CIVIC CVCC & ACCORD 4 CYLINDER

ENGINE CODING

ENGINE IDENTIFICATION

Engine serial number is stamped at right, rear of engine. Serial number is preceded by engine model number.

Application	Code
CVCC	
Sedan	ED3-3
Station Wagon	ED4-3
Accord	
Fed.	KA
Calif.	KL
High Alt.	KH

ENGINE & CYLINDER HEAD

ENGINE

Removal – 1) Remove grill to gain access to hood screws and remove hood after scribing location marks for reinstallation. Disconnect battery ground cable from battery and transmission. Completely remove engine torque arm. Disconnect all wiring and vacuum hoses to engine.

2) Drain radiator and disconnect coolant lines. Remove radiator. On automatic transmission models, remove transmission oil cooler lines. Remove starter motor and distributor cap. Disconnect clutch cable from clutch arm. Remove cooling fan housing with fan. Remove emission control box from firewall. Remove complete air cleaner assembly and engine mount heat shield.

3) On Accord models only, remove clutch slave cylinder with hose. Disconnect throttle and choke cables from carburetor. On automatic transmission models only, remove center console and remove shift control from shift lever. Raise front of vehicle and remove both front wheels. Drain crankcase and transmission fluid. Disconnect speedometer cable from transmission complete with drive gear.

4) Remove cotter pin and nut from both lower ball joints. Disengage both ball joints from steering knuckles using driver and collar (07941-6710000). Pry both constant velocity joints out about .5" (12.7 mm) and pull sub-axles out of transmission case. Remove front crossmember and front lower engine mount bolt. On manual transmission models, drive out pin securing shift linkage.

5) Disconnect lower torque arm from transmission. On automatic transmission models, pull shift control cable out of housing. Disconnect exhaust pipe. Attach chain hoist to engine and position lifting hook 7 chain links from left side of engine and 14 links from right side of engine. Raise hoist slightly to place tension on lifting sling. Install a protective shield between engine and radiator.

6) Disconnect nut from rear engine mount and remove complete front engine mount assembly. Remove three bolts from left shock absorber mount assembly and push left engine mount into shock absorber mount bracket as far as it will go. Lift engine and remove from vehicle.

Installation – To install, reverse removal procedure and note following: Use new shift rod pin. Make sure sub-axles bottom in transmission, and spring clip holds sub-axle securely. Arrows on combination lights point outward. Adjust all control cables after installation is completed.

CYLINDER HEAD

NOTE – *To minimize the chances of warping cylinder head, remove head after engine has been allowed to cool.*

Removal – 1) Scribe index marks on hood, then remove hood. Drain radiator and remove complete air cleaner assembly. Disconnect upper radiator hose and all vacuum lines to cylinder head and intake manifold. Disconnect throttle and choke cables.

2) Disconnect all wiring and hoses to intake manifold and cylinder head. Remove engine torque rod. Disconnect exhaust pipe from manifold. Remove valve cover and upper timing belt cover. Rotate engine until number one piston is at top dead center position.

3) Loosen timing belt adjusting and pivot bolt, then remove camshaft pulley bolt and remove pulley. Take off fuel pump and remove distributor. Remove oil pump gear holder and pump gear and shaft. Loosen bolts in reverse of tightening sequence *(See Fig. 1)*, a little at a time and lift off cylinder head.

Installation – To install cylinder head, reverse removal procedure and tighten bolts in sequence shown in *Fig. 1*.

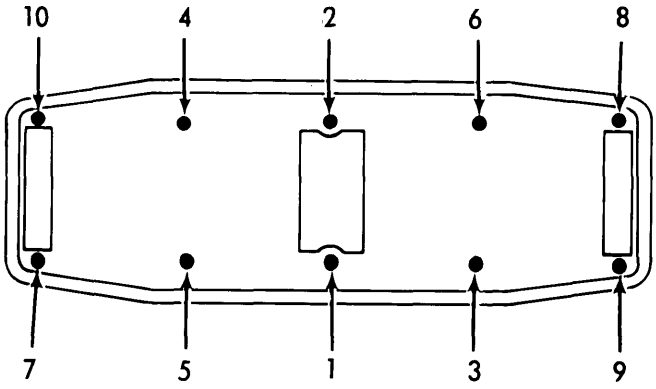

Fig. 1 Cylinder Head Tightening Sequence

VALVES

VALVE ARRANGEMENT

Rear Side – I-E-E-I-I-E-E-I (left to right).
Front Side – All Auxiliary.

ROCKER ARM ASSEMBLY

Removal – Loosen rocker arm shaft support bolts in criss-cross pattern starting with end supports. Pull out roll pins from both end shaft supports and remove supports, rocker collars, rocker arms and springs. Retain components in proper order for reassembly.

CIVIC CVCC & ACCORD 4 CYLINDER (Cont.)

Installation – Measure all rocker arms for arm-to-shaft clearance. If clearance exceeds .0035" (.08 mm), replace rocker shaft and/or arms. Assemble in reverse of disassembly and install rocker arm assembly on engine. Tighten support bolts in a criss-cross pattern starting with center support.

VALVE SPRINGS

Intake & Exhaust Valves – Using valve spring compressor, remove valve keepers, collars and springs. Check valve springs for squareness, free length and tension. Install in reverse of removal procedure, making sure closely wound coils are nearest cylinder head.

Auxiliary Valves – Cut lock nut retainer with a cold chisel and remove. Remove valve holder nut using wrench (07907-6570001). Pull out and remove valve holder assembly complete with valve. Using valve spring compressor, compress spring and remove valve keepers, collars and springs. Remove "O" ring from valve holder. Check valve springs for squareness, free length and tension. Install in reverse of removal procedure using new "O" ring on valve holder. Install lock nut retainer with tab in positioning hole and flatten down retainer on holder nut using driver.

VALVE GUIDE SERVICING

NOTE – *On 1600 cc engines, it may be necessary to heat cylinder head to 300° F (150° C), to remove or install valve guides.*

Using a driver (07942-6110000), drive valve guides out of bottom of cylinder head. Install new guides from top of head using driver attachment tool (1500 cc, 07943-6340100 for intake, or 07943-6340200 for exhaust; 1600 cc, 07943-6710000 for intake and exhaust). Drive guide in until tool bottoms on cylinder head. Ream valve guides to provide proper clearance.

VALVE CLEARANCE ADJUSTMENT

1) Rotate engine until number one piston is at TDC on compression stroke, check and adjust intake valves of cylinder 1 and 2, exhaust valves of cylinders 1 and 3 and auxiliary valves of cylinders 1 and 2. Rotate crankshaft 360° and check and adjust intake valves of cylinder 3 and 4, exhaust valves of cylinders 2 and 4 and auxiliary valves of cylinders 3 and 4.

2) To adjust all valves, loosen lock nut and insert feeler gauge between rocker arm and valve stem. Turn adjuster to obtain proper clearance and tighten lock nut, recheck valve clearance. Specified valve clearance with engine cold (cylinder head less than 100°F (38°C) is .006" (.15 mm) for all valves.

PISTONS, PINS & RINGS

OIL PAN

1) Raise front of vehicle and support with floor stands. Attach a hoist to transmission and raise just enough to take load off center mount.

2) Remove center support and lower engine mount. Loosen and remove oil pan bolts in a criss-cross pattern, starting from outside bolts. Tap corner lightly with a mallet to break seal and remove oil pan. To install, reverse removal procedure.

PISTON & ROD ASSEMBLY

1) With oil pan and cylinder head removed, ream any ridge from top of cylinders. Mark piston and rod assemblies for proper reinstallation. Remove rod caps and push piston and rod assemblies out top of cylinder with a hammer handle.

2) Assemble piston and connecting rod with piston front mark and connecting rod oil jet hole on same side and facing intake manifold. Using a ring compressor, install piston and rod assemblies in proper cylinder.

FITTING PISTONS

1) Measure cylinder bore for taper and out-of-round. If taper exceeds .004" (.1 mm) or out-of-round exceeds .002" (.05 mm), rebore cylinder for oversize pistons. Determine piston-to-cylinder clearance. If not within specifications, rebore cylinder for oversize pistons. An oversize piston of 2.923" (74.25 mm) diameter is available.

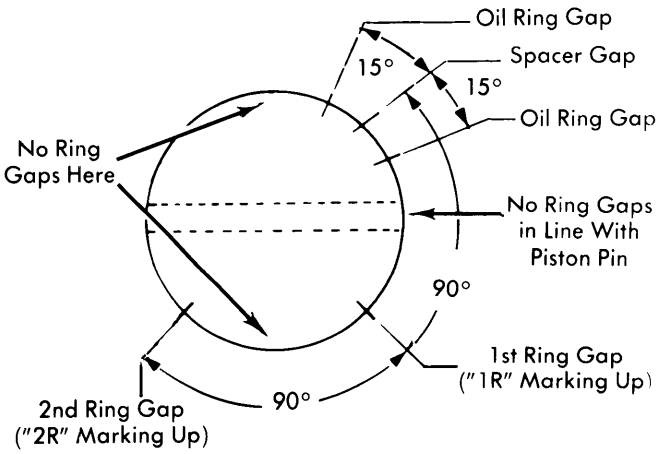

Fig. 2 Piston Ring Installation

2) Install three piece oil ring on piston with end gaps of rails and spacer staggered about 15°. Install top ring about 90° from oil spacer and second ring about 180° from spacer. Make sure no end gaps are in line with piston pin hole or thrust face of piston. Install all rings with markings facing upward.

PISTON PINS

Using a press and piston pin removal tool set (07973-6570000), press piston pin out of piston and connecting rod. Install new pin by placing pilot through piston and connecting rod. Lightly oil piston pin and place piston, rod, pin and ram on press base. Press in pin until centered in connecting rod.

CIVIC CVCC & ACCORD 4 CYLINDER (Cont.)

CRANKSHAFT MAIN & CONNECTING ROD BEARINGS

MAIN & CONNECTING ROD BEARINGS

1) Prior to disassembly, mark main and connecting rod bearings caps for reassembly in their original positions and check crankshaft endplay and connecting rod side play. Remove piston and connecting rod assemblies, remove main bearing caps and remove crankshaft.

2) Measure crankshaft for bend, out-of-round and taper *(See Specifications)*. If any measurement exceeds specifications, crankshaft must be replaced. Do not attempt to regrind crankshaft as bearing journals are specifically heat-treated.

Crankshaft Wear Specifications

Application	Standard In. (mm)	Service Limit In. (mm)
Bend	.0024 (.06)	.0118 (.30)
Taper	.0002 (.005)	.0004 (.010)
Out-Of-Round	.0002 (.005)	.0004 (.010)

3) Using Plastigage method, determine bearing clearances. If bearing replacement is necessary, use following procedure to determine bearing size to use.

4) Referring to *Fig. 3* and *Fig. 4*, note that all **letters** stamped on crankshaft counterweight pads apply to connecting rod journal nearest letter. All **numbers** stamped on crankshaft apply to nearest main bearing journal. Connecting rod caps have numbers stamped on cap and cylinder block has Roman numerals stamped on pad at flywheel end of block.

5) To determine color (size) of bearing insert to use, pair up numbers and/or letters on tables and where the column and row intersect, this will be bearing insert to use. Example: For a main bearing, use "Main Bearing Journals" table. If number stamped on crankshaft is "2" and roman numeral stamped on block for corresponding journal is "III", you would use a "Green" bearing insert

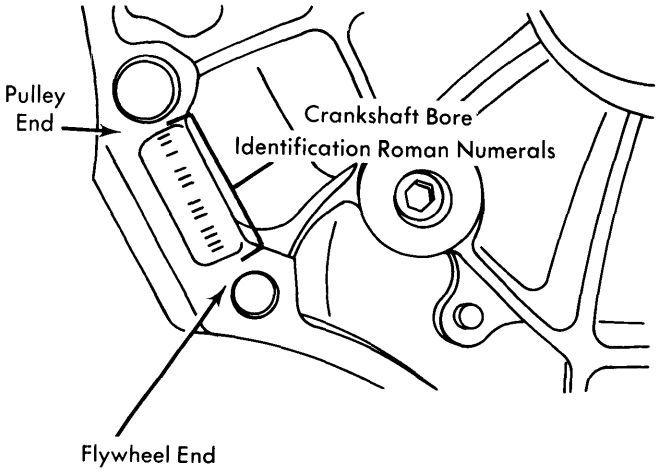

Fig. 3 Crankshaft Identification Locations (All Engines)

THRUST BEARING ALIGNMENT

Measure thrust bearing clearance and replace thrust washers or crankshaft as necessary. Do not change thrust washer thickness either by grinding or shimming. Install thrust washers with oil grooves facing toward crankshaft.

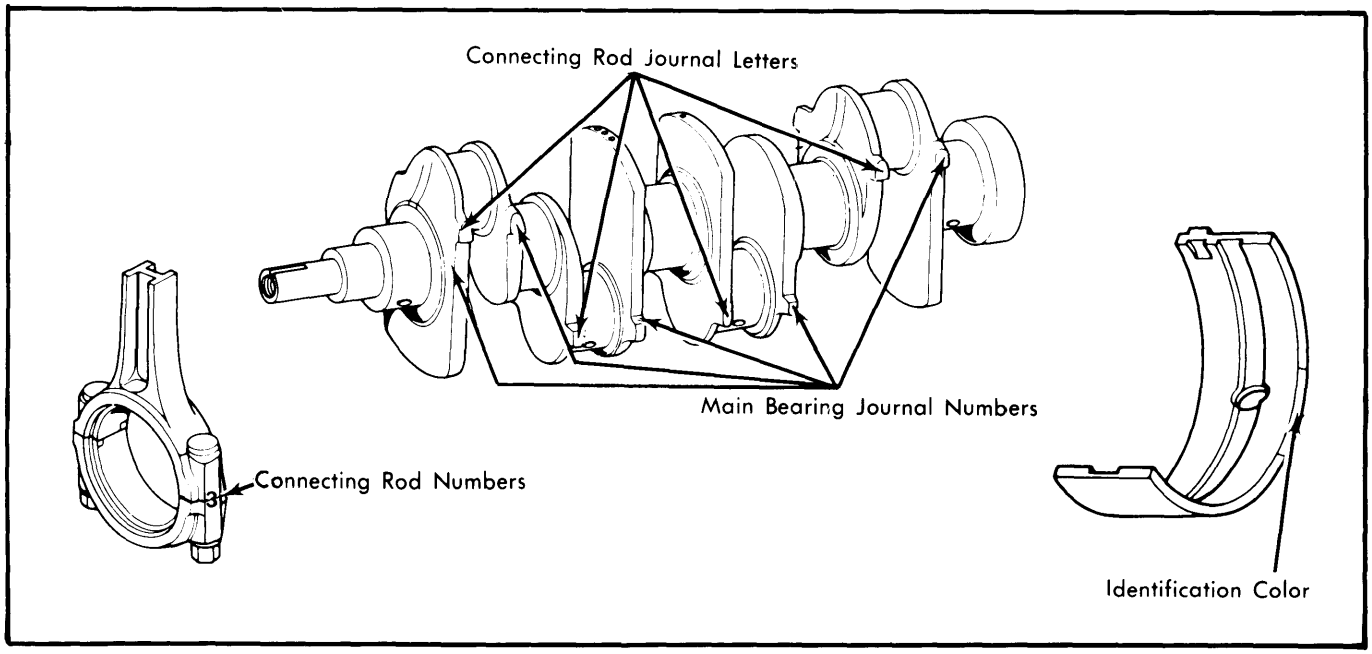

Fig. 4 Connecting Rod Bearing & Cylinder Block Identification Locations

CIVIC CVCC & ACCORD 4 CYLINDER (Cont.)

CVCC 1487cc Main Bearing Journals In. (mm)				
Crankcase Bore Dia. 2.13 (54) / Journal Dia. 1.97 (50)	I +.0021 to +.0023 (+.052 to +.058)	II +.0023 to +.0025 (+.058 to +.064)	III +.0025 to +.0027 (+.064 to +.070)	IIII +.0027 to +.0030 (+.070 to +.076)
1 +.0013 to +.0016 (+.033 to +.041)	Red −.0001 to −.0002 (−.002 to −.005)	Pink −.0001 to +.00004 (−.002 to +.001)	Yellow +.00004 to +.0002 (+.001 to +.005)	Green +.0002 to +.0003 (+.004 to +.007)
2 +.0011 to +.0013 (+.028 to +.033)	Pink −.0001 to +.00004 (−.002 to +.001)	Yellow +.00004 to +.0002 (+.001 to +.025)	Green +.0002 to +.0003 (+.005 to +.007)	Brown +.00004 to +.0003 (+.001 to +.007)
3 +.0009 to +.0011 (+.023 to +.028)	Yellow +.00004 to +.0002 (+.001 to +.005)	Green +.0002 to +.0003 (+.005 to +.007)	Brown +.00004 to +.0003 (+.001 to +.007)	Black +.0004 to +.0005 (+.010 to +.013)
4 +.0006 to +.0009 (+.016 to +.023)	Green +.0002 to +.0003 (+.005 to +.007)	Brown +.00004 to +.0003 (+.001 to +.007)	Black +.0004 to +.0005 (+.010 to +.013)	Blue +.0005 to +.0006 (+.013 to +.016)

Accord 1600cc Main Bearing Journals In. (mm)				
Crankcase Bore Dia. 2.13 (54) / Journal Dia. 1.97 (50)	I +.0016 to +.0018 (+.041 to +.046)	II +.0018 to +.0020 (+.046 to +.051)	III +.0020 to +.0023 (+.051 to +.058)	IIII +.0023 to +.0025 (+.058 to +.064)
1 +.0009 to +.0012 (+.023 to +.030)	Red −.0001 to −.0002 (−.002 to −.005)	Pink −.0001 to +.00004 (−.002 to +.001)	Yellow +.0002 to +.00004 (+.005 to +.001)	Green +.0002 to +.0003 (+.005 to +.007)
2 +.0007 to +.0009 (+.018 to +.023)	Pink −.0001 to +.00004 (−.002 to +.001)	Yellow +.0002 to +.00004 (+.005 to +.001)	Green +.0002 to +.0003 (+.005 to +.007)	Brown +.00004 to +.0003 (+.001 to +.007)
3 +.0005 to +.0007 (+.013 to +.018)	Yellow +.0002 to +.00004 (+.005 to +.001)	Green +.0002 to +.0003 (+.005 to +.007)	Brown +.00004 to +.0003 (+.001 to +.007)	Black +.0004 to +.0005 (+.010 to +.013)
4 +.0002 to +.0005 (+.005 to +.013)	Green +.0002 to +.0003 (+.005 to +.007)	Brown +.00004 to +.0003 (+.001 to +.007)	Black +.0004 to +.0005 (+.010 to +.013)	Blue +.0005 to +.0006 (+.013 to +.015)

CIVIC CVCC & ACCORD 4 CYLINDER (Cont.)

Connecting Rod Bearing Journals In. (mm)				
Connecting Rod Dia. 1.69 (43) / Journal Dia. 1.654 (42)	1 0 to +.0002 (0 to +.006)	2 +.0002 to +.0005 (+.006 to +.012)	3 +.0005 to +.0007 (+.012 to +.018)	4 +.0007 to +.0009 (+.018 to +.024)
A 0 to −.0002 (0 to −.006)	Red −.0002 to −.0003 (−.005 to −.008)	Pink −.0001 to −.0002 (−.002 to −.005)	Yellow −.0001 to +.00004 (−.002 to +.001)	Green +.00004 to +.0002 (+.001 to +.004)
B −.0002 to −.0005 (−.006 to −.012)	Pink −.0001 to −.0002 (−.002 to −.005)	Yellow −.0001 to +.00004 (−.002 to +.001)	Green +.00004 to +.0002 (+.001 to +.004)	Brown +.0002 to +.0003 (+.004 to +.007)
C −.0005 to −.0007 (−.012 to −.018)	Yellow −.0001 to +.00004 (−.002 to +.001)	Green +.00004 to +.0002 (+.001 to +.004)	Brown +.0002 to +.0003 (+.004 to +.007)	Black +.0003 to +.0004 (+.007 to +.010)
D −.0007 to −.0009 (−.018 to −.024)	Green +.00004 to +.0002 (+.001 to +.004)	Brown +.0002 to +.0003 (+.004 to +.007)	Black +.0003 to +.0004 (+.007 to +.010)	Blue +.0004 to +.0005 (+.010 to +.013)

CAMSHAFT

Camshaft Lobe Height	
Application	In. (mm)
1487 cc	
Intake	1.4966-1.5029 (38.01-38.17)
Exhaust	1.4789-1.4851 (37.56-37.72)
Auxiliary	1.6475-1.6537 (41.85-42.01)
1600 cc	
Intake	1.4856-1.4951 (37.74-37.98)
Exhaust	1.4856-1.4951 (37.74-37.98)
Auxiliary	1.7316-1.7410 (43.98-44.22)

TIMING BELT

1) Remove water pump drive belt, water pump pulley and crankshaft pulley. Remove upper timing belt cover from cylinder head and remove lower timing belt cover from engine block.

2) Loosen, do not remove, timing belt adjusting and pivot bolts. Slide belt off pulleys. To install, reverse removal procedure using care not to excessively bend or twist belt. Do not expose belt to engine oil or grease as this will damage belt. Install belt so same direction of rotation will be maintained to prevent excessive belt wear.

CAMSHAFT

1) Remove rocker arm assembly, then lift out camshaft . Inspect camshaft and cylinder head bearing surfaces for wear or damage. Check camshaft runout. If runout exceeds .004" (.10 mm), replace camshaft. Measure total camshaft lobe height. If total height of lobes is not to specifications, replace camshaft.

2) Oil camshaft bearing journals and install camshaft and seal or tachometer drive body. Apply silicone seal to mating surfaces on end camshaft supports and cylinder head. Install rocker arm assembly and tighten to specifications.

VALVE TIMING

Rotate crankshaft until TDC mark on flywheel or automatic transmission drive plate is aligned with index mark. Rotate camshaft until "UP" mark on pulley is at 11 o'clock position and timing mark aligns with arrow on cylinder head. See *Fig. 5*. Without disturbing pulley positions, slide timing belt on and adjust belt tension.

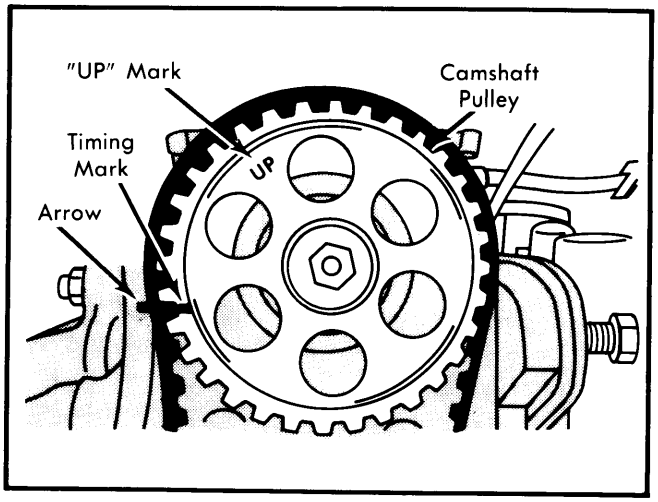

Fig. 5 Camshaft Alignment Marks in Position for Installing Camshaft Belt

TIMING BELT TENSION

Loosen timing belt pivot and adjustment bolts on lower timing belt cover. **NOTE** – *Upper bolt is pivot bolt and lower bolt is adjusting bolt.* Rotate engine a quarter of a turn counterclockwise and tighten adjusting bolt, then tighten pivot bolt. Do not apply pressure to timing belt while adjusting tension.

CIVIC CVCC & ACCORD 4 CYLINDER (Cont.)

ENGINE OILING

ENGINE OILING SYSTEM

A rotor type oil pump draws oil from oil pan and delivers it under pressure through main bearing cradle to main and connecting rod bearings. Oil passes through rods to an oil jet which lubricates pistons and cylinder walls. An oil passage carries oil to camshaft bearings and rocker arms. Oil mist lubricates valve stems.

OIL PUMP

1) Remove oil pan, then oil pump assembly may be removed by removing four long bolts (one bolt under strainer). Pull out relief valve cotter pin and remove seat, spring and valve.

2) Remove two pump body bolts and disassemble pump. Inspect pump for wear or damage. Measure pump operating clearances and relief valve spring free length. Reassemble pump making sure marks on rotors face outward and are adjacent to each other. Place oil pickup in container of oil and operate pump with screwdriver to ensure that it is operating. Place finger over outlet hole and check the pressure is created as pump is turned.

NOTE – *If oil pump driven gear is to be replaced, camshaft must also be replaced.*

Oil Pump Specifications

Application	Standard In. (mm)	Service Limit In. (mm)
Inner-to-Outer Rotor	.0059 (.15)	.0079 (.20)
Rotor-to-Body	.0039-.0071 (.10-.18)	.0079 (.20)
Rotor End Clearance	.0012-.0039 (.03-.10)	.0059 (.15)

Crankcase Capacity – 3.2 qts. (includes filter)

Oil Filter – Disposable with built-in by-pass valve.

Pressure Regulator Valve – Non-adjustable.

1487 cc Normal Oil Pressure – 48-58 psi (3.4-4.2 kg/cm) at 3000 RPM. 20 psi (1.4 kg/cm^2) minimum at idle speed.

1600 cc Normal Oil Pressure – 54-60 psi (3.8-4.2 kg/cm^2) at 3000 RPM. 21 psi (1.5 kg/cm ^{2}) minimum at idle speed.

ENGINE COOLING

Thermostat – Starts to open at 176-183°F (80-84°C) and is fully open at 203°F (95°C).

Thermoswitch – Operates at 191-197°F (88.5-91.5°C).

Cooling System Capacity – 4.2 quarts on 1487 cc, and 5.3 quarts on 1600 cc.

WATER PUMP

Removal – Drain radiator and loosen alternator adjusting bolts. Push alternator toward engine and remove drive belt. Remove water pump and "O" ring seal.

Installation – 1) Reinstall water pump. Loosen cooling system bleed valve located on thermostat housing. Fill radiator with coolant. When air bubbles no longer appear in coolant draining from bleed valve, close valve.

2) Start engine and place heater temperature control lever in high position. Run engine about ten minutes. Again open bleed valve and bleed system until there are no air bubbles in coolant draining from bleed valve. Refill radiator.

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										
CVCC	90.80	1487	1x3-Bbl.	60@5000	77@3000	7.9:1	2.91	74.0	3.41	86.5
Accord	97.63	1600	1x3-Bbl.	.....	.....	8.0:1	2.91	74.0	3.66	93.0

CIVIC CVCC & ACCORD 4 CYLINDER (Cont.)

ENGINE SPECIFICATIONS (Cont.)

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)
1487 cc							
Intake	1.374-1.382 (34.9-35.1)	46°	46°	.055 (1.4)	.259-.260 (6.58-6.59)	.0004-.0016 (.01-.04)	.....
Exhaust	1.138-1.146 (28.9-29.1)	46°	46°	.055 (1.4)	.258-.259 (6.55-6.56)	.002-.003 (.05-.08)	.....
Auxiliary	.467-.471 (11.85-11.95)	45°	45°	.022 (.56)	.216-.217 (5.48-5.49)	.0008-.002 (.02-.05)	.....
1600 cc							
Intake	1.374-1.382 (34.9-35.1)	46°	46°	.055 (1.4)	.259-.260 (6.58-6.59)	.0008-.002 (.02-.05)	.....
Exhaust	1.098-1.106 (27.9-28.1)	46°	46°	.055 (1.4)	.258-.259 (6.55-6.56)	.002-.003 (.05-.08)	.....
Auxiliary	.469-.476 (11.9-11.10)	45°	45°	.022 (.56)	.216-.217 (5.48-5.49)	.001-.002 (.02-.05)	.....

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)
1487 cc & 1600 cc	.0012 (.03)	.0004-.0009 (.010-.022)	①0-.0007 (0-.019)	No. 1	.008-.016 (.2-.4)	.0008-.0018 (.020-.045)
				No. 2	.008-.016 (.2-.4)	.0008-.0018 (.020-.045)
				Oil	②.008-.035 (.2-.9)	.....

① — Interference fit.

② — .012-.035" (.25-.89 mm) on 1487 cc.

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)
1487 cc & 1600 cc	1.9687-1.9697 (50.006-50.030)	①.0010-.0022 (.026-.055)	No. 4	.0039-.0138 (.10-.35)	1.6526-1.6535 (41.976-42.000)	.0008-.0015 (.020-.038)	.0059-.0118 (.15-.30)

① — .0010-.0017" (.026-.044 mm) on 1600 cc.

CAMSHAFT

Engine	Journal Diam. In. (mm)	Clearance In. (mm)①	Lobe Lift In. (mm)
1487 cc & 1600 cc	.....	.0020-.0059 (.050-.150)	.....

① — End play is .0020-.0039" (.050-.098 mm).

CIVIC CVCC & ACCORD 4 CYLINDER (Cont.)

ENGINE SPECIFICATIONS (Cont.)

VALVE SPRINGS

Engine	Free Length In. (mm)	PRESSURE Lbs. @ In. (kg @ mm)	
		Valve Closed	Valve Open
1487 cc			
Intake			
Inner	1.583 (40.2)	12@1.358 (5.5@34.5)	59-68@1.024 (27-31@26)
Outer	1.573 (39.95)	11@1.437 (5@36.5)	72-84@1.094 (33-38@28)
Exhaust			
Inner	2.047 (52.0)	23@1.331 (10.5@33.8)	39-50@.988 (17-22@26)
Outer	2.138 (54.3)	51-62@1.432 (23-28@36)	79-90@1.108 (36-41@28)
Auxiliary	1.146 (29.1)	14-17@.906 (7-8@23)	21-26@.787 (10-12@20)
1600 cc			
Intake			
Inner	1.583 (40.2)	23@1.583 (10.5@34.5)	59-68@1.024 (27-31@26)
Outer	1.573 (39.95)	19@1.437 (9@36.5)	72-84@1.094 (33-38@28)
Exhaust			
Inner	2.047 (52.0)	31.5@1.358 (14.3@34.5)	39-50@1.024 (17-22@26)
Outer	2.118 (54)	60@1.437 (27.2@36.5)	79-90@1.108 (36-41@28)
Auxiliary	1.146 (29.1)	17@.906 (7.6@23.0)	21-26@.787 (10-12@20)

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
1487cc	
Connecting Rod Bolts	20 (2.7)
Main Bearing Bolts	33 (4.7)
Cylinder Head Bolts	44 (6.0)
Aux. Valve Holder Nut	50 (7.0)
Camshaft Sprocket Bolt	22 (3.0)
Intake/Exhaust Manifold Bolts	16 (2.2)
Rocker Arm Support	
6 mm Bolts	10 (1.4)
8 mm Bolts	16 (2.2)
Lower Torque Arm	5-9 (.7-1.2)
Upper Torque Arm	25-31 (3.5-4.3)
1600 cc	
Connecting Rod Bolts	18-21 (2.5-2.9)
Main Bearing Bolts	30-35 (4.2-4.8)
Cylinder Head Bolts	40-47 (5.5-6.5)
Aux. Valve Holder Nut	47-54 (6.5-7.5)
Camshaft Sprocket Bolt	18-25 (2.5-3.5)
Intake/Exhaust Manifold Bolts	14-17 (2.0-2.4)
Rocker Arm Support	
6 mm Bolts	7-10 (1.0-1.4)
8 mm Bolts	14-17 (2.0-2.4)
Lower Torque Arm	5-9 (.7-1.2)
Upper Torque Arm	25-31 (3.5-4.3