TUNE-UP

Pickup

ENGINE IDENTIFICATION

The engine identification number is stamped on right side of engine block below distributor and on model identification plate attached to body at right rear corner of engine compartment. Engine model code is the 8th digit of identification number.

Engine Code Numbers

Application	Code
2000 cc	1
2300 cc	2

COMPRESSION PRESSURE

Check compression pressure with engine at normal operating temperature, all spark plugs removed, throttle valve wide open and engine at cranking speed. Compression pressure is within specifications if lowest reading cylinder is more than 75% of highest.

VALVE TAPPET CLEARANCE

NOTE – *2300 cc engines are equipped with hydraulic valve lifters which require no adjustment during engine tune-up.*

Valve Clearance Specifications

Application	Clearance
2000 cc	
Intake & Exhaust	①.012" (.3 mm)

① – Adjust with engine off and at normal operating temperature.

VALVE ARRANGEMENT

2000 cc
Right Side – All Exhaust
Left Side – All Intake
2300 cc – E-I-E-I-E-I-E-I

SPARK PLUGS

Application	Gap In. (mm)	Torque Ft. Lbs. (N·m)
2000 cc	.031 (.8)	11-15 (15-20)
2300 cc	.034 (.9)	5-10 (7-13)

Spark Plug Type

Application	NGK No.
2000 cc	BPR5ES
2300 cc	BPR5EFS

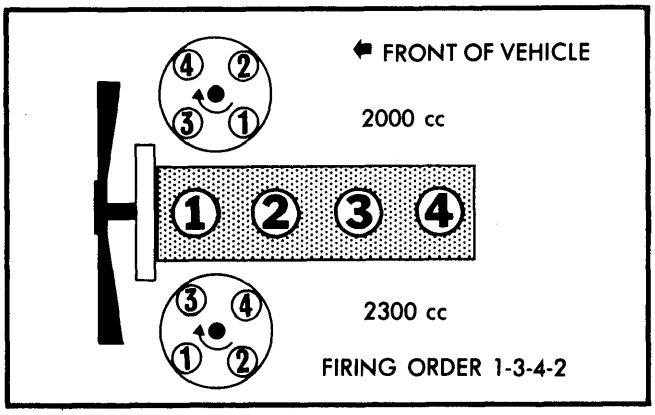

Fig. 1 Distributor Rotation and Firing Order

HIGH TENSION WIRE RESISTANCE

Carefully remove ends of wire from spark plug and distributor. Using an ohmmeter, check resistance of wire while gently twisting wire. If resistance exceeds 570 ohms per inch of wire or fluctuates from infinity to any value, replace wire.

DISTRIBUTOR

All models are equipped with breakerless, electronic ignition systems.

Armature Tooth-to-Magnetic Pickup Gap	.008-.024" (.2-.6 mm)

IGNITION TIMING

Check or adjust ignition timing with engine at normal operating temperature, at correct idle speed, and with distributor vacuum advance line disconnected and plugged.

Ignition Timing Specifications (Degrees BTDC@RPM)

Application	Timing
2000 cc	8@650
2300 cc	
Man. Trans.	6@850
Auto. Trans.①	6@850

① – Transmission in "D".

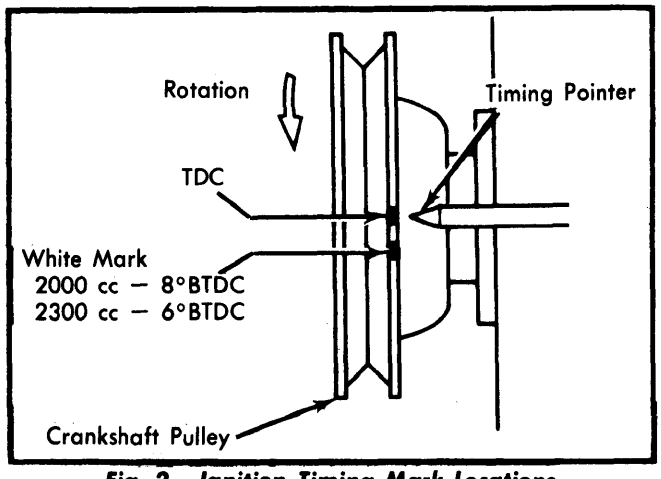

Fig. 2 Ignition Timing Mark Locations

TUNE-UP (Cont.)

IDLE SPEED & MIXTURE

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

1) Clean and chalk timing mark on crankshaft pulley. Disconnect and plug vacuum hose at distributor on 2300 cc engine only. Connect timing light and tachometer. Adjust idle speed and check ignition timing. Adjust by turning distributor.

2) Connect a tachometer and run engine at 2000 RPM for 3 minutes. Disconnect hose between canister and air cleaner. Set idle speed to specification by turning throttle adjusting screw. Reconnect hose.

3) Remove mixture adjusting screw shell by pulling outward on shell while turning it counterclockwise or cut shell off at points shown in *Fig. 3*. Connect exhaust gas analyzer to vehicle.

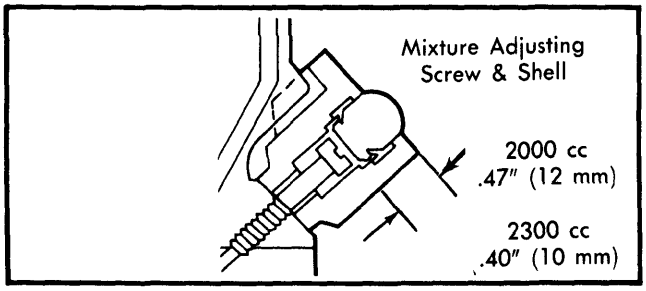

Fig. 3 Mixture Adjust Screw and Shell Removal

4) On Calif. models, disconnect air by-pass valve hose at check valve and plug valve port. On Federal models, disconnect air cleaner hose at reed valve and plug valve port.

5) On 2000 cc models only, adjust speed to 20 RPM higher than mixture RPM by turning throttle adjusting screw. Adjust mixture screw to obtain highest possible RPM, then reset engine speed to 20 RPM higher than mixture RPM by turning throttle adjusting screw.

6) Turn mixture screw clockwise to obtain mixture RPM. If CO level is now less than 1.0%, turn mixture screw out ¼ turn. Reconnect air hose and adjust idle speed with throttle adjusting screw. Install mixture screw plug.

7) On 2300 cc models only, adjust idle speed to mixture RPM by turning throttle adjusting screw. Check CO level and adjust by turning mixture screw. If idle speed changes, adjust back to mixture RPM with throttle adjusting screw.

8) Reconnect air hose. Check and, if necessary, adjust idle speed to curb idle RPM. Install and plug new mixture adjusting screw shell.

Idle Speed & CO Level

Application	Mixture RPM	Curb Idle RPM	①CO%
2000 cc			
Federal	650	650	1.0
Calif.	600	650	1.0
2300 cc			
Man. Trans.	750	850	3.5
Auto. Trans.	②625	②700	3.5

① – Air injection disconnected.
② – Transmission in "D".

COLD (FAST) IDLE RPM

With choke valve fully closed, position fast idle screw on highest step of fast idle cam. Measure clearance between lower edge of throttle valve and wall of throttle bore. If clearance is not within specifications, adjust by turning screw clockwise to increase clearance, counterclockwise to decrease clearance.

Fast Idle Specifications

Application	Clearance
2000 cc	.055" (1.4 mm)
2300 cc	
Federal	.062" (1.6 mm)
Calif.	.066" (1.7 mm)

FUEL PUMP PRESSURE & VOLUME

Pressure	2.8-3.6 psi (.20-.25 kg/cm²)
Volume	1 pt. in 30 sec.

EXHAUST EMISSION SYSTEMS

See EXHAUST EMISSION SYSTEMS section.

GENERAL SERVICING

IGNITION

DISTRIBUTOR

All models are equipped with Mitsubishi breakerless, electronic ignition system.

IGNITION COIL

Resistance Specifications (Ohms@68°F)

Application	Primary	Secondary
2000 cc	1.15	9,800
2300 cc	.81-.99	6,800-9,200

FUEL SYSTEMS

CARBURETORS

Application	Model
2000 cc	Nikki 2-Bbl.
2300 cc	Hitachi DCS 328 2-Bbl.

ELECTRICAL

BATTERY

Application	Amp. Hr. Rating
All Models	
Standard	45
Optional	70

GENERAL SERVICING (Cont.)

Battery Location – The battery is located in the engine compartment.

STARTER

Nippondenso solenoid-actuated with overrunning clutch.

Application	Volts	Amps.	Test RPM
All Models	11	50	5000

ALTERNATOR

All models are equipped with Mitsubishi alternators.

Application	Rated Amp. Output
All Models	35

ALTERNATOR REGULATOR

All models are equipped with externally mounted Mitsubishi regulators having an operating voltage of 14.5-15.8 volts.

BELT ADJUSTMENT

Application	①Deflection New Belt	①Deflection Used Belt
2000 cc		
Alternator	0.3-0.4" (8-10 mm)	0.5-0.6" (13-15 mm)
Air Pump	0.4-0.6" (10-15 mm)	0.6-0.7" (15-18 mm)
2300 cc		
Alternator	0.4-0.45" (10-11 mm)	0.45-0.5" (11-13 mm)
Air Pump	0.6-0.7" (15-18 mm)	0.8-0.9" (20-23 mm)

① – Deflection is with 22 lbs. (10 kg) pressure applied midway on longest belt run.

FILTERS

Filter	Service Interval (Miles)
Oil Filter	Replace every 7500
Air Filter	①Replace every 30,000
Fuel Filter	Replace every 15,000

① – Inspect and clean every 15,000 miles.

CAPACITIES

Application	Quantity
Crankcase (Includes Filter)	
2000 cc	4.7 qts.
2300 cc	5.0 qts.
Cooling System	
2000 cc	7.6 qts.
2300 cc	8.8 qts.
Man. Trans.(SAE 90 with EP)	
4-Speed	1.5 qts.
5-Speed	1.8 qts.
Auto. Trans. (Type F Trans. Fluid)	6.6 qts.
Rear Axle (Hypoid Gear Lubricant)	2.8 pts.
Fuel Tank	
Standard	14.8 gals.
Optional	17.5 gals.