

1971 Chevrolet 6 Tune-Up

TUNE-UP

ENGINE IDENTIFICATION

Engine Code letters are suffix of Engine Identification Number. Number is stamped on a pad, located at right hand side of cylinder block next to distributor.

Application	Code
250" Man. Trans.	TPT, TPW, TPR, TKH, TPD TPL, TKD, TRB, TPJ, TBB
250" Man. Trans. LPG	TPX, TKJ
250" Auto. Trans.	TPY, TPS, TTK, TPH, TKG, TPK
292" Man. Trans.	TKL
292" Man. Trans. LPG	TKP
292" Auto. Trans.	TKR, TKS

MODEL IDENTIFICATION

VEHICLE IDENTIFICATION NUMBER

A combination Vehicle Identification Number and Rating Plate is used on all vehicles. Plate is attached to inside face of dash panel on P-20 and P-30 models, on air intake plenum panel on cowl models and on left hand door pillar on all remaining models.

CS131F100043

- First Digit - Truck Type.
- Second Digit - Engine Type.
- Third Digit - GVW Range.
- Fourth Digit - Model Type.
- Fifth Digit - Model Year 1 (1971).
- Sixth Digit - Assembly Plant.
- Remaining Digits - Sequence Built Number.

TUNE-UP NOTES

► **IDLE SPEED ADJUSTMENT CAUTION** - Procedures and specifications for idle speed adjustment must be followed exactly as outlined. See "Hot (Slow) Idle RPM" under Tune-Up.

NOTE - For other items affecting Tune-Up, see CARBURETION Section or EMISSION CONTROL Section.

NOTE - Due to changes and corrections, always refer to Engine Tune-Up Decal in engine compartment before attempting tune-up. In the event of a conflict between specifications given in this manual and decal specifications, decal specifications prevail.

COMPRESSION PRESSURE

With air cleaner removed and throttle and choke wide open, crank engine through at least four compression strokes. Compression should be 130 psi with a maximum variation of 20 psi between cylinders.

VALVE TAPPET CLEARANCE

Hydraulic Lifters One turn down from zero lash.

VALVE ARRANGEMENT

E-I-I-E-E-I-I-E-E-I-I-E

SPARK PLUGS

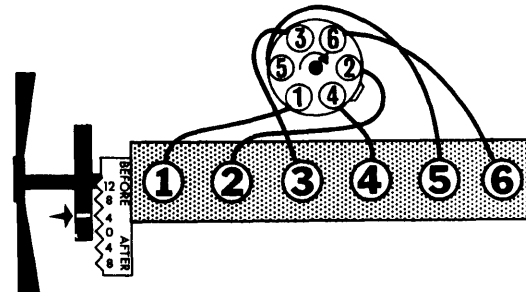
Gap035"
Torque..... 25 ft. lbs.

Spark Plug Type

Application	AC No.
250"	R46T
292"	R44T

DISTRIBUTOR

Point Gap	
New019"
Used.....	.016"
Cam Angle.....	31-34°
Breaker Arm Spring Tension	19-23 ozs.
Condenser Capacity18-.23 mfd.



1CHA001

FIRING ORDER & TIMING MARKS

IGNITION TIMING

Ignition timing is checked or adjusted with engine at normal operating temperature, distributor vacuum line disconnected and plugged, manual transmission in Neutral, automatic transmission in "D" and engine at normal idle.

Application	Timing
All	4° BTDC

HOT (SLOW) IDLE RPM

10 Series Gas, All - Disconnect and plug distributor vacuum line. Disconnect "Fuel Tank" line from Evaporation Emission canister. Idle speed is adjusted with engine at normal operating temperature, choke valve open, parking brake on, drive wheels blocked, manual transmission in Neutral or automatic transmission in "D". Adjust idle speed screw to obtain an engine speed of 550 RPM (manual transmission) and 500 RPM (automatic transmission). **NOTE - DO NOT attempt to adjust CEC solenoid or idle mixture screw.**

10 Series LPG, All - Disconnect and plug distributor vacuum line. Disconnect "Fuel Tank" line from Evaporation Emission canister. Idle speed is adjusted with engine at normal operating temperature, choke valve open, parking brake on, drive wheels blocked and transmission in neutral. Adjust carburetor idle speed screw to obtain an engine speed of 550 RPM. **NOTE - DO NOT attempt to adjust CEC solenoid or idle mixture screw.**

TUNE-UP (Cont.)

20 & 30 Series Gas, All - Disconnect and plug distributor vacuum line. Idle speed is adjusted with engine at normal operating temperature, choke valve open, parking brake on, drive wheels blocked, manual transmission in Neutral, automatic transmission in "D" and air conditioning "ON". Turn mixture screws lightly into stop then back out four turns. Adjust carburetor idle speed screw to obtain an engine speed of 600 RPM (manual transmission) and 530 RPM (automatic transmission). Adjust mixture screw in to obtain an engine speed of 550 RPM (manual transmission) and 500 RPM (automatic transmission).

20 & 30 Series LPG, All - Disconnect and plug distributor vacuum line. Idle speed is adjusted with engine at normal operating temperature, choke valve open, parking brake on, drive wheels blocked and transmission in Neutral. Adjust carburetor idle speed screw to obtain an engine speed of 600 RPM. Adjust idle mixture screw in to obtain an engine speed of 550 RPM.

COLD (FAST) IDLE RPM

Fast idle RPM is checked or adjusted with engine at normal operating temperature, choke valve open and transmission in Neutral. Position fast idle lever on highest step of fast idle cam and bend lever to obtain an engine speed of 2400 RPM.

CHOKE ADJUSTMENT

With air cleaner removed, check that choke valve and rod move freely. Disconnect choke rod at choke lever. Hold choke valve in fully closed position and pull choke rod upward to end of travel. The bottom of choke rod should be even with top of hole on choke lever. To adjust, bend choke rod at offset until it freely enters hole in choke lever. Reconnect rod and install air cleaner.

FUEL PUMP PRESSURE & VOLUME

Pressure (At Idle)..... 3-4.5 psi
Volume (At Cranking Speed) 1 pt. in 30-45 sec.

MANIFOLD HEAT CONTROL VALVE

Check valve for freedom of movement and lubricate with a suitable solvent (GM Manifold Heat Control Valve Solvent).

EMISSION CONTROL

See appropriate article in EMISSION CONTROL Section.

IGNITION

DISTRIBUTOR

Application	Delco Part No.	
	Man. Trans.	Auto. Trans.
"G" Models 250"	1110465	1110466
All Others 250"	1110489	1110489
All 292"	1110486	1110486

Other Data & Specifications - See Delco Distributors in ELECTRICAL Section.

IGNITION COIL

Application	Delco Part No.
All	1115202
Resistance	Ohms @ 75°F
Primary	1.41-1.65
Secondary	3,000-20,000
Ballast Resistor Loom	1.8

CARBURETION

CARBURETORS

Rochester Model MV 1-Bbl.

Application	Carb. No.
250" G-10	7040007
250" 10 Series	7041021
292" 10 Series	7041022
250" 20 & 30 Series	7041025
292" 20 & 30 Series	7041026

Other Data & Specifications - See Tune-Up and Rochester Carburetors in CARBURETION Section.

ACCELERATOR LINKAGE ADJUSTMENT

All (Exc. "G" Models) - Throttle linkage is cable type and is nonadjustable. Inspect all components for wear or damage and replace as necessary.

"G" Models - With accelerator pedal depressed to floor, disconnect accelerator rod at pedal rod. Rotate bellcrank mounted on manifold until carburetor throttle valve is wide open. Adjust accelerator rod at swivel until it freely enters pedal rod and reconnect. Depress accelerator pedal to ensure linkage works freely.

DOWNSHIFT LINKAGE ADJUSTMENT

Powerglide - Disconnect throttle rod swivel at throttle lever or dash lever. Disconnect throttle valve rod at throttle lever. Position carburetor in wide open position and push throttle valve rod rearward and adjust swivel until it freely enters hole in throttle lever. Connect swivel to throttle lever and reconnect return spring.

DETENT CABLE ADJUSTMENT

Turbo Hydra-Matic 350 Trans. - Remove air cleaner and loosen detent cable clamp. Adjust accelerator linkage if necessary. With choke valve wide open, position throttle lever in wide open position and pull detent cable rearward until internal stop in transmission is felt. Cable must be pulled through transmission detent to reach wide open position. Tighten cable clamp and check linkage for correct operation.

DETENT SWITCH ADJUSTMENT

Turbo Hydra-Matic 400 Trans. - Adjust accelerator linkage if necessary. Rotate throttle lever to wide open position and adjust switch on mount until .05" clearance is obtained between switch and lever.

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ELECTRICAL

BATTERY

12 Volt — Negative Ground.

Application	Delco Part No.	Cranking Power Watts @ 0°F
"G" Models.....	Y-86.....	2300
250" All Others.....	Y-88.....	2350
292" All.....	R-88.....	2900
Optional All.....	R-88W.....	3750

STARTER

Application	Delco Part No.
250" Man. Trans. "G" Models.....	1108367
250" Man. Trans. All Others.....	1108368
250" Auto. Trans. (Powerglide).....	1108365
250" Auto. Trans. (Turbo Hydra-Matic).....	1108367
292" Man. Trans.	1108360
292" Auto. Trans.	1108361
Optional For Starter No. 1108360, 68.....	1108372
Optional For Starter No. 1108365.....	1108363

Other Data & Specifications — See *Delco Starters* in *ELECTRICAL* Section.

ALTERNATOR

Application	Amps.	Delco Part No.
All, Standard.....	37.....	1100566
"C" & "K" Models ^①	37.....	1100838
P-20 & P-30.....	42.....	1100567
All, Optional ^②	42.....	1100842

① — With Power Steering.

② — Except "G" Models.

Other Data & Specifications — See *Delco Alternators* in *ELECTRICAL* Section.

ALTERNATOR REGULATOR

Application	Delco Part No.
All.....	1119515

Other Data & Specifications — See *Delco Alternator Regulators* in *ELECTRICAL* Section.

ENGINE

INTAKE MANIFOLD TIGHTENING

Tighten center clamp bolts to 30 ft. lbs. and end bolts to 20 ft. lbs.

BELT ADJUSTMENT

Tension (Lbs.) Using Strand Tension Gauge

Application	New Belt	Used Belt
Water Pump.....	125±5.....	75±5
Power Steering.....	125±5.....	75±5
Air Conditioning.....	140±5.....	90±5

FILTERS & CLEANERS

Filter or Cleaner	Service Interval (Miles)
Oil Filter.....	Replace 12,000
Air-Cleaner	
Element Type.....	①Check 12,000
Oiled Element Type.....	①Check 12,000
Polyurethane Wrap Type.....	Clean 12,000
Oil Bath Type.....	②Clean 12,000
Crankcase Ventilation Filter.....	③Clean 12,000
PCV Valve.....	Replace 24,000
TH-400 Sump Strainer.....	Replace 24,000
Fuel Filter.....	Replace 24,000
Distributor Cam Lubricator.....	④Replace 24,000

① — Replace if dirty, do not clean. Rotate 180° at 12,000 miles and replace at 24,000.

② — Clean and replace with SAE 50 oil.

③ — Located in air cleaner, if equipped. Replace at 24,000 miles.

④ — Rotate 180° at 12,000 miles.

COOLING CAPACITIES

Application	①Quantity
250"	
"G" Models.....	12 qts.
"C" & "K" Models	
Man. Trans.	11.2 qts.
Auto. Trans.	11.9 qts.
P-10.....	11.5 qts.
P-20 & 30	
Man. Trans.	11.5 qts.
Auto. Trans.	12.6 qts.
292"	
"C" & "K" Models	
Man. Trans.	11.6 qts.
Auto. Trans.	12.3 qts.
P-20 & 30	
Man. Trans.	12.1 qts.
Auto. Trans.	13 qts.

① — Add one quart if equipped with heater, heavy duty radiator or air conditioning.

ENGINE (Cont.)

CAPACITIES (EXCEPT COOLING)	
Application	Quantity
Crankcase	
250"	① 4 qts.
292"	① 5 qts.
Auto. Trans.	
Powerglide	② 9 qts.
TH 350	10 qts.
TH 400	9.5 qts.
Man. Trans.	
3-Speed	3.5 pts.
4-Speed	7 pts.
Four-Wheel Drive	
Transfer Case	5 pts.
Power Take-Off	1 pt.
Drive Axles	③
Fuel Tank	
"G" Models	④ 24.5 gals.
Panel, Suburban & Blazer	
10 Series	20.5 gals.
20 Series	23.5 gals.
"C" & "K" Models, All Others	
10 Series	20.2 gals.
20 & 30 Series	21 gals.
P-10	17 gals.
P-20 & 30	30 gals.

① - Add one quart with filter change.
 ② - Add one quart if equipped with oil cooler.
 ③ - Fill to bottom of filler plug hole.
 ④ - 22 gals. if equipped with anti-overfill.