

► **AIR CONDITIONED CAR SERVICE CAUTION:** *B* for disc nnecting any part f air c nditi ning quipment r lines for access to engine, see "Air Conditioning Service Cautions" in Miscellaneous Section.

MODEL IDENTIFICATION

ENGINE & SERIAL NUMBER: Stamped on upper right corner on front face of right hand block, on right frame side member just to rear of engine support bracket, and on lubrication plate on front side of left body pillar (Exc. Coupe), on left door lock pillar (Coupe).

Series	First 1956 Nos.
60S.....	566000001
62.....	566200001
75.....	567500001
86.....	568600001

Identification—First two figures indicate year, third and fourth indicate model (last five figures are numbered consecutively regardless of series).

Engine Unit Number Note: Use for identification. Stamped on top of crankcase to rear of left hand block with prefix indicating model:

Series	Engine Unit Prefix
60S, 62, 75 (Standard).....	4X-1 and up.
60S, 62, 75 (Air Conditioned).....	4XK-1 and up.
86 (Standard).....	5X-1 and up.
86 (Air Conditioned).....	5XK-1 and up.
60S, 62 (Dual Carburetors).....	7X-1 and up.
60S, 62 (Dual Carbs. & Air Conditioned).....	7XK-1 and up.

► **ENGINE NUMBER NOTE:** "L.C." will be added as a suffix to engine unit number on all engines built to low compression specifications.

► **NOTE:** Mark * preceding Engine Unit Number indicates cylinder bore and pistons are .010" oversize.

TUNE-UP

► **1956 DETONATION CORRECTION** (Early Cars in Low Octane Areas): See "Ignition Timing" below.

► **POWER LOSS OR "STUMBLE" AFTER HARD LEFT TURN CORRECTION** (CARS WITH CARTER CARBURETOR): May be caused by fuel leakage from bowl into choke vacuum passage. See "Cadillac (Carter & Rochester) Carburetors" in Carburetion Section.

► **FLAT SPOT & "SHUDDER" CORRECTION** (ELDORADO ENGINE): See "Cadillac (Carter & Rochester Carburetors" in Carburetion Section.

► **SURGE UNDER FULL THROTTLE OR LEANNESS AT HIGH SPEED CORRECTION** (CARTER CARBURETORS): See "Cadillac (Carter & Rochester) Carburetors" in Carburetion Section.

► **PART THROTTLE DETONATION CORRECTION:** Install Vacuum Advance Unit, Delco-Remy Part No. 1116103 on early cars which were equipped with Part No. 1116097.

COMPRESSION PRESSURE: 165 to 185 lbs., (at cranking speed), 212 to 230 lbs., (at 1000 RPM).

VACUUM READING: Not specified. **NOTE**—Beginning with Eng. No. 033849, new Camshaft used which results in decrease in manifold vacuum (normal vacuum at sea level with new camshaft is 13-15" idling).

► **VACUUM CHECKING CAUTION:** When checking engine vacuum, shut off engine before removing vacuum

hose. The plunger in the vacuum operated throttle check will increase engine speed to approximately 900 RPM if hose is removed with engine running. Set hand brake firmly before checking engine vacuum.

VALVE TAPPET CLEARANCE: None in service (Hydraulic Lifters).

MANIFOLD HEAT CONTROL: Automatic thermostatic type. Valve diverts exhaust gases of left hand cylinder bank through carburetor heating passages in intake manifold to right hand exhaust system during warm-up period.

IGNITION

FIRING ORDER: 1-8-4-3-6-5-7-2.

Cylinders—RIGHT BANK 2-4-6-8. LEFT BANK 1-3-5-7.

SPARK PLUG GAP: .035".

Spark Plugs—AC No. 44 (All Engines), 14mm.

COIL: Delco-Remy 1115082. 12 Volt.

Ignition Current—1.25 amps. idling. 3 amps. stopped.

Resistor—Delco-Remy 1927809. On coil bracket.

► **COIL RESISTOR NOTE:** Resistor is connected in lead from ignition switch-to-coil.

DISTRIBUTOR: Delco-Remy 1110858 (Except Eldorado), 1110859 (Eldorado Engine). 12 Volt. New "Window type" with external adjustment. See "Delco-Remy (Window type) Distributor" in Electrical Section.

Condenser—Delco-Remy 1932004. Capacity .18-.23 mfd.

Contact Point Set—Delco-Remy 1931988.

Breaker Gap—.016" (new & used points).

Cam Angle—26-33°.

Breaker Arm Spring Tension—19-23 ozs.

Rotation—Counter-clockwise viewed from above.

Automatic Advance

Degrees	Distr.	RPM	Degrees	Eng.	RPM
0-2.....		575	0-4.....		1150
6-8.....		1275	12-16.....		2550
9-11.....		1950	18-22.....		3900

Vacuum Spark Control: Delco-Remy 1116097 (Early); 1116103 (Later). See "Part Throttle Detonation Correction" above.

Vacuum Advance - 1116097

Distr. Degrees	Eng. Degrees	Vacuum (" of HG)
Start.....	0.....	5-7
18.....	36.....	15.5-17.25

Plunger Travel - 3/8-13/32"

Vacuum Advance - 1116103

Distr. Degrees	Eng. Degrees	Vacuum (" of HG)
Start.....	0.....	6.5-8.5
15.5.....	31.....	13.5-16

Plunger Travel - 5/16-11/32"

IGNITION TIMING

► **1956 ENGINE DETONATION** (Low Octane Areas): If octane rating of available fuel results in detonation complaints, this condition can be corrected as follows:

1) **Ignition Timing**—Check timing. Timing can be retarded to 2½° BTDC (midway between "A" and "C" on harmonic balancer), or in extreme cases to TDC ("C" mark on balancer), without noticeable decrease in performance.

2) **Distributor Vacuum Advance**—If detonation not corrected by timing change, original Vacuum Advance Unit,

Delco-Remy No. 1116097, can be replaced with late type unit No. 1116103.

3) **Lowering Compression Ratio**—On engines before Eng. No. 033849, compression ratio can be lowered by installing shim, Part No. 1466224, under each cylinder head. After installing shim, torque head bolts to 65-70 ft. lbs. and retorqued after 500 miles to 75-80 ft. lbs. **NOTE**—Beginning Eng. No. 033849, engines have extra head gasket, shim, or modified cylinder head installed in production and it should not be necessary to lower compression ratio.

4) **Low Compression Pistons**—For travel in foreign countries where octane rating of fuel is not equivalent to average U.S. fuel, a set of low compression pistons, Part No. 3630680, can be installed.

► **SETTING CAUTION:** Settings below are latest recommendations and should be followed exactly to avoid detonation and possible damage to engine. THESE SETTINGS ARE CORRECT FOR FUEL OF 97 OCTANE RATING AND TIMING MUST BE RETARDED IF FUEL OF LOWER OCTANE RATING USED.

Car Model	Ignition Setting
First Cars (To Eng. No. 033849).....	2½° BTDC
Later Cars (Beginning No. 033849).....	5° BTDC

Timing—Disconnect vacuum line to distributor and tape end of line. Idle engine at 400 RPM, set timing midway between "A" and "C" line on balancer (First Cars—2½° BTDC setting), or at "A" line on balancer (Later Cars—5° BTDC setting).

Timing Mark—Two lines on vibration balancer at front of engine marked "A" (5° BTDC) and "C" (TDC) and pointer on right side of chain case cover.

CARBURETOR

► **CARBURETOR APPLICATION:** One 4-Barrel Carter or Rochester 4-Barrel Carburetor used on all models except Eldorado. Two Carter 4-Barrel Carburetors used on Eldorado.

► **1956 DETONATION CORRECTION:** (Early Cars in Low Octane Areas): See "Ignition Timing" below.

► **CARBURETOR PRODUCTION CHANGES & RECOMMENDED CORRECTIONS:** S "Cadillac (Carter & Rochester) Carburetors" in Carburetion Section.

► **FAILURE TO OBTAIN WIDE OPEN THROTTLE POSITION** (Due to improper accelerator pedal adjustment): Adjust accelerator pedal arm-to-trunnion, on the accelerator pedal linkage, up or down to obtain ¼" clearance from underside of top of pedal to floor pan. With carpet installed, this dimension should be ¾" to top of carpet.

► **IMPROPER CARBURETOR CHOKE OPERATION CORRECTION:** This condition may be caused by oil leaking from the right rocker arm cover and draining down to the hot air stove on the right exhaust manifold where it is then drawn up into the choke housing. Check for indications of oil in choke assembly and clean if necessary. Replace right rocker arm cover gasket.

► **IDLE SPEED (AIR CONDITIONED CARS):** Summ r and Wint r Idle Speed Adjustment is different as follows: Summ r S tting (Air C nditi n r in Op rati n)—With transmission selector lever in either "Dr" range, and

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