1981 LUV 4 Tune-Up

TUNE-UP

Pickup

ENGINE IDENTIFICATION

Engine serial number is stamped on pad between distributor and cylinder head.

Engine Code

Application	Code
1817 cc	G1802

COMPRESSION PRESSURE

Test compression with engine at normal operating temperature, spark plugs removed, throttle valve wide open and engine at cranking speed (300 RPM).

Compression Pressure Specifications

Application	Pressure psi (kg/cm²)
Normal (New Engine)	170 (12)
Minimum	120 (8.4)
Maximum Variation	10.0 (.6)

VALVE CLEARANCE

NOTE – *Before adjusting valve clearance, check torque of cylinder head and camshaft bolts. Valves should be adjusted every 15,000 miles with engine cold.*

1) Measure valve clearance between rocker arm and valve stem. Position No. 1 piston on TDC of compression stroke. Adjust intake valves on cylinder No. 1 and 2, and exhaust valves on cylinder No. 1 and 3.

2) Turn crankshaft 1 full revolution until No. 4 piston is at TDC of compression stroke. Adjust intake valves on cylinder No. 3 and 4, and exhaust valves on cylinder No. 2 and 4.

Valve Clearance Specifications①

Application	Intake In. (mm)	Exhaust In. (mm)
All Models	.006 (.15)	.010 (.25)

① – Set with engine cold.

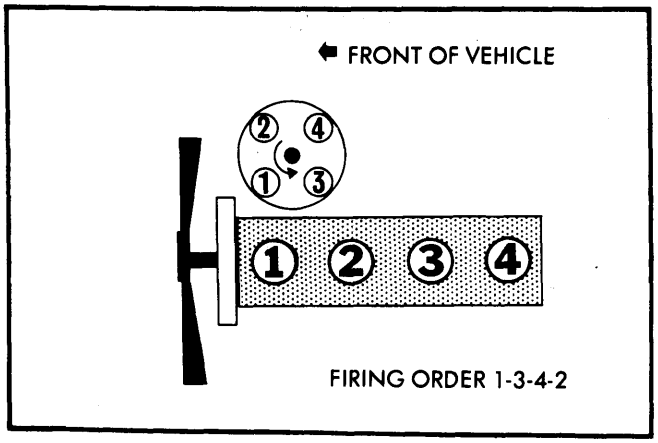

Fig. 1 Firing Order and Distributor Rotation

VALVE ARRANGEMENT

All Models
Right Side – All Intake
Left Side – All Exhaust

SPARK PLUGS

Application	Gap In. (mm)	Torque Ft. Lbs. (N·m)
All Models	.040 (1.05)	18-25 (24-33)

Spark Plug Type

Application	NGK
All Models	BPR6ES11

HIGH TENSION WIRE RESISTANCE

Carefully remove high tension wires from spark plugs and from distributor cap. Using an ohmmeter, check resistance of wire while gently twisting wire. If resistance is not to specification, or fluctuates from infinity to any value, replace wire.

Resistance (Ohms)

Application	Resistance
All Models	31,500-73,500 per foot

DISTRIBUTOR

All models equipped with Nippondenso electronic ignition system. No adjustments are required.

Air Gap	.008-.016" (.2-.4mm)

IGNITION TIMING

1) Ensure engine is warmed up to normal operating temperature, and that air gap in distributor is correct.

2) Connect timing light to either No. 1 or No. 4 cylinder. Remove distributor vacuum advance line and plug.

3) Loosen distributor clamping bolts and turn distributor until timing is within specifications.

Ignition Timing Specifications (Degrees BTDC @ RPM)

Application	①Timing
Federal Man. Trans.	6@800
All Other Models	6@900

① – With distributor vacuum hose disconnected and plugged.

TUNE-UP (Cont.)

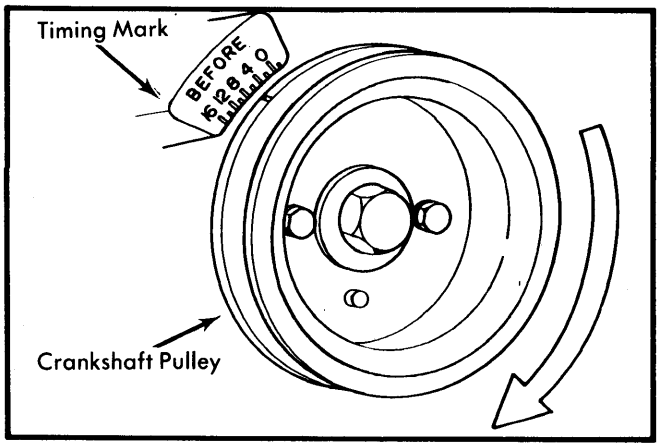

Fig. 2 Ignition Timing Mark Location

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) Warm engine to normal operating temperature. Check valve clearance and ignition timing. Choke should be open, air conditioning off and air cleaner installed.

2) Disconnect and plug vacuum lines for distributor, hot idle compensator, and EGR valve.

3) Turn idle mixture adjusting screw fully in, then back out 2 turns (Federal) or 1 turn (Calif.). Set throttle adjusting screw to obtain specified mixture RPM.

4) Adjust idle mixture screw to obtain maximum RPM, then reset throttle adjusting screw to achieve specified mixture RPM. Turn idle mixture screw clockwise until speed drops to specified curb idle.

5) If equipped with air conditioner, turn on to maximum cooling and high blower. Open throttle slightly to allow solenoid to extend, then close throttle. Adjust solenoid screw to give 900 RPM idle.

Idle Speed & Mixture Adjustment

Application	Idle RPM	Mixture RPM
Federal		
Man. Trans.	800	850
Auto. Trans.	900	950
Calif.	900	950

COLD (FAST) IDLE ADJUSTMENT

Automatic choke fast idle is adjusted by opening angle of throttle valve on carburetor, rather than by engine speed. Adjust valve opening at 1st step of fast idle cam to 16-18°.

Disconnect and plug distributor, hot idle compensator and EGR valve vacuum hoses after engine warm-up. Fast idle speed should be as follows:

Fast Idle Specifications

Application	Engine RPM
All Models	3200

AUTOMATIC CHOKE

Automatic choke is set from factory and is non-adjustable.

FUEL PUMP PRESSURE

Pressure	3.6 psi (.25 kg/cm²)

EXHAUST EMISSION SYSTEMS

See EXHAUST EMISSION SYSTEMS section.

GENERAL SERVICING

IGNITION

DISTRIBUTOR

All models are equipped with a Nippondenso electronic distributor.

IGNITION COIL

Coil Resistance (Ohms@68° F)

Application	Primary	Secondary
All Models	0.83-1.02	12,150-14,850

FUEL SYSTEMS

CARBURETORS

Application	Model
All Models	Hitachi 2-Bbl.

ELECTRICAL

BATTERY

Application	Amp. Hr. Rating
All Models	50

Battery Location – Engine compartment, left side of engine.

GENERAL SERVICING (Cont.)

STARTER

Hitachi ..... Overrunning Clutch

Starter Specifications

Application	Volts	Amps	Test RPM
All Models	12	70	6000

ALTERNATOR

Application	Rated Amp. Output
All Models	40 or 50

ALTERNATOR REGULATOR

All models utilize a Hitachi adjustable alternator regulator with an operating voltage of 13.8-14.8 volts.

BELT ADJUSTMENT

Belt deflection for all drive belts should be .4" (10 mm) with pressure applied midway on belt run.

FILTERS

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

① — Replace at 7500 miles and then every 15,000 miles.

CAPACITIES

Application	Quantity
Crankcase (Includes Filter)	4.2 qts.
Cooling System	
Auto. Trans.	6.4 qts.
Man. Trans.	6.8 qts.
Man. Trans. (SAE 30)	
2-WD	2.7 pts.
4-WD (Includes Trans. Case)	5.3 pts.
Auto. Trans. (Dexron II)	
Refill	3.5 qts.
Overhaul (Includes Converter)	7.0 qts.
Front Axle (SAE 90)	1.7 pts.
Rear Axle (SAE 90)	2.7 pts.
Fuel Tank	
Short Wheelbase	13.2 gals.
Long Wheelbase	18.5 gals.