1982 Chrysler Corp. Imports Tune-Up

TUNE-UP

Arrow Pickup, Challenger, Champ, Colt, Ram-50 Pickup, Sapporo

ENGINE IDENTIFICATION

Engine code numbers are stamped on top edge of right front side of cylinder block.

ENGINE CODE

Application	Code
1400cc	GB12B
1600 cc	G32B
2000 cc	G52B
2600 cc	G54B

ENGINE COMPRESSION

Check compression pressure with engine at normal operating temperature, choke and throttle valves wide open and engine at cranking speed (250 RPM). Crank engine at least 6 "puffs" per cylinder to determine engine compression.

COMPRESSION SPECIFICATIONS

Application	Specification
Compression Ratio	
1400 cc	8.81
1600 cc & 2000 cc	8.5:1
2600 cc	8.2:1
Compression Pressure	149 psi (10.5 kg/cm²)
Maximum Variation Between Cylinders	10%

VALVE CLEARANCE

NOTE: Jet valve clearance must be adjusted before adjusting intake valve clearance. Loosen intake valve adjusting screw at least 2 full turns before adjusting jet valve.

Check or adjust valve clearance with engine off, at normal operating temperature and with coil wire to distributor disconnected. To adjust valves, loosen lock nut and turn adjusting screw until specified clearance is obtained.

VALVE CLEARANCE SPECIFICATIONS

Application	Clearance
Jet	.006" (.15 mm)
Intake	.006" (.15 mm)
Exhaust	.010" (.25 mm)

VALVE ARRANGEMENT

Left Side — All Intake
Right Side — All Exhaust

SPARK PLUGS

SPARK PLUG TYPE

Application	NGK	Champion
2600 cc	BPR5ES-11	RN-12Y
All Others	BPR6ES-11	RN-9Y

SPARK PLUG SPECIFICATIONS

Application	Gap In. (mm)	Torque Ft. Lbs. (N.m)
All Models	.041 (1.0)	20 (27)

HIGH TENSION WIRE RESISTANCE

Carefully remove high tension wires from spark plugs and distributor cap. Twist wire gently while measuring resistance with ohmmeter. If resistance is greater than specified value, or fluctuates from infinity to any value, replace wire.

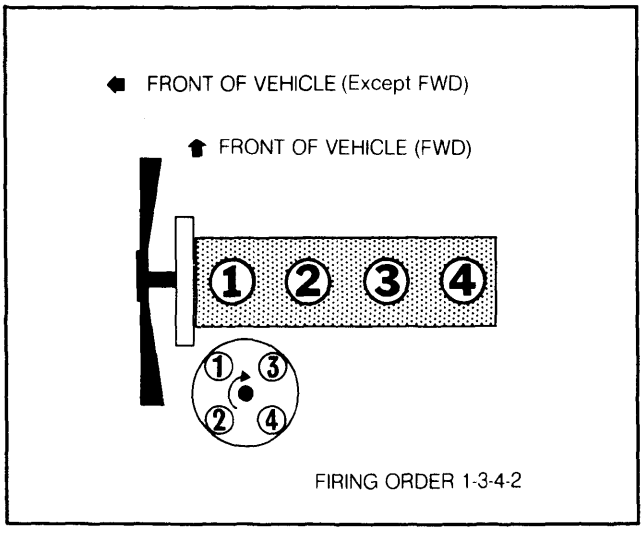
WIRE RESISTANCE

Application	Ohms
All Models	Less Than 22,000

DISTRIBUTOR

All models use Mitsubishi electronic, breakerless ignition systems with an electronic control unit.

Fig. 1: Firing Order and Distributor Rotation

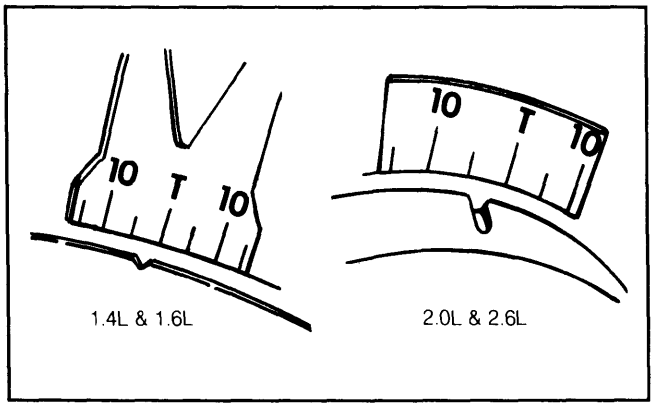


IGNITION TIMING

1) With engine at normal operating temperature, turn headlights, air conditioning controls (if equipped), and all electrical accessories off. Connect tachometer and timing light.

TUNE-UP (Cont.)

Fig. 2: Ignition Timing Mark Location



2) Loosen distributor nut and rotate distributor as necessary to adjust timing. Tighten mounting nut.

IGNITION TIMING (Degrees BTDC @ RPM)

Application	Timing
1400 cc	[1] 5@650
1600 cc	[2] 5@700
2000 cc	5@750
2600 cc	
Man. Trans.	[3] 7@750
Auto. Trans.	7@800

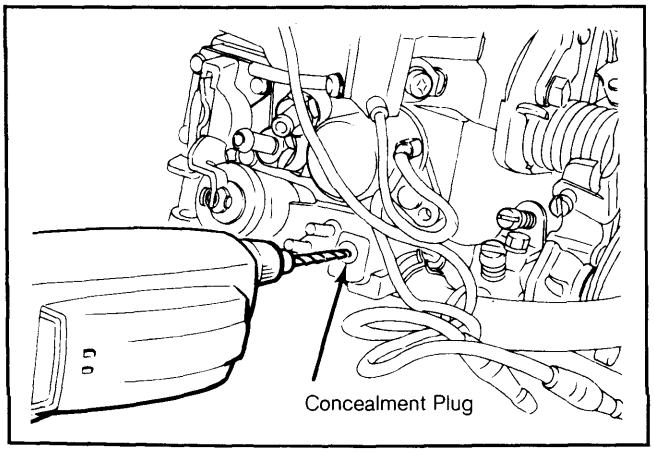
[1] — Set 4x2 Man. Trans. at 700 RPM
[2] — Set Auto. Trans. at 750 RPM
[3] — Set 2WD Pickup to 5° BTDC

IDLE SPEED & MIXTURE

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

1) If mixture needs adjustment, remove carburetor from engine and place in holder. Drill out concealment plug. *See Fig. 3.* Drive out roll pin. With plug and pin removed, reinstall carburetor on engine.

Fig. 3: Drilling Out Concealment Plug



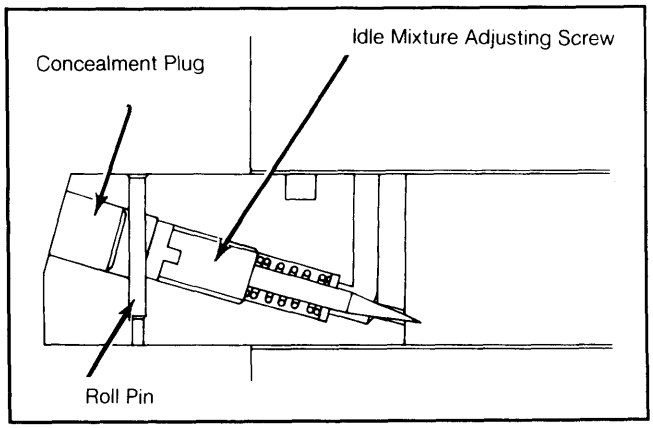
Place carburetor on work stand to drill out plug.

2) Warm engine to normal operating temperature. With headlights, air conditioning (if equipped), cooling fan and all electrical accessories off, check idle speed. Adjust as needed with speed adjusting screw on throttle lever. If equipped with air conditioning, turn system on and adjust "A/C RPM" with screw on side of throttle opener.

3) Remove air cleaner-to-reed valve hose and plug inlet side of reed valve. Run engine at 3000 RPM for 10 seconds, then allow engine to idle for 2 minutes. Check CO level and adjust to 0.5% using idle mixture screw. Unplug reed valve air inlet and reconnect air hose.

4) If necessary, reset idle speed with idle speed adjusting screw. Install new roll pin and concealment plug to seal idle mixture adjusting screw. *See Fig. 4.*

Fig. 4: Cutaway View of Tamper-Proof Idle Mixture System



A new roll pin and concealment plug must be installed after idle mixture setting is properly adjusted.

IDLE SPEED SPECIFICATIONS

Application	Idle RPM	A/C RPM
1400 cc	[1] 650	[1] 850
1600 cc	[2] 700	[2] 850
2000 cc	[3] 700	900
2600 cc	[2] 750	900

[1] — Add 50 RPM for 4x2-Speed Man. Trans.
[2] — Add 50 RPM for Auto. Trans.
[3] — Add 50 RPM for 5-Speed Man. Trans.

FUEL PUMP

FUEL PUMP PERFORMANCE

Application	Pressure psi (kg/cm²)	Volume in 30 Sec. Pints (Liters)
1400 cc	3.7-5.1 (.26-.36)	1.4 (.7)
1600 cc	3.7-5.1 (.26-.36)	1.7 (.8)
2000 & 2600 cc	4.6-6.0 (.32-.42)	2.1 (1.0)

EXHAUST EMISSION SYSTEMS

See EXHAUST EMISSION SYSTEMS section.

1982 Chrysler Corp. Imports Tune-Up

GENERAL SERVICING

FUEL SYSTEMS

CARBURETORS

Application	[1] Model
1400 cc	
Federal	
4-Speed	28-32DIDTA-216
4x2-Speed	28-32DIDTA-211
California	28-32DIDTA-210
1600 cc	
Federal	
Man. Trans.	28-32DIDTA-214
Auto. Trans.	28-32DIDTA-215
California	
Man. Trans.	28-32DIDTA-212
Auto. Trans.	28-32DIDTA-213
2000 cc	
Federal	
4-Speed	32-35DIDTA-78
5-Speed	32-35DIDTA-83
California	32-35DIDTA-80
2600 cc	
Pickup	
2WD	
Federal	
Man. Trans.	32-35DIDTA-74
Auto. Trans.	32-35DIDTA-75
California	
Man. Trans.	32-35DIDTA-76
Auto. Trans.	32-35DIDTA-77
4WD	
Federal	32-35DIDTA-82
California	32-35DIDTA-76
Challenger & Sapporo	
Federal	
Man. Trans.	30-35DIDTA-70
Auto. Trans.	30-35DIDTA-71
California	
Man. Trans.	30-35DIDTA-72
Auto. Trans.	30-35DIDTA-73

[1] — Solex (Mikuni) carburetors.

IGNITION

DISTRIBUTOR

All models use Mitsubishi electronic, breakerless ignition systems with an electronic control unit.

TOTAL SPARK ADVANCE@2800 RPM

Application	W/Vac. Advance	W/O Vac. Advance
1400 cc & 1600 cc	28°	20°
2000 cc		
Fed. Man. Trans.	29°	12°
Fed. Auto. Trans.	26.5°	12°
California	19°	12°
2600 cc		
Federal	24°	12°
California	26.5°	12°

[1] — 1.4L & 1.6L at 4400 RPM.

DISTRIBUTOR PICK-UP COIL RESISTANCE

Application	Ohms
All Models	920-1120

IGNITION COIL

IGNITION COIL RESISTANCE Ohms@68°F (20°C)

Application	Primary	Secondary
All Models	.70-.85	9000-11,000

ELECTRICAL

BATTERY

BATTERY SPECIFICATIONS

Application	Amp. Hr. Rating
All Models	45

STARTER

All Arrow and Ram-50 Pickups with automatic transmissions and some Challenger and Sapporo models with automatic transmissions use reduction-drive type starters. All other models use direct drive starters.

STARTER SPECIFICATIONS

Application	Volts	Amps	Test RPM
1400 cc & 1600 cc			
Man. Trans.	11.5	60	6500
Auto. Trans.	11.5	60	6600
2000 cc & 2600 cc			
Man. Trans.	11.5	60	6600
Auto. Trans.	11.5	90	3300

ALTERNATORS

All models use Mitsubishi alternators.

ALTERNATOR SPECIFICATIONS

Application	Rated Amp. Output
Challenger & Sapporo	50
All Others	45

ALTERNATOR REGULATORS

All models use Mitsubishi alternator regulators which are integral with the alternator.

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

Application	Voltage
All Models	14.1-14.7

GENERAL SERVICING (Cont.)

SERVICE SPECIFICATIONS

BELT ADJUSTMENT

Application	[1] Deflection In. (mm)
Alternator Belt	1/4-3/8 (7-10)

[1] — Measured with 22 lbs. (10 kg) pressure applied midway between pulleys on longest belt run.

REPLACEMENT INTERVALS

Components	Miles
Oil Filter	15,000
Fuel Filter	50,000
Air Filter	30,000
Canister Filter	50,000
PCV Valve	30,000
Spark Plugs	30,000

FLUID CAPACITIES

Application	Quantity
Crankcase (Includes Filter)	
1400 cc	3.7 qts. (3.5L)
1600 cc	4.2 qts. (4.0L)
2000 cc	2.0 qts. (1.9L)
2600 cc	
All Except 4WD Pickups	4.5 qts. (4.3L)
4WD Pickups	5.6 qts. (5.3L)
Cooling System (Includes Heater)	
1400 cc & 1600 cc	5.0 qts. (4.8L)
2000 cc	9.5 qts. (9.0L)
2600 cc	9.7 qts. (9.2L)
Manual Transaxle (SAE 80)	4.8 pts. (4.6L)
Manual Transmission (SAE 90)	
2000 cc	4.4 pts. (2.1L)
2600 cc	4.8 pts. (2.3L)
Transfer Case (4WD Pickups)	4.6 pts. (2.2L)
Automatic Transaxle (Dexron)	12.0 pts. (5.7L)
Automatic Transmission (Dexron)	14.4 pts. (6.8L)
Rear Axle (SAE 80W-90)	3.0 pts. (1.4L)
Front Axle (4WD Pickups)	2.8 pts. (1.3L)
Fuel Tank	
Arrow & Ram-50 Pickups	18.0 gals. (68.0L)
Challenger & Sapporo	15.8 gals. (60.0L)
Champ & Colt	
Luxury & Rally Sports	13.2 gals. (50.0L)
All Others	10.6 gals. (40.0L)