

## TUNE-UP

928

### ENGINE IDENTIFICATION

The engine identification number is stamped on the front reinforcing rib in the top half of the crankcase. The first 3 digits in engine number identify type and model year.

#### ENGINE CODE

Application	Code
928 .....	811

### ENGINE COMPRESSION

With engine at normal operating temperature, remove all plugs and allow 12 compression strokes per cylinder.

#### COMPRESSION SPECIFICATIONS

Compression Ratio .....	9:1
Compression Pressure	
Normal .....	142-199 psi (10-14 kg/cm <sup>2</sup> )
Minimum .....	114 psi (8 kg/cm <sup>2</sup> )
Max. Variation	
Between Cylinders .....	21 psi (1.5 kg/cm <sup>2</sup> )

### VALVE CLEARANCE

Porsche 928 models are equipped with self-adjusting hydraulic valve lifters.

### VALVE ARRANGEMENT

Both Banks — I-E-I-E-I-E-I-E (Front to rear)

### SPARK PLUGS

#### SPARK PLUG TYPE

Application	Bosch No.
All Models .....	WR8DS

#### SPARK PLUG SPECIFICATIONS

Application	Gap In. (mm)	Torque Ft. Lbs. (N.m)
All Models .....	.028 (.7)	18 (24)

### HIGH TENSION WIRE RESISTANCE

Carefully remove high tension wires from spark plugs and distributor cap. Using an ohmmeter, check high tension wire resistance while gently twisting wires. If resistance is incorrect, or fluctuates from infinity to any value, replace wires.

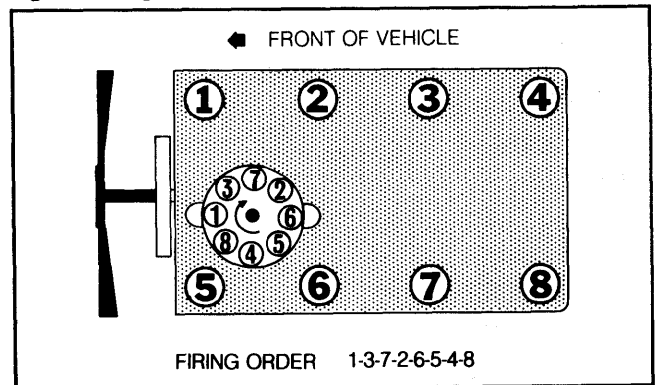
#### WIRE RESISTANCE

Application	Ohms
All Models .....	2500

### DISTRIBUTOR

All models use Bosch breakerless electronic ignition. No adjustments are necessary.

Fig. 1: Firing Order and Distributor Rotation



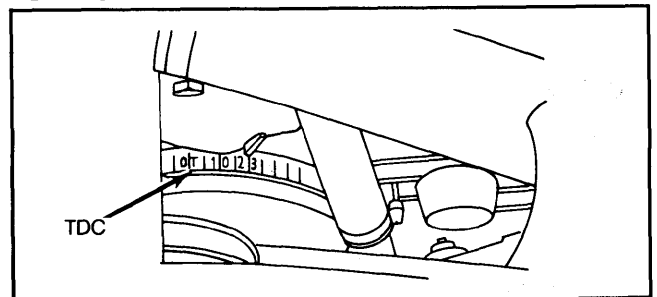
### IGNITION TIMING

1) With engine at normal operating temperature, disconnect and plug hoses at distributor advance unit. Stop engine and connect timing light to No. 1 cylinder. Connect tachometer to connection stud above ignition control unit in engine compartment.

**CAUTION: Dangerously high voltage exists in ignition system. Ignition must be off when attaching or removing testing equipment, or severe shock may occur.**

2) Start engine and accelerate. Adjust timing as necessary by turning distributor. Return engine to idle, and connect vacuum hoses. Recheck timing. Timing should read TDC to 7° BTDC. If not to specification, distributor should be removed and tested.

Fig. 2: Ignition Timing Mark Location



#### IGNITION TIMING (Degrees BTDC@RPM)

Application	Timing
All Models .....	1 23@3000
1 — With distributor vacuum advance hoses disconnected and plugged.	

# 1982 Porsche V8 Tune-Up

## TUNE-UP (Cont.)

### IDLE SPEED & MIXTURE

1) Fold up foot support on passenger side under dashboard. Disconnect plug from oxygen sensor (left side of footwell). Connect CO meter to test point on catalytic converter and connect tachometer.

2) Adjust idle speed using screw in front of throttle housing. If mixture must be adjusted, insert tool through opening in air flow sensor. Rotate clockwise for richer mixture and counterclockwise for leaner mixture.

#### IDLE SPEED & CO LEVEL

Application	Idle RPM	CO%
All Models .....	700-800 .....	<sup>1</sup> 0.4-0.8

<sup>1</sup> — With oxygen sensor disconnected.

3) When idle mixture and speed are correct, remove test equipment. Connect oxygen sensor plug and coat thread of catalytic converter test cap with anti-seize compound.

### FUEL PUMP

#### FUEL PUMP PERFORMANCE

Application	Pressure psi (kg/cm <sup>2</sup> )	Volume in 30 Sec. Pints (Liters)
All Models .....	26-32 (1.8-2.2) .....	1.2 (.6)

### EXHAUST EMISSION SYSTEMS

See EXHAUST EMISSION SYSTEMS section.

## GENERAL SERVICING

### IGNITION

#### DISTRIBUTOR

All models are equipped with Bosch transistorized ignition system with breakerless distributor.

#### IGNITION COIL

#### RESISTANCE Ohms@68°F (20°C)

Application	Primary	Secondary
All Models .....	0.4-0.6 .....	650-790

### FUEL SYSTEMS

#### FUEL INJECTION

All models are equipped with Bosch AFC Lambda fuel injection system with oxygen sensor.

### ELECTRICAL

#### BATTERY

#### BATTERY SPECIFICATIONS

Application	Amp. Hr. Rating
All Models .....	66

#### STARTER

All models are equipped with Bosch starters with overrunning clutch.

#### ALTERNATORS

All models use a Bosch alternator.

#### ALTERNATOR SPECIFICATIONS

Application	Rated Amp. Output
All Models .....	90

### ALTERNATOR REGULATOR

All models are equipped with Bosch or Motorola solid state alternator regulators.

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

Application	Voltage
All Models .....	13.5-14.8

### SERVICE SPECIFICATIONS

#### BELT ADJUSTMENT

Application	<sup>1</sup> Deflection In. (mm)
All Models .....	.4 (10)

<sup>1</sup> — With moderate pressure applied midway on belt.

#### REPLACEMENT INTERVALS

Component	Miles
Oil Filter .....	15,000
Air Filter .....	30,000
Fuel Filter .....	30,000
Spark Plugs .....	30,000
Oxygen Sensor .....	30,000

#### FLUID CAPACITIES

Application	Quantity
Crankcase (Includes Filter) .....	8.5 qts. (8.0L)
Cooling System .....	16.8 qts. (16.0L)
Man. Trans. (SAE 75W-90) .....	4.0 qts. (3.8L)
Auto. Trans. (Dexron II) .....	5.8 qts. (5.5L)
Differential (SAE 90) .....	2.1 qts. (2.0L)
Fuel Tank .....	23.0 gals. (86.0L)