

## TUNE-UP

### ENGINE IDENTIFICATION

#### VEHICLE IDENTIFICATION NUMBER CODE

Engine can be identified by the 8th digit of Vehicle Identification Code. VIN is stamped on a plate attached to top left corner of instrument panel, and is visible through windshield.

#### VIN Engine Codes

Application	Code
3.7L (225") 1-Bbl.	
Standard .....	E
Heavy Duty .....	F

#### ENGINE IDENTIFICATION NUMBER CODE

Engine Identification Number is stamped in block below No. 6 spark plug. It is the same code as the VIN number. The engine serial number is stamped in the block below No. 1 spark plug.

### TUNE-UP NOTES

**NOTE** — In order to comply with emission standards, specifications shown on engine compartment emission control tune-up decal must be used in all instances.

**CAUTION** — When performing tune-up on vehicles equipped with catalytic converters, do not allow or create a condition of engine misfire in more than one cylinder for an extended period of time. Damage to converter may occur due to loading converter with unburned air/fuel mixture.

**CAUTION** — On vehicles equipped with catalytic converters, do not add fuel system cleaning agents to fuel tank or carburetor as their use may be detrimental to the catalytic converter.

**CAUTION** — Before making a compression test or cranking engine using a remote starting switch, disconnect coil wire from distributor and secure to a good ground.

### ENGINE COMPRESSION

Compression Ratio .....	8.4:1
Compression Pressure .....	100 psi minimum
Max. Variation Between Cylinders .....	25 psi

Check compression pressure with engine warm, all spark plugs removed, throttle wide open, and at cranking speed.

### VALVE CLEARANCE

Hydraulic Lifters .....	Zero Lash
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### VALVE ARRANGEMENT

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

### SPARK PLUGS

Application	Gap (In.)	Torque Ft. Lbs. (N·m)
All Models .....	.035	10 (14)

**NOTE** — Spark plug has a tapered seat and tapered threads. Torque only to specifications as over-torquing can result in damaged threads.

#### Spark Plug Type

Application	Champion No.
All Models .....	RBL-16Y

### HIGH TENSION WIRE RESISTANCE

Carefully remove spark plug wire from spark plug and install proper adapter between wire and spark plug. Carefully remove wire from distributor cap. Connect an ohmmeter between spark plug adapter and opposite end of wire. If resistance is not within specifications, replace wire. To check coil wire resistance, remove distributor cap from distributor without removing wire from cap or coil. Connect an ohmmeter between center contact in cap and either primary terminal at coil. If resistance is not within specifications, remove coil wire at coil tower and check cable resistance. If resistance is now within specifications, check for a loose connection at coil tower or a faulty coil. If resistance is not within specifications, replace wire.

Application	Resistance (Ohms)	Maximum
Coil Wire		
Installed .....		25,000
Removed .....		15,000
Spark Plug Wire .....		50,000

### DISTRIBUTOR

All models are equipped with the Electronic Spark Advance distributor, which is controlled by the Combustion Computer with Feedback Carburetor Controller.

**NOTE** — Dwell is not adjustable, even though it may be read with a dwell meter. There is no means provided to change dwell.

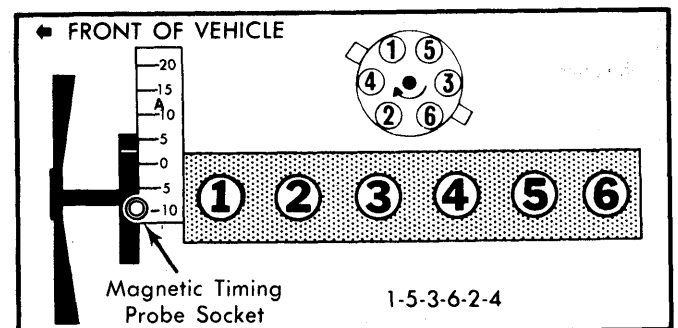


Fig. 1 Firing Order and Timing Marks

### IGNITION TIMING

**CAUTION** — Timing light connections should be made using proper adapters. Do not puncture cables, boots or nipples with test probes.

**NOTE** — Engine is equipped with a magnetic probe receptacle, located 10° ATDC. Do not use this location to check timing with a conventional timing light.

## TUNE-UP (Cont.)

Connect a suitable timing light to number 1 cylinder. With engine at normal operating temperature, disconnect and plug vacuum hose at distributor. Ground carburetor switch (if equipped) and adjust curb idle. Transmission selector should be in "N".

### Ignition Timing Specifications (Degrees BTDC@RPM)

Application	Auto. Trans.
3.7L	
Federal .....	12@625
Calif. ....	12@725

### HOT (SLOW) IDLE RPM

1) Remove exhaust manifold heat shield to gain access to oxygen sensor. Connect tachometer and warm engine to normal operating temperature, then place transmission selector in "N". Allow engine to run at idle for at least 2 minutes after it is warm. Check timing and adjust if necessary.

2) Turn on A/C and disconnect compressor clutch wire. If not equipped with A/C, a jumper wire must be connected between positive battery terminal and solenoid wire.

**NOTE** - Solenoid wire comes out of boot on solenoid barrel. Connect jumper to connector about 6" from solenoid and leave connector hooked up.

3) With solenoid energized, remove external screw and spring from top of solenoid. If engine stalls, restart it and hold throttle open slightly. Insert 1/8" Allen wrench into solenoid and adjust solenoid RPM. Turn A/C off and reconnect compressor clutch wire.

4) Disconnect and plug vacuum hose to EGR valve. Connect a jumper wire between carburetor switch and ground.

5) Disconnect PCV valve from cylinder head cover and allow to draw fresh air. Disconnect and plug 3/16" control hose at canister. Disconnect oxygen sensor and connect a jumper wire between wiring harness connector and ground.

6) Allow engine to run at idle for 2 minutes, then check RPM. Turn idle speed screw on on solenoid to adjust idle speed to specifications.

7) Stop engine. Remove test equipment and jumper wires, then return all wiring and hoses to original locations. Reinstall heat shield.

### Idle Speed (RPM)

Application	Curb Idle	Solenoid Energized
3.7L		
Federal .....	625	875
High Alt. ....	730	885
Calif.		
Cordoba, Mirada .....	725	900
Diplomat, Gran Fury .....	675	850

### IDLE MIXTURE

**NOTE** - Mixture adjustment should only be performed when diagnosis indicates carburetor is cause of emission test failure.

### IDLE MIXTURE SCREW PLUG REMOVAL

1) Remove carburetor from engine and remove throttle body from carburetor. Clamp throttle body in vise with padded jaws, with mixture screw facing up.

2) Drill a 1/16" pilot hole in casting directly above roll pin. Redrill hole to 1/8", then drive out roll pin with a punch.

3) On bottom side of throttle body, drill a 1/16" pilot hole into casting at a 45° angle towards mixture screw plug. Redrill hole to 1/8" and drive out plug with punch.

4) Position a new roll pin partially into place, but so mixture screw is still accessible. Assemble and install carburetor.

### PROPANE ENRICHMENT PROCEDURE

1) Remove manifold heat shield, connect tachometer, and warm engine to normal operating temperature. Disconnect and plug vacuum hose to EGR valve. Connect a jumper wire between ground and carburetor switch.

2) Disconnect vacuum supply hose from choke diaphragm at "T" and install propane supply hose in its place. All other hoses at "T" must remain connected.

3) Remove PCV valve from cylinder head cover and allow to draw fresh air. Disconnect and plug 3/16" control hose at canister. Disconnect oxygen sensor and ground wiring harness side of connector.

4) With engine idling, slowly open propane valve. Adjust valve until highest RPM is obtained. Adjust idle speed screw on solenoid to obtain propane RPM. Turn off propane and adjust mixture screws evenly and carefully to obtain smoothest curb idle (lean drop).

5) Turn on propane slowly to obtain highest engine RPM. If speed is more than 25 RPM different than propane RPM, repeat procedure.

6) Reinstall PCV valve and vacuum lines. Restore wiring to original locations and remove test equipment. Press roll pin into place and install new plug.

### Propane Enrichment RPM

Application	Auto. Trans.
3.7L	
Federal .....	725
High Alt. ....	855
Calif.	
Cordoba, Mirada .....	870
Diplomat, Gran Fury .....	820

### COLD (FAST) IDLE RPM

1) Ground carburetor switch. Disconnect and plug vacuum line at EGR valve. Remove PCV valve from cylinder head cover and allow to draw fresh air. Disconnect and plug 3/16" control line at canister.

2) Remove air cleaner. Set carburetor linkage on 2nd highest step of fast idle cam and adjust fast idle RPM with fast idle screw.

## TUNE-UP (Cont.)

### Fast Idle Speed (RPM)

Application	Auto. Trans.
3.7L	
Federal .....	1600
High Alt. Calif. ....	1800
Cordoba, Mirada .....	2000
Diplomat, Gran Fury .....	1950

### AUTOMATIC CHOKE

All models are equipped with a non-adjustable electric choke system.

### FUEL PUMP

Application	Specification
Pressure (At Idle) .....	4.0-5.5 psi
Volume .....	1 pint in 30 sec.

### EXHAUST EMISSION SYSTEMS

See EXHAUST EMISSION SYSTEMS section.

## GENERAL SERVICING

### IGNITION

#### DISTRIBUTOR

Chrysler Corp. Electronic Spark Advance distributor controlled by the Combustion Computer with Feedback Carburetor Controller.

#### IGNITION COIL

#### Coil Resistance (Ohms@75°F)

Application	Primary	Secondary
Essex .....	1.34-1.55	9000-12,200
Prestolite .....	1.60-1.79	9400-11,700

Ballast Resistor — 1.12-1.38 ohms.

### CARBURETION

#### CARBURETOR

Application	Model
3.7L 1-Bbl.	
Fed. & High Alt. ....	Holley 1945
Calif. ....	Holley 6145

### ELECTRICAL

#### BATTERY

Application	Cold Crank (Amps@0°F)	Reserve Capacity (Minutes)
Standard .....	430	100
Optional .....	500	120

#### STARTER

#### Starter Specifications

Application	Volts	Amps	Test RPM
All Models .....	11.0	90	5700

#### Starter Current Draw

1.8 HP ..... 180-200 Amps.

### ALTERNATOR

#### Color Code

	Rated Amp. Output
Yellow Tag .....	60
Brown Tag .....	78
Yellow Tag .....	114

#### Current Draw

	Amps.@12V
60 amp. ....	4.5-6.5
78 amp. ....	4.5-6.5
114 amp. ....	4.75-6.0

### ALTERNATOR REGULATOR

Chrysler Corp. Electronic Voltage Regulator

#### Application

#### Operating Voltage Volts@80°F

All Models .....	13.9-14.6
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### BELT ADJUSTMENTS

#### Tension (Lbs.) Using Strand Tension Gauge

Application	New Belt	⓪Used Belt
All .....	120	70

⓪ — Any belt operated for 15 minutes.

### REPLACEMENT INTERVALS

Component	Interval (Miles)
Oil Filter (Every 2nd oil change) .....	15,000
Air Filter .....	30,000
PVC Filter (Clean & Lubricate) .....	30,000
Spark Plugs .....	30,000

### COOLING CAPACITIES

Application	Quantity
Cordoba, Mirada	
Standard .....	11.5 qts.
Optional .....	14.5 qts.
Diplomat, Gran Fury, New Yorker	
Standard .....	11.5 qts.
Optional .....	12.5 qts.

# 1982 Chrysler Corp. 6 Tune-Up

## GENERAL SERVICING (Cont.)

### OIL & FUEL CAPACITIES

Application	Quantity
Crankcase (Including Filter) .....	5.0 qts.
Fuel Tank	
All Models .....	18.0 gals.

### TRANSMISSION & DIFFERENTIAL CAPACITIES

Application	Quantity
Auto. Trans. (Dexron II)	
A904 .....	7.7 pts.
A727 .....	7.3 pts.
Rear Axle (Hypoid Gear Lube, GL-5)	
7.25" Ring Gear .....	2.5 pts.
8.25" Ring Gear .....	4.4 pts.