

Engine Cooling Systems

BUICK

FILL LEVEL

1964-70 – Check coolant level only when cold. Fill radiator to "Fill Cold" mark.

1971-73 – Uses a coolant recovery system. Do NOT remove radiator cap to check coolant level. Keep coolant level between "Full" and "Add" marks on coolant overflow bottle.

THERMOSTAT

Thermostat application and testing are as follows:

Application	Ⓢ Initial	Ⓢ Open	Ⓢ Fully Open
1964-66	177-182	202	
1967	187-192	202	
1968-71 (6 Cyl.)	Approx. 195	212	
1968-73 (V8)	Approx. 190	212	
(6 Cyl.)	Approx. 190	212	

Ⓢ – All temperatures are in °F.

PRESSURE VALVE

All models use a 15 lb. radiator cap.

WATER PUMP

All 1964-67 Models – Pump shaft bearing is a shrink fit in the aluminum housing. Housing, shaft, bearing and hub are serviced as an assembly. Check pump bearings for roughness and endplay and replace assembly if bearings are not serviceable. Pump seal and impeller can be replaced as follows: Support impeller and shaft on anvil to prevent shock load on bearings, crack impeller in several places with a chisel and remove from shaft. Use punch inserted through vent hole to drive old seal and sleeve out of housing. Clean pump housing carefully. **CAUTION** – Do not use solvent which might destroy bearing lubricant. Press new seal assembly in housing using a piece of thick wall tubing of correct diameter. Coat face of carbon washer and impeller hub with rust preventative oil (Seco or equivalent), support hub end of shaft and press new impeller on shaft until clearance between impeller and pump housing is .035-.040" (1964-66 400", 401" & 425") or .025-.050" (all other engines).

All 1968-73 Models – Service as an assembly only if there is excessive endplay or roughness in bearing operation.

MAINTENANCE

Inspect, drain and clean cooling system every 24 months.

CAPACITY (in quarts)		
APPLICATION	STANDARD	OPTIONAL
1964-65 V-6 300" 400", 401", 425"	13 15 18.5
1966 Special, Skylark V-6 V-8 LeSabre G.S. Wildcat, Electra, Riviera	11.3 12.7 14.5 18.5 18	11.7 14 Ⓢ 14.5 18.5 18.3
1967 Special, Skylark V-6 V-8 LeSabre G.S.400 Wildcat, Electra, Riviera	11.3 12.7 14.5 17 17.5	11.7 14 Ⓢ 14.8 18 18.5
1968-69 250" 350" (Exc. LeSabre) (LeSabre) 400" 430"	11.3 13.5 13.2 16.2 16.7	13 13.5 13.6 16.7 17
1970-71 250" 350" (Exc. LeSabre) (LeSabre) 455" (Exc. GS 455) (GS 455)	16 16.5 16.2 19.7 19.2	16 16.5 16.6 20 19.7
1972-73 250" 350" (Exc. LeSabre, Apollo) (LeSabre) (Apollo) 455"	14.0 16.5 16.2 14.0 19.7 15.5 16.6 16.0 20.0

Ⓢ – 14.8 qts. with 340" engine.