

## TUNE-UP

### ENGINE IDENTIFICATION

#### VEHICLE IDENTIFICATION NUMBER CODE

Engine can be identified by the 4th digit of the Vehicle Identification Number (VIN) which is stamped on a plate attached to top left corner of instrument panel.

#### VIN Engine Code

<b>Application</b>	<b>Code</b>
4.2L (258") 2-Bbl. ....	C

#### ENGINE IDENTIFICATION NUMBER CODE

Engine code is part of number stamped on machined pad on right side of cylinder block between number two and three cylinders.

**NOTE** — Engines built for sale in Georgia and Tennessee have an additional, nonrepeating number, located on the right side of the engine below the build date code.

#### Engine Codes

<b>Application</b>	<b>Code</b>
258" 2-Bbl. ....	C

### TUNE-UP NOTES

**NOTE** — In order to comply with emission standards, specifications shown on engine compartment emission control tune-up decal must be used in all instances.

**CAUTION** — When performing tune-up on vehicles equipped with catalytic converters, do not allow or create a condition of engine misfire in more than 1 cylinder for an extended period of time. Damage to converter may occur due to loading converter with unburned air/fuel mixture.

### ENGINE COMPRESSION

Compression Ratio	
258" .....	8.3:1
Compression Pressure .....	120-150 psi
Max. Variation Between Cylinders .....	30 psi

### VALVE CLEARANCE

Hydraulic Lifters .....Zero Lash

### VALVE ARRANGEMENT

E-I-I-E-I-E-E-I-E-I-E (Front to rear)

### SPARK PLUGS

<b>Application</b>	<b>Gap (In.)</b>	<b>Torque (Ft. Lbs.)</b>
All Models .....	.035	7-15

### Spark Plug Type

<b>Application</b>	<b>Champion No.</b>
All Models .....	RFN14LY

### 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.

	<b>Resistance (Ohms)</b>	
<b>Wire Length</b>	<b>Minimum</b>	<b>Maximum</b>
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 a Solid State Ignition system (SSI) and no adjustments are required.

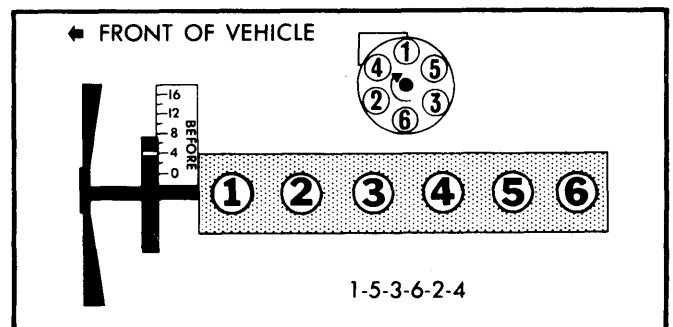


Fig. 1 Firing Order and Timing Marks

### IGNITION TIMING

**NOTE** — All engines incorporate a magnetic timing probe socket located at 10° ATDC. This is for use with electronic timing equipment. Refer to manufacturer's instructions for correct procedures. Do not use the probe location to check timing using a conventional timing light.

Check or adjust ignition timing with engine at normal operating temperature, distributor vacuum hose disconnected and engine running at specified speed.

**NOTE** — If a timing light incorporating an advance control feature is used, set control to OFF position. On SSI coils, a terminal is provided for tachometer connection.

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

<b>Application</b>	<b>Man. Trans.</b>	<b>Auto. Trans</b>
Concord & Spirit .....	6@650	ⓐ6@550
Eagle		
Fed. ....	8@650	ⓐ8@550
Calif. ....	4@650	6@550

ⓐ — Set High Alt. models to 15° BTDC@550

**TUNE-UP (Cont.)**

**HOT (SLOW) IDLE RPM**

**NOTE** — Do not idle engine for over 3 minutes at a time. If idle adjustment is not completed within 3 minutes, run engine at 2000 RPM for 1 minute before continuing, repeat as necessary.

- 1) Connect tachometer. Start engine and warm to normal operating temperature. Disconnect vacuum line from vacuum actuator, then disconnect solenoid wire. Use idle speed screw to obtain curb idle RPM.
- 2) Apply vacuum to vacuum actuator. Turn adjustment screw on throttle lever until vacuum actuator RPM is reached. Disconnect manifold vacuum.
- 3) Apply battery voltage with jumper wire to holding solenoid. Turn A/C on and open throttle to allow solenoid to extend fully. Adjust hex-head screw on back of solenoid to obtain solenoid RPM. Remove jumper wire and reconnect solenoid wire. Reconnect vacuum hose to actuator and remove test equipment.

Application	Idle Speed (RPM)		
	Curb Idle	Vacuum Actuator	Solenoid Energized
All Models			
Man. Trans. ....	650	900	750
Auto. Trans. ....	550	800	650

**IDLE MIXTURE**

**NOTE** — Do not idle engine for over 3 minutes at a time. If idle mixture adjustment is not completed within 3 minutes, run engine at 2000 RPM for 1 minute before continuing, repeat as necessary.

**LEAN DROP PROCEDURE**

- 1) Connect an accurate tachometer, start engine, and warm to normal operating temperature. If idle mixture screws cannot be turned, remove carburetor. Drill and punch out dowel pins that lock mixture screws, then reinstall carburetor.
- 2) Place transmission selector in "D". Adjust mixture screws clockwise (leaner) until a noticeable loss in RPM is indicated.
- 3) Turn mixture screws counterclockwise (richer) until highest RPM reading is obtained. Do not turn screws any further than point at which highest RPM is first obtained.
- 4) As final adjustment, turn screws clockwise until correct RPM drop is indicated. If final RPM varies more than ± 30 RPM from curb idle, reset curb idle and repeat procedure.

**Specified RPM Drop**

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

**COLD (FAST) IDLE RPM**

- 1) Adjust fast idle speed with engine at normal operating temperature and with EGR disconnected.
- 2) Position fast idle adjusting screw in contact with second step and against shoulder of fast idle cam. Turn fast idle adjusting screw to obtain specified fast idle speed.

**Fast Idle Speed (RPM)**

Application	Man. Trans.	Auto. Trans.
All Models .....	1600-1800	1750-1950

**AUTOMATIC CHOKE**

To adjust automatic choke, loosen choke cover retaining screws and rotate cover in desired direction as indicated on cover to specified setting.

**Automatic Choke Setting**

Application	Man. Trans.	Auto. Trans.
Concord & Spirit .....	1NR	⓪1NR
Eagle		
Fed. ....	2NR	⓪2NR
Calif. ....	1NR	1NR

⓪ — Set High Alt. models to Index.

**FUEL PUMP**

Make tests with air cleaner removed and fuel inlet line or filter disconnected at carburetor. Disconnect fuel return line at fuel filter and plug nipple on filter. Make all tests at idle speed.

**Fuel Pump Specifications**

Pressure .....	4-5 psi
Volume .....	One pint in 30 sec.
Vacuum (at fuel pump inlet) .....	10 in. Hg min.

**EXHAUST EMISSION SYSTEMS**

See EXHAUST EMISSION SYSTEMS section.

## GENERAL SERVICING

### IGNITION

#### DISTRIBUTOR

Solid State Electronic Ignition (SSI)  
 Sensor Resistance ..... 400-800 ohms

#### IGNITION COIL

Coil Resistance (Ohms@75°F)

Application	Primary	Secondary
All Models .....	1.13-1.23.....	7700-9300
<b>Coil Output</b>		
All Models .....	20 KV Min.	
<b>Current Draw</b>		
Engine Stopped .....	4 amps.	
Engine Idling.....	2 amps.	

### CARBURETION

#### CARBURETORS

Application	Model
4.2L (258") .....	Carter BBD

**Other Data & Specifications** — See *Tune-Up and Carter Carburetors* in *FUEL SYSTEMS* Section.

### ELECTRICAL

#### BATTERY

Application	Cold Crank Amps@0°F	Reserve Capacity Minutes
Standard .....	305 .....	60
Optional .....	450 .....	90

#### STARTER

Motorcraft Positive Engagement Type

#### Starter Specifications

Application	Volts	Amps	Test RPM
All Models .....	12 .....	67 .....	7380-9360

### ALTERNATOR

#### Application

**Rated  
Amp. Output**

Standard .....	55
Optional .....	63, 70

### ALTERNATOR REGULATOR

Delco-Remy nonadjustable, integral with alternator.

Operating Voltage (at 50-100°F) ..... 13.9-14.9

### REPLACEMENT INTERVALS

Component	Interval (Miles)
Oil Filter .....	7500
Air Filter .....	30,000
Fuel Filter .....	15,000
PCV Valve .....	30,000
Spark Plugs .....	30,000

### BELT ADJUSTMENT

Tension (Lbs.) Using Strand Tension Gauge

Application	New Belt	Used Belt
Air Pump w/P.S. ....	65-75 .....	60-70
Serpentine Belt .....	180-200 .....	140-160
All Others .....	125-155 .....	90-115

### CAPACITIES

Application	Quantity
Crankcase (With Filter) .....	5.0 qts.
Cooling System (Includes Heater)	
Standard .....	11.0 qts.
H.D. ....	14.0 qts.
Man. Trans. (SAE 80W-90) .....	3.3 pts.
Auto. Trans. (Dexron) .....	8.0 pts.
Transfer Case (SAE 10W-30) .....	3.0 pts.
Rear Axle (SAE 80W-90) .....	3.0 pts.
Front Axle (SAE 80W-90) .....	3.5 pts.
Fuel Tank	
Concord, Eagle 2 Dr. & Wagon .....	22.0 gals.
Spirit, Eagle Kamback & SX4 .....	21.0 gals.