1982 Jeep V8 Tune-Up

TUNE-UP

ENGINE IDENTIFICATION

Engine can be identified by the fourth digit of engine Build Date Code, located on a tag attached to the right cylinder head cover. The same code letter is also the fourth digit of Vehicle Identification Number (VIN), located on a plate attached to top left corner of instrument panel.

VIN ENGINE CODES

Application	Code Letter
6.0L (360") 2-Bbl.	N

TUNE-UP NOTES

NOTE: Due to production changes, always refer to Engine Tune-Up Decal in engine compartment before attempting tune-up. In the event of a conflict between specifications given in this manual and decal specifications, use the decal specifications.

CAUTION: When performing tune-up on vehicles equipped with a catalytic converter, do not allow or create a condition of engine misfire in one or more cylinders for an extended period of time. Damage to converter from overheating may occur due to loading with unburned fuel.

ENGINE COMPRESSION

Measure compression pressure with engine at normal operating temperature, spark plugs removed, throttle and choke valves wide open and engine at cranking speed.

COMPRESSION SPECIFICATIONS

Compression Ratio	8.3:1
Compression Pressure	120-140 psi (8.4-9.8 kg/cm²)
Maximum Pressure Variation	30 psi (2.1 kg/cm²)

VALVE CLEARANCE

All models are equipped with hydraulic lifters which should be adjusted to zero lash.

VALVE ARRANGEMENT

E-I-I-E-E-I-I-E (Front to rear, both banks)

SPARK PLUGS

SPARK PLUG SPECIFICATIONS

Application	Gap In. (mm)	Torque Ft. Lbs. (N.m)
All Models	.035 (.9)	16-26 (22-35)

SPARK PLUG TYPE

Application	Champion No.
High Alt.	N12Y
All Others	RN12Y

HIGH TENSION WIRE RESISTANCE

Do not puncture spark plug wires with any type of probe. Remove spark plug wire and check resistance using an ohmmeter.

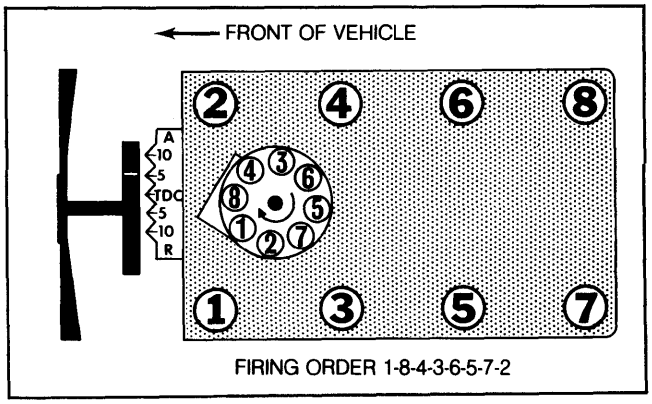
RESISTANCE (Ohms)

Wire Length	Minimum	Maximum
0-15"	3000	10,000
15-25"	4000	15,000
25-35"	6000	20,000
Over 35"	8000	25,000

DISTRIBUTOR

All models are equipped with Solid State Ignition (SSI) systems and no adjustments are required.

Fig. 1: Timing Mark and Firing Order



Timing socket located at 9.5° ATDC.

IGNITION TIMING

NOTE: Engines are equipped with a receptacle for a magnetic probe timing light, located 9.5° ATDC. Do not use this location for timing with a conventional light.

Warm engine and allow to idle. Disconnect and plug distributor vacuum line, then check ignition timing. Adjust by turning distributor.

TIMING SPECIFICATIONS (Degrees BTDC@RPM)

Application	Man. Trans.	Auto. Trans.
All Models		
High Alt.	6-18@600	16-18@600
All Other	9-11@600	9-11@600

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TUNE-UP (Cont.)

HOT (SLOW) IDLE RPM

1) Set parking brake and block drive wheels. Warm engine to operating temperature and place in neutral (manual) or "D" (automatic). Turn hex head screw on solenoid carriage to adjust solenoid RPM. Disconnect solenoid wire and adjust idle speed screw to obtain curb idle.

2) If equipped with dashpot, depress stem fully and measure clearance between stem and throttle lever. Turn dashpot to adjust to .093" (2.4 mm). Tighten lock nut and remove test equipment.

IDLE SPEED (RPM)

Application	Curb Idle	Solenoid Energized
All Models	500	550-650

IDLE MIXTURE

NOTE: Be sure idle speed and timing are set before performing idle mixture adjustment. If mixture setting takes more than 3 minutes, run engine at 2000 RPM in neutral for 1 minute, then resume adjustment.

TACHOMETER (LEAN DROP) PROCEDURE

NOTE: Idle mixture adjustment is not part of a regular tune-up. DO NOT adjust mixture unless carburetor has been disassembled or vehicle fails emissions testing.

1) Warm engine to normal operating temperature. Turn idle mixture screws to full counterclockwise position, note position of screw slot, and remove limiter caps. If screw moved during cap removal, adjust to prior position.

2) Start engine and run in neutral (manual) or "D" (automatic). Turn mixture screw clockwise (leaner) until engine speed begins to drop. Then turn screw counterclockwise (richer) until highest RPM reading is obtained. This is lean best idle. Finally, turn screw clockwise until specified "Lean Drop" is obtained.

NOTE: If final RPM differs more than 30 RPM from specified curb idle speed, reset curb idle and repeat mixture adjustment.

3) Carefully install new limiter caps with tabs positioned against full rich stop. Press caps fully into place.

LEAN DROP RPM

Application	Man. Trans.	Auto. Trans.
All Models	50	20

COLD (FAST) IDLE RPM

Disconnect EGR vacuum line and plug carburetor port. With engine idling at normal operating temperature, place fast idle screw on second step of fast idle cam and against shoulder of high step. Adjust screw to set fast idle RPM.

IDLE SPEED RPM

Application	Man. Trans.	Auto. Trans.
All Models	1500	1600

AUTOMATIC CHOKE SETTING

To adjust automatic choke, loosen cover retaining screws and rotate cover in direction indicated by arrow on face of cover. Adjust to specified setting.

AUTOMATIC CHOKE SETTING

All Models	1NR

FUEL PUMP

FUEL PUMP SPECIFICATIONS

Application	Pressure psi (kg/cm²)	Volume Pints (Liters)
All Models	5.0-6.5 (.35-.46)	1 in 30 sec. (.47 in 30 sec)

EMISSION CONTROL

NOTE: See appropriate article in EMISSION CONTROL Section.

GENERAL SERVICING

IGNITION

DISTRIBUTOR

All models are equipped with Motorcraft breakerless solid state distributors. No adjustments are required.

TOTAL SPARK ADVANCE@2000 RPM

Application	With Vac. Advance	Without Vac. Advance
All Models	32°	8°

DISTRIBUTOR PICKUP COIL RESISTANCE (Ohms)

All Models	500-1500

IGNITION COIL

COIL RESISTANCE (Ohms)

Application	Primary	Secondary
All Models	1.13-1.23	7700-9300

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GENERAL SERVICING (Cont.)

COIL OUTPUT

All Models	24 KV min.

FUEL SYSTEMS

CARBURETORS

Application	Model
All Models	Motorcraft 2150 2-Bbl.

ELECTRICAL

BATTERY

BATTERY SPECIFICATIONS

Application	Cold Cranking Amps. [1]	Reserve Capacity Minutes
Standard	380	75
Optional	450	90
Police	440	135

[1] — At 0°F (-18°C.)

STARTER

All models are equipped with Motorcraft positive engagement starters.

STARTER SPECIFICATIONS

Application	Volts	Amps.	Test RPM
All Models	12	67	7380-9356

ALTERNATORS

All models are equipped with Delco solid state alternators with integral voltage regulator.

ALTERNATOR SPECIFICATIONS

Application	Rated Amp. Output
Standard	42
Optional	63, 70
Police	85
Field Current Draw	
All Models	4.0-5.0 amps.

ALTERNATOR REGULATORS

All models use Delco solid state regulators, integral with alternator. Regulator is non-adjustable.

ADJUSTMENTS

BELT ADJUSTMENT

Application	Tension Using Strand Tension Gauge Lbs. (Kg)
New Belts	125-155 (57-70)
Used Belts	90-115 (40-52)

SERVICE INTERVALS

REPLACEMENT INTERVALS

Component	Interval (Miles)
Oil Filter	7500
Air Filter	30,000
Charcoal Canister Filter	30,000
PCV Valve	30,000
Spark Plugs	30,000

CAPACITIES

FLUID CAPACITIES

Application	Capacity
Cooling System (Includes Heater)	14.0 qts. (13.2L)
Crankcase (Includes Filter)	5.0 qts. (4.7L)
Man. Trans. (SAE 85W-90)	
T18 4-Speed	6.5 pts. (3.1L)
T176 4-Speed	3.5 pts. (1.7L)
T5 5-Speed	4.0 pts. (1.9L)
Auto. Trans. (Dexron)	
Refill	8.5 pts. (4.0L)
Overhaul	17.0 pts. (8.0L)
Transfer Case	
Model 208	6.0 pts. (2.8L)
Quadra-Trac	4.0 pts. (1.9L)
Drive Axles	Fill to bottom of filler plug hole
Fuel Tank	
Cherokee & Wagoneer	20.3 gals. (76.8L)
Truck	18.2 gals. (68.9L)