3K-C 4 CYLINDER

ENGINE CODING

ENGINE IDENTIFICATION

Engine serial number and code is stamped in pad on left side of crankcase behind dipstick. First series of digits is engine code.

Application	Code
1166cc Engine (1200 Model)	3K-C

ENGINE, CYLINDER HEAD & MANIFOLDS

ENGINE

NOTE – *Engine and transmission are removed as one unit.*

1) Drain cooling system and disconnect cable from battery to starter. Remove hood support, hinges and hood. Remove right hand headlight rim and radiator grille.

2) Remove hood lock from lock base and remove base with brace. Disconnect electrical connections at horns and remove horns. Remove air cleaner and windshield washer reservoir.

3) Loosen clamps and remove radiator hoses and radiator. Disconnect accelerator cable at bracket and throttle lever on carburetor. Disconnect choke cable from carburetor.

4) Disconnect water hose from bracket on valve cover and disconnect hoses from water pump and water valve. Disconnect cable from water valve.

5) Disconnect electrical wiring harness connector. Remove exhaust pipe from exhaust manifold. Remove left hand front engine mount nut. Disconnect fuel line at fuel pump.

6) Disconnect electrical connections at water temperature sending unit, oil pressure switch, and back-up light switch. Disconnect battery ground cable from crankcase.

7) Remove right hand engine mount nut. Pull out "E" clip from clutch cable at firewall and disconnect clutch cable at lever. Remove coil wire and wire from distributor to coil.

8) Remove carpet from center of floor in drivers compartment. Remove shift lever boot and cap boot. Remove gear shift lever using a suitable tool (09305-12010).

9) Raise rear of vehicle and support with safety stands. Remove drive shaft and insert a suitable plug (09325-12010) in rear of transmission to prevent loss of oil.

10) Remove exhaust pipe support bracket from transmission tail housing. Disconnect speedometer cable at transmission and remove transmission mount bolt from crossmember.

11) Support transmission and remove crossmember. Connect a suitable hoist to engine hangers. Lift engine and transmission assembly up and out toward front of vehicle.

12) To install engine and transmission assembly, reverse removal procedure. With engine installed, adjust clutch pedal freeplay and adjust hood for closing if necessary.

INTAKE MANIFOLD

NOTE – *Intake and exhaust manifold are removed as an assembly.*

1) Remove air cleaner and disconnect choke cable and accelerator cable at carburetor. Disconnect exhaust pipe at exhaust manifold.

2) Disconnect fuel line and vacuum lines from carburetor and remove carburetor. Remove manifold retaining nuts and remove manifolds.

3) To install, reverse removal procedure. Clean mating surfaces, use new gaskets and tighten manifold retaining nuts to specification.

CYLINDER HEAD

1) Drain cooling system and remove air cleaner. Disconnect accelerator cable from support on valve cover and throttle lever. Disconnect choke cable from carburetor.

2) Disconnect water hose bracket from valve cover. Disconnect water hoses from water pump and water control valve. Disconnect cable from water control valve.

3) Disconnect ventilation tube from valve cover. Remove valve cover and bolts securing rocker arm assembly to cylinder head. Remove rocker arm assembly and push rods.

4) Remove upper radiator hose and spark plug wires. Remove windshield washer reservoir. Remove exhaust pipe at exhaust manifold. Remove cylinder head bolts in sequence taking two or three steps and remove cylinder head.

5) To install, reverse removal procedure. Clean mating surfaces and use new gasket. Install gasket with correct side up. Tighten bolts to specification in sequence shown in *Fig. 2*. Adjust valve clearance.

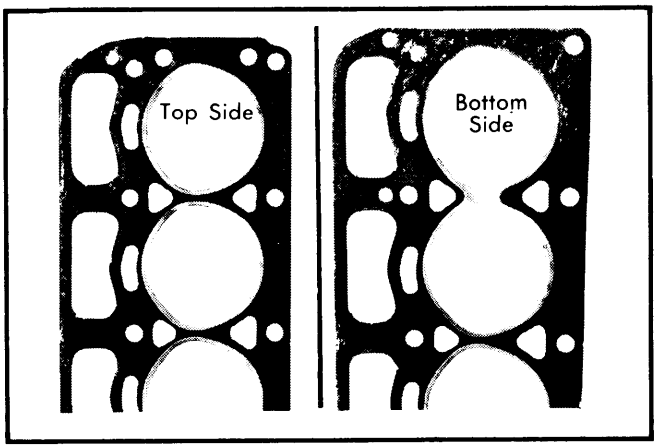

Fig. 1 Cylinder Head Gasket Installation

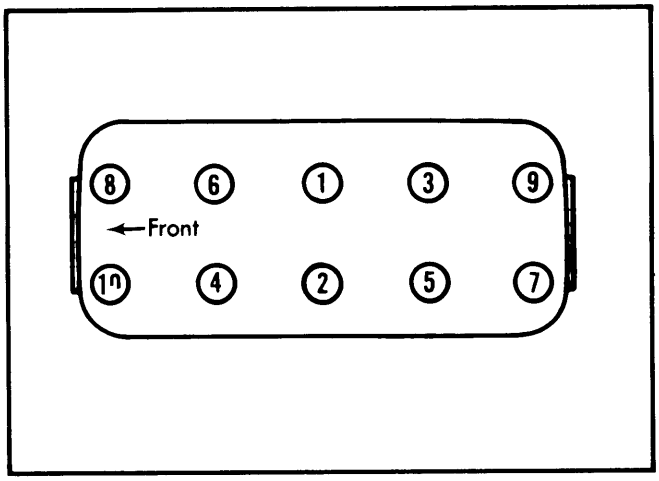

Fig. 2 Cylinder Head Tightening Sequence

3K-C 4 CYLINDER (Cont.)

VALVES

VALVE ARRANGEMENT

E-I-I-E-E-I-I-E

VALVE GUIDE SERVICING

1) Check clearance between valve stem and valve guide. If clearance exceeds .004" (intake) and .005" (exhaust), replace valve guide.

2) To replace valve guide, break off upper portion of guide with a punch and hammer. Drive remaining portion of guide down and out through combustion chamber with a suitable driver (09201-10010).

NOTE – *Cylinder head should be heated to 212-266°F before removal of valve guide.*

3) Install snap ring on valve guide and install valve guide from top using a suitable driver (09201-10010). Drive in guide until snap ring contacts surface of cylinder head.

4) With valve guide installed correctly, ream to appropriate clearance with a reamer.

VALVE STEM OIL SEALS

An "O" ring type seal is installed on end of valve stem above valve keepers after cylinder head is assembled.

VALVE SPRING REMOVAL

1) Remove cylinder head as previously outlined. Compress valve spring with a valve spring compressor and remove valve keepers. Release spring compressor and remove spring retainer, spring cover, spring and spring seat.

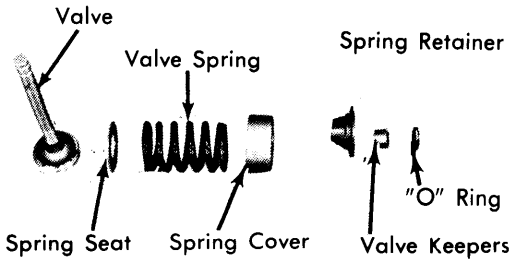

Fig. 3 View of Valve Assembly

2) To assemble, reverse disassembly procedure. After cylinder head is assembled, install "O" ring on valve stem above keepers.

VALVE SPRING INSTALLED HEIGHT

1) With valve spring removed, check length under specified load (see specifications) in a spring tester. Check valve spring free length, if less than 1.83", replace spring.

2) Check valve spring squareness with a steel square. If spring is out of square more than .063" (1.6 mm), replace spring.

ROCKER ARM ASSEMBLY

1) Remove valve cover and rocker arm assembly retaining bolts. Remove rocker arm assembly. Remove retaining clips from both ends of rocker arm shaft. Remove conical springs, rocker arms, springs and support stands.

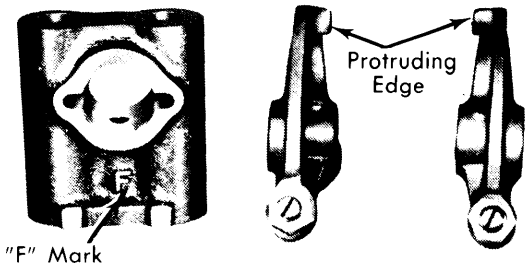

Fig. 4 View of Rocker Arm Assembly

2) Thoroughly clean and inspect all components. Check rocker arm-to-shaft clearance. If clearance exceeds .003", replace rocker arms or shafts as necessary. Reface valve end of rocker arm if worn. Lubricate all components before assembly.

3) Assemble rocker arm assembly in reverse of removal order. There are two types of rocker arms used, install rocker arm so that protruding side of valve end of rocker arm faces support stand. Install rocker stand so that when rocker assembly is installed, "F" mark on rocker stand faces front of engine.

4) To install rocker arm assembly, reverse removal procedure. Install rocker arm assembly so that "F" mark on support stand faces front of engine. Tighten retaining bolts to specifications and adjust valve clearance.

VALVE TAPPET SERVICE

1) Check clearance between valve tappet and tappet bore in crankcase. If clearance exceeds .004", replace tappet with oversize tappet and ream bore in crankcase to appropriate clearance.

2) Oversize tappet available is .002" over standard. Crankcase must be reamed .002" over standard or until correct clearance is obtained. Correct clearance is .0006-.0011".

VALVE CLEARANCE ADJUSTMENT

1) Valve clearance is adjusted with engine cold. Rotate engine until piston of valves being adjusted is at TDC on compression stroke.

2) Adjust valve clearances with engine hot to .008" (intake) and .012" (exhaust).

PISTONS, PINS & RINGS

OIL PAN

NOTE – Engine must be removed to remove oil pan.

1) Remove engine as previously outlined. Drain oil from oil pan and remove oil pan retaining nuts and bolts. Remove oil pan.

2) Clean mating surfaces. Apply sealer to new gasket and install gasket and oil pan. Tighten retaining nuts and screws to specifications. Install engine as previously outlined.

PISTON & ROD ASSEMBLY

1) Remove engine as previously outlined. Remove cylinder head and oil pan as previously outlined. Remove connecting rod cap with bearing half and push piston and connecting rod assembly up and out through top of engine. Mark connecting rod cap to insure that it is installed on same rod and in same position.

3K-C 4 CYLINDER (Cont.)

2) Mark piston to insure that it is installed in same cylinder. To install piston and rod assembly, make sure ring gaps are in correct position (see illustration). Coat piston and rings with oil.

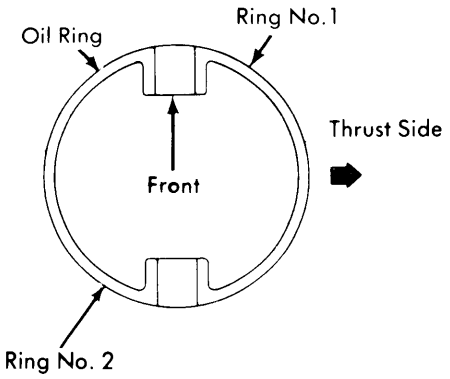

Fig. 5 Piston Ring Gap Arrangement

3) Compress piston rings with a ring compressor and install piston and rod assembly in crankcase with notch in piston facing front of engine. Make sure bearings are properly seated in connecting rod and cap and apply oil to crankshaft journal.

4) Make sure bearing in connecting rod is properly seated against crankshaft journal. Install connecting rod cap in correct position and tighten nuts to specifications. Install cylinder head, oil pan and engine as previously outlined.

PISTON PIN REPLACEMENT

1) Remove circlips from pin hole in piston, heat piston to approximately 158-176°F and drive out piston pin. Make sure piston, pin and connecting rod are marked for assembly with each other.

2) Thoroughly clean and inspect all components. Piston pin should push fit through piston with piston heated to approximately 158-176°F. If pin falls through piston or fit is to loose, replace piston and pin.

3) Check piston pin-to-connecting rod clearance, if more than .002", bushing must be replaced. Press bushing out and install new bushing using a press and a suitable driver (09222-30010). With new bushing installed, ream to correct clearance with piston pin.

4) Thoroughly lubricate all components before assembly. Position piston on connecting rod with notch in piston facing in same direction as mark on lower part of connecting rod (see illustration). Heat piston to 158-176°F and install piston pin and circlips.

FITTING PISTONS

1) Check size of cylinder bore in crankcase, if size is more than .008" over standard, cylinders must be bored to next oversize piston. Pistons and rings are available in .010", .020" and .030" oversize.

2) Check fit of piston in cylinder with a feeler gauge and a spring tension gauge. A .002" or .003" feeler gauge should require 2.2-5.5 lbs., measured on spring tension gauge, to withdraw feeler gauge from between piston and cylinder bore.

3) Check piston rings for wear or damage and replace as necessary. Check piston ring gap in cylinders and piston ring side clearance in pistons (see specifications). Install rings on pistons with marks on rings up and make sure ring grooves in pistons are clean.

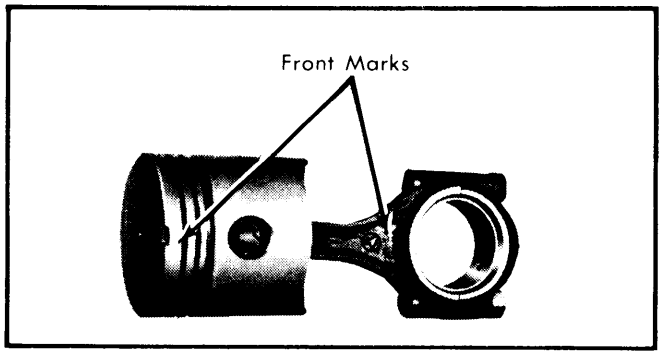

Fig. 6 Piston & Rod Assembly Markings

CRANKSHAFT MAIN & CONNECTING ROD BEARINGS

MAIN & CONNECTING ROD BEARING SERVICE

1) Remove engine as previously outlined. Remove piston and rod assemblies as previously outlined. Remove crankshaft pulley bolt and pull off crankshaft pulley using a suitable puller (09213-60013). Remove front engine cover. Remove clutch and flywheel.

2) Remove timing chain tensioner and damper. Remove camshaft sprocket bolt and remove sprocket and chain. Remove rear crankshaft oil seal retainer and oil pump. Remove main bearing caps with bearing halves and remove crankshaft. Remove bearing halves from crankcase.

3) Thoroughly clean and inspect crankshaft. Blow out all oil passages with compressed air. Check crankshaft for runout by checking center main bearing journal with a dial indicator. If crankshaft is bent more than .0012", replace or repair crankshaft.

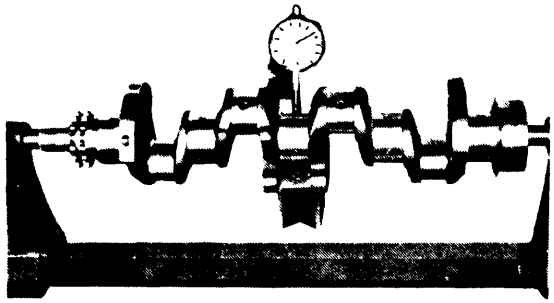

Fig. 7 Checking Crankshaft Runout

3K-C 4 CYLINDER (Cont.)

4) Check main and connecting rod bearing journals with a micrometer. If journals are more than .0003" out-of-round or undersize, crankshaft must be ground to next undersize. Undersize main and connecting rod bearings for ground crankshafts are available in .010", .020" and .030" undersizes.

5) Main and connecting rod bearing clearance is checked by the Plastigage method. To check connecting rod bearing clearance, make sure bearing halves and crankshaft journal are thoroughly clean. Place a piece of Plastigage wire on journal being checked. Install connecting rod cap on connecting rod and tighten nuts to specifications.

6) Remove connecting rod cap and check flattened wire against scale on back of Plastigage package to determine clearance. Main bearing clearance is checked in same manner. If rod bearing clearance is more than standard, a .002" undersize bearing is available. If clearance with this bearing will still exceed standard clearance, crankshaft must be ground to next undersize. The limit of bearing clearance on both main and rod bearings is .004".

7) Install bearing halves in crankcase and in main bearing caps. Lubricate bearings and install crankshaft. Install main bearing caps with arrows pointing toward front of engine. Main bearing caps are numbered one through five and must be installed in that order from front to rear.

8) Tighten bolts to specifications and check crankshaft for freedom of movement. Check crankshaft endplay. *See Thrust Bearing Alignment.* Install rear main bearing oil seal. *See Rear Main Bearing Oil Seal Installation.* Install timing chain in correct position. *See Timing Chain Replacement.* Install remaining components in reverse of removal order. Install engine as previously outlined.

THRUST BEARING ALIGNMENT

Check crankshaft end play with number three main bearing cap and original thrust washers installed. Pry crankshaft back and forth and measure distance moved with a feeler gauge. If end play is more than .012", a thicker thrust washer must be installed. Thrust washers are available in .005" and .010" oversize. Install thrust washers with grooves toward crankshaft.

REAR MAIN BEARING OIL SEAL SERVICE

NOTE – *This procedure is with engine in vehicle.*

1) From inside drivers compartment, remove shift lever boot and cap boot. Remove shift lever using a suitable remover (09305-12010).

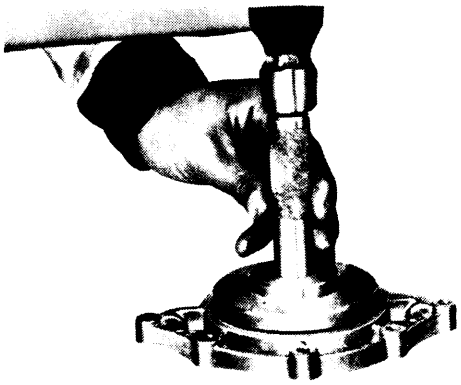

Fig. 8 Rear Main Bearing Oil Seal Installation.

2) Raise rear of vehicle and support with safety stands. Disconnect clutch cable from fork. Remove drive shaft and install a sutiable plug (09325-12010) in rear of transmission to prevent loss of oil.

3) Disconnect exhaust pipe support bracket from transmission. Disconnect speedometer cable at transmission. Place a jack under transmission and remove crossmember.

4) Remove mounting bolts from starter, stiffener plate and transmission. Pull transmission back until shaft clears clutch and remove transmission.

5) Remove clutch and flywheel. Remove oil seal retainer and remove oil seal. To install oil seal in retainer, drive in using a suitable driver (09250-10011 set "A").

CAMSHAFT

ENGINE FRONT COVER & OIL SEAL

NOTE – *This procedure is with engine in vehicle.*

1) Drain cooling system and oil pan. Remove air cleaner, hood lock and hood lock base with brace. Disconnect upper and lower radiator hoses and remove radiator.

2) Remove water pump and generator drive belt. Remove crankshaft pulley bolt and pull off pulley with a suitable puller (09213-60013). Remove cover under engine.

3) Remove left and right hand engine mounting nuts. Disconnect exhaust pipe from manifold. Raise front of engine slightly. Front oil seal can be removed now using a suitable puller (09308-10010), or front engine cover can now be removed and seal replaced.

4) If seal is removed with cover still attached to engine, drive in new seal using a suitable driver (09223-22010). To remove cover, remove bolts securing cover to oil pan and remove cover from engine.

5) With cover removed, pry seal out and drive in new seal using a suitable driver (09223-22010). To install cover, clean mating surfaces, use new gasket and sealer and tighten bolts to specifiactions. Reverse removal procedure to install remaining components.

6) To install oil seal retainer, thoroughly clean mating surfaces and use new gasket. Tighten bolts to specifications. Reverse removal procedure to install remaining components.

TIMING CHAIN REPLACEMENT

1) With timing chain installed on engine, attach a spring tension gauge to chain and pull out on chain with a pressure of 22 lbs. and check distance between chain tensioner plunger and tensioner body.

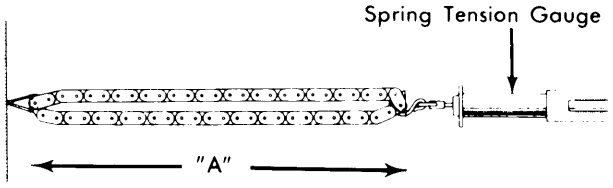

Fig. 9 Timing Chain Checking

3K-C 4 CYLINDER (Cont.)

2) If clearance exceeds .532", chain and sprockets must be removed and checked. Remove camshaft sprocket bolt and remove sprocket and chain. Pull crankshaft sprocket from crankshaft.

3) Secure one link of timing chain and attach spring tension gauge to opposite end (see illustration). With 11 lbs. tension applied to chain, distance "A" should be no more than 10.7". Replace chain if distance is more.

4) Place timing chain on crankshaft sprocket and measure diameter, if less than 2.34", replace sprocket. Measure camshaft sprocket in same manner, if less than 4.48", replace camshaft sprocket.

5) To correctly install sprockets and timing chain, install crankshaft sprocket with "O" mark in line with dowel pin on camshaft (see illustration). Place timing chain on sprocket with mark on chain aligned with mark on sprocket.

6) Align camshaft sprocket "O" mark with mark on timing chain and install camshaft sprocket on camshaft. Tighten camshaft sprocket bolt to specification. Install chain tensioner and vibration damper. Install timing chain cover as previously outlined.

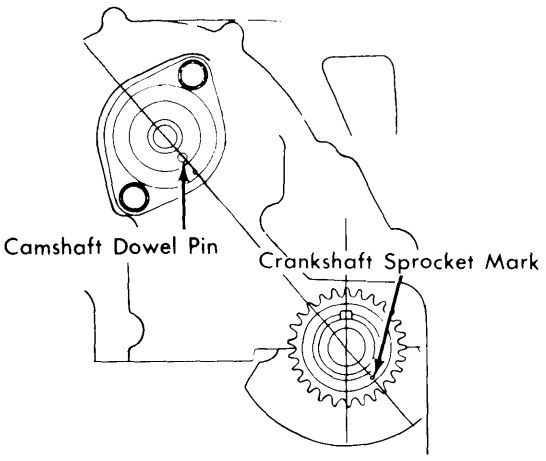

Fig. 10 Timing Chain & Sprocket Installation

TIMING CHAIN TENSIONER & DAMPER

1) Inspect surfaces of tensioner plunger and bore of tensioner body. To test clearance, lubricate plunger and insert it into plunger body. Cover two oil passages with fingers and pull plunger about half way out. Vacuum strong enough to return plunger should be felt.

2) Measure thickness of tensioner head and chain damper wall. Head should be minimum .47" (12 mm) and chain damper should be minimum .28" (7 mm).

CAMSHAFT

NOTE – *This procedure is with engine in vehicle.*

1) Remove front engine cover as previously outlined. Remove right hand headlight rim and radiator grille. Remove spark plugs.

2) Disconnect accelerator cable and choke cable at carburetor. Remove ventilation tube from valve cover and remove valve cover.

3) Loosen valve adjusting screws on rocker arms and remove push rods. Mark or position push rods so that they are installed in same valve tappet. Remove valve tappets and mark or position them to make sure they are installed in same bore in crankcase.

4) Disconnect primary wire and vacuum line from distributor, then remove distributor. Disconnect fuel lines at fuel pump and remove fuel pump.

5) Remove timing chain tensioner. Remove camshaft sprocket and timing chain. Remove camshaft thrust plate and remove camshaft taking care not to damage camshaft lobes or bearings.

6) Check camshaft for runout by checking second bearing journal. If runout exceeds .0012", repair camshaft. Check bearing journals for out-of-round or taper, if more than .001", grind camshaft journals to next undersize and install appropriate bearings in crankcase. See *Camshaft Bearing Replacement.*

7) Check camshaft end thrust. See *Camshaft End Thrust.* To install camshaft reverse removal procedure. Install timing chain correctly. See *Timing Chain Replacement.* Install engine front cover as previously outlined.

CAMSHAFT BEARING REPLACEMENT

NOTE – *Engine must be removed and disassembled to replace camshaft bearings.*

1) With engine removed and disassembled, check clearance between camshaft and bearings. If clearance exceeds .004", bearings should be replaced.

2) If camshaft journals are worn excessively, camshaft journals must be ground to next undersize and appropriate bearing installed. Camshaft bearings are available in .005" and 010" undersize.

3) To replace cam bearings, remove expansion plug from rear of engine. Remove old bearings and install new ones of appropriate size using a suitable bearing replacement tool (09215-22010). Align oil holes in bearings with holes in crankcase.

CAMSHAFT END THRUST

Check clearance between thrust plate and first bearing journal, if clearance exceeds .012", replace thrust plate.

CAM LOBE LIFT

Total height of camshaft lobe is 1.436-1.440" (intake) and 1.432-1.436" (exhaust). Check total lobe height, if less than 1.424" (intake) and 1.420" (exhaust), replace camshaft.

3K-C 4 CYLINDER (Cont.)

ENGINE OILING

Crankcase Capacity – Approximately 3.7 qts. (3.5 ltr) with filter.

Oil Filter – Full flow, mounted on outside of crankcase next to distributor.

Normal Oil Pressure – With engine at 212°F, 28.4 psi @ 300 RPM, 42.6 psi @ 3000 RPM.

Pressure Regulator Valve – Mounted in oil pump. See *Oil Pump*.

ENGINE OILING SYSTEM

Oil is circulated through engine by pressure provided by a trochoid rotor type oil pump. Pump is mounted on bottom of crankcase and driven by camshaft via distributor drive. Oil is drawn from oil pan and circulated through a full flow oil filter into main oil gallery. Oil is then distributed to main and connecting rod bearing journals and camshaft bearing journals. Cylinders and piston pins are lubricated by oil squirting from hole in connecting rod. Oil is supplied to timing chain by oil from timing chain tensioner. Oil flows from number two cam bearing journal to rocker arm shaft to lubricate rocker arms. Excess oil from rocker arm shaft lubricates valves and valve stems.

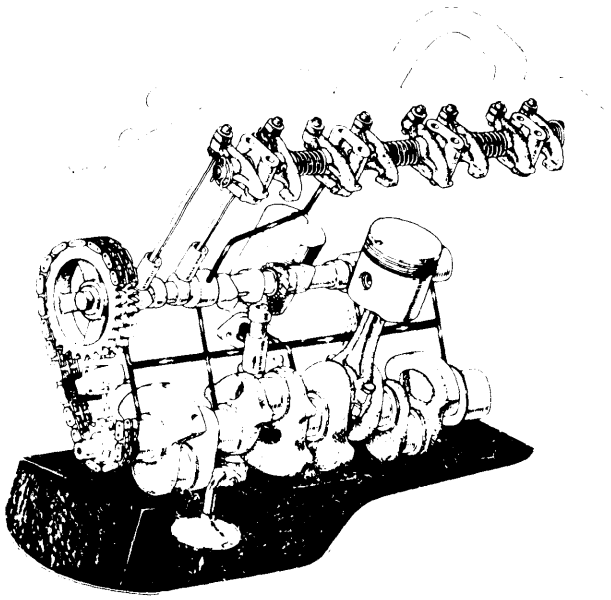

Fig. 11 Engine Oiling System

OIL PUMP

1) Remove oil pan as previously outlined and remove oil pump. Remove oil strainer, pump cover and pressure regulator plug from side of pump body. Remove spring, piston and rotors from pump body.

2) Thoroughly clean and inspect all components. Check rotor tip clearance, if more than .0079", replace rotors. Check clearance between drive rotor and cover. Place a straight edge on mating surface of pump body and insert a feeler gauge between straight edge and drive rotor. If clearance exceeds .0059", replace cover, pump body or rotors.

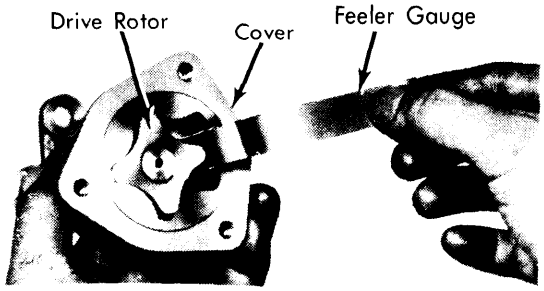

Fig. 12 Oil Pump Tip Clearance Checking

3) Check clearance between outer rotor and pump body with a feeler gauge. If clearance exceed .0079", replace pump body or rotors. Check pressure regulator spring and piston for wear or signs of seizure. Replace as necessary.

4) To assemble pump, reverse disassembly procedure. Install rotors with punch marks to cover. With pump assembled, submerge in clean motor oil and rotate drive shaft to check flow of oil from outlet port. To install pump, reverse removal procedure and install oil pan as previously outlined.

Oil Pump Specifications

Application	In. (mm)
Rotor Tip Clearance	.002-.006 (.04-.16)
	Limit .008 (.2)
Rotor Side Clearance	.001-.004 (.03-.09)
	Limit .006 (.15)
Rotor-to-Body Clearance	.004-.006 (.10-.16)
	Limit .008 (.2)

ENGINE COOLING

WATER PUMP

1) Drain cooling system and remove radiator. Remove water pump drive belt. Remove fan and fan pulley. Remove water pump.

2) To install, clean mating surfaces, use new gasket and reverse removal procedure.

Thermostat – Starts opening at 177°F and is fully open at 203°F.

Cooling System Capacity – 5 qts.

3K-C 4 CYLINDER (Cont.)

ENGINE SPECIFICATIONS

GENERAL SPECIFICATIONS

Year	Displ.		Carburetor	HP at RPM	Torque (Ft. Lbs. at RPM)	Compr. Ratio	Bore		Stroke	
	cu. ins.	cc					in.	mm	in.	mm
1977	71.1	1166	2-Bbl.	73 @ 6000	74.2 @ 3800	9.0-1	2.953	75	2.598	66

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)
3K-C							
Intake	.....	45°	45°	.047-.063 (1.2-1.6)	.3136-.3140 (7.965-7.975)	.0014-.0026 (.035-.065)	.....
Exhaust	.....	45°	45°	.047-.063 (1.2-1.6)	.3134-.3140 (7.960-7.975)	.0014-.0028 (.040-.071)	.....

PISTONS, PINS, RINGS

Engine	PISTONS Clearance In. (mm)	PINS		RINGS		
		Piston Fit In. (mm)	Rod Fit In. (mm)	Rings	End Gap In. (mm)	Side Clearance In. (mm)
3K-C	.001-.002 (.03-.05)	①	.0002-.0003 (.004-.008)	No. 1	.004-.011 (.10-.28)	.0012-.0028 (.03-.04)
				No. 2	.004-.011 (.10-.28)	.0008-.0024 (.02-.06)
				Oil.	.008-.035 (.2-.9)	.....

① — Push fit with piston and pin heated to 158-175°F.

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)
3K-C	1.968-1.969 (49.976-50.000)	.0006-.0016 (.016-.040)	No. 3	.002-.009 (.04-.22)	1.653-1.654 (41.976-42.000)	.0009-.0019 (.024-.048)	.004-.008 (.11-.21)

VALVE TIMING

Engine	INTAKE		EXHAUST	
	Open (BTDC)	Close (ABDC)	Open (BBDC)	Close (ATDC)
3K-C	16°	50°	50°	16°

VALVE SPRINGS

Engine	Free Length In. (mm)	PRESSURE Lbs. @ In. (kg @ mm)	
		Valve Closed	Valve Open
3K-C	1.831 (46.5)	70.1 @ 1.512 (31.8 @ 38.4)	.....

3K-C 4 CYLINDER

ENGINE SPECIFICATIONS (Cont.)

CAMSHAFT

Engine	Journal Diam. In. (mm)	Clearance In. (mm)	Lobe Lift In. (mm)
3K-C		.001-.003 (.03-.07)	Int. .225 (5.72)
Journal			
No. 1	1.701-1.702 (43.21-43.23)		Exh. .237 (6.02)
No. 2	1.691-1.692 (42.96-42.98)		
No. 3	1.681-1.682 (42.71-42.73)		
No. 4	1.671-1.672 (42.46-42.48)		

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Cylinder Head Bolts	39-48 (5.4-6.6)
Manifold Nuts	14-22 (2.0-3.0)
Main Bearing Cap Bolts	39-48 (5.4-6.6)
Connecting Rod Cap Nuts	29-38 (4.0-5.2)
Oil Pan Bolts	2-3(.3-.4)
Camshaft Thrust Plate Bolts	4-7 (.6-.9)
Camshaft Sprocket Bolt	39-48 (5.4-6.6)
Crankshaft Pulley Bolt	33-40 (4.5-6.5)
Flywheel Bolts	39-48 (5.4-6.6)