4M 6 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
1974	156.4	2563	1x2-Bbl.	109@5200	120@3600	8.5-1	3.15	80	3.35	85

ENGINE IDENTIFICATION

Engine number is stamped on left side of cylinder block below oil filter. First two digits indicate engine type.

Application	Engine Code
2563 cc	4M

ENGINE REMOVAL

NOTE — Engine and transmission should be removed as assembly using engine hoist.

1) Disconnect battery and drain cooling system. Remove hood and fan shroud. Remove radiator hoses, radiator, heater hoses, and all oil cooler hoses. Remove oil pressure gauge sending wire, and alternator wiring.

2) Remove air cleaner and disconnect brake booster vacuum hose. Disconnect distributor primary wiring, coil secondary wiring, and water temperature gauge sending wire. Disconnect fuel line and vacuum hose.

3) Disconnect starter wiring and accelerator connecting rod. Disconnect clutch flexible hose from master cylinder tube (if equipped). *NOTE — To prevent spillage of fluid, install bleeder plug cap onto master cylinder tube end.* Disconnect power steering feed hose (if equipped).

4) Raise front and rear of vehicle with jack and support on stands. Disconnect exhaust pipe from manifold and remove exhaust pipe supports and insulator. Disconnect speedometer drive cable and back-up light wiring.

5) On manual transmission cars with column shift, remove low speed connecting rod, cross shaft, and gear shift rod. On automatic transmission cars with column shift, remove control rod and cross shaft and remove throttle link connecting first rod and second rod.

6) On manual transmission cars with floor shift, remove console box and gear shift lever. On automatic transmission cars with floor shift, remove connecting rod swivel nut and disconnect control rod from shift lever.

7) Remove propeller shaft and plug rear of transmission to prevent oil leakage. Remove rear engine undercover and remove front engine mounts. Support transmission with jack and remove rear engine mount and crossmember.

8) Lower jack supporting transmission and remove stands. Using suitable engine hoist, remove engine and transmission assembly from vehicle. To install, reverse removal procedure.

INTAKE MANIFOLD

Removal — 1) Disconnect battery and drain coolant. Remove air cleaner and distributor cap. Remove radiator inlet hose and heater hoses. Disconnect temperature gauge sending wire and fuel line.

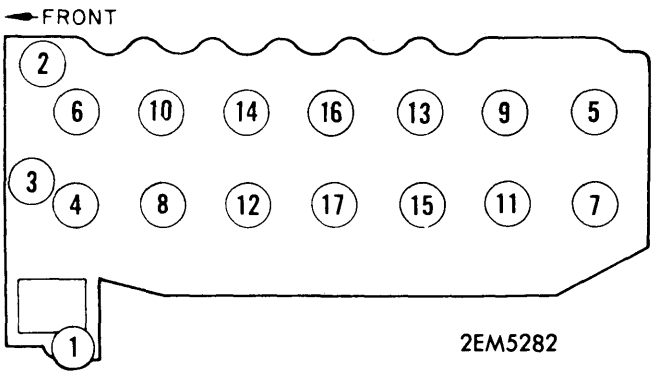
2) Disconnect vacuum hoses at carburetor and manifold, and remove accelerator connecting rod. Remove automatic choke stove inlet hose and outlet pipe. Remove water by-pass hose under manifolds, and remove manifold with carburetor attached.

Installation — Thoroughly clean all gasket surfaces and install new gaskets. Install manifold assembly and gradually tighten bolts working from center out. Install remaining components in reverse of removal procedure.

CYLINDER HEAD

Removal — 1) Remove intake and exhaust manifolds and remove water by-pass pipe. Remove cylinder head cover and place shop towel over camshaft timing gear to prevent bolt or washer from dropping into timing chain cover.

2) Remove attaching bolts and oil union between number one camshaft bearing cap and number one rocker arm assembly support. Loosen rocker shaft attaching bolts in sequence taking two or three steps and remove rocker arm assembly. See *Rocker Arm Assembly*.



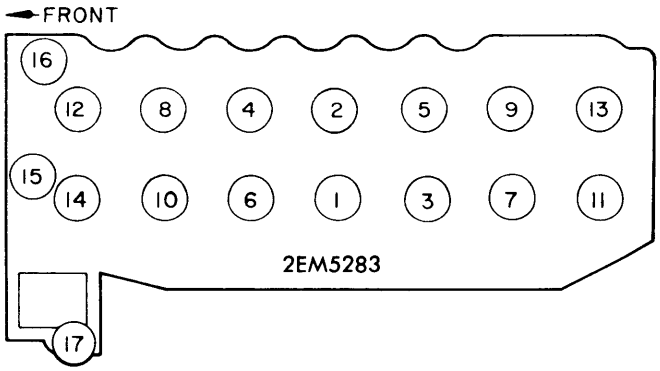
CYLINDER HEAD LOOSENING SEQUENCE

4M 6 CYLINDER (Cont.)

3) Remove timing chain tensioner, camshaft timing gear and camshaft. See *Camshaft Removal*. Loosen cylinder head bolts in two or three steps in sequence shown and remove cylinder head.

CAUTION – Dowel pins are installed at front and rear of cylinder block. Do not slide cylinder head on block as locating dowels may cause damage to gasket surface.

Installation – Install cylinder head and new gasket and tighten cylinder head bolts in sequence taking two or three steps. Reverse removal procedure for remaining components. See *Camshaft Installation*.



CYLINDER HEAD TIGHTENING SEQUENCE

VALVES

Engine & Valve	Head Diam. In. (mm)	Face Angle	Seat Angle	Seat Width In. (mm)	Stem Diameter In. (mm)	Stem Clearance In. (mm)	Valve Lift In. (mm)
4M							
Intake	1.575 (40)	45°	45°	.055 (1.4)	.3144-.3148 (7.985-7.995)	.0006-.0018 (.015-.045)	.....
Exhaust	1.339 (34)	45°	45°	.055 (1.4)	.3138-.3144 (7.970-7.985)	.0010-.0024 (.025-.060)	.....

VALVE ARRANGEMENT

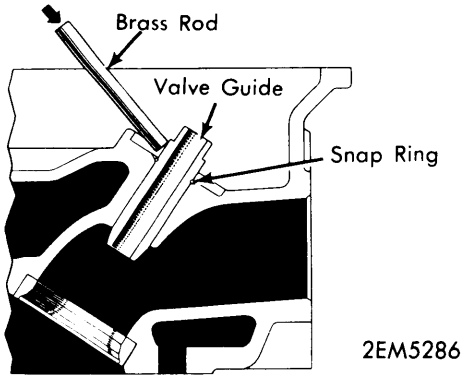
Left Side – All Intake.

Right Side – All Exhaust.

VALVE GUIDE SERVICING

1) Measure clearance between valve stem and guide bushing. If clearance exceeds .002" (intake) or .003" (exhaust), replace bushing.

2) To replace valve guide bushing, heat cylinder head to 176-212°F and position brass rod above guide bushing snap ring. Strike to break off bushing at snap ring portion.



BREAKING OFF VALVE GUIDE

3) Drive bushing into combustion chamber using suitable tool (Valve Stem Guide Tool 09201-60010). Install snap ring on new valve guide bushing and apply liquid sealer. Drive bushing in until snap ring contacts head. Use suitable valve guide replacer tool (09201-41010).

NOTE – If tool 09201-60010 is used instead of the proper Tool 09201-41010, bushing will be damaged. It is important, therefore, to use correct tool.

4) Ream bushing to achieve clearance on intake valves of .0006-.0018". Exhaust valve stem clearance should be .0010-.0024". Guide bore finished measurements should be .315-.316".

VALVE STEM OIL SEALS

1) Install valve and plate washer, and install oil seal on valve guide by pressing with hands. Make sure there is a clearance of .008-.020" (.2-.5 mm) between plate washer and oil seal. Use longer oil seal for intake valve and shorter seal for exhaust valve.

2) Install compression springs, valve spring retainer and install spring retainer locks using suitable spring compressor. Place valve springs in position with closed coil ends toward cylinder head.

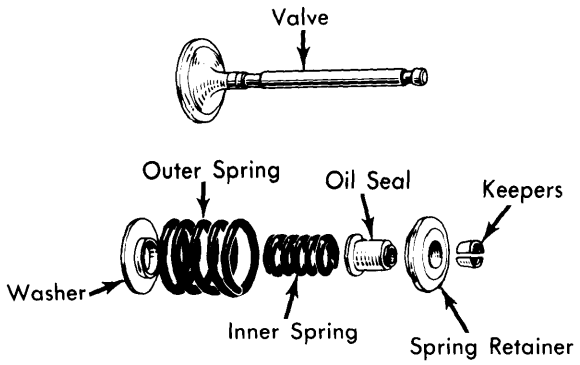
VALVE SPRINGS

Engine	Free Length In. (mm)	PRESSURE (LBS.) Lbs. @ In. (kg @ mm)	
		Valve Closed	Valve Open
4M			
Intake			
Inner	1.843 (46.8)	26@1.50 (11.7@38.2)	.....
Outer	1.913 (48.6)	63@1.65 (28.7@41.7)	.....
Exhaust			
Inner	1.843 (46.8)	25@1.52 (11.2@38.6)	.....
Outer	1.913 (48.6)	60@1.66 (27.8@42.1)	.....

4M 6 CYLINDER (Cont.)

VALVE & VALVE SPRING REMOVAL

Mark each valve and using valve spring compressor, remove valves, valve retainers, retainer locks, springs and valve stem oil seals. When replacing valve springs, closed coil ends face toward cylinder head.

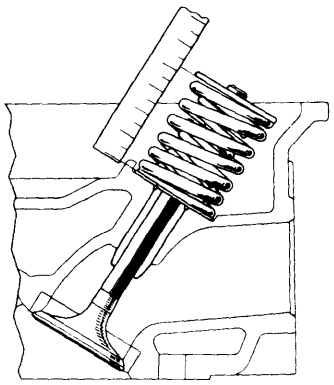


3T003

VALVE COMPONENTS

VALVE SPRING INSTALLED HEIGHT

Valve spring installed height is measured with valve in closed position. Measure distance from upper edge of valve washer to lower edge of valve spring retainer (see illustration). *Refer to Valve Springs Table for specifications.* Check squareness of springs by placing spring on flat surface next to steel square. Squareness should be within .062" (1.6 mm) for inner spring and .075" (1.9 mm) for outer spring.



2EM5288

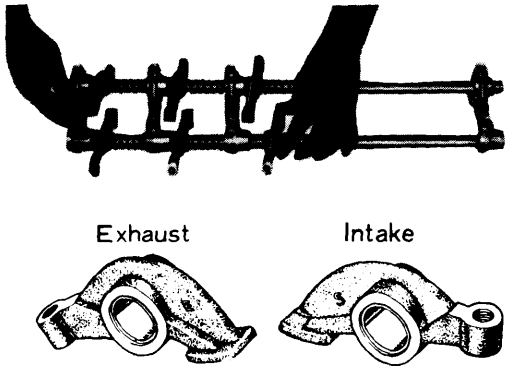
VALVE SPRING INSTALLED HEIGHT

ROCKER ARM ASSEMBLY

1) To disassemble rocker arm assembly, remove two retaining screws and one spring retainer. *NOTE — Mark all parts in order for correct reassembly.* Remove supports, rocker arms, and tension springs from rocker shafts.

2) Inspect clearance between rocker shaft and rocker arm bushings. If clearance exceeds .004" replace rocker arms or shaft. Inspect contacting surface of rocker arm with cam and replace rocker arm if worn excessively.

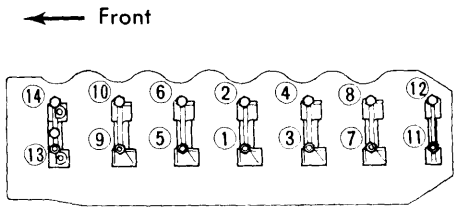
3) Rocker shafts have screw holes for retaining screws. Screw hole must face front. A retainer spring installing groove is provided on rocker shaft for exhaust. Rocker arms are marked "S" for intake and "E" for exhaust. Marks must face front.



3T006

ROCKER ARM ASSEMBLY

4) Assemble rocker arm assembly in reverse of removal and install on cylinder head. Tighten bolts gradually in sequence shown, taking three or four steps. Install oil union between number one rocker shaft support and number one camshaft bearing cap.



3T007

ROCKER ARM TIGHTENING SEQUENCE

VALVE CLEARANCE ADJUSTMENT

1) With No. 1 piston at TDC of compression stroke, adjust intake valves 1, 2, and 4 and exhaust valves 1, 3, and 5 to specified clearance.

2) Rotate crankshaft one complete revolution and align crankshaft damper V groove with timing chain cover "O" mark. Adjust intake valves 3,5, and 6 and exhaust valves 2,4, and 6 to specified clearance.

Valve Clearance Specifications

Valve	Hot In. (mm)	Cold In. (mm)
Intake	.007 (.18)	.006 (.14)
Exhaust	.010 (.25)	.008 (.21)

4M 6 CYLINDER (Cont.)

PISTONS, PINS, RINGS						
Engine	PISTONS	PINS		RINGS		
	Clearance In. (mm)	Piston Fit In. (mm)	Rod Fit In. (mm)	Rings	End Gap In. (mm)	Side Clearance In. (mm)
4M	①.002-.003 (.05-.07) ②.001-.002 (.03-.05)	③	.0002-.0004 (.005-.011)	No. 1	.006-.014 (.15-.35)	.001-.003 (.03-.07)
				No. 2	.006-.014 (.15-.35)	.001-.002 (.02-.06)
				Oil	.008-.020 (.20-.50)	Zero

① — Measured under oil ring.
② — Measured at bottom of skirt.
③ — Thumb press fit with piston heated to 122-140°F.

OIL PAN

Removal — Raise front of vehicle with jack, support on stands and drain oil. Disconnect steering relay rod from steering idler arm and pitman arm. Remove exhaust pipe support bracket, flywheel housing undercover, and engine under-rear-cover left hand side. Remove oil pan.

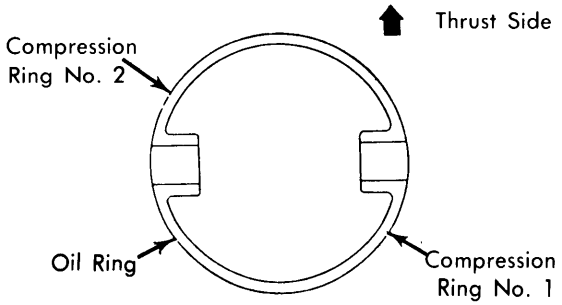
Installation — Thoroughly clean all gasket mating surfaces. Apply liquid sealer onto both oil pan gasket surfaces, install oil pan and tighten bolts.

PISTON & ROD ASSEMBLY

Removal — With cylinder head and oil pan removed, remove connecting rod caps and remove bearings. Push piston and rod assembly up through cylinder head side. Mark all components with cylinder numbers for correct reassembly.

Installation — 1) Apply oil to piston and piston rings. Install rings with mark on side of ring facing upwards. Position piston ring gaps shown in illustration. Using suitable ring compressor, install piston and rod assembly in cylinder block. Make sure mark on piston faces front.

2) Replace connecting rod bearings and connecting rod caps. Tighten bolts with rod and cap flush with thrust surface of crankshaft. After tightening bolts, check side play.

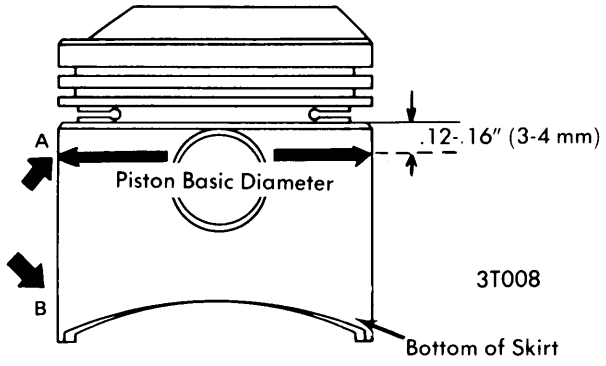


2EM5290

PISTON RING GAP SPACING

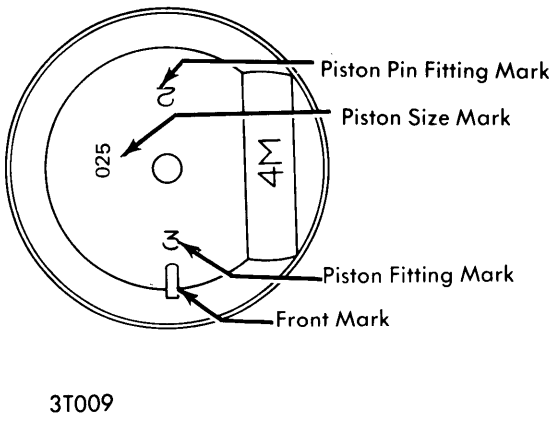
FITTING PISTONS

1) Measure cylinder bores and pistons to be fitted. Measure piston with micrometer at point .12-.16" (3-4 mm) below oil ring groove ("A") and at bottom of piston skirt ("B"). See *illustration.*



MEASURING PISTON DIAMETER

2) Measure piston ring end gaps in cylinder. If cylinder has not been bored, check gap with ring in lowest part of cylinder. Check clearance of piston ring in ring groove.

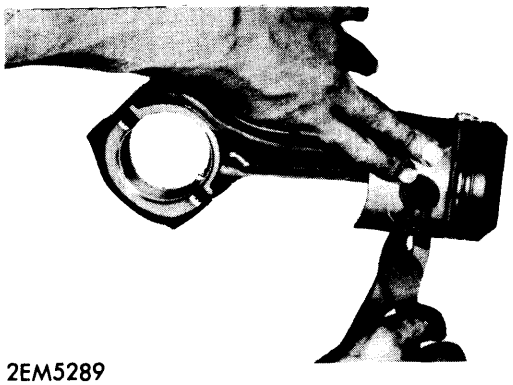


PISTON MARKINGS

PISTON PINS

Removal — Remove circlips, heat piston to 122-140°F and push piston pin out of piston and connecting rod. Piston pin should push through connecting rod with thumb pressure when rod is at 68°F.

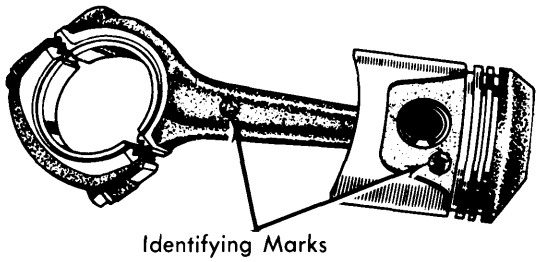
4M 6 CYLINDER (Cont.)



2EM5289

SNAP RING REMOVAL

Installation – Install one circlip in piston and heat piston to 122-140°F. Position piston and connecting rod so identifying marks on piston and rod face same direction. Push piston pin into piston and rod assembly and replace remaining circlip. Circlips should be inserted with open end down.



3T012

PISTON & ROD ASSEMBLY

CRANKSHAFT MAIN & CONNECTING ROD BEARINGS

Engine	MAIN BEARINGS				CONNECTING ROD BEARINGS		
	Journal Diam. In. (mm)	Clearance In. (mm)	Thrust Bearing	Crankshaft End Play In. (mm)	Journal Diam. In. (mm)	Clearance In. (mm)	Side Play In. (mm)
4M	2.3617-2.3627 (59.998-60.012)	.0012-.0021 (.030-.054)	No. 4	.002-.010 (.05-.25)	2.0463-2.0472 (51.976-52.000)	.0008-.0021 (.021-.053)	.006-.012 (.16-.30)

MAIN & CONNECTING ROD BEARINGS

1) Thoroughly clean crankshaft and blow out oil passages with compressed air. Check crankshaft for runout with a dial indicator on center main bearing journal. If runout exceeds .002" (.06 mm), straighten or replace crankshaft.

2) Check main and connecting rod bearing journals for taper or out-of-round. If taper or out-of-round exceeds .0004" (.01 mm), crankshaft must be ground to next undersize.

3) Main and connecting rod bearing clearance is checked by the Plastigage method. If clearance exceeds .003" (.08 mm) and cannot be corrected with .002" (.05 mm) undersize bearings, crankshaft must be reground to next undersize. Bearings are available .010", .020", .030" and .040" (.25, .50, .75, 1.00 mm) undersize.

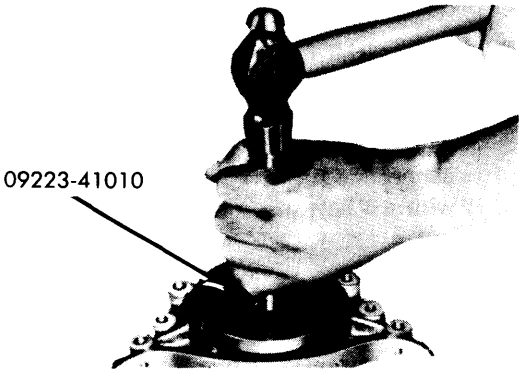
THRUST BEARING

Check crankshaft end thrust at No. 4 bearing. If clearance exceeds .012" (.3 mm), replace thrust washers as required. Select standard or oversize thrust washers as needed to achieve correct clearance. Standard thickness of thrust washer is .115" (2.92 mm) with .005" and .010" (.125, .250 mm) oversizes available.

NOTE – When assembling thrust washer, position oil groove toward crankshaft (outside) thrust surface.

REAR MAIN OIL SEAL

Inspect oil seal lip and replace if worn or damaged. Pry old seal out without damaging cover or retainer. Install seal using suitable oil seal replacer (Tool 09223-41010). After installing, lightly apply multipurpose lubricant to lip of seal.



2EM5292

INSTALLING REAR OIL SEAL

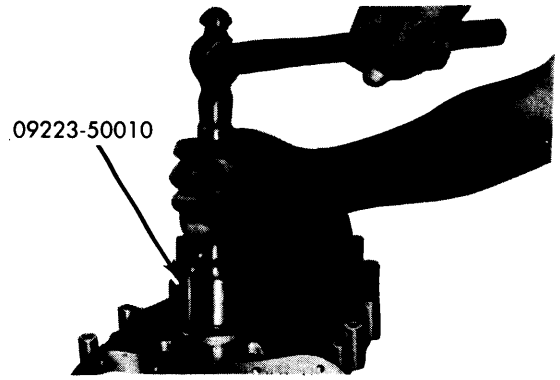
ENGINE FRONT COVER

Remove crankshaft damper attaching bolt and remove damper using suitable puller (09213-41013). Remove oil pan and remove front cover bolts and front cover. Use liquid sealer on front cover gaskets when assembling.

ENGINE FRONT COVER OIL SEAL

Inspect oil seal lip and replace if worn or damaged. Pry old seal out without damaging cover or retainer. Install seal using suitable oil seal replacer (Tool 09223-50010). After installing, lightly apply multipurpose lubricant to lip of seal.

4M 6 CYLINDER (Cont.)



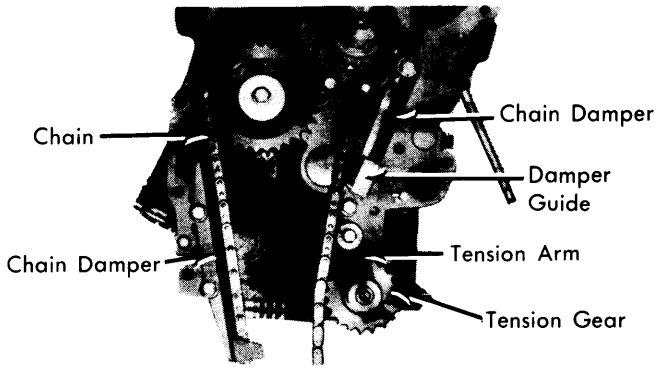
2EM5291

FRONT COVER OIL SEAL

CAMSHAFT			
Engine	**Journal Diam. In. (mm)**	**Clearance In. (mm)**	**Lobe Lift In. (mm)**
4M	1.3771-1.3778 (34.979-34.995)	.0005-.0025 (.012-.064)	Int. 3437 (8.730) Exh. 3428 (8.707)

TIMING CHAIN

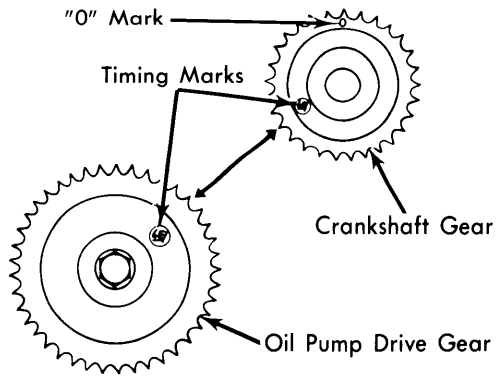
Removal – *See Valve Timing.* Remove cylinder head cover, rocker arm shafts and camshaft. Remove cylinder head. Remove crankshaft damper attaching bolt and remove damper using suitable puller (09213-41013). Remove oil pan, timing chain cover and timing chain.



2EM5294

REMOVING TIMING CHAIN

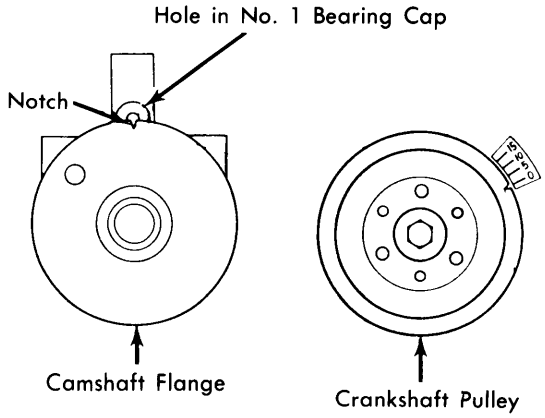
Installation – 1) Inspect timing chain tensioner and chain dampers. *See Timing Chain Tensioner.* Position crankshaft timing gear and auxiliary shaft drive gear as illustrated. Install timing chain and replace front engine cover and cylinder head.



3T017

TIMING MARK ALIGNMENT

2) Align valve timing mark (4 mm hole) in camshaft bearing cap number one with "V" groove of camshaft flange. Crankshaft pulley "V" groove should be aligned with 0° mark on engine front cover. Install camshaft timing gear with chain. *See Valve Timing.* Reverse removal procedure for remaining components.



3T018

TIMING MARK ALIGNMENT

TIMING CHAIN TENSIONER, CHAIN DAMPER & TENSION GEAR

1) Inspect chain tensioner plunger, bore and head for excessive wear. Body-to-plunger clearance should not exceed .005" (.12 mm). Tensioner spring free length should be 4.33" (110 mm) and installed load is 9.5 lb. @ 2.48" (4.3 kg @ 62.9 mm).

2) Inspect chain dampers and replace if worn or damaged. Inspect tension gear for worn or damaged teeth, shaft or bushing. Shaft-to-bushing clearance is .0008-.0021" (.020-.054 mm) and should not exceed .004" (1.0 mm).

3) With timing chain and all related parts installed, adjust timing chain tensioner as follows: Turn crankshaft clockwise to tighten chain. Loosen chain tensioner locknut, then turn adjusting screw clockwise until tight. Back off adjusting screw two turns. This should give .08" (2.0 mm) of tensioner play.

4) Run engine and if chain noise is too loud, back off adjusting screw one more turn. Screw must not be backed off more than four turns. If noise persists, check timing chain and gears.

4M 6 CYLINDER (Cont.)

CAMSHAFT REMOVAL

1) Remove head cover and valve rocker shafts. Remove chain tensioner.

NOTE — Before removing tensioner, inspect timing chain for stretch. This will facilitate valve timing at time of reassembly.

2) Straighten lock plate, remove camshaft timing gear bolt and remove camshaft timing gear. *NOTE — Camshaft gear bolt is left hand threaded.*

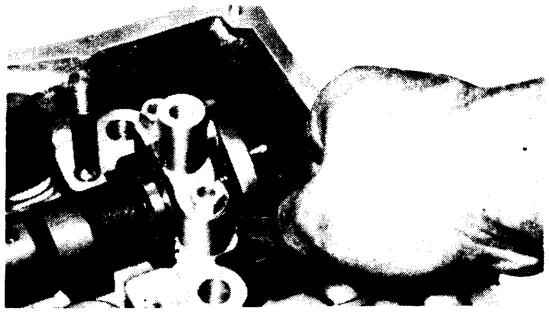
3) Remove camshaft bearing caps and remove camshaft. After camshaft is removed, temporarily assemble caps. Make sure caps are marked for identification and replacement.

CAMSHAFT BEARINGS

Inspect bearings for wear or damage. Check that oil clearance does not exceed .004" (.10 mm). When checking clearance, use Plastigage method. Bearings are available in standard, .005", .010" and .020" (.125, .250, .500 mm) undersizes.

CAMSHAFT END THRUST

To measure end thrust, use feeler gauge with camshaft installed on cylinder head. If end thrust exceeds .012" (3.0 mm), replace cam bearing No. 2. Specified end thrust is .002-.005" (.055-.155 mm).



2EM5293

MEASURING END THRUST

CAM HEIGHT

Measure height of cam. If height is less than following specified limits, camshaft must be replaced.

Cam Height Specifications

Application	Normal In. (mm)	Minimum In. (mm)
Intake	1.604 (40.730)	1.587 (40.32)
Exhaust	1.603 (40.707)	1.587 (40.30)

AUXILIARY SHAFT

Remove auxiliary shaft thrust plate bolt and remove gear and shaft as a unit. Inspect auxiliary shaft journals and gear for wear or damage. Replace thrust plate if thrust clearance exceeds limit.

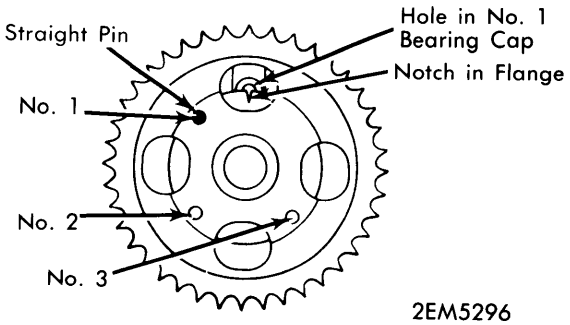
Auxiliary Shaft Specifications

Application	In. (mm)
Out-of-Round & Taper Limit	.0004 (.01)
Thrust Clearance	.002-.005 (.06-.13)
	Limit .012 (.30)
Bearing Clearance	.001-.0025 (.025-.066)
	Limit .003 (.08)

VALVE TIMING				
	INTAKE		EXHAUST	
Engine	Open (BTDC)	Close (ABDC)	Open (BBDC)	Close (ATDC)
4M	.....	.....	.....	.....

VALVE TIMING

1) With timing gears, timing chain, engine front cover and crankshaft pulley installed, align "V" groove on crankshaft pulley with 0° graduation on chain cover.



VALVE TIMING

2) Check to see if timing mark in camshaft flange is within indent hole in camshaft front bearing cap. Look through opening in camshaft gear.

3) If timing mark is off mark to the left, remove camshaft gear attaching bolt (left hand threaded) and rotate camshaft gear clockwise until straight pin on camshaft flange fits in No. 2 straight pin hole in camshaft gear.

4) If V groove is still off mark, repeat procedure and try No. 3 straight pin hole. Replace chain if straight pin must surpass No. 3 hole to achieve alignment of timing mark within indent hole.

5) When straight pin is installed in No. 2 hole, valve timing will advance 6 degrees more than if installed in No. 1 hole. If No. 3 hole is used, advance will be 6 degrees more than if installed in No. 2 hole.

NOTE — Valve timing is ±6 degrees when timing line aligns within indent hole.

4M 6 CYLINDER (Cont.)

ENGINE OILING

Pressure Relief Valve – Located in oil pump, valve opens at pressure of 57-71 psi. Check relief valve spring free length. Free length should be 2.173".

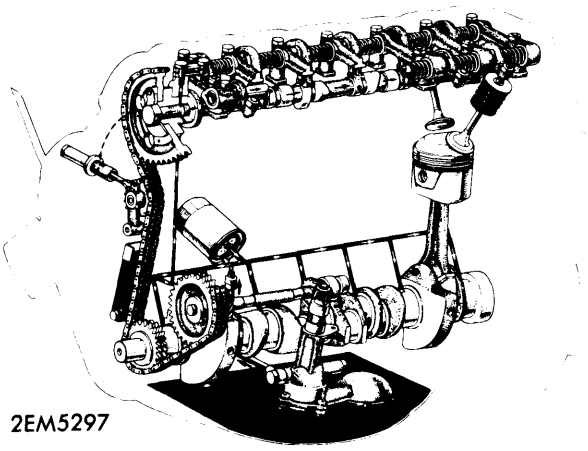
Crankcase Capacity – 4.6 qts. Add approximately .85 qts. with filter.

Oil Fitler – Full flow spin-on type.

Normal Oil Pressure – 57 psi.

ENGINE OILING SYSTEM

System is force feed with full-flow filtering unit. Pressure is delivered by a gear-driven oil pump. From filter oil travels through cylinder block passages by which internal components are lubricated.



ENGINE OILING

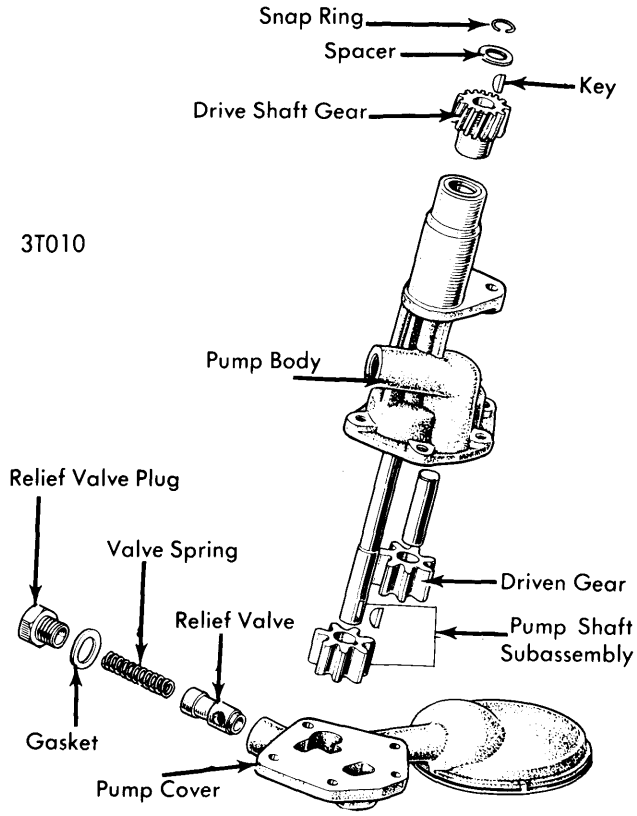
OIL PUMP

Removal – Raise front and rear of car and support on stands. Drain engine oil. Disconnect steering relay rod from steering idler arm and pitman arm using suitable tie rod end puller (Tool 09611-20013). Remove exhaust pipe support bracket, flywheel housing undercover, engine left rear undercover. Remove oil pan. Remove oil pump outlet pipe, remove oil pump.

Disassembly – Remove pump cover, gear, relief valve plug, gasket, spring, and relief valve (in this order) from pump body. Remove snap ring and spacer from top end of shaft. After removing drive shaft gear and Woodruff key, remove oil pump shaft from pump body.

Inspection – 1) Thoroughly clean each component, then inspect for wear or damage and replace as necessary. Measure diameter of pump driven shaft. If less than .547" (13.9 mm), replace shaft.

2) Install gear on driven gear shaft. Press gear toward center of pump body and measure clearance between gear teeth and body with a feeler gauge. If clearance exceeds .0079" (.2 mm), replace gear.



GEAR-DRIVEN OIL PUMP

3) Remove driven gear and install pump shaft with drive gear. Press gear toward center of body and measure clearance between gear teeth and pump body. Clearance must not exceed .0079" (.2 mm) or gear must be replaced.

4) Measure backlash between drive gear and driven gear with feeler gauge. This clearance must not exceed .035" (.9 mm). Measure side clearance between gear and cover. If clearance exceeds .0059" (.15 mm), replace gear or pump body. This measurement is made with straightedge across cover mounting face.

Reassembly – To reassemble, reverse disassembly procedure.

ENGINE COOLING

Thermostat – Wax pellet type, begins to open at 177-182°F, fully opened at 203°F.

Cooling System Capacity – Approximately 11.4 qts.

WATER PUMP

NOTE – It is not necessary to remove entire water pump housing to service water pump. Water pump cover may be removed from pump housing with housing left on cylinder block.

Removal – Remove bolts and remove fan shroud. Remove fan belt and four water pump cover bolts. Remove cover complete with coupling and fan assembly.

Rotor or Seal Replacement – Remove fan and using press and suitable tool (SST 09236-36010), push out rotor from rotor end. Remove seal set from rotor, remove seat and gasket from cover.

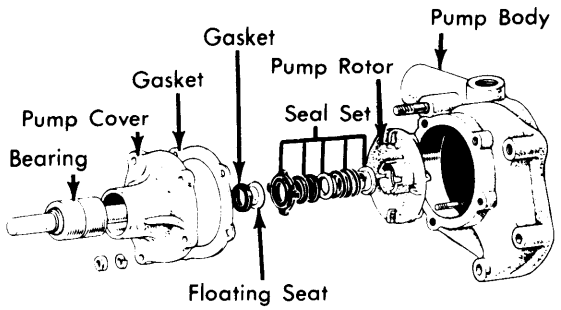
4M 6 CYLINDER (Cont.)

ENGINE COOLING (Cont.)

Bearing Replacement – 1) Remove rotor and heat cover to about 176°F. Using a press and suitable tool (SST 09623-36010), force bearing out of cover.

2) Place bearing on suitable tool (SST 09236-36010) and place tool into service hole at coupling center. Using press, force bearing out from coupling end.

3) With cover heated to about 176°F, force bearing in using press and suitable tool (SST 09236-36010). Do not attempt to install by pressing bearing shaft. Press in until bearing end surface is flush with cover end surface.



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WATER PUMP

4) Place gasket and seat into cover and press onto bearing. Coat contact surfaces of seat and thrust washer with 1 or 2 drops of silicone oil. Do not use other lubricants.

5) Using suitable tool (SST 09236-36010), press coupling onto bearing. Coat coupling case mounting surface with liquid sealer and install coupling case. Fill with silicone oil and install pump.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Cylinder Head	
8 mm Bolts	11-16 (1.5-2.2)
13 mm Bolts	54-62 (7.5-8.5)
Cylinder Head Cover	3-5 (0.4-0.7)
Intake Manifold	17-21 (2.3-2.9)
Exhaust Manifold	12-17 (1.7-2.3)
Oil Pan	3-5 (0.4-0.7)
Oil Pump Mounting Bolts	12-17 (1.7-2.3)
Valve Rocker Shaft Support	22-33 (3.1-4.5)
Timing Chain Cover	
8 mm Bolts	7-12 (1.0-1.6)
10 mm Bolts	14-22 (1.9-3.1)
Timing Chain Vibration Damper	7-12 (1.0-1.6)
Timing Chain Tensioner	22-29 (3.0-4.0)
Crankshaft Vibration Damper	69-76 (9.5-10.5)
Camshaft Timing Gear (Left hand thread)	47-54 (6.5-7.5)
Connecting Rod Bearing Caps	30-35 (4.2-4.8)
Main Bearing Caps	72-79 (9.9-10.9)
Camshaft Bearing Caps	12-17 (1.7-2.3)