1966-74 GENERAL MOTORS EXHAUST EMISSION TUNE-UP (Cont.)
CHEVROLET

DESCRIPTION

Refer to EMISSION CONTROL APPLICATIONS Section for individual systems as applied to particular combinations of vehicle model, engine, and transmission.

Several systems are used to control emissions of pollutants. Each system is designed to effect particular vehicle emission situations. In addition, specially calibrated carburetors, distributors, modified combustion chambers and valve timing are used with these systems.

SERVICE PROCEDURES

In addition to servicing an individual emission system or component, all ignition system and/or carburetor adjustments necessary must also be correctly performed.

NOTE — Due to late changes and corrections, always refer to Engine Tune-Up decal in engine compartment before beginning Tune-Up. In event of any conflict between decal specifications and given specifications, decal specifications should prevail.

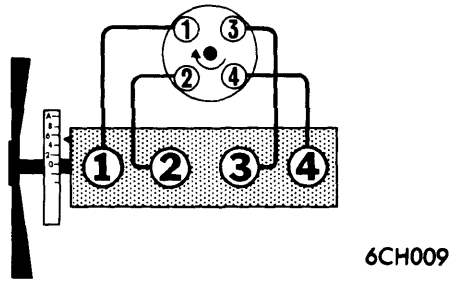
NOTE — To by-pass Starter Interlock, turn ignition "ON" and locate by-pass relay switch in engine compartment. Press and release button on relay. Engine can now be cranked or started. If ignition is turned to "OFF" or "LOCK" position, reactivation of relay button will again be required before engine can be cranked or started.

IGNITION SYSTEM

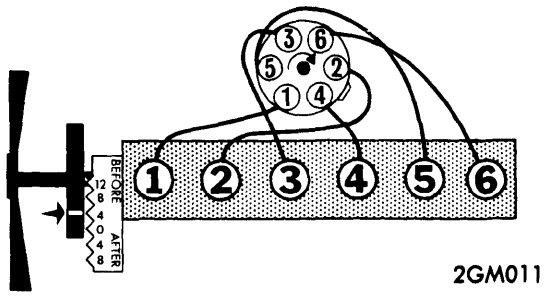
IGNITION TIMING

Refer to appropriate Tune-Up chart in TUNE-UP SPECIFICATIONS Section for ignition system and timing specifications.

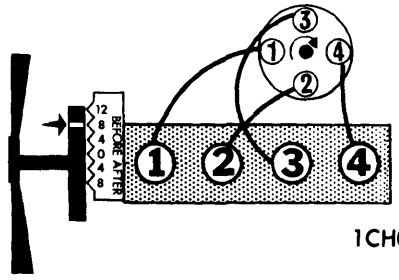
All Engines (1966-74) — Check or adjust ignition timing with distributor cam angle correctly set, idle speed adjusted to specified RPM, and distributor vacuum line disconnected and plugged. After timing is set, reconnect vacuum line and bring idle speed to specified idle RPM.



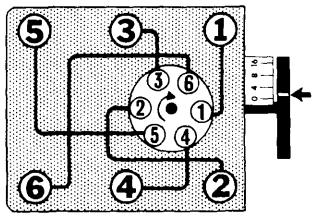
CHEVROLET 153" 4 CYLINDER (1966-70)



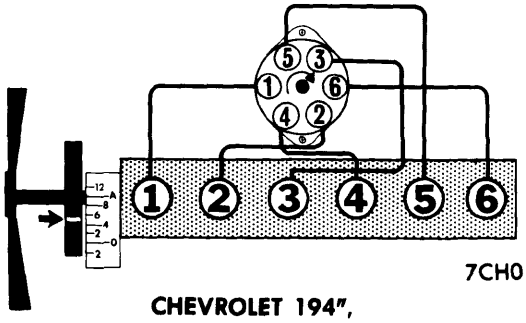
CHEVROLET 250" 6 CYLINDER (1971-74)



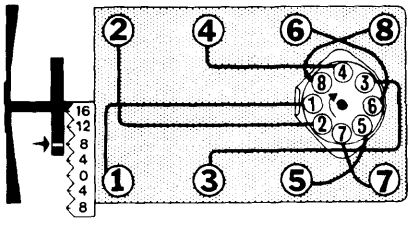
CHEVROLET VEGA 140" 4 CYLINDER (1971-74)



CHEVROLET CORVAIR 164" 6 CYLINDER (1966-69)



CHEVROLET 194", 230" & 250" 6 CYLINDER (1966-70)



CHEVROLET V8, ALL ENGINES (1966-74)

1966-74 GENERAL MOTORS EXHAUST EMISSION TUNE-UP (Cont.)

CHEVROLET (Cont.)

CARBURETION

For service procedures and specifications, refer to following individual carburetor articles in CARBURETION Section, or for idle speed and mixture specifications, refer to appropriate TUNE-UP Chart in TUNE-UP SPECIFICATIONS Section.

CHEVROLET

Application	Carburetor Type
140" 4 Cylinder	
1-Bbl. (1971-74)	Rochester MV
2-Bbl. (1971-72)	Rochester 2GV
2-Bbl. (1973-74)	Holley (Weber) 5210-C
153" 4 Cylinder	
1-Bbl. (1966-70)	Carter YF, Rochester M
194" 6 Cylinder	
1-Bbl. (1966-68)	Carter YF, Rochester BV
230" 6 Cylinder	
1-Bbl. (1966-70)	Carter YF, Rochester BV & MV
250" 6 Cylinder	
1-Bbl. (1966-74)	Carter YF, Rochester BV & MV
283" V8	
2-Bbl. (1966-67)	Rochester 2GV
4-Bbl. (1966-67)	Rochester 4GC
302" V8	
4-Bbl. (1967-69)	Holley 4150
307" V8	
2-Bbl. (1968-74)	Rochester 2GV
327" V8	
2-Bbl. (1966-69)	Rochester 2GC, 2GV
4-Bbl. (1966-69)	Carter AVS, Rochester 4MV, Holley 4150 & 4160
350" V8	
2-Bbl. (1967-74)	Rochester 2GV
4-Bbl. (1967-74)	Holley 4150, Rochester 4MV
396" V8	
2-Bbl. (1969)	Rochester 2GC
4-Bbl. (1966-69)	Rochester 4MV, Holley 4150 & 4160
400" V8	
2-Bbl. (1970-74)	Rochester 2GV
4-Bbl. (1970-74)	Rochester 4MV
402" V8	
4-Bbl. (1970-72)	Rochester 4MV
427" V8	
4-Bbl. (1966-69)	Holley 4150, Rochester 4MV
Three 2-Bbls. (1967-69)	Holley 2300 & 2300C
454" V8	
4-Bbl. (1970-74)	Holley 4150, Rochester 4MV

CORVAIR

Application	Carburetor Type
164" 6 Cylinder	
Two 1-Bbls. (1966-69)	Rochester HV
Four 1-Bbls. (1966-69)	Rochester HV & V

CORVETTE

Application	Carburetor Type
302" V8	
4-Bbl. (1967-69)	Holley 4150
327" V8	
4-Bbl. (1966-68)	Rochester 4MV, Holley 4150 & 4160
350" V8	
4-Bbl. (1969-74)	Rochester 4MV, Holley 4150
396" V8	
4-Bbl. (1966-69)	Rochester 4MV, Holley 4150 & 4160
427" V8	
4-Bbl. (1966-69)	Rochester 4MV, Holley 4150
Three 2-Bbls. (1967-69)	Holley 2300 & 2300C
454" V8	
4-Bbl. (1970-74)	Rochester 4MV, Holley 4150

IDLE SPEED & MIXTURE ADJUSTMENT

NOTE — Correct mixture for emission compliance and idle quality are pre-set by manufacturer. Following procedures should only be used when normal tune-up activities fail to give satisfactory idle performance at specified air/fuel ratio or CO level, or after major carburetor overhaul or component replacement.

All Models (1966-67) — 1) Set parking brake firmly and bring engine to normal operating temperature. Remove air cleaner. Connect suitable tachometer and vacuum gauge to engine, place transmission selector lever into Neutral.

2) For preliminary adjustment, turn idle mixture screws lightly against seat then back out (counterclockwise) 1½ turns. *CAUTION — Do not turn idle mixture screw tightly against seat or damage may result.*

3) With engine running (choke wide open), adjust idle speed screw to specified idle speed with automatic transmission in "D" and manual transmission in Neutral. Adjust idle mixture screw to obtain highest steady vacuum at specified idle speed. *NOTE — On air conditioned vehicles, turn to "ON" position and hold hot idle compensator valve closed while adjusting idle speed and idle mixture screws. On Rochester BV carburetors, the idle mixture screw should be turned out ¼ turn from Lean Drop position.*

4) If necessary, final carburetor adjustment can be made with air cleaner in place. Shut off engine, and remove tachometer and vacuum gauge.

All Models (1968-69) — 1) For preliminary adjustment, turn idle mixture screw until seated lightly, then back out (counterclockwise) three turns. *CAUTION — Do not turn idle mixture screw tightly against seat as damage may result.*

1966-74 GENERAL MOTORS EXHAUST EMISSION TUNE-UP (Cont.)

CHEVROLET (Cont.)

IDLE SPEED & MIXTURE ADJUSTMENT (Cont.)

2) With engine operating at normal temperature (air cleaner installed, pre-heater valve and choke valve wide open), adjust idle speed screw to bring idle to specified RPM with automatic transmission in "D" position and manual transmission in Neutral. Air conditioning is to be turned "OFF" with following exceptions: All 1968 4 and 6 cylinder models with automatic transmission, 1968 325 HP and 350 HP 327" engines with manual transmission, and 1969 390 HP and 400 HP Corvette models, all requiring air conditioners to be in "ON" position.

3) Adjust idle mixture screw to obtain highest steady idle speed. Adjust idle speed screw to recommended RPM on engine compartment tune-up decal. Idle speed adjustment for engines equipped with idle speed solenoid is as follows: Adjust idle speed to specifications by adjusting solenoid plunger hex only. Disconnect wire at solenoid and observe idle speed. De-energizing solenoid allows throttle lever to seat against carburetor idle screw. Adjust carburetor idle screw as necessary to obtain specified RPM.

4) Adjust idle mixture screw to obtain 20 RPM drop (lean fall off point), then adjust mixture screw out (counterclockwise) ¼ turn. Repeat adjustments given for second mixture screw (if applicable). Readjust idle speed screw if necessary to specified idle RPM.

All Models, 153" 4 Cylinder (1970) - 1) Disconnect and plug distributor vacuum line. Set mixture screw to obtain maximum idle RPM.

2) Adjust idle speed screw to obtain 650 RPM (automatic transmission in "D" position) or 750 RPM (manual transmission in Neutral).

3) Adjust mixture screw in (clockwise) to obtain 20 RPM idle drop, then back out screw ¼ turn. Readjust idle speed screw to specified RPM if necessary. Reconnect distributor vacuum line.

All Models, 230" & 250" 6 Cylinder (1970) - 1) Disconnect and plug distributor vacuum advance line. Turn mixture screw in (clockwise) until screw lightly touches seat, then screw out (counterclockwise) four turns.

2) Adjust solenoid screw to obtain 630 RPM (automatic transmission in "D" position) or 830 RPM (manual transmission in Neutral).

3) Adjust mixture screw in (clockwise) to obtain 600 RPM (automatic) or 750 RPM (manual). Disconnect electrical connections to solenoid, set carburetor idle speed to obtain 400 RPM, and connect solenoid. Reconnect distributor vacuum advance line.

All Models, 307" & 400"/265 HP (1970) - 1) Disconnect and plug distributor vacuum advance line. Turn mixture screws in (clockwise) until lightly seated, then turn out (counterclockwise) four turns.

2) Adjust carburetor idle speed screw to obtain 800 RPM with manual transmission in Neutral, and adjust solenoid screw to obtain 630 RPM with automatic transmission in "D" position. Adjust mixture screws equally in (clockwise) to obtain 600 RPM for automatic transmission (in "D") and 700 RPM for manual transmission (in Neutral).

4) On vehicles equipped with automatic transmission, disconnect electrical connections to solenoid, set carburetor idle speed screw to obtain 450 RPM and connect solenoid. Reconnect distributor vacuum line.

All Models, 350"/250 HP (1970) - 1) Disconnect and plug distributor vacuum advance line. Turn mixture screws in (clockwise) until lightly seated, then turn out (counterclockwise) four turns.

2) Adjust solenoid screw to obtain 630 RPM with automatic transmission in "D" position, or 830 RPM with manual transmission in Neutral. Adjust mixture screws equally in (clockwise) to obtain 600 RPM with automatic transmission in "D" position, or 750 RPM with manual transmission in Neutral.

3) Disconnect electrical connections to solenoid, set carburetor idle speed screw to obtain 450 RPM and connect solenoid. Reconnect distributor vacuum advance line.

All Models (Exc. Corvette), 350"/300 HP & 400"/335 HP (1970) - 1) Disconnect and plug distributor vacuum advance line. Turn mixture screws in (clockwise) until lightly seated, then turn out (counterclockwise) four turns.

2) Adjust carburetor idle speed screw to obtain 630 RPM with automatic transmission in "D" position, or 775 RPM with manual transmission in Neutral. Adjust mixture screws equally to obtain 600 RPM with automatic transmission in "D" position, and 700 RPM for manual transmission in Neutral. Reconnect distributor vacuum advance line.

All Models (Exc. Corvette), 396"/400 HP, 400"/400 HP, & 454"/450 HP (1970) - 1) Remove air cleaner, disconnect and plug distributor vacuum advance line. Adjust mixture screws for maximum idle RPM.

2) Adjust carburetor idle speed screw to obtain 700 RPM with automatic transmission in "D" position, or 750 RPM with manual transmission in Neutral. Turn one mixture screw in (clockwise) to achieve 20 RPM drop, then back out screw (counterclockwise) ¼ turn. Repeat for second mixture screw.

3) Readjust carburetor idle speed screw to 700 RPM with automatic transmission in "D" position, or 750 RPM with manual transmission in Neutral.

All Models (Exc. Corvette), 396"/350 HP, 454"/345 HP, 454"/360 HP & 390 HP (1970) - 1) Disconnect and plug distributor vacuum advance line. Turn mixture screws in (clockwise) until lightly seated, then back screws out (counterclockwise) four turns.

2) Adjust carburetor idle screw to obtain 630 RPM with automatic transmission in "D" position. Adjust mixture screws equally to achieve 600 RPM in "D" position.

1966-74 GENERAL MOTORS EXHAUST EMISSION TUNE-UP (Cont.)

CHEVROLET (Cont.)

IDLE SPEED & MIXTURE ADJUSTMENT (Cont.)

3) With manual transmission in Neutral, adjust carburetor idle speed screw to obtain 700 RPM. Turn one mixture screw in (clockwise) until idle speed drops 40 RPM. Regain 700 RPM idle by readjusting carburetor idle speed screw. Turn in other mixture screw until idle speed again drops 40 RPM. Regain 700 RPM by adjusting carburetor idle speed screw.

4) Reconnect distributor vacuum advance line on both automatic transmission and manual transmission vehicles.

Corvette Models Only (1970) – 1) With engine at normal operating temperature, choke valve open, air cleaner damper door fully open (if applicable) and air conditioner "OFF" (except 427"/390 HP & 400 HP), set parking brake firmly and adjust idle speed and mixture to attain idle speed as given in specifications.

2) 427"/390 HP & 400 HP models with manual transmission and air conditioning require following adjustments; turn air conditioner "OFF" and disconnect idle-stop solenoid. Set mixture screws to obtain maximum idle RPM and adjust carburetor idle speed screw to achieve 550 RPM with transmission in Neutral. Adjust each mixture screw to give a 20 RPM drop, then back screws out (counterclockwise) ¼ turn each. Turn "ON" air conditioner and reconnect idle-stop solenoid. Adjust solenoid to give 1000 RPM with transmission in Neutral.

3) 427"/390 HP & 400 HP models with automatic transmission and air conditioning require following adjustments; turn air conditioning "ON", set mixture screws to obtain maximum idle RPM and adjust idle-speed solenoid to obtain 650 RPM with automatic transmission in "D" position. Adjust each mixture screw in (clockwise) to achieve a 20 RPM drop, then back each screw out (counterclockwise) ¼ turn. Readjust idle-speed solenoid screw (if necessary) to give 650 RPM with transmission still in "D" position. Disconnect solenoid electrical connections, and set carburetor idle speed screw for 500 RPM, and connect solenoid.

4) 427"/430 HP & 435 HP models, both automatic and manual transmission utilize following procedure; set mixture screws to obtain maximum idle RPM, and adjust carburetor idle speed screw (on manual transmission) or idle-speed solenoid screw (on automatic transmission) to 750 RPM for 430 HP automatic transmission and 1000 RPM for 430 HP manual transmission, or 750 RPM for 435 HP models with either transmission. Disconnect solenoid at electrical connection and set carburetor idle speed to 500 RPM, reconnect solenoid. Readjust, if necessary, carburetor idle speed screw on manual transmission models, or idle-speed solenoid screw on automatic transmission models to obtain specified RPM.

Corvette Idle Speed Specifications (1970)

Application	Auto. Trans.	Man. Trans.
350"/300 HP	600	700
350"/350 HP & 370 HP		750
427"/390 HP	600	800
427"/400 HP	600	750
427"/430 HP	750	1000
427"/435 HP	750	750

All Models (1971) – 1) Disconnect and plug vacuum advance hose at distributor. Bring engine to normal operating temperature, stop engine and remove limiter caps from carburetor, then turn mixture screws out (counterclockwise) four full turns from a lightly seated position.

2) Start engine, and with automatic transmission in "D" position or manual transmission in Neutral, adjust idle stop screw to obtain initial idle RPM. Turn each idle mixture screw in (clockwise) equally to gain final idle RPM.

3) Use suitable CO meter to adjust idle mixture. Reconnect vacuum advance hose to distributor, and install new plastic limiter caps.

NOTE – On all Vega 4 cylinder engines, Transmission Controlled Spark solenoid should be disconnected when setting initial idle speed and mixture.

CAUTION – If Combination Emission Control Valve (solenoid) is used to set engine idle, or is not adjusted to specified limits, a decrease in braking by engine may result, plus vehicle may not meet emission standards.

Idle Speed Specifications (1971)

Engine	Initial Idle RPM	Final Idle RPM	% CO at Idle
140"			
Auto. Trans.	750	550	2.0
Man. Trans.	730	700	2.0
250"			
Auto. Trans.	530	500	1.0
Man. Trans.	625	550	1.0
307" & 350" 2-Bbl.			
Auto. Trans.	580	550	0.5
Man. Trans.	700	600	0.5
350" 4-Bbl.			
Auto. Trans.	580	550	0.5
Man. Trans.	675	600	0.5
400" 2-Bbl.			
Auto. Trans.	580	550	0.5
Man. Trans.	700	600	0.5
402" 4-Bbl.			
Auto. Trans.	630	600	1.0
Man. Trans.	675	600	1.0
350" Performance Package			
All Models	①	700	②
350" Special High Performance			
All Models	①	700	②
454" High Performance			
Auto. Trans.	630	600	1.0
Man. Trans.	675	600	1.0
454" Special High Performance			
All Models	①	700	②

① – Applications have Air Injection Reactor system and do not have mixture screw limiter caps. Idle adjustment is ¼ turn to rich from lean roll on mixture screws.

② – Engines equipped with Air Injection Reactor system do not have limiter caps on mixture screws. Idle adjustment is ¼ turn from lean roll on mixture screws.

1966-74 GENERAL MOTORS EXHAUST EMISSION TUNE-UP (Cont.)

CHEVROLET (Cont.)

IDLE SPEED & MIXTURE ADJUSTMENT (Cont.)

All Models (1972) – *NOTE – After carburetor overhaul, throttle body replacement, mixture needle part replacement, or limiter cap and needle removal, it will be necessary to perform a preliminary idle speed and mixture adjustment, and then a final curb idle speed adjustment. Both procedures are as follows:*

Preliminary Idle Speed and Mixture Adjustment

Chevrolet, All Models (1972) – Adjustments are to be made with air conditioning "OFF", air cleaner installed, engine at normal operating temperature, choke fully open, automatic transmission in "D" position or manual transmission in Neutral. Disconnect and plug distributor vacuum advance hose. Disconnect fuel tank line from vapor canister. *NOTE – On Corvette models, do not disconnect this line, remove gas cap.* Proceed as follows:

All Models (except Vega) – 1) Turn mixture screws four full turns from lightly seated position. Adjust idle stop solenoid or carburetor idle speed screw to obtain initial idle RPM as specified.

2) Equally adjust mixture screws in (clockwise) to lean position, or ¼ turn rich (counterclockwise) when specified, to obtain final idle RPM. Reconnect distributor vacuum advance hose and fuel tank line to vapor canister. Install new limiter caps.

Vega, Manual Transmission – 1) Turn mixture screw four full turns out from a lightly seated position. With idle stop solenoid de-energized, adjust idle speed screw to obtain specified initial idle RPM.

2) Adjust mixture screws in (clockwise) to lean mixture to obtain final idle RPM. Reconnect and energize solenoid wire and adjust by turning solenoid plunger to obtain 850 RPM for 1-Bbl. carburetor models (1200 RPM for California 1-Bbl. models) and 1200 RPM on all 2-Bbl. carburetor applications. Reconnect distributor vacuum advance line, and fuel tank line to vapor canister. Install new limiter caps.

Vega, Automatic Transmission – 1) Turn mixture screws four full turns from lightly seated position. With idle stop solenoid energized, adjust idle stop solenoid to obtain specified initial idle RPM.

2) Equally adjust mixture screws in (clockwise) to lean mixture and obtain final idle RPM specifications. Install new limiter caps. Reconnect distributor vacuum advance line and fuel tank line to vapor canister.

Preliminary Idle Speed Specifications

Engine	① Initial Idle RPM	Final Idle RPM
140"		
All Models	720	② 700
250"		
Auto. Trans.	630	600
Man. Trans.	800	700
307"		
Auto. Trans.	650	600
Man. Trans.	1000	900

Preliminary Idle Speed Specifications (Cont.)

Engine	① Initial Idle RPM	Final Idle RPM
350" 2-Bbl.		
Auto. Trans.	650	600
Man. Trans.	1050	900
350" 4-Bbl. (Rochester)		
Auto. Trans.	630	600
Man. Trans.	1000	900
350" 4-Bbl. (Holley)		
Auto. Trans.	700	700
Man. Trans.	900	900
400"		
All Models	650	600
402" & 454"		
Auto. Trans.	600	600
Man. Trans.	750	750

① – Vehicles with Air Injection Reactor have idle Adjustment of ¼ turn to rich from lean roll using mixture screw.
② – 800 RPM on air conditioned models.

Final Curb Idle Speed Adjustment

After completing adjustments as outlined in Preliminary Mixture and Idle Speed section, proceed with final curb idle speed adjustments as follows:

4 Cylinder Models (1972) – 1) Disconnect electrical connection at idle stop solenoid. With solenoid de-energized, adjust idle speed screw on low step of cam to obtain low idle speed RPM as specified.

2) Make sure dwell and timing are correct. Reconnect solenoid, open throttle momentarily and adjust solenoid plunger screw to obtain specified curb idle speed RPM with solenoid energized.

4 Cylinder Curb Idle Specifications

Application	Low Idle Speed RPM	Curb Idle Speed RPM
1-Bbl. Carburetor		
Auto. Trans.	550	① 700
Man. Trans.	① 550	② 850
2-Bbl. Carburetor		
Auto. Trans.	550	① 700
Man. Trans.	① 700	1200

① – 800 RPM with air conditioner.
② – 1200 RPM on California vehicles.

6 Cylinder Models (1972) – *CAUTION – During adjustment, do not turn solenoid more than one complete turn without first disconnecting electrical wiring.* 1) Turn solenoid clockwise to increase RPM, counterclockwise to decrease RPM. Set to Solenoid Energized specification.

2) Disconnect solenoid electrical wiring. Using suitable Allen wrench, turn screw located on end of solenoid to obtain Solenoid De-Energized RPM.

Solenoid RPM Specifications

Application	Solenoid Energized	Solenoid De-Energized
250"		
Auto. Trans.	600	450
Man. Trans.	700	450

1966-74 GENERAL MOTORS EXHAUST EMISSION TUNE-UP (Cont.)

CHEVROLET (Cont.)

IDLE SPEED & MIXTURE ADJUSTMENT (Cont.)

V8 Models (All 1972) – 1) With engine running, disconnect electrical wiring at end of idle stop solenoid. With solenoid de-energized, adjust low speed idle screw to low step of cam to obtain 450 RPM (Rochester carburetor) or 500 RPM (Holley carburetor).

2) Set dwell and timing, recheck low idle speed. Reconnect electrical wiring to solenoid. Open throttle momentarily and adjust solenoid plunger screw to achieve specified curb idle speed.

Curb Idle Speed (RPM) Specifications

Application	Automatic Transmission	Manual Transmission
307" & 350" 2-Bbl.	600	900
350" 4-Bbl.		
Rochester Carb.	600	900
Holley Carb.	700	900
400"	600	
402" & 454"	600	750

Chevrolet, All Models (1973) – *NOTE – After carburetor overhaul, throttle body replacement, mixture needle part replacement, or limiter cap and needle removal, it will be necessary to perform a preliminary idle speed and mixture adjustment, and then a final curb idle speed adjustment.*

Preliminary Idle Speed & Mixture Adjustment

Adjustments are to be made with engine at normal operating temperature, air cleaner installed, air conditioner "OFF" (if equipped), choke and air cleaner snorkel duct fully open, and transmission in "D" position if automatic, or Neutral if manual shift. Disconnect and plug distributor vacuum advance hose. Disconnect fuel tank line from vapor canister on all models except Corvette (on Corvette models, remove gas cap). Proceed as follows:

All Models (1973) – 1) Turn mixture screws in (clockwise) until screws lightly contact seat, then back out (counterclockwise) each screw four full turns.

2) Adjust idle stop solenoid or idle speed screw to achieve specified initial idle RPM, then adjust mixture screws in (clockwise) equally to obtain final idle RPM.

3) When idle mixture setting is specified as ¼ turn from lean roll, turn mixture screws equally in (clockwise) to a 20 RPM drop, then back out (counterclockwise) ¼ turn.

4) Install new idle limiter caps, and reconnect distributor vacuum advance hose and fuel tank vapor canister hose (if Corvette, replace gas cap).

Preliminary Idle Speed Specifications

Application	Initial Idle RPM	Final Idle RPM
140"		
Auto. Trans.	800	① 750
Man. Trans.	800	① 700
250"		
Auto. Trans.	630	600
Man. Trans.	750	700

Preliminary Idle Speed Specifications (Cont.)

Application	Initial Idle RPM	Final Idle RPM
307"		
Auto. Trans.	630	600
Man. Trans.	950	900
350" 2-Bbl.		
Auto. Trans.	630	600
Man. Trans.	1000	900
350" 4-Bbl. ②		
Auto. Trans.	620	600
Man. Trans.	920	900
350" 4-Bbl. High Performance ②		
Auto. Trans.	720	700
400"		
Auto. Trans.	630	600
454"		
Auto. Trans.	625	600
Man. Trans.	925	900

① – GT option with air conditioner, set @ 800 RPM.
② – Set mixture ¼ turn from lean roll.

Final Curb Idle Speed Adjustment

After completing adjustments as outlined in Preliminary Idle Speed and Mixture Adjustment section, proceed with final curb idle adjustments as follows:

1-Bbl. Carburetors, All except Vega (1973) – *NOTE – During adjustment, do not turn solenoid more than one complete turn without first disconnecting solenoid wire.* 1) With engine running, turn solenoid clockwise (increase) or counterclockwise (decrease) to achieve specified RPM.

2) De-energize solenoid and set low idle speed RPM to 450 RPM using suitable Allen wrench.

Vega, 1-Bbl. Carburetor (1973) – 1) With engine running, disconnect idle stop solenoid wire. Adjust solenoid low idle speed as specified, using suitable Allen wrench.

2) Set dwell and timing, recheck low speed idle RPM. Reconnect solenoid wire and adjust solenoid plunger by turning complete solenoid body to specified curb idle speed RPM.

2-Bbl. & 4-Bbl. Carburetors, All except Vega (1973) – 1) With engine running, disconnect idle stop solenoid wire. Adjust carburetor low idle, using adjustment screw on low step of cam, to specified RPM.

2) Set dwell and timing and recheck low idle speed RPM. Reconnect solenoid wire. Open throttle momentarily (plunger should extend) and adjust solenoid plunger screw to specified curb idle speed RPM.

2-Bbl. Carburetor, Vega (1973) – 1) With engine running, disconnect idle stop solenoid wire. Adjust carburetor low idle speed screw to gain specified low idle speed RPM.

2) Set dwell and timing, recheck low idle speed RPM. Reconnect solenoid wire. Adjust screw on throttle to specified curb idle speed RPM.

1966-74 GENERAL MOTORS EXHAUST EMISSION TUNE-UP (Cont.)

CHEVROLET (Cont.)

IDLE SPEED & MIXTURE ADJUSTMENT (Cont.)

NOTE — Combination Emission Control Valve adjustment may be applicable to carburetor adjustments being made. Valve is a component of some Controlled Combustion systems and should not be used to set idle speed.

CAUTION — If Combination Emission Control Valve is used to set engine idle, or is adjusted out of limits specified, decreased engine braking and poor performance may result.

Final Curb Idle Speed Specifications

Application	Low Idle Speed RPM	Curb Idle Speed RPM
140"		
Auto. Trans.	① 550	750
Man. Trans.	① 800	② 1000
250"		
Auto. Trans.	500	600
Man. Trans.	500	700
307"		
Auto. Trans.	500	600
Man. Trans.	500	900
350" 2-Bbl.		
Auto. Trans.	400	600
Man. Trans.	400	900
350" 4-Bbl.		
Auto. Trans.	500	600
Man. Trans.	500	900
350" 4-Bbl. High Performance		
Auto. Trans.	③	700
400"		
Auto. Trans.	500	600
454"		
Auto. Trans.	500	600
Man. Trans.	500	900

① — Set at 550 RPM on 2-Bbl. Vega, all vehicles set with solenoid de-engergized.
② — GT option, set at 1200 RPM.
③ — 9.0-1 compression.

TACHOMETER LEAN DROP PROCEDURE (PREFERRED METHOD)

All Models (1974) — 1) Firmly set parking brake and block drive wheels. Disconnect fuel tank vent hose from vapor canister, on Corvette only, remove fuel tank filler cap. Disconnect and plug distributor vacuum advance hose at vacuum advance unit.

2) With engine at normal operating temperature, air conditioning "OFF" (if equipped), place transmission selector lever in "D" (if automatic) or Neutral (if manual shift).

3) Break off tab on mixture cap using suitable tool. Adjust idle RPM to higher of two idle speeds given in Lean Drop Idle Speed specifications, with idle stop solenoid energized and extended.

4) Equally richen (turn counterclockwise) mixture screws until maximum idle speed is achieved. Reset speed if necessary to higher specified idle speed.

5) Equally lean (turn clockwise) mixture screws until lower specified idle speed is obtained (Example: 650/600 RPM). Reconnect fuel tank vent hose and distributor vacuum advance hose. Reinstall fuel tank filler cap on Corvette models.

EXHAUST GAS ANALYZER (ALTERNATE METHOD)

NOTE — CO meter must be capable of accurate low level readings. A suitable meter will have an accuracy of ±2% of full scale reading, and scale divisions of 0.2% or less. Begin with adjustments as outlined in steps one and two of Tachometer Lean Drop Procedure, then continue as follows:

All Models (1974) — 1) Connect CO meter to exhaust system tailpipe. Set curb idle speed to specified idle RPM with idle stop solenoid energized and extended.

2) Record idle CO reading. If CO level is within limits and engine idles smoothly, no further adjustment is needed. If CO level exceeds value shown in specifications, proceed with adjustment.

3) Turn each idle mixture cap clockwise in equal amounts until idle CO is at or below percent shown in specifications. Do not remove limiter caps. Reset curb idle speed (if necessary) with air cleaner in place and idle stop solenoid energized and extended.

4) Reconnect fuel tank vent hose and distributor vacuum advance hose. Install fuel tank filler cap on Corvette models.

Idle Speed and CO Specifications

Application	Curb Idle RPM	Lean Drop Idle Speed RPM	CO Level
140" 1-Bbl. & 2-Bbl., All			
Auto. Trans.	750	800/750	.3%
Man. Trans.	700	800/700	.3%
250" Federal			
Auto. Trans.	600	650/600	.3%
Man. Trans.	850	950/850	.3%
250" Calif.			
Auto. Trans.	600	630/600	.5%
Man. Trans.	850	950/850	.5%
350" & 400" 2-Bbl., All			
Auto. Trans.	600	650/600	.5%
Man. Trans.	900	1000/900	.5%
350" & 400" 4-Bbl., Federal			
Auto. Trans.	600	650/600	.5%
Man. Trans.	900	950/900	.5%
350" & 400" 4-Bbl., Calif.			
Auto. Trans.	600	630/600	.5%
Man. Trans.	900	950/900	.5%
350" 4-Bbl. Z-28, All			
Auto. Trans.	700	730/700	.5%
Man. Trans.	900	950/900	.5%
454" All			
Auto. Trans.	600	630/600	.5%
Man. Trans.	800	850/800	.5%