

# 1982 Honda 4 Tune-Up

## TUNE-UP

Accord, Civic, Prelude

### ENGINE IDENTIFICATION

Engine serial number is stamped on a machined surface at right rear of engine, near the starter. Engine serial number is preceded by a 3-character code denoting engine type.

#### ENGINE CODE

Application	Code
Accord & Prelude .....	EK1
Civic	
1300 cc .....	EJ1
1500 cc .....	EM1

### ENGINE COMPRESSION

Check compression with engine at normal operating temperature, air cleaner and spark plugs removed, throttle and choke valve wide open and engine at normal cranking speed (300 RPM). Crank engine at least 6 "puffs" per cylinder to determine engine compression.

#### COMPRESSION SPECIFICATIONS

Compression Ratio	
Accord & Prelude .....	8.8:1
Civic .....	9.3:1
Compression Pressure	
Accord & Prelude .....	185 psi (13 kg/cm <sup>2</sup> )
Civic .....	192 psi (13.5 kg/cm <sup>2</sup> )
Max. Variation Between Cylinders ...	28 psi (2 kg/cm <sup>2</sup> )

### VALVE CLEARANCE

1) Adjust valves with engine cold. Remove valve cover. Place No. 1 piston at TDC to adjust valves of No. 1 cylinder.

2) On Civic models, the notched cutaway in the camshaft pulley should be at top and TDC groove on back side of pulley should align with top of cylinder head surface. On Accord and Prelude, "UP" mark on camshaft pulley should be at top and TDC grooves on backside of pulley should align with cylinder head surface.

3) Repeat procedure for remaining valves in firing order sequence. Rotate crankshaft 180° counterclockwise after each adjustment to position next piston in firing order for adjustment.

#### VALVE CLEARANCE SPECIFICATIONS

Application	Clearance In. (mm)
Accord & Prelude	
Intake & Auxiliary .....	.005-.007 (.12-.17)
Exhaust .....	.010-.012 (.25-.30)
Civic	
Intake & Auxiliary .....	.005-.007 (.12-.17)
Exhaust .....	.007-.009 (.17-.22)

### VALVE ARRANGEMENT

Accord & Prelude  
 Left Side — E-I-E-I-I-E-I-E  
 Right Side — All Auxiliary Intake  
 Civic  
 Left Side — I-E-E-I-I-E-E-I  
 Right Side — All Auxiliary Intake

### SPARK PLUGS

#### SPARK PLUG TYPE

Application	Nippondenso	NGK
Accord & Prelude ...	W21ESR-L11 .....	BR6EB-L-11
Civic .....	W20ESR-L11 .....	BR6EB-11

#### SPARK PLUG SPECIFICATIONS

Application	Gap In. (mm)	Torque Ft. Lbs. (N.m)
All Models .....	.041 (1.0) .....	13 (18)

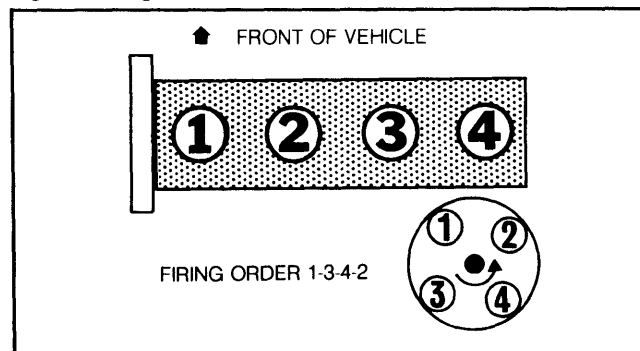
### HIGH TENSION WIRE RESISTANCE

Carefully remove ends of wire from spark plug and distributor cap. Using an ohmmeter, check resistance of wire while gently twisting wire. If resistance exceeds 25,000 ohms replace wire.

### DISTRIBUTOR

All models are equipped with electronic breakerless ignition systems and no adjustments are necessary. See Fig. 1.

Fig. 1: Firing Order and Distributor Rotation



### IGNITION TIMING

1) Remove rubber inspection cap from window on cylinder block. Attach a timing light. See Fig. 2. Engine should be idling at normal operating temperature.

2) Timing is correct when proper timing mark on flywheel (or drive plate) is aligned with index pointer on crankcase. See Fig. 3. Timing mark on Federal Accord and Prelude models with manual transaxle is painted white. It is red on all other models.

## TUNE-UP (Cont.)

3) To adjust timing, loosen distributor bolt and turn distributor body counterclockwise to retard timing or clockwise to advance timing.

### IGNITION TIMING (Degrees BTDC @ RPM)

Application	Man. Trans.	1 Auto. Trans.
Accord & Prelude		
Federal & Hi. Alt. ....	16°@750 .....	16°@700
Calif. ....	12°@750 .....	16°@700
Civic		
1300 cc .....	20°@700 .....	.....
1500 cc .....	18°@700 .....	18°@700

1 — Auto. Trans. in "D".

Fig. 2: Inspection Window Location

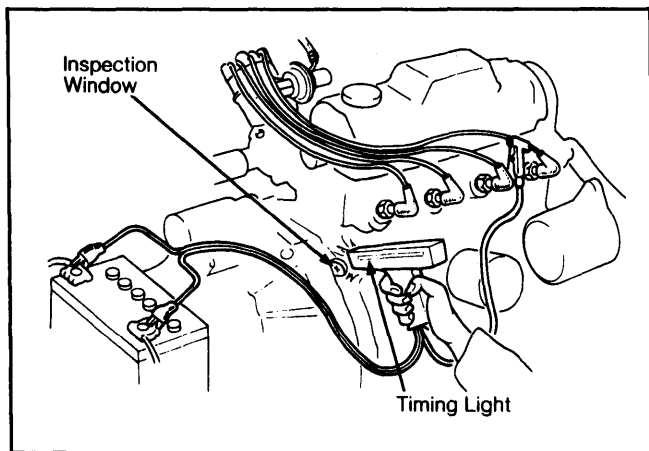
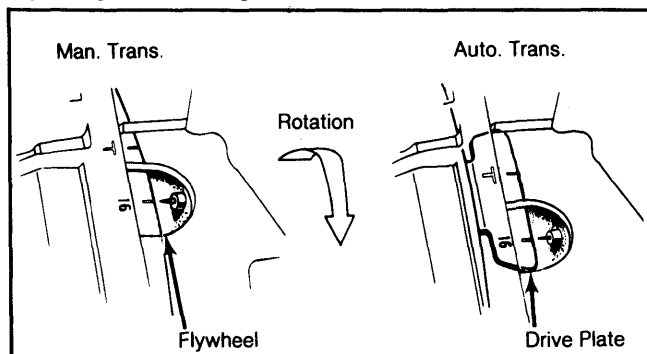


Fig. 3: Ignition Timing Mark Locations



Timing mark on Federal Accord and Prelude with manual transaxle is white. It is red on all other models.

## IDLE SPEED & MIXTURE

### PROPANE ENRICHMENT PROCEDURE

**NOTE:** Mixture adjustment is NOT a part of normal tune-up procedure and should not be performed unless carburetor is overhauled or vehicle fails emissions testing.

1) Start engine and warm up to normal operating temperature. Remove vacuum hose from intake air control diaphragm on air cleaner snorkel and plug

hose. Connect tachometer and check idle speed with all electrical accessories off.

2) Adjust idle speed as needed by turning throttle stop adjusting screw. Disconnect air intake tube from air duct near radiator. With engine idling, insert propane enrichment kit hose 4" into air intake tube and slowly open valve.

3) Engine speed should increase to enriched RPM. If not, remove carburetor from engine, disconnect throttle opener linkage and remove throttle opener bracket. Remove plug from mixture adjusting screw hole.

4) Reinstall bracket and linkage. Reinstall carburetor, using new O-rings on the insulator and a new heat shield gasket.

5) Repeat steps 1) through 3). If peak RPM is below enriched RPM, turn mixture adjusting screw 1/4 turn clockwise to increase engine speed (lean out mixture). If peak RPM is above enriched RPM, turn mixture screw 1/4 turn counterclockwise to lower engine speed (enrich mixture).

6) Close propane control valve. Run engine at 2500 RPM for 10 seconds to stabilize condition. Recheck idle speed as in step 1). If not correct, adjust throttle stop screw. Adjust mixture screw as in step 5). Continue to repeat procedure until idle speed and increase are correct.

Fig. 4: Idle Control Screw Location

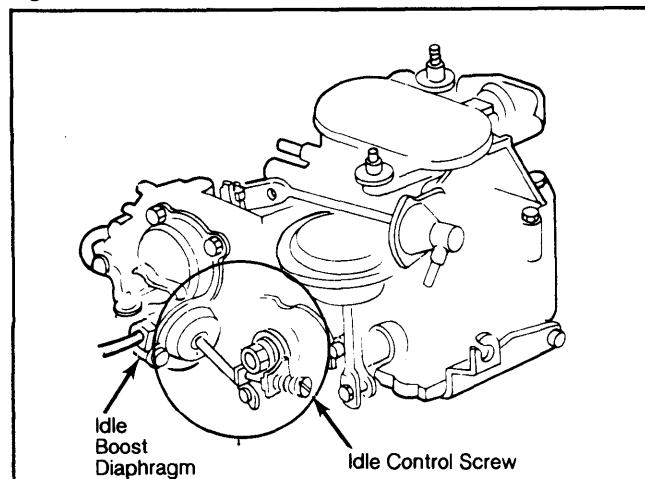
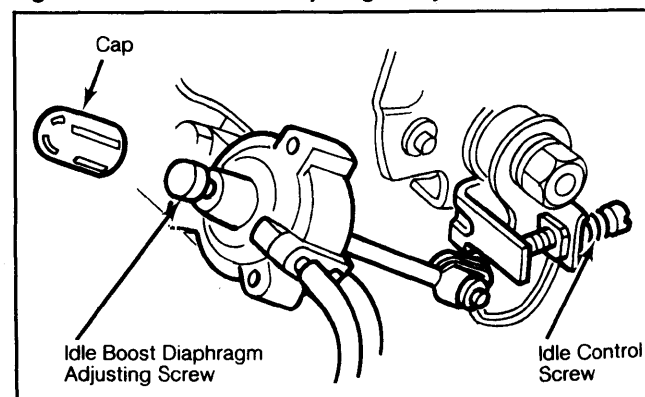


Fig. 5: Civic Idle Boost Diaphragm Adjustment



Diaphragm adjustment is for A/C equipped Civic with manual transaxle only.

# 1982 Honda 4 Tune-Up

## TUNE-UP (Cont.)

7) Remove propane equipment and reconnect vacuum hose to intake air control diaphragm. Reinstall plug in mixture adjusting screw hole.

8) Check idle boost controller speed. On A/C equipped Civic (automatic transaxle only), Accord and Prelude models, adjust idle control screw with A/C on. Adjust screw to idle RPM specification. See Fig. 4.

9) On A/C equipped Civic with manual transaxle, check idle RPM with A/C on. Adjust by turning adjusting screw on idle boost diaphragm until idle RPM specification is reached. See Fig. 5.

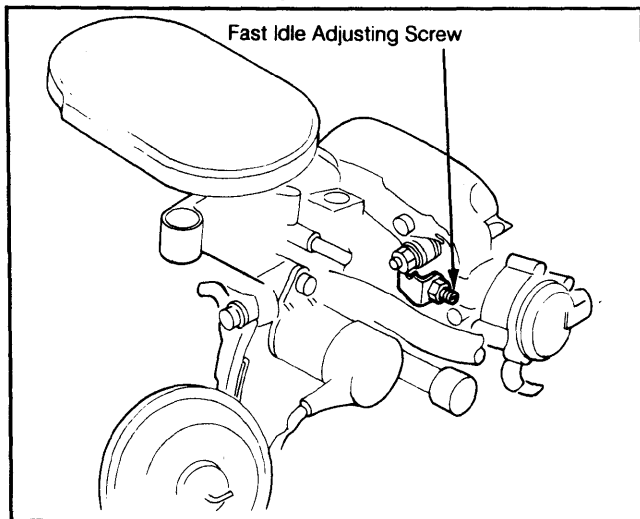
10) On Civic manual transaxle vehicles without A/C, check idle speed with headlights on and heater blower switch set to position III. Idle speed should be 650 RPM. Turn idle control screw as needed to adjust speed.

### IDLE & ENRICHED SPEED SPECIFICATIONS

Application	Idle RPM	Enriched RPM
<b>Accord &amp; Prelude</b>		
Man. Trans. ....	750	850
Auto. Trans. <sup>1</sup> .....	700	750
<b>Civic</b>		
Man. Trans. ....		
1300 cc .....	700	825
1500 cc .....	700	800
Auto. Trans. <sup>1</sup> .....	700	750

<sup>1</sup> — Auto. Trans. in Drive.

Fig. 6: Fast Idle Adjusting Screw Location



Make adjustment with inside vacuum hose of fast idle unloader disconnected and plugged.

### COLD (FAST) IDLE RPM

1) Start engine and allow to reach normal operating temperature. Stop engine and connect a tachometer. Disconnect and plug inside vacuum hose to fast idle unloader. Open and close throttle fully while holding the choke valve closed to position fast idle cam.

2) Start engine and check idle. On Accord and Prelude models, fast idle should be 2000-3000 RPM. On Civic models, fast idle should be 3000 RPM. Turn fast idle adjusting screw to set fast idle. See Fig. 6.

### AUTOMATIC CHOKE

If automatic choke does not close properly, spray choke linkage with carburetor cleaner. If improper closing still results after cleaning, the rivets securing the choke cover must be removed for linkage inspection and/or choke cover replacement. Install cover so index marks line up.

### AUTOMATIC CHOKE SPECIFICATIONS

Application	Choke Setting
All Models .....	Align Index Marks

### FUEL PUMP PRESSURE

#### FUEL PUMP PERFORMANCE

Application	Pressure psi (kg/cm <sup>2</sup> )	Volume in 30 sec. Pints (Liters)
All Models .....	2-3 (.14-.21)	.5 (.2)

### EXHAUST EMISSION SYSTEMS

See EXHAUST EMISSION SYSTEMS section.

## GENERAL SERVICING

### IGNITION

#### DISTRIBUTOR

All Civic models are equipped with Hitachi electronic ignition systems. Accord and Prelude models may be fitted with either Hitachi or Toyo Denso electronic ignition systems.

### IGNITION COIL

#### RESISTANCE Ohms @ 68°F (20°C)

Application	Primary	Secondary
Accord & Prelude .....	1.06-1.24	7400-11,000
Civic .....	1.00-1.30	7400-11,000

# 1982 Honda 4 Tune-Up

1-49

## GENERAL SERVICING (Cont.)

### FUEL SYSTEM

#### CARBURETORS

Application	Model
All Models .....	Keihin 2-Bbl.

### ELECTRICAL

#### BATTERY

#### BATTERY SPECIFICATIONS

Application	Amp. Hr. Rating
All Models .....	47

#### STARTER

Nippondenso or Hitachi starters are used on all vehicles.

#### STARTER SPECIFICATIONS

Application	Volts	Amps	Test RPM
Accord & Prelude .....	11.5	90	3500
Civic			
Calif.			
Nippondenso .....	11.0	50	5000
Hitachi .....	11.0	70	6000
All Others .....	11.5	90	3000

#### ALTERNATOR

All models use Nippondenso alternators.

#### ALTERNATOR SPECIFICATIONS

Application	Rated Amp. Output
Accord & Prelude .....	60
Civic .....	45

#### ALTERNATOR REGULATOR

Nippondenso alternator regulators are used on all models.

#### REGULATOR OPERATING VOLTAGE @ 68°F (20°C)

Application	Voltage
All Models .....	13.5-14.5

### SERVICE SPECIFICATIONS

#### REPLACEMENT INTERVALS

Component	Miles
Oil Filter .....	7500
Air Filter .....	30,000
Fuel Filter .....	60,000
Spark Plugs .....	30,000

#### BELT ADJUSTMENT

Application	<sup>1</sup> Deflection In. (mm)
Accord & Prelude	
Alternator Belt .....	.6-.7 (14-17)
Air Conditioning Belt .....	.5-.6 (12-16)
Power Steering Belt .....	.7-.9 (17-22)
Civic	
Alternator Belt .....	.5-.7 (12-17)
Air Conditioning Belt .....	.3-.4 (8-10)

<sup>1</sup> — 22 Lbs. (10 kg) pressure applied midway between pulleys on longest belt run.

#### FLUID CAPACITIES

Application	Quantity
Crankcase (Includes Filter) .....	3.7 qts. (3.5L)
Cooling System	
Accord & Prelude .....	6.1 qts. (5.8L)
Civic	
1300 cc .....	4.9 qts. (4.6L)
1500 cc .....	5.7 qts. (5.4L)
Man. Transaxle (SAE 10W-40) .....	5.3 pts. (2.5L)
Auto. Transaxle (Dexron)	
Drain & Refill .....	5.3 pts. (2.5L)
Overhaul .....	10.4 pts. (4.9L)
Fuel Tank	
Accord .....	15.8 gals. (59.8L)
Civic	
Hatchback & Wagon .....	10.8 gals. (40.9L)
Sedan .....	12.2 gals. (46.2L)
Prelude .....	13.2 gals. (50.0L)