fitting this new design shaft and

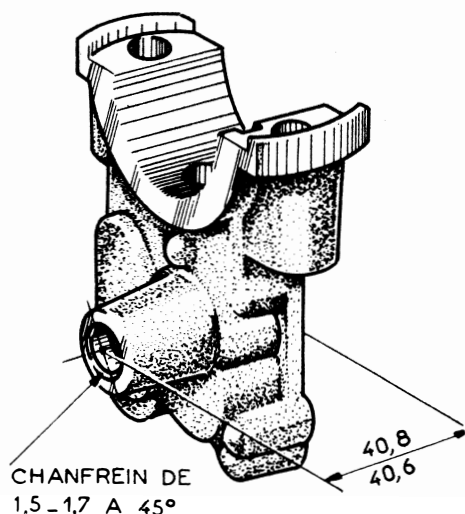


Fig. 32 -

pinion led to the following alterations of the oil pump body (see fig. 32).

The dimension from the cover mounting face to the end of the shaft bore face is reduced from 1.641, 1.645" to 1.598, 1.606"

The inner chamfer on the shaft bore outer face is increased from .02", .028" X 45° to .06", .067" X 45°.

NEW CYLINDER HEADS - All VEDETTES

The new heads are easily identified by number 108.626 cast on their outer face (fig.33).

New cylinder heads were released in production with engine n° 194.264; they differ from the former type by the increased height of the bosses for the attaching screws.

The new head requires : - 9 screws, 2.40 - 2.44" long.
4 screws, 2.20 - 2.24" long. These screws, already used with the former type head (51.855-W), should be located on bosses marked «B» (see fig.33).
4 screws, 1.81 - 1.85" long. These screws, already used with the former type head (51.852-T), should be located on bosses marked «A» (see fig.33).

The new heads will be serviced exclusively : for replacement on former engine numbers, order the new screws as well.

IMPORTANT

The tightening sequence, as well as the torque (29 to 30 ft.lbs.) are unchanged; the latter figure should not be exceeded to avoid distortion.

The new parts are numbered as follows :

cylinder head	66.667-G
screw (long)	66.668-R

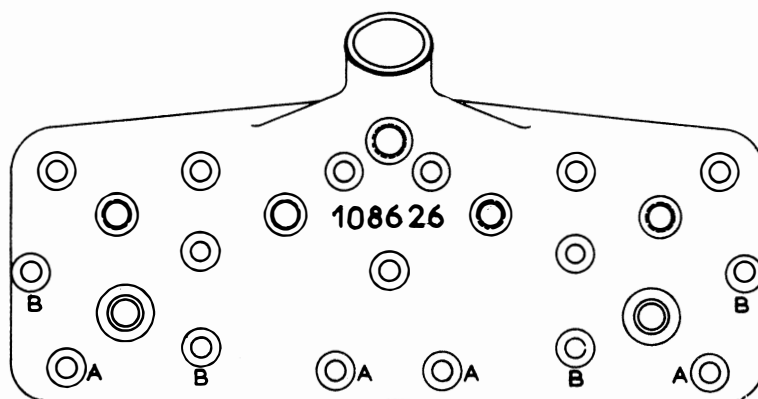


Fig. 33 -

REPLACING CYLINDER HEAD GASKETS

Whenever a cylinder head gasket is replaced, the lubrication system of the engine should imperatively be drained and rinsed, and the cartridge in the oil filter, replaced.

This is essential in order to eliminate water which might have seeped into the oil circuit.

RECAPITULATION CHART OF TIGHTENING TORQUES

	ft.lbs.
Crankshaft bearing cap screws	51 - 54
Connecting rod bearing cap nuts	22 - 23
Intake manifold screws	13 - 14
Exhaust manifold screws	13 - 14
Timing gear cover plate screws	13 - 14
Water pump screws	13 - 14
Fan to pulley screws	8 - 9
Cylinder head attaching screws	29 - 30
Camshaft gear screws	12 - 13
Oil pump cover plate screws	5 - 6
Oil pump strainer screws	5 - 6
Flywheel screws	76 - 84
Crankshaft pulley screws	26 - 29
Clutch screws	11 - 12
Clutch housing to upper oil pan screws	23 - 25
Engine support to cylinder block screws	12 - 13
Engine support pad to support screws	25 - 27
Clutch housing to cylinder block screws	36 - 40
Distributor locking screw	3 - 4
Distributor locking screw check nut	2 - 3
Oil strainer cover plate screws	10 - 12
Oil strainer bowl screws	18 - 22
Drain plug	25 - 29

FUEL SYSTEM

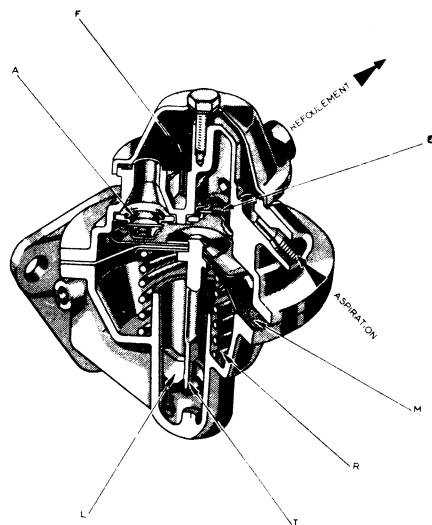


Fig. 1

Refolement.
Aspiration.

Outlet.
Inlet.

The fuel tank is assembled to the underside of the rear floorboard by means of two straps. The fuel is drawn from the tank into the pump along a line assembled under the body foundation. The fuel gauge is assembled to the upper part of the tank.

The fuel line system, made of .19 dia. rolled steel, welded and copper-plated, includes four sections :

- a) Two lines, connected together, linking the tank to the inlet of the fuel strainer.

The line connected to the tank is attached under the foundation by four clamps, to the L.H. of the drive shaft tunnel. These clamps also maintain the brake line.

The second line is held by two clamps, one of them located on the transmission cross member.

- b) a hose between the strainer and the fuel pump.
- c) a line between the fuel pump and the carburetter.

The fuel strainer is assembled to the right of the front extension. It is composed of a bowl and a cartridge.

The fuel pump is assembled to the rear of the intake manifold.

The inlet hole is located opposite the assembling flange of the pump, and the outlet hole is 90° to the left (fig. 1).

PRINCIPLE OF OPERATION OF THE FUEL PUMP (Fig. 1)

The eccentric on the camshaft drives lever L through a push rod, pulling the diaphragm downward.

This causes fuel to be drawn in past valve (A), after going through strainer (F) in the inlet chamber.

At that time outlet valve (E) is closed.

As the diaphragm is pushed upward by spring (R), fuel is chased past valve (E) toward the carburetter. In the meantime, inlet valve (A) remains closed.

It is therefore spring (R) which determines pressure of fuel feed, and the pump cannot discharge into the carburetter unless the needle valve is open: as long as the bowl is full and the needle valve closed, rod (T) remains at the bottom of its travel and lever (L) oscillates freely.

DISASSEMBLING THE FUEL TANK (on cars prior to serial n° 29,886)

1. Drain the tank.
2. Unscrew the filler cap.
3. Remove the filler neck shield held by 3 sheet metal screws.
4. Loosen the hose clamp screws.
5. Remove the filler neck, the hose and the clamps.
6. Disconnect the fuel gauge wiring on the tank.
7. Disconnect the fuel line on the tank.
8. Remove lock wire on the tank strap screws.
9. Remove these screws, maintaining the tank in the meantime.

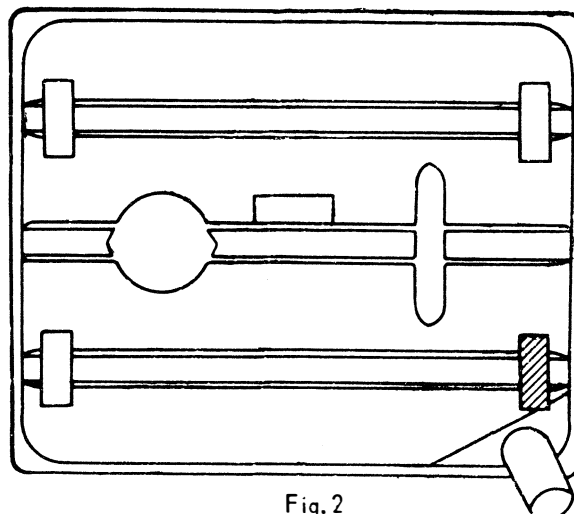
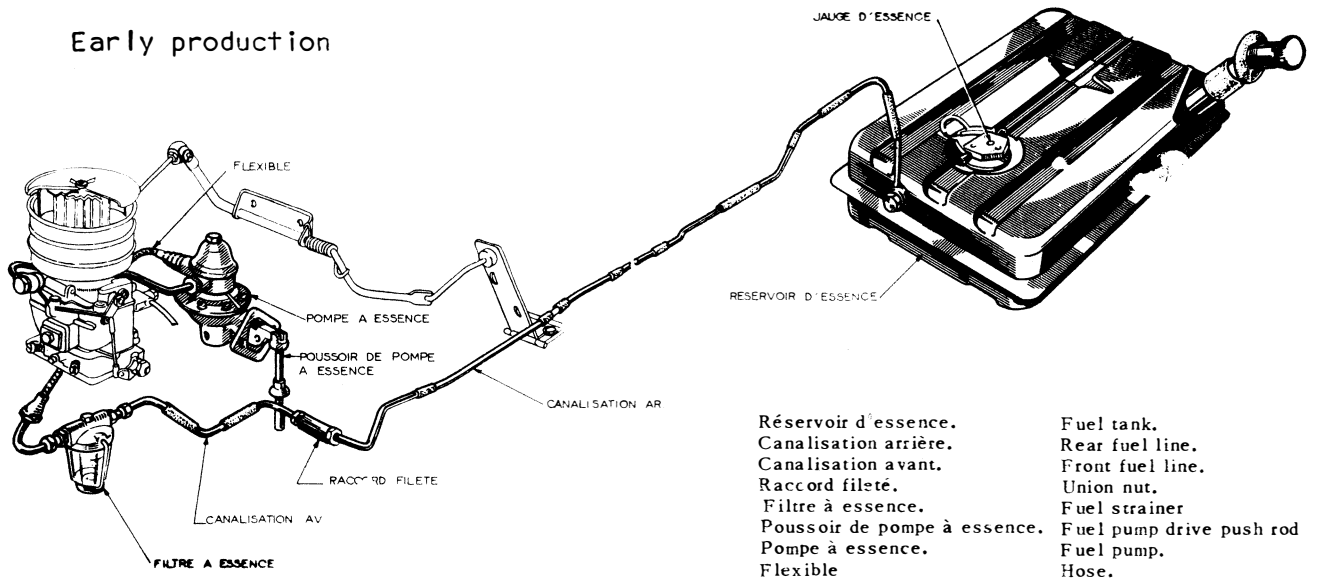


Fig. 2

Early production



Late production

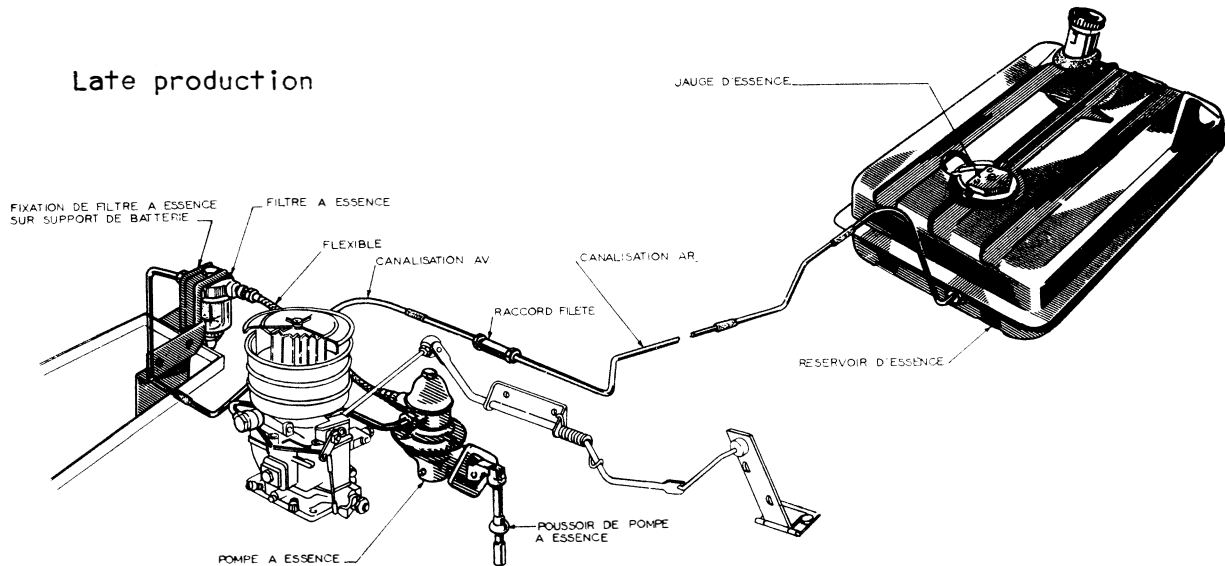


Fig. 3

Fixation de filtre à essence sur support de batterie.
Filtre à essence.
Flexible.
Canalisation AV.
Canalisation AR.
Raccord fileté.
Jauge d'essence.
Réservoir d'essence.
Pompe à essence.
Poussoir de pompe à essence.

Fuel strainer bracket on battery support.
Fuel strainer.
Hose.
Front fuel line.
Rear fuel line.
Union nut.
Fuel gauge.
Fuel tank.
Fuel pump.
Fuel pump drive push rod.

10. Remove the tank and the straps, hooked to the body rear cross member.
The fuel gauge may be removed after the tank has been disassembled.

REASSEMBLING THE FUEL TANK

Make sure the tank does not leak and the fuel gauge gasket is tight.

Glue the deadeners in locations shown fig. 2.

Hang the straps to the rear cross member before reassembling the tank.

To reassemble the tank, reverse the above operations.

Make sure the filler neck hose is tight before assembling its shield.

Starting with serial n° 5422, the tank has a transversal partition which

checks the movements of the fuel, thereby improving the accuracy of the fuel gauge.

Starting with serial n° 29,886 (model '56), the filler neck has been re-located and is now concealed behind the rear license plate, which is collapsible.

This alters the disassembling procedure: operations 3,4,5 become obsolete.

On cars having the new device, an inspection hole has been added in the floor of the luggage compartment. This makes it possible to remove and adjust the gauge without disassembling the tank.

REMOVING THE FUEL PUMP

1. Disconnect the inlet and outlet lines.
2. Straighten the retainers of the fuel pump attaching screws.
3. Remove the screws and the pump with its gasket.

FITTING THE FUEL PUMP

Operate in the reverse order, without omitting to replace the pump to valve chamber cover gasket if required.

DISASSEMBLING THE FUEL PUMP

1. Remove the cover plate attaching screw with its washer and gasket. Remove the cover plate and its cork gasket.
2. Remove the strainer.
3. Identify the relative position of the upper and lower housings with markings; remove 8 screws; disassemble the upper housing with its valves.
4. Unscrew and remove the valve hold-down plate, the valves and their gasket.
5. Free the diaphragm assembled with its drive rod, remove the spring.
6. Chase the pivot pin of the actuating lever, remove the lever and its retracting spring.

REASSEMBLING THE FUEL PUMP

Check the components of the pump, particularly the valves and the diaphragm.

Reverse disassembly operations, be sure to fit new gaskets.

Bring locating markings on the housing opposite each other before assembling.

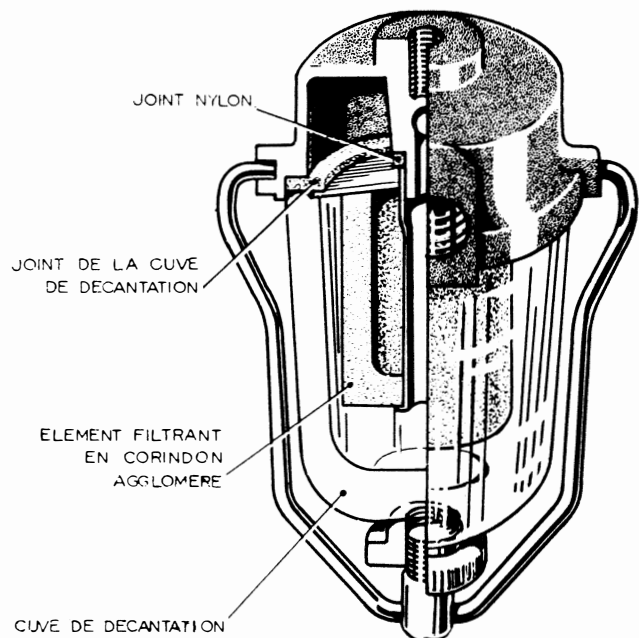


Fig. 4. -

Joint nylon.	Nylon gasket.
Joint de la cuve de décantation.	Strainer bowl gasket.
Élément filtrant en corindon aggloméré.	Agglomerated corindon cartridge.
Cuve de décantation.	Bowl.

Starting with serial n° 126.895, the fuel pump has a hand priming lever.

FUEL STRAINER

«Vedettes '55» were primitively equipped with Zenith strainer, in which the cartridge is made of a pile of brass discs. These discs are flat on one side and serrated on the other; the flat face of each disc rests upon the serrated face of the next disc.

Starting with serial n° 12.485, the brass unions at the inlet and outlet of the pump have been discontinued.

The front fuel line and the strainer body were altered accordingly.

Starting with serial n° 15.013, a new unit, the DIFUZUIL strainer, is optional with the former one. The difference lies in the cartridge, which is a sieve located between the strainer body and the bowl.

Starting with serial n° 25.086, a new DIFUZUIL strainer obsoleted the two others, the «Difufiltre 500» type. Its cartridge is made of agglomerated corindon (see figure 4).

DIFUZUIL strainers, sieve type, can be brought up to date as follows :

discard the sieve,

add a nylon gasket on the strainer body,

fit the corindon cartridge.

NOTE: This cartridge should be replaced every 12,000 Miles.

Starting with serial n° 29.886 (model '56), the fuel strainer is fitted on the battery support. Fuel lines were altered accordingly.

Fuel tank capacity 13 gallons

Fuel pump push rod length 6.43" - 6.44"

FUEL PUMP OUTPUT AND PRESSURE TEST

(After 30 seconds' operation)

Number of cycles per minute	Hourly output	Output pressure
200	5.3 pts	2.6 lbs per sq.in.
1250	44 pts	1.1 to 2 lbs per sq. in.
2500	70.4 pts	1 to 2 lbs per sq.in.

When the lines are empty, the number of cycles required to prime the pump should not exceed 30.

PECULIAR FEATURES OF MODEL 1957

1. Fuel tank

The fuel tank is equipped with a strainer the old sediment bowl is therefore obsolete.

The outlet connection has a 12-100 metric tap.

A study on interchangeability will appear in a later paper.

2. Fuel lines

The section has been increased from .19 X .25" to .26 X .31" and the line from the tank to the hose is a one-piece design. The connections are threaded to 12-100.

3. Fuel pump

Designed for connections threaded to 12-100, it has a notably higher output and carries a nylon strainer.

4. Carburetter

On account of increased output of the pump, the diameter of the valve seat was changed from .08 to .06" The new and the former carburetter are optional.

CARBURETTER

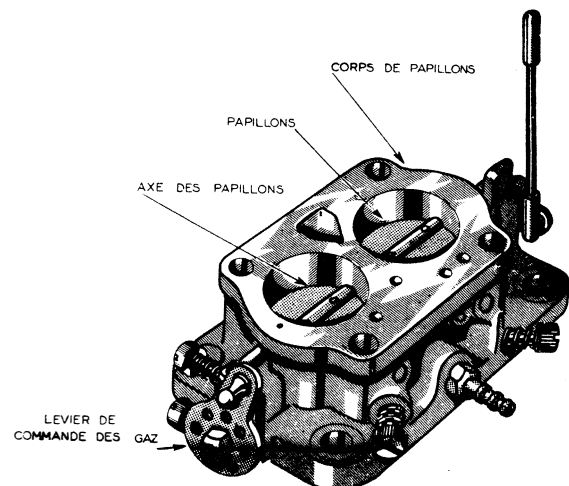


Fig. 5. -

Corps de papillons
Papillons
Axe de papillons
Lever de commande des gaz
Lower throttle body
Throttle plates
Throttle plate shaft
Throttle shaft lever

Tige de commande de pompe
Bouchon de clapet d'aspiration de pompe
Bouchon de clapet de refoulement de pompe
Vis d'air d'émulsion de ralenti
Vis d'air d'émulsion principale
Gicleurs de pompe
Tubes des jets de pompe
Flotteurs
Vis de fixation de diffuseur
Gicleur de starter
Vis de réglage de vitesse de ralenti
Butée réglable
Vis de réglage de richesse de ralenti
Prise de dépression
Gicleurs principaux
Gicleurs de ralenti

Accelerating pump rod
Accelerating pump intake valve plug
Accelerating pump outlet valve plug
Idler emulsion air screw
Main emulsion air screw
Pump jets
Pump jet tubes
Floats
Venturi screw
Starter jet
Idling speed adjusting screw
Adjustable stop
Idling mixture adjusting screw
Vacuum connection
Main jets
Idling jets

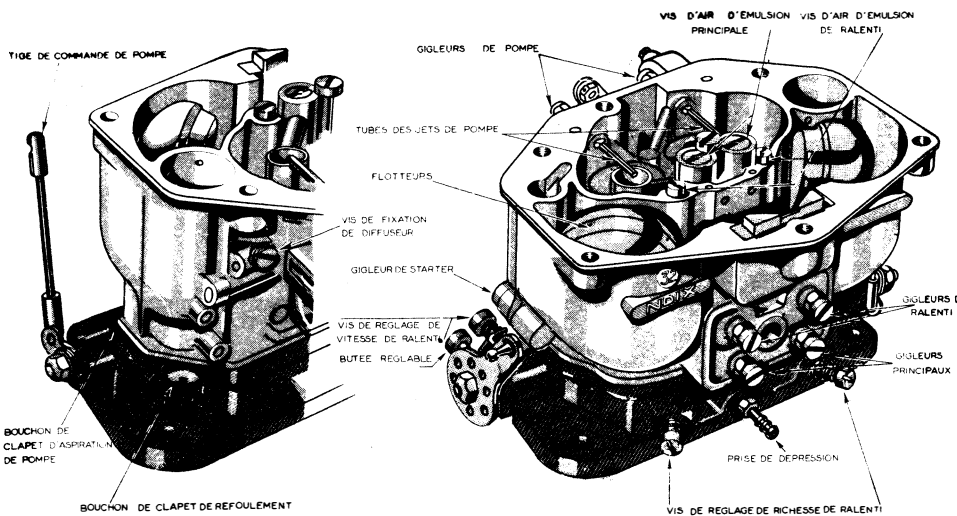


Fig. 6. -