

## TUNE-UP

**280ZX**  
**280ZX Turbo**  
**810**

### ENGINE IDENTIFICATION

Engine serial number is stamped on right rear side of cylinder block at cylinder head contact surface. Serial number is preceded by engine model number.

#### Engine Code

Application	Code
280ZX .....	L28E
280ZX Turbo .....	L28ET
810 .....	L24E

### COMPRESSION PRESSURE

Test compression with engine at normal operating temperature, spark plugs removed, all injector connectors and cold start valve disconnected, throttle valve fully open and engine at cranking speed (350 RPM). Lowest reading cylinder must be at least 80% of highest reading cylinder.

#### Compression Pressure Specifications

Application	Pressure psi (kg/cm <sup>2</sup> )
280ZX & 810	
Normal (New Engine) .....	171 (12)
Minimum .....	128 (9)
280ZX Turbo	
Normal (New Engine) .....	142 (10)
Minimum .....	100 (7)

### VALVE CLEARANCE

1) Adjust valves with engine off and at normal operating temperature. Remove rocker cover. Rotate crankshaft until No. 1 cam lobe points up. Adjust intake valves on cylinder No. 2, 4 and 6, and exhaust valves on cylinder No. 1, 4 and 5.

2) Rotate crankshaft so that No. 1 cam lobe points down. Adjust intake valves on cylinder No. 1, 3 and 5, and exhaust valves on cylinder No. 2, 3 and 6.

#### Valve Clearance Specifications<sup>Ⓢ</sup>

Application	Intake In. (mm)	Exhaust In. (mm)
All Models .....	.010 (.25)	.012 (.30)

Ⓢ — Set with engine warm.

### VALVE ARRANGEMENT

E-I-I-E-I-E-I-E-I-E-I-E-I-E (front to rear).

### SPARK PLUGS

Application	Gap In. (mm)	Torque Fr. Lbs. (N·m)
All Models .....	.039-.043 (1.0-1.1)	11-14 (15-19)

### Spark Plug Type

Application	NGK No.
280ZX & 810 .....	BP6ES-11
280ZX Turbo .....	BPR6ES-11

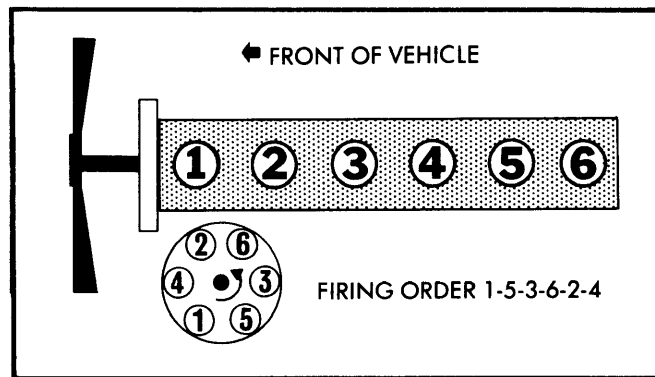


Fig. 1 Firing Order and Distributor Rotation

### HIGH TENSION WIRE RESISTANCE

Remove distributor cap from distributor but do not disconnect high tension wires from cap. Disconnect high tension wires from spark plugs. Using an ohmmeter, check resistance from distributor cap. Resistance should be less than 30,000 ohms. If resistance is more, disconnect wire from cap and recheck resistance. Replace wire if resistance still exceeds specifications.

### DISTRIBUTOR

All models use a single pick-up transistor ignition system with no point set. The only adjustment needed is for air gap between the reluctor and pick-up coil.

Measure air gap using a non-magnetic feeler gauge. If gap is not to specifications, loosen pickup coil screws and adjust gap.

Air Gap ..... .012-.020" (.3-.5 mm)

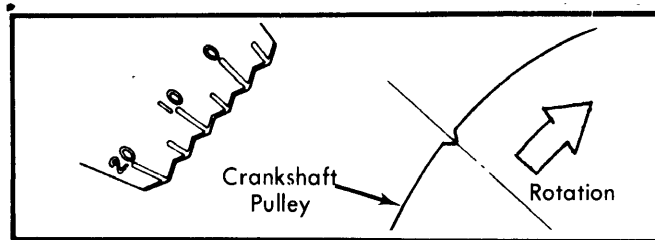


Fig. 2 Ignition Timing Mark Location

### IGNITION TIMING

**NOTE** — Regular ignition timing adjustment is not necessary on 280ZX Turbo models. Timing cannot be changed by turning distributor. For adjustment procedures, see Electronic Concentrated Engine Control System (ECCS) article in ELECTRICAL Section.

1) With engine at normal operating temperature, connect a timing light and tachometer to engine. With Man. Trans. in

## TUNE-UP (Cont.)

neutral or Auto. Trans. in "D", check and, if necessary, adjust air gap and idle speed.

2) On all models except 280ZX Turbo, disconnect and plug distributor vacuum hose. Adjust timing by loosening set screw and rotating distributor until timing is set. Tighten set screw and recheck timing.

### Ignition Timing Specifications (Degrees BTDC @ RPM)

Application	Man. Trans.	ⓐ Auto. Trans.
280ZX .....	8@600-800 .....	8@600-800
280ZX Turbo .....	.....	20@600-700
810 .....	10@600-800 .....	10@550-750

ⓐ — Transmission in "D".

### IDLE SPEED & MIXTURE

**NOTE** — Regular idle speed and mixture adjustments are not necessary on 280ZX Turbo models. For testing procedures, see Electronic Concentrated Engine Control System (ECCS) article in ELECTRICAL Section.

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

**NOTE** — The following adjustment procedures should be performed with engine at normal operating temperature, air conditioning "OFF" (if equipped), ignition timing set to specifications and air cleaner installed. Set parking brake, block drive wheels and, on models with automatic transmission, place gear selector in "D" position.

1) Connect a tachometer to engine and run at 2000 RPM for 5 minutes to stabilize operating condition. Accelerate engine 2-3 times and return to idle. Turn idle speed adjusting screw to obtain specified idle RPM.

2) Turn ignition switch off and disconnect throttle valve switch harness connector. Position harness connector at least 4" away from any secondary ignition wires.

3) Disconnect and plug distributor vacuum hose. Disconnect air induction hose and canister purge hose at intake manifold. Plug air induction pipe and purge hose fitting on intake manifold. Start engine, accelerate 2-3 times and allow to idle for 1 minute. Disconnect oxygen sensor.

4) Check and, if necessary, adjust ignition timing. Connect a jumper wire between throttle valve switch harness connector terminals No. 24 and No. 30. See Fig. 3. Insert CO meter probe into tail pipe at least 16".

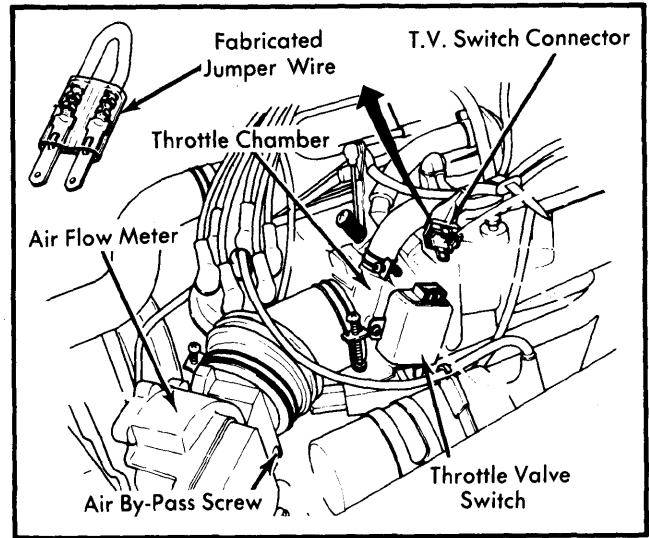


Fig. 3 Idle Mixture Adjustment (CO%)  
(280ZX Shown - 810 Similar)

**NOTE** — Connecting jumper wire between connector terminals signals the control unit of a full throttle condition which allows the idle mixture to run at full load enrichment. This step is necessary to enrich the CO% level at idle enough to be read by the CO meter.

5) With engine idling, check Co level. If necessary to adjust CO, remove air flow meter and drill a small hole in plug covering air by-pass screw. DO NOT allow drill to contact screw. Clean up metal shavings. Install self-tapping screw into hole and pull plug from bore. Install air flow meter.

6) Adjust CO level by turning air by-pass screw clockwise to richen mixture and counter-clockwise to lean mixture. Remove air flow meter. Tap new seal plug, with convex side up, into air by-pass screw bore. Install air flow meter.

7) Stop engine and remove jumper wire from throttle valve switch harness connector. Reconnect harness and all hoses. Reset idle speed to specified RPM.

### Idle Speed & CO Level

Application	Idle RPMⓐ	CO%
280ZX .....	700 .....	Less than 5.0
810		
Man. Trans. ....	700 .....	Less than 5.0
Auto. Trans. ....	650 .....	Less than 5.0

ⓐ — Auto. Trans. in "D".

### FUEL PUMP PRESSURE

Pressure ..... 36.3 psi (2.6 kg/cm<sup>2</sup>)

### EXHAUST EMISSION SYSTEMS

See EXHAUST EMISSION SYSTEMS section.

# 1981 Datsun 6 Tune-Up

## GENERAL SERVICING

### IGNITION

#### DISTRIBUTOR

All models are equipped with Hitachi Transistor Ignition System.

#### IGNITION COIL

##### Resistance Specifications (Ohms @ 68°F)

Application	Primary	Secondary
280ZX & 810 .....	0.84-1.02 .....	8200-12,400
280ZX Turbo .....	0.63-0.77 .....	7000-8600

### FUEL SYSTEMS

#### FUEL INJECTION

All models are equipped with Bosch AFC Fuel Injection System.

### ELECTRICAL

#### BATTERY

Application	Amp. Hr. Rating
All Models .....	60

Battery Location — Right side of engine compartment.

#### STARTER

All models use Hitachi reduction gear type starters.

Application	Volts	Amps	Test RPM
All Models .....	11 .....	100 .....	3900

#### ALTERNATOR

Application	Rated Amp. Output
All Models .....	60

### ALTERNATOR REGULATOR

All models use a Hitachi alternator regulator with an operating voltage of 14.5 -15.0 volts at 68°F (20°C).

### BELT ADJUSTMENT

Application	⓪ Deflection
All Belts .....	$\frac{5}{16}$ - $\frac{1}{2}$ " (8-12 mm)
⓪ — Deflection is with 22 lbs. (10 kg) pressure applied midway on belt run.	

### FILTERS

Filter	Service Interval (Miles)
Oil Filter .....	Replace every 7500
Air Filter .....	Replace every 30,000
Fuel Filter .....	Replace every 30,000
Canister Filter .....	Replace every 30,000

### CAPACITIES

Application	Quantity
Crankcase (Includes Filter)	
280ZX & 280ZX Turbo .....	4.8 qts.
810 .....	5.3 qts.
Cooling System (Includes Heater)	
280ZX & 280ZX Turbo	
With Reservoir .....	11.1 qts.
Without Reservoir .....	10.3 qts.
810 .....	11.6 qts.
Man. Trans. (API GL-5/SAE 80) .....	4.3 pts.
Auto. Trans. (Dexron) .....	5.9 qts.
Rear Axle (API GL-5/SAE 80-90)	
280ZX	
Model R-180 .....	2.1 pts.
Model R-200 .....	2.8 pts.
280ZX Turbo .....	2.8 pts.
810 .....	2.1 pts.
Fuel Tank	
280ZX & 280ZX Turbo .....	21.1 gals.
810	
Sedan .....	16.4 gals.
Station Wagon .....	15.9 gals.