1975-79 TUNE-UP PROCEDURES
Chrysler Corp. 6-Cylinder

Chrysler, Dodge, Plymouth

ENGINE IDENTIFICATION

VEHICLE IDENTIFICATION NUMBER

Engine can be identified by the fifth character of Vehicle Identification Number (VIN), located on plate attached to left corner of instrument panel and visible through windshield.

VIN CODE

Application	Code
225" 1-Bbl. (Standard)	C
225" 1-Bbl. (Fleet)	E
225" 2-Bbl.	D

ENGINE IDENTIFICATION CODE

Engine identification code is located on block at right front corner adjacent to number one cylinder bore. The second, third and fourth digits designate CID.

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.

NOTE: The EPA High Altitude emission standards apply to vehicles sold in certain areas outside California which have an elevation above 4000 feet.

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

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

Check compression pressure with engine warm, spark plugs removed, throttle valve wide open, and at cranking speed. Minimum compression pressure should be 100 psi, with a maximum variation of 25 psi between cylinders.

ENGINE COMPRESSION

Application	Specification
Compression Ratio	8.4:1
Recommended Fuel	Unleaded (87 AKI Minimum)

VALVE CLEARANCE

VALVE TAPPET CLEARANCE

Application	Cold	Hot
Intake	.012"	.010"
Exhaust	.028"	.020"

VALVE ARRANGEMENT

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

SPARK PLUGS

SPARK PLUG INSTALLATION

Application	Specification
Gap	.035"
Torque	10 ft. lbs.

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.
1975-76	BL-13Y or RBL-13Y
1977	RBL-15Y
1978-79	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.

NOTE: Some 1976 models with Lean Burn System, may develop a miss. This condition may be caused by routing the high tension ignition wires too close to the distributor pick-up wiring harness. Ensure the engine wiring harness runs along the lower edge of right valve cover. Also make sure the secondary ignition wires do not run parallel with the distributor pick-up leads.

RESISTANCE (OHMS)

Application	Maximum Ohms
Coil Wire	
Installed	25,000
Removed	15,000
Spark Plug Wire	50,000

DISTRIBUTOR

All models equipped with Chrysler Corp. Electronic Ignition System. No adjustments are required.

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

NOTE: Some 1976 models with Lean Burn may exhibit severe engine miss, backfiring or die out after 10 minutes of operation at cruising speed. This may be caused by the distributor pick-up.

To diagnose; allow engine to idle until normal operating temperature is reached. Place a piece of paper between carburetor switch and ground contact. Remove vacuum hose from Lean Burn Computer transducer.

After running engine for 6 minutes, reconnect vacuum hose. If engine starts to miss, backfire and dies out, replace the distributor pick-up coil assembly.

1975-79 TUNE-UP PROCEDURES
Chrysler Corp. 6-Cylinder (Cont.)

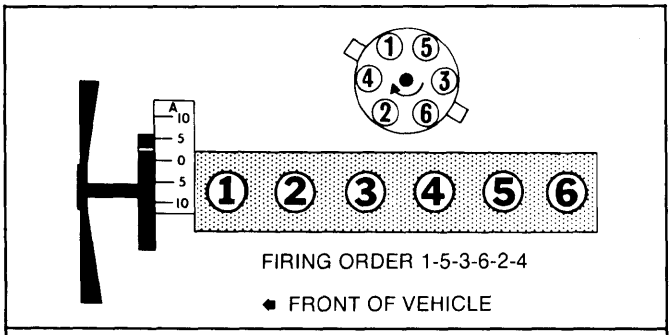

Fig. 1: Firing Order & Timing Marks

IGNITION TIMING

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

Ignition timing is checked or adjusted with engine at normal operating temperature. Hot (Slow) Idle RPM should be set to specification. Disconnect and plug vacuum advance hose at distributor. Transmission should be in Neutral.

IGNITION TIMING SPECIFICATIONS

Application	Man. Trans.	Auto. Trans.
1975	0°BTDC	0°BTDC
1976		
Federal	6°BTDC	[1] 2°BTDC
Calif.	4°BTDC	2°BTDC
1977-78		
225" 1-Bbl.		
Federal	[2] 12°BTDC	12°BTDC
Calif.	8°BTDC	8°BTDC
High Alt.		8°BTDC
225" 2-Bbl.		
Federal	12°BTDC	12°BTDC
Calif.	4°BTDC	4°BTDC
1979		
225" 1-Bbl.		
Federal	12°BTDC	12°BTDC
Calif.		15°BTDC
225" 2-Bbl.		
Federal	12°BTDC	12°BTDC

[1] - Timing is 12°BTDC with Carb. No. 4006652.
[2] - Timing is 6°BTDC with Carb. No. R-7632A.

IDLE SPEED & MIXTURE

IDLE SPEED (AUTO. IDLE SPEED ONLY)

1976 Dart Lite & Feather Duster - 1) Allow engine to idle. Back off Auto. Idle Speed (AIS) screw until it does not contact AIS. Adjust curb idle speed to specifications on Emission Control Tune-Up Decal.
2) On man. trans. vehicles, adjust AIS screw until it just contacts AIS stem. On auto. trans. vehicles, adjust idle screw to obtain RPM specification shown on Emission Control Tune-Up Decal.
3) Accelerate engine and ensure AIS RPM speed is to specification. Adjust curb idle speed screw until it contacts throttle lever and back out screw one full turn.
4) On automatic transmission equipped vehicles, adjust downshift linkage with engine not running and with 18 in. Hg applied to AIS diaphragm.

NOTE: To prevent tampering, the idle mixture screws on some carburetors are concealed by metal plugs installed in mixture screw bores.

NOTE: Some models with solenoid throttle positioner screw may exhibit an excessive high idle speed. This may be due to a misadjusted or defective throttle positioner solenoid.

EXHAUST GAS ANALYZER

1975-76 All & 1977-78 Calif. - 1) Allow engine to warm up to operating temperature. Ensure fast idle cam is off and timing is set.
2) Disconnect and plug distributor advance vacuum hose. Disconnect and plug engine side of air pump supply hose. Attach an exhaust gas analyzer and tachometer to engine.
3) Adjust idle speed and CO%. Readjust idle speed if necessary. Reconnect air supply hose and distributor vacuum hose.

IDLE SPEED (RPM) & CO%

Application	Curb Idle RPM	Idle CO%
1975-76		
Man. Trans.	800	[1]
Auto. Trans.	[2] 750	[1]
1977-78		
225" 1-Bbl.	750	.3
225" 2-Bbl.		
Man. Trans.	800	.3
Auto. Trans.	850	.3

[1] - See Emission Control Tune-Up Decal.
[2] - 700 RPM on 1976 Federal with Carb. No. 4006652.

NOTE: Some 1976 models with Lean Burn System may exhibit rough running or poor driveability. Revised idle mixture procedures are now available to correct this condition.
Set ignition timing. Remove air cleaner and set aside. Do not disconnect any wires or hoses. Remove mixture limiter caps. Lightly seat each screw and back out 3 turns. Connect a tachometer and CO% meter to engine.
Start engine and allow to reach normal operating temperature. Connect a jumper wire between carburetor switch and ground. Turn in one mixture screw until engine RPM drops. Unscrew mixture screw until highest RPM is obtained. Repeat procedures for other mixture screw. Perform regular idle adjustment. Reinstall limiter caps and air cleaner.

PROPANE ENRICHMENT PROCEDURE

1977-79 Federal & Altitude Only - 1) With engine at normal operating temperature, disconnect heated air door hose from air cleaner and connect propane supply. Remove canister purge hose at carburetor. Disconnect and plug EGR and distributor vacuum advance hoses. Remove PCV valve and allow to draw outside air.
2) Connect a tachometer to engine. Slowly open propane supply control valve until maximum RPM is reached and leave at maximum with propane on.

NOTE: Too much propane will begin to reduce engine idle speed. Also, propane bottle must stand upright to maintain a near constant flow.

3) With propane flowing, adjust idle speed screw to obtain specified propane enriched RPM. If necessary, readjust propane control for maximum RPM.

1975-79 TUNE-UP PROCEDURES
Chrysler Corp. 6-Cylinder (Cont.)

IDLE SPEED (RPM)

Application	Curb Idle	Propane Enriched
1975		
Man. Trans.	800	950
Auto. Trans.	750	875
1976		
Man. Trans.	750	900
Auto. Trans.	750	875
1977		
225" 1-Bbl.		
Federal		
Man. Trans.		
Carb. No. R-7632A	700	805
Carb. No. R-7764A	700	835
Auto. Trans.		
Carb. No. R-7633A	700	830
Carb. No. R-7765A	700	790
High Alt.	750	[1] 850
225" 2-Bbl.		
Federal		
Man. Trans.	750	930
Auto. Trans.	750	850
1978		
225" 1-Bbl.		
Federal		
Man. Trans.	675	845
Auto. Trans.	675	830
High Alt.	750	[1] 910
225" 2-Bbl.		
Federal		
Man. Trans.	750	930
Auto. Trans.	750	900
1979		
225" 1-Bbl.		
Federal		
Man. Trans.	675	845
Auto. Trans.	675	830
225" 2-Bbl.		
Federal	725	890

[1] - Set at 30 RPM less, if below 4000 ft.

4) Turn off propane and adjust idle mixture screw(s) to achieve smoothest idle at specified curb idle RPM. Turn propane on and check maximum RPM to see if idle speed has changed. If maximum speed is more than 25 RPM different than propane enriched RPM, repeat adjustment procedure.

CURB IDLE SET PROCEDURE

1979 Calif. Only - 1) Start and run engine in Neutral on the 2nd step of fast idle cam until radiator is hot. This may take 10 minutes. Check ignition timing before continuing.
2) Disconnect and plug EGR hose at EGR valve. Ground carburetor idle stop switch with jumper wire.
3) Adjust idle RPM in Neutral. Reconnect EGR hose and remove jumper wire from idle stop switch.

CALIF. IDLE SPEED (RPM)

Application	Curb Idle
225" 1-Bbl.	750

COLD (FAST) IDLE RPM

1) Remove air cleaner. Disconnect air cleaner vacuum hoses, distributor, OSAC valve (if equipped) and EGR vacuum hoses and cap. With engine off, transmission in Neutral and parking brake set, open throttle and close choke. Close throttle to place fast idle speed screw on highest speed step of cam.

2) Move fast idle cam until screw drops to second highest speed step. Start engine and determine stabilized fast idle speed. Turn fast idle speed screw to obtain specified fast idle speed. Reposition screw on cam after each adjustment to provide correct throttle closing torque.

FAST IDLE SPEED (RPM)

Application	RPM
1975	
Man. Trans.	[1] 1600
Auto. Trans.	1700
1976	
Man. Trans.	1700
Auto. Trans.	1600
1977	
225" 1-Bbl.	
Federal & High Alt.	
Man. Trans.	[2] 1700
Auto. Trans.	1700
California	
Man. Trans.	1600
Auto. Trans.	1700
225" 2-Bbl.	
Federal	
Man. Trans.	1500
Auto. Trans.	1600
California	
Man. Trans.	1600
Auto. Trans.	1700
1978	
225" 1-Bbl.	
Federal	
Man. Trans.	1400
Auto. Trans.	1600
High Alt.	1700
California	1500
225" 2-Bbl.	
Federal	
Man. Trans.	1500
Auto. Trans.	1600
1979	
225" 1-Bbl.	
Federal	
Man. Trans.	1400
Auto. Trans.	1600
California	1800
225" 2-Bbl.	
Federal	1600

[1] - 1700 RPM on dashpot equipped engines.
[2] - Set at 1400 RPM with Carb. No. R-7632A.

DASHPOT ADJUSTMENT

Remove air cleaner and cap disconnected air cleaner vacuum hose. Maintain all other vacuum hoses and carburetor fittings. Set brake, place transmission in Neutral and start engine. Position throttle lever so lever contacts dashpot stem without depressing it. Allow 30 seconds for engine speed to stabilize, then adjust to specification by turning dashpot after lock nut is loosened. Tighten lock nut and check idle return.

DASHPOT ADJUSTMENT SPEED (RPM)

Application	RPM
1975-76	2300
1977-79 225" 1-Bbl.	
Federal Man. Trans.	2500

1975-79 TUNE-UP PROCEDURES
Chrysler Corp. 6-Cylinder (Cont.)

AUTOMATIC CHOKE

All models use an electrical assist choke and no adjustment is required.

FUEL PUMP

Application	Specification
Pressure	3.5-5.0 psi
Volume at Idle	1 pint in 30 sec.

IGNITION

DISTRIBUTOR

All models are equipped with Chrysler Corp. Electronic Ignition System

Other Data & Specifications – Also see Chrysler Corp. Distributors in DISTRIBUTORS & IGNITION SYSTEMS section.

IGNITION COIL

IGNITION COIL

Application	Specification
Resistance	
Primary (at 70-80°F)	
Essex	1.34-1.55 ohms
Prestolite	1.60-1.79 ohms
Secondary (at 70-80°F)	
Essex	9000-12,200 ohms
Prestolite	9400-11,700 ohms
Ballast Resistor	
Coil Side	.5-.6 ohm
Current Draw	
(Including Coil & Ballast Resistor)	
Engine Idling	1.9 amps.
Engine Stopped	3.0 amps.
Coil Output	
All Models	20 KV Min.

CARBURETION

CARBURETORS

Application	Model
225" 1-Bbl.	Holley 1945
225" 1-Bbl. Calif. (1979 W/Elec. Fuel Cont.)	Holley 6145
225" 2-Bbl.	Carter BBD

Other Data & Specifications – Also see Carter or Holley Carburetors in FUEL SYSTEMS section.