

Peugeot Engines

1971-72 PEUGEOT 304 4 CYLINDER

GENERAL SPECIFICATIONS										
Year	Displ.		Carburetor	HP at RPM	Torque (Ft. Lbs. at RPM)	Compr. Ratio	Bore		Stroke	
	Cu. ins.	cc					in.	mm	in.	mm
1971-72 XL3	78.59	1288	1-Bbl.	70@6100	73.8@3750	8.8-1	2.99	76	2.79	71

ENGINE IDENTIFICATION

Engine serial number is located in engine compartment on top of right hand inner fender panel. Serial number is stamped on fender next to identification plate. Serial number is also located on dash panel.

Engine number is stamped on engine block to right of exhaust manifold. Engine is a transverse, four cylinder, single overhead cam engine.

ENGINE REMOVAL

NOTE — Engines are either mounted at three or four points.

Removal — 1) Working from under hood, drain cooling system. Remove battery and air cleaner with support. Disconnect all water hoses, electrical leads, carburetor linkage, vacuum lines, and fuel inlet lines.

2) Remove radiator and clutch slave cylinder. Disconnect gearshift linkage, speedometer cable and if necessary remove tie rod links.

3) From under vehicle drain crankcase. Separate exhaust pipe from manifold and remove bolt mounting pipe collar to transmission. Remove nuts from sway bars. Disconnect control arm and cover cups and rubber bushings.

4) Using suitable hoist (8.1501), raise vehicle at upper frame crossmember. Support vehicle under lower frame crossmember. Remove control arms from pivots (ball joints).

5) Disengage drive shafts in following manner: Spread left and right suspension units until drive shafts disengage. Secure shafts in separated position using suitable clamp (8.0407). *NOTE* — Avoid all impact on drive shaft oil seal bearing faces.

6) On engines mounted in four points, remove two nuts securing lower left and right hand rubber blocks. Attach suitable hoist to engine.

7) On models with three point mounting, slightly raise engine to release mounting. Remove engine mounting nuts. Raise engine and rock it gently to avoid steering box. Engine must be maneuvered around portions of suspension.

NOTE — Moving vehicle after engine is removed may cause damage to drive shaft.

8) To install, reverse removal procedures noting the following: Check and if necessary replace drive shaft oil seals. Tighten all nuts and bolts to specifications.

CYLINDER HEAD REMOVAL

1) Drain crankcase and cooling system. Disconnect battery and starter. Remove rocker cover and air filter. Disconnect: ground at cylinder head, all electrical leads, fuel line at pump, and carburetor linkage.

2) Disconnect upper radiator hose. Separate exhaust manifold and remove front damper. Disconnect both tie links at cylinder head.

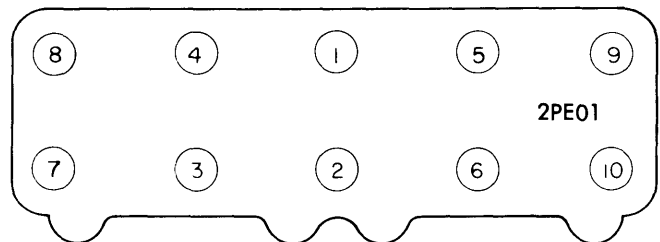
3) Remove intake manifold and carburetor, and generator. Remove timing chain cover. *NOTE* — To facilitate cover removal push engine to left by applying pressure at engine mounting block.

4) Release timing chain tensioner and remove timing sprocket from camshaft. Remove cylinder head bolts and lift off rocker assembly, cylinder head, and gasket.

NOTE — On engines equipped with one-piece cylinder block, rotate cylinder head on centering pin to avoid raising cylinder liners.

5) To install cylinder head, reverse removal procedures noting the following: Three different head gaskets are available, ensure the correct one is being installed. Tighten head bolts to specifications.

← FRONT



CYLINDER HEAD TIGHTENING SEQUENCE

VALVE ARRANGEMENT

All intake valves are located on rear side of engine. All exhaust valves are located on front side of engine.

VALVE CLEARANCE ADJUSTMENT

1) Valve clearance must be set with engine cold. *NOTE* — Valve clearance is critical and engine should cool for six hours.

2) Turn engine until valve in first column is open, then adjust valves in second column. Valves are numbered left to right.

Valve Chart

Valves To Adjust

Valve Open

No.3 Intake & No.4 Exhaust.....	No.1 Exhaust
No.4 Intake & No.2 Exhaust.....	No.3 Exhaust
No.2 Intake & No.1 Exhaust.....	No.4 Exhaust
No.1 Intake & No.3 Exhaust.....	No.2 Exhaust

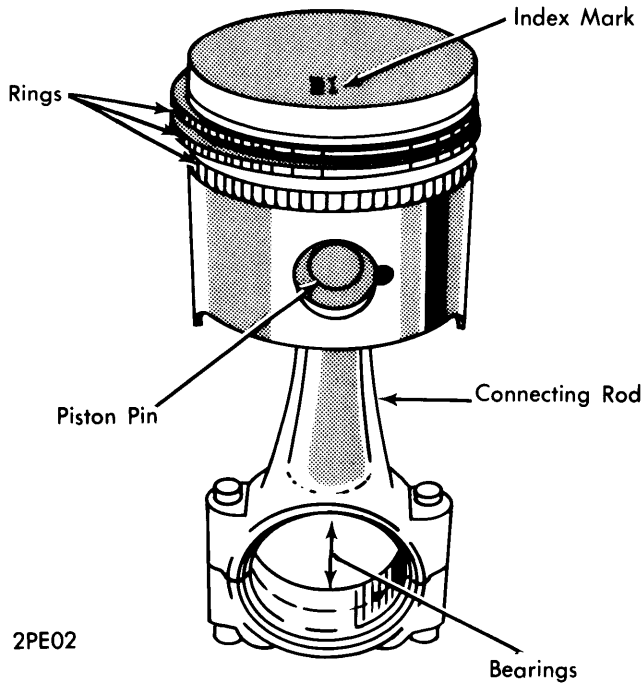
PISTON & ROD ASSEMBLY

1) Ensure liner protrusion is correct by adjusting paper gasket thickness between lower liner collar and cylinder block shoulder.

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2) After hand assembling new piston and rod, mark cylinder liners and piston/liner parings. **NOTE** — Do not alter piston/liner parings.

3) Carefully check positioning of connecting rod. Holding rod as shown in illustration oil jet faces right, "DIST" mark and arrow on piston face forward. Insert piston pin circlips.



PISTON & ROD ASSEMBLY

4) On one-piece blocks, place piston and rod assembly in vise and fit cylinder liner, lower chamfered edge, onto piston. Turn liner mark away from connecting rod oil jet. Carefully slide liner over piston.

5) Insert liner into block noting the following: Correct order of connecting rods. Position of liner marks (facing oil gallery passage). Position of piston arrow.

TIMING GEAR COVER REPLACEMENT

1) Disconnect and remove battery. Remove air filter, rocker cover, ignition coil, and distributor. Drain crankcase. Disconnect oil pressure switch and fuel inlet line.

2) On three point engine mountings, remove right hand tie link. On four point engine mountings, place a steel block between transmission and lower engine support. Remove upper right hand mounting block. On all models, remove timing chain cover and ground strap.

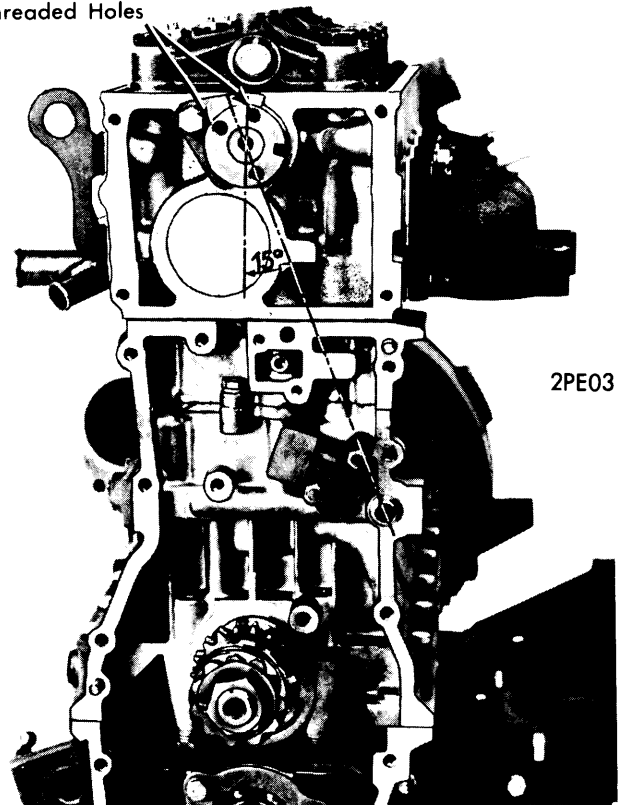
TIMING CHAIN REMOVAL

1) Position timing mark on crankshaft sprocket horizontally to right. Disengage chain tensioner by inserting a 3 mm Allen key into slot and turning clockwise until tensioner is free.

2) Unlock and remove camshaft sprocket bolts. Remove sprocket, timing chain, tensioner, and filter. When removing oil pump pinion and timing sprocket from crankshaft, hold pulley housing with suitable tool (8.0118A).

3) Refit timing sprocket and oil pump pinion on crankshaft, using new lock washer. Tighten nut to specifications and lock. Ensure camshafts two threaded holes are closer together at upward end (see illustration).

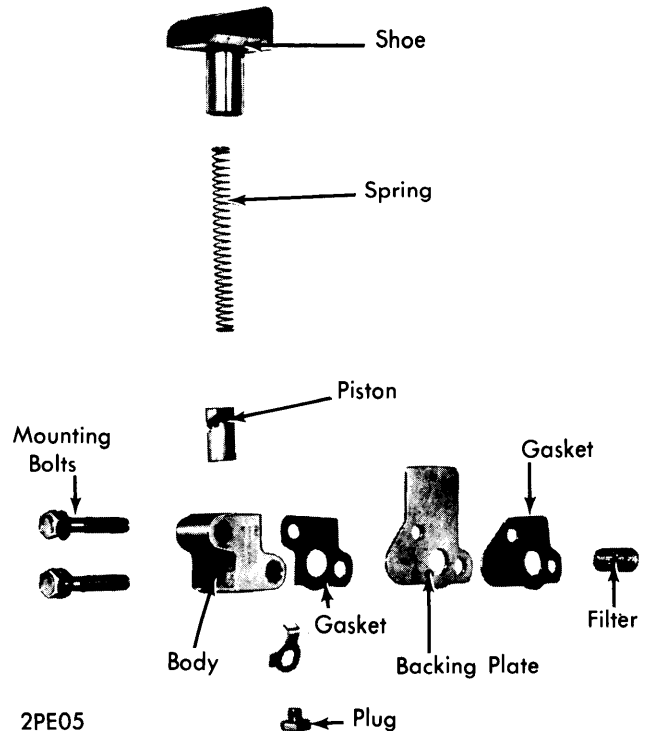
Threaded Holes



CAMSHAFT ALIGNMENT

TIMING CHAIN TENSIONER

If timing chain tensioner has been removed and disassembled as shown in illustration, ensure all components are in working order. After assembling chain tensioner install to cylinder block. Tighten mounting bolts to 5.5 ft. lbs.



TIMING CHAIN TENSIONER

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ENGINE OILING

Crankcase Capacity - 8.44 pints.

ENGINE COOLING

Cooling System Capacity - 10.15 pints, including heater.

Thermostat - Drain radiator, disconnect battery and remove generator. Untighten and remove the five generator support bolts. Remove support bracket. *NOTE* - *Thermostat is equipped with a gasket around the valve seat. The gasket must be replaced when thermostat is removed.*

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Engine Mounting Nuts (3 point mounting)	25
Tie Links.....	13
Upper Mounting Block Nuts.....	23.5
Lower Mounting Block Nuts.....	23.5
Steering Box Mounting Bolts.....	22
Cylinder Head	
Two-Piece Block	43.5
One-Piece Block	40.0
Crankshaft Sprocket & Oil Pump Pinion Nut.....	65