

1974 Chevrolet 6 Tune-Up

TUNE-UP

ENGINE IDENTIFICATION

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

Application	Code
250" Man. Trans.	TAB, TAC, TAD, TAH, TAK TAL, THM, TAT, TAU, TBA TBX, TBK, TBH
250" Auto. Trans.	TAJ, TBL, TAR, TAS, TAW TAA, TAZ, TBC, TBD
250" LPG	TBM
292" Man. Trans.	THU, THW
292" Auto. Trans.	THS, THT
292" LPG	THD

MODEL IDENTIFICATION

A combination Vehicle Identification Number and Rating Plate is used on all vehicles. Plate is attached to toe and dash panel on all "P" models (except Motor Home Chassis) and on left hand door pillar on all remaining models. Plate location on Motor Home Chassis must be supplied by body builder.

CCQ134F10001

- First Digit** - Make (Chevrolet Division).
- Second Digit** - Truck Type.
- Third Digit** - Engine Designation.
- Fourth Digit** - Truck Series.
- Fifth Digit** - Model Type.
- Sixth Digit** - Model Year 4 (1974).
- Seventh 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.

NOTE - For Tune-Up purposes only, Light Duty (L/D) will refer to all 10 series, C-20 Suburban, K-20 Suburban, G-20 Sportvan and G-30 Sportvan. Heavy Duty (H/D) will refer to all remaining models.

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

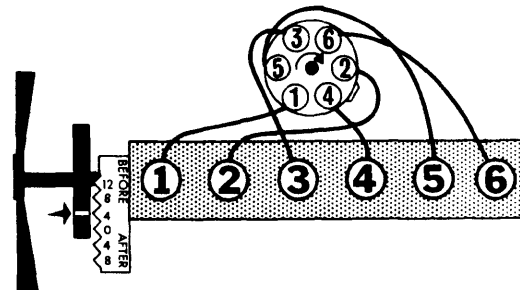
Gap035"
Torque..... 15 ft. lbs.

Spark Plug Type

Application	AC No.
250"	R46T
292"	R44T

DISTRIBUTOR

Point Gap
New019"
Used016"
Cam Angle..... 31-34°
Breaker Arm Spring Tension 19-23 ozs.
Condenser Capacity18-.23 mfd.



4CHA001

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.

Ignition Timing Specifications

Application	Timing
250" Light Duty All, Federal	8° BTDC
250" Light Duty, California Man. Trans.	①
Auto. Trans.	8° BTDC
250" Heavy Duty, All	6° BTDC
292" Heavy Duty, All	8° BTDC

① - Not available.

TUNE-UP (Cont.)

HOT (SLOW) IDLE RPM

Idle speed is checked or adjusted with engine at normal operating temperature, air cleaner installed, choke valve open, distributor vacuum line disconnected and plugged, "Fuel Tank" line to vapor canister disconnected, air conditioning off, manual transmission in Neutral and automatic transmission in "D". Adjust idle speed solenoid to obtain specified idle speed RPM.

Idle Speed (RPM)

Application	Man. Trans.	Auto. Trans.
250" Light Duty	850	600
250" & 292" Heavy Duty	600	600

IDLE MIXTURE ADJUSTMENT

For both Exhaust Analyzer and Lean Drop Idle procedures, Hot (Slow) Idle RPM and Ignition Timing must be correctly adjusted. See appropriate article in this Section. Idle mixture is checked or adjusted with engine at normal operating temperature, distributor vacuum line disconnected and plugged, "Fuel Tank" line from vapor canister disconnected, air cleaner installed, air conditioning off, manual transmission in Neutral, automatic transmission (light duty vehicles) in "D" and automatic transmission (heavy duty vehicles) in "P".

EXHAUST ANALYZER PROCEDURE (PREFERRED)

Connect a suitable CO meter to exhaust system and check CO level. If CO level exceeds specified CO percentage, turn mixture screw clockwise until CO level is at or below adjusted CO percentage specifications.

CO Level Specifications

Application	CO %	Adjusted CO %
250"		
Light Duty	.3	.3 or below
Heavy Duty	2.0	2.0 or below
292" Heavy Duty	.3	.3 or below

LEAN DROP IDLE PROCEDURE (ALTERNATE)

Using a pair of needle nose pliers, break tab off of mixture screw limiter cap. With idle speed solenoid energized and extended, adjust idle speed to higher of two RPM specifications. Back out (richen) mixture screw until maximum idle speed is obtained. Readjust idle speed solenoid to higher RPM specification if necessary. Turn in (lean) mixture screw until lowest of two RPM specifications is obtained.

DISTRIBUTOR

Application	Delco Part No.
250"	
10 Series, Exc. "G" Models	1110499
G-10	1110500
20 & 30 Series, Exc. "G" Models	1110520
G-20 & G-30	1110525
292" All	1110518

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

Idle Mixture RPM

Application	Man. Trans.	Auto. Trans.
250" Light Duty		
Federal	950/650	650/600
California	950/850	①
250" & 292" Heavy Duty	700/600	700/600

① - Not available.

COLD (FAST) IDLE RPM

Fast idle is checked or adjusted with engine at normal operating temperature, choke valve open, transmission in Neutral and fast idle lever on highest step of fast idle cam. Disconnect and plug distributor vacuum line on all vehicles with manual transmission. Disconnect and plug EGR vacuum line on all vehicles. Bend fast idle tank on throttle lever to obtain specified fast idle RPM.

Fast Idle Speed (RPM)

Application	RPM
All, Light Duty	1800
All, Heavy Duty	2400

CHOKE ADJUSTMENT

With air cleaner removed, check that choke and rod move freely. Disconnect choke rod from choke lever and hold choke valve closed. With rod pushed down to bottom of travel, top of rod should be even with bottom of hole in choke lever. To adjust, bend rod at offset.

FUEL PUMP PRESSURE & VOLUME

Pressure (At Idle)	3.5-4.5 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

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

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CARBURETION

CARBURETORS

Rochester Model MV 1-Bbl.

Application	Rochester Carb. No.	
	Man. Trans.	Auto. Trans.
250"		
Light Duty, Federal.....	7044021	7044022
Light Duty, Calif.	7044321	①
Heavy Duty, All	7044025	7044025
292" Heavy Duty, All.....	7044026	7044026

① — Not available.

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

ACCELERATOR LINKAGE ADJUSTMENT

Throttle linkage is cable type and is nonadjustable. Inspect all components for wear or damage and replace as necessary.

DETENT CABLE ADJUSTMENT

Turbo Hydra-Matic 350 Trans. — Remove air cleaner and pry up on each side of snap lock to release it. Compress locking tabs and disconnect lock assembly from bracket. Position carburetor in wide open position and pull rearward on cable housing until internal stop on transmission is felt. With cable and throttle in this position, push snap lock on cable until it is flush with top. Install air cleaner.

DETENT SWITCH ADJUSTMENT

Turbo Hydra-Matic 400 & 475 Trans. — Adjustment is required only if switch is removed or replaced. Install switch and press plunger as far forward as possible. This will preset switch for adjustment. Switch will now adjust itself when accelerator pedal is depressed to wide open position.

ELECTRICAL

BATTERY

12 Volt — Negative Ground.

Application	Delco Part No.	Cranking Power Watts @ 0°F
250" Standard	Y87	2300
292" Standard	R89	2900
All Optional	R89W	3750

STARTER

Application	Delco Part No.
250" "G" Models	
Man. Trans.	1108520
Auto. Trans.	1108367
250" C & K-10 & 20	
Man. Trans.	1108400
Auto. Trans.	1108479
250" C & P-30	1108480
292" All, Exc. P-30.....	1108427
292" P-30	1108360

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

ALTERNATOR

Application	Amps.	Delco Part No.
250"		
Standard.....	37	1110497
Optional.....	42	1102346
Optional.....	61	1102347
292"		
Standard.....	42	1102382
Optional.....	61	1102383
Optional.....	61	1102347

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

ALTERNATOR REGULATORS

Delco — Nonadjustable, integral with alternator.

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

ENGINE

INTAKE MANIFOLD TIGHTENING

Tighten outer bolts to 30 ft. lbs. then tighten inner nuts to 30 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

COOLING CAPACITIES

Application	Quantity
"G" Models	
W/Heater	13.0 qts.
W/O Heater	12.0 qts.
"C" & "K" Models	
250" Man. Trans.	12.2 qts.
250" Auto. Trans.	12.5 qts.
292"	12.6 qts.
292" Heavy Duty Cooling	13.3 qts.
P-10.....	12.0 qts.
P-20 & P-30	
250"	12.5 qts.
292"	13.1 qts.

ENGINE (Cont.)

CAPACITIES (EXCEPT COOLING)	
Application	Quantity
Crankcase	
250"	① 4 qts.
292"	① 5 qts.
Automatic Transmission	
TH-350	
Refill	5.0 pts.
Total	10.0 qts.
TH-400	
Refill	7.5 pts.
Total	9.5 qts.
Manual Transmission	
"G" Models	5.0 pts.
3-Speed	3.5 pts.
465 4-Speed	7.0 pts.
Transfer Case	
Conventional	5.0 pts.
Full Time	8.25 pts.
Power Take-Off	1.0 pt.
Drive Axles	②
Fuel Tank	
"G" Models	
Standard	21 gals.
Optional	36 gals.
"C" & "K" Models (Exc. Short W.B., Suburban & Blazer)	
Main Tank, Right Side	20 gals.
Auxiliary Tank, Left Side	20 gals.
"C" & "K" Models, Short W.B.	16 gals.
"C" & "K" Models, Suburban	
Standard	31 gals.
Optional	40 gals.
Blazer	
Standard	24 gals.
Optional	30 gals.
P-10	22 gals.
P-20 & P-30	30 gals.

① - Add one quart with filter change.
② - Fill to bottom of filler hole.

FILTERS & CLEANERS	
Filter or Cleaner	Service Interval (Miles)
Oil Filter	
Motor Home	Replace 6,000
All Others	Replace 12,000
Air Cleaner	
Element Type	Replace 12,000
Polyurethane Wrap Type	Clean 24,000
Oil Bath Type	① Check 12,000
Crankcase Ventilation Filter	② Replace 24,000
PCV Valve	Replace 24,000
TH-400 Sump Strainer	Replace 24,000
Fuel Filter	
Carburetor Inlet Type	Replace 12,000
In-Line Filter Type	Replace 24,000
Distributor Cam Lubricator	Replace 24,000
Fuel Evap. Canister Filter	Replace 24,000

① - Check oil level and add SAE 50 oil if necessary.
② - Located in air cleaner.