

Engine Cooling Systems

FORD MOTOR CO.

Application	CAPACITY (Qts.)	
	Non A/C	A/C
Pinto		
2300 cc 4-Cyl.	8.7	9.0
2800 cc V6	12.5	13.2
Mustang		
2300 cc 4-Cyl.	8.5	9.1
2800 cc V6	12.3	13.2
302" V8	16.3	16.3
Maverick & Comet		
250" 6-Cyl.	9.7	9.7
302" V8	13.5	14.1
Granada & Monarch		
250" 6-Cyl.	10.5	10.7
302" V8	14.4	14.6
351" W V8	15.7	16.7
Torino, Montego, Ranchero, Cougar & Elite		
351" M V8	17.1	18.0
351" M V8 (Medium)	17.5	17.5
351" W V8	15.9	16.2
400" V8	17.1	17.5
400" V8 (Heavy)	18.0	18.0
460" V8	19.2	19.2
460" V8 (Heavy)	19.7	19.7
Ford & Mercury		
351" M V8	17.1	17.6
400" V8	17.1	17.6
460" V8	18.5	18.5
460" V8 (Medium)	19.0	19.0
460" V8 (Heavy) & Police	20.0	20.0
Mark IV		
460" V8 Trailer Tow	19.8	19.8
460" V8 Heated Window	19.9	19.9
Thunderbird		
460" V8	19.3	19.3
460" V8 Trailer Tow	19.8	19.8
460" V8 Heated Window	19.4	19.4
Lincoln		
460" V8	19.7	19.7

NOTE — Add one quart with closed cooling systems.

THERMOSTAT

Thermostat is located in water outlet elbow. Test thermostat to see that they start to open at the correct temperatures as indicated in following table.

Thermostat Opening Temperatures ①

Application	Low. Temp.	High Temp.
All Except Pinto	157-164	188-195
Pinto		183-190

① — All temperatures are in °F.

PRESSURE VALVE

Test radiator cap at 12-16 lbs. pressure.

WATER PUMP

Ford Motor Co. recommends replacement of water pump if wear or damage exists. No attempt to overhaul or repair should be made.

MAINTENANCE

Inspect cooling system every 12,000 miles. Drain, clean, and flush system if inspection indicates sufficient dirt or rust to impair cooling ability. Ford recommends that coolant be replaced every 36 months or 36,000 miles.

GENERAL MOTORS

BUICK

CAPACITY (Qts.)					
Application	Non A/C	A/C	Application	Non A/C	A/C
Skyhawk			400" V8 W/HD		
231" V6	13.8	13.8	Cooling	25.4	25.9
Apollo			400" V8 Sta. Wgn.		
250" 6-Cyl.	16.9	17.0	455" V8	19.6	20.0
231" V6	17.1	17.2	455" V8 W/HD		
260" V8	23.0	23.5	Cooling	21.5	21.5
350" V8	18.5	19.2	Electra & Riviera		
Century & Regal			400" V8		
231" V6	15.3	15.3	400" V8 W/HD	23.6	24.4
350" V8	16.9	17.2	Cooling	25.4	25.9
LeSabre & Estate Wagon			400" V8 Sta. Wgn.		
350" V8	16.9	17.2	455" V8	19.6	20.0
400" V8	23.6	24.4	455" V8 W/HD		
			Cooling	21.5	21.5

GENERAL MOTORS (Cont.)

BUICK (Cont.)

THERMOSTAT

Thermostat should initially open at approximately 190°F (231" V6, 350" & 455" V8's) or 195°F (250" 6-Cyl., 260" & 400" V8's) and be fully open at 212°F.

PRESSURE VALVE

All models use a 15 lb. radiator cap.

WATER PUMP

Water pump should be serviced as an assembly only if there is excessive endplay or roughness in bearing operation.

MAINTENANCE

Inspect, drain and clean cooling system every 24 months.

CADILLAC

CAPACITY (Qts.)	
Application	Quantity
Eldorado	25.8
All Others	23.0

THERMOSTAT

Thermostat should initially open at 177-182°F. and be fully open at 202°F.

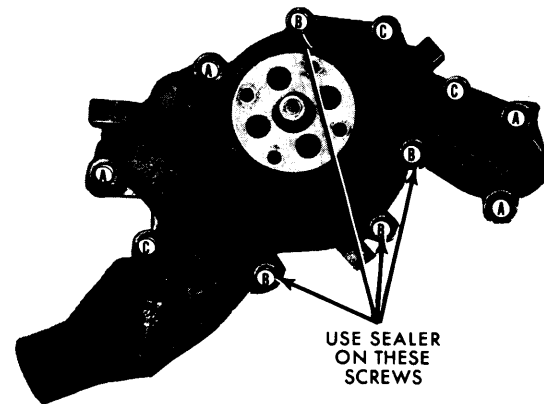
PRESSURE VALVE

All models use a 15 lb. radiator cap. Test at 13.5-16.5 lbs.

WATER PUMP

NOTE – Some water pumps may have a reddish or greenish coolant stain at vent hole below shaft. This is a normal condition and water pump should not be serviced unless it is obviously leaking with the engine running.

Overhaul of water pump is possible only if special tool kit is used. Tool kit and overhaul parts kits are available.



BF6007

WATER PUMP ATTACHING BOLT LOCATIONS

Key	No.	Size	Torque
A	(4)	3/8 - 16 x 1-3/8	22 foot-pounds
B	(4)	1/4 - 20 x 1-1/8	70 inch-pounds
C	(3)	5/16 - 18 x 1-1/4	15 foot-pounds

MAINTENANCE

Inspect, drain, clean and flush cooling system every 24 months.

CHEVROLET

CAPACITY (Qts.)					
Application	Non A/C	A/C	Application	Non A/C	A/C
Vega			Chevrolet		
140" 4-Cyl.	7	7.5	350" V8	16	17
Nova			400" V8	16.5	17.5
250" 6-Cyl.	12.5	13.5	454" V8	23	24
350" V8	15.5	16.5	Monza 2+2		
Chevelle			140" 4-Cyl.	7	7.5
250" 6-Cyl.	12.5	13.5	262" V8	18	19
350" & 400" V8	16	17	Camaro		
454" V8	23	24	250" 6-Cyl.	12.5	13.5
Monte Carlo			350" V8	15.5	16.5
350" V8	16	17	Corvette		
454" V8	23	24	350" V8	18	18

Engine Cooling Systems

GENERAL MOTORS (Cont.)

CHEVROLET (Cont.)

THERMOSTAT

Thermostat applications and testing are as follows:

Application ①	Initial Open	Fully Open
All Exc. 350" Hi Perf.	192-198.....	220
350" Hi Perf.	177-183.....	205

① - All temperatures in °F.

PRESSURE VALVE

All models use a 15 lb. pressure cap. Test at 14-16 lbs.

WATER PUMP

Water pumps are serviced as an assembly only.

MAINTENANCE

Inspect, drain, clean and flush cooling system every 24 months.

OLDSMOBILE

Application	CAPACITY (Qts.)	
	Non A/C	A/C
Starfire		
231" V6 Federal	13.25	13.75
231" V6 Calif.	13.25	14.25
Omega		
250" 6-Cyl.	15.5	19.5
260" & 350" V8	18.5	19.5
Cutlass		
250" 6-Cyl.	17.0	17.0
260" V8	23.5	23.5
260" V8 Y72	26.0	26.0
350" V8	20.0	20.0
350" V8 Y72	22.5	22.5
455" V8	21.0	21.5
455" V8 Y72	23.5	23.5
"88"		
350" V8	20.0	20.0
350" V8 Y72	22.5	22.5
455" V8	21.0	21.0
455" V8 Y72	23.5	23.5
Custom Cruiser & "98"		
400" V8	21.5	22.0
400" V8 Y72	24.0	24.0
455" V8	21.0	21.5
455" V8 Y72	23.5	23.5
Toronado		
455" V8	21.0	21.5
455" V8 Y72	21.5	21.5

THERMOSTAT

Application	Opens	Fully Opens
231" V6 Starfire	190°F	212°F
350" V8 Omega	190°F	212°F
All Others	195°F	222°F

PRESSURE VALVE

All models use a 15 lb. radiator pressure cap. Test at 14-17 lbs. pressure.

WATER PUMP

Water pump on all models is serviced as an assembly only. Install pump assembly on front cover using new gasket and suitable sealer. Install self-tapping bolts and tighten to 13 ft. lbs. and 5/16" bolts to 22 ft. lbs.

MAINTENANCE

Inspect, drain and flush cooling system every 24 months on all models.

PONTIAC

THERMOSTAT

Thermostat should initially open at 192-198°F and be fully open at 220°F.

PRESSURE VALVE

All models use a 15 lb. radiator cap. Test at 14-17 lbs.

WATER PUMP

Water pumps are serviced as an assembly only.

MAINTENANCE

On all models, drain, clean, inspect and flush cooling system every 24 months.

GENERAL MOTORS (Cont.)

PONTIAC (Cont.)

CAPACITY (Qts.)		
Application [Ⓢ]	Non A/C	A/C
Ventura		
250" 6-Cyl.	13.1	13.1
260" V8	22.4	22.9
350" V8	20.0	20.0
Firebird		
250" 6-Cyl.	13.1	13.1
350" V8	22.0	23.3
400" V8 2-Bbl.	22.0	22.5
400" V8 4-Bbl.	21.8	23.3
LeMans & Grand AM		
250" 6-Cyl.	14.7	14.7
350" V8	21.3	23.6
400" V8 2-Bbl.	21.3	21.9
400" V8 4-Bbl.	21.3	23.6
455" V8	19.9	21.6
Grand Prix		
400" V8	21.5	24.0
455" V8	20.2	22.5
Catalina, Bonneville, Grand Ville & Safari		
400" V8	21.6	22.4
455" V8	19.8	22.3
[Ⓢ] — Add 1/10 qt. for vehicles with Man. Trans.		