

TUNE-UP

ENGINE IDENTIFICATION

Engine Code letters are suffix of Engine Identification Number. Number is stamped on pad on front right hand side of cylinder block.

Application	Code
307" Man. Trans.	TDA, TDB, TRA, TAD, TJR, TJT, TJX, TDT, TAK
307" Auto. Trans.	TAL, TDL, TDP, TAH, TAJ, TJP, TJS, TLP, TDX, TJW
350" Man. Trans.	TBL, TFH, TDD, TDG, TRK, TRH, TLD, TLW, TFA, TDW, TRD
350" Man. Trans. LPG	TDH
350" Auto. Trans.	TFD, TFJ, TDJ, TDR, TRL, TRJ, TLX, TFB, TDY, TRG
350" Auto. Trans. LPG	TDK
402" Man. Trans.	TKA, TKW, TKM
402" Auto. Trans.	TKB, TKX, TKM

MODEL IDENTIFICATION

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

TCS132F000001

- First Digit - Make (GMC Division).
- Second Digit - Truck Type.
- Third Digit - Engine Designation.
- Fourth Digit - Truck Series.
- Fifth Digit - Model Type.
- Sixth Digit - Model Year 2 (1972).
- 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.

COMPRESSION PRESSURE

With air cleaner removed and choke and throttle wide open, crank engine through at least four compression strokes. Compression should be 150 psi with a maximum variation of 20 psi between cylinders.

VALVE TAPPET CLEARANCE

Hydraulic Lifters One turn down from zero lash.

VALVE ARRANGEMENT

307", 350"
E-I-E-E-I-E-I-E (Both banks, front to rear).
402"
E-I-E-I-E-I-E-I (Left bank, front to rear).
I-E-I-E-I-E-I-E (Right bank, front to rear).

SPARK PLUGS

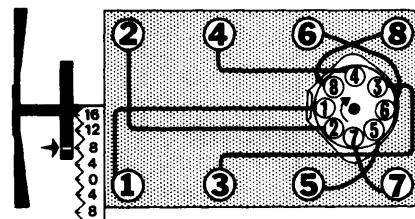
Gap035"
Torque..... 15 ft. lbs.

Spark Plug Type

Application AC No.
AllR44T

DISTRIBUTOR

Point Gap
New019"
Used016"
Cam Angle.....28-32°
Breaker Arm Spring Tension 19-23 ozs.
Condenser Capacity18-.23 mfd.



2CHA001

FIRING ORDER & TIMING MARKS

IGNITION TIMING

Ignition timing is checked or adjusted with engine at normal operating temperature, distributor vacuum line disconnected and plugged, transmission in Neutral, and engine at normal idle. On "P" models, use number two cylinder and timing mark tab on bottom of engine front cover.

Ignition Timing Specifications

Application	Man. Trans.	Auto. Trans.
307"	4° BTDC	8° BTDC
350"	4° BTDC	8° BTDC
402"	8° BTDC	8° BTDC

HOT (SLOW) IDLE RPM

NOTE - During adjustments do not turn idle speed solenoid more than one turn without disconnecting electrical lead.

Idle speed is checked or adjusted with engine at normal operating temperature, choke valve fully open, "Fuel Tank" line disconnected from vapor canister, distributor vacuum line disconnected and plugged, air conditioning "OFF", manual transmission in Neutral and automatic transmission in "D". Rotate idle speed solenoid (DO NOT turn CEC solenoid) to obtain specified idle RPM (solenoid energized). Disconnect electrical lead from solenoid and adjust screw at end of solenoid with an Allen wrench to obtain an engine speed of 450 RPM (solenoid de-energized).

1972 GMC V8 Tune-Up

TUNE-UP (Cont.)

Idle Speed (RPM)

Application	Solenoid Energized RPM
307" Man. Trans.	900
307" Man. Trans. ①	600
350" Man. Trans.	900
402" Man. Trans.	750
402" Man. Trans. ①	600
All Auto. Trans.	600

① — All vehicles over 6,000 GVW as shown on vehicle Rating Plate.

COLD (FAST) IDLE RPM

Rochester 2GV 2-Bbl. — Fast idle RPM is correct when slow idle RPM is correctly adjusted. See *Hot (Slow) Idle RPM* in this Section.

Rochester 4 MV 4-Bbl. — Fast idle RPM is checked or adjusted with engine at normal operating temperature, choke valve open, transmission in Neutral and fast idle lever on second step of fast idle cam. Adjust fast idle screw to obtain an engine speed of 1350 RPM (manual transmission) and 1500 RPM (automatic transmission).

CHOKE ADJUSTMENT

With air cleaner removed, check that choke valve 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 point in rod.

FUEL PUMP PRESSURE & VOLUME

Pressure (At Idle)	
307"	5-6.5 psi
350", 402"	7-8.5 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.
307" 1500 Series.....	1112041	1115202
307" 2500, 3500 Series....	1112043	1112043
350"	1112046	1112047
402"	1112064	1112064

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

IGNITION COIL

Application	Delco Part No.
All	1115238
Resistance	Ohms @ 75°F
Primary	1.77-2.01
Secondary	3,000-20,000
Ballast Resistor Loom.....	1.8

CARBURETION

CARBURETORS

Rochester Model 2GV 2-Bbl.

Application	Carb. No.
307" G-1500 (Federal)	
Man. Trans.	7042103
Auto. Trans.	7042102
307" G-1500 (Calif.)	
Man. Trans.	7042823
Auto. Trans.	7042822
307" C & K-1500 (Federal)	
Man. Trans.	7042105
Auto. Trans.	7042104
307" C & K-1500 (Calif.)	
Man. Trans.	7042825
Auto. Trans.	7042824
307" 2500 & 3500 Series	7042108

Rochester Model 4MV 4-Bbl.

Application	Carb. No.
350" 1500 Series (Federal)	
Man. Trans.	7042211
Auto. Trans.	7042210
350" 1500 Series (Calif.)	
Man. Trans.	7042911
Auto. Trans.	7042910
350" 2500 & 3500 Series	7042208
402" C-1500 & 2500 (Federal)	
Man. Trans.	7042219
Auto. Trans.	7042218
402" C-1500 & 2500 (Calif.).....	①
402" C-2500, 3500 & P-3500 (Over 6,000 Lbs. GVW)	
Man. Trans.	7042207
Auto. Trans.	7042206

① — Not available.

CARBURETION (Cont.)

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 in 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 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
All Standard.....	R-88	2300
All Optional	R-88X	3750

STARTER

Application	Delco Part No.
307"	
"G" Models.....	1108367
All Others	1108368
350"	
"G" Models, Man. Trans.	1108360
All Others, Man. Trans.	1108338
All, Auto. Trans.	1108427
402"	
All Man. Trans.	1108365
All Man. Trans. ①	1108481
All Auto. Trans.	1108418

① — Second production.

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

ALTERNATOR

Application	Amps.	Delco Part No.
Standard		
"C" & "K" Models	37	1102457
"G" & "P" Models	37	1102440
P-3500 Motor Home.....	61	① 1100487
Optional All.....	42.....	1102459
Optional All.....	61.....	1102463

① — Integral regulator.

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

ALTERNATOR REGULATORS

Application	Delco Part No.
All (Exc. For Alternator No. 1100487).....	1119515
Alternator No. 1100487.....	①

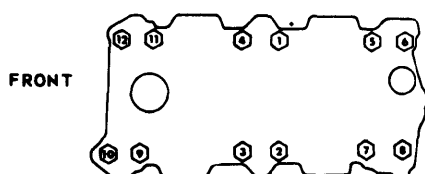
① — Integral regulator.

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

ENGINE

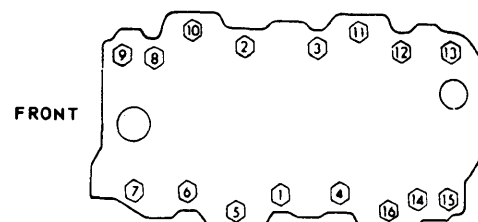
INTAKE MANIFOLD TIGHTENING

Tighten bolts to 30 ft. lbs. in sequence shown in illustration.



2CH002

**307" & 350"
INTAKE MANIFOLD TIGHTENING SEQUENCE**



2CH003

**402"
INTAKE MANIFOLD TIGHTENING SEQUENCE**

ENGINE (Cont.)

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
A.I.R. Pump	125±5	75±5

COOLING CAPACITIES

Application	Quantity
307"	
"G" Models ①	
Standard	16 qts.
H.D. Radiator	17 qts.
Air Conditioning	18 qts.
"C" Models	
Man. Trans.	15.8 qts.
Auto. Trans. or H.D. Radiator.....	16.2 qts.
"K" Models	
Man. Trans. or H.D. Radiator	16.1 qts.
Auto. Trans. or Air Conditioning	16.5 qts.
P-1500 & 2500	
Man. Trans.	18.7 qts.
Auto. Trans. or H.D. Radiator.....	19.1 qts.
350"	
C-1500	
Man. Trans.	15.8 qts.
Auto. Trans. or H.D. Radiator.....	16.2 qts.
Air Conditioning	17.7 qts.
C-2500 & 3500	
Man. Trans.	16.2 qts.
Auto. Trans. or Air Conditioning	17.7 qts.
H.D. Radiator	18.2 qts.
"K" Models	
Man. Trans. or H.D. Radiator.....	16.5 qts.
Auto. Trans. or Air Conditioning	17.9 qts.
P-2500 & 3500	
Man. Trans. or Air Conditioning.....	16.9 qts.
Auto. Trans. or H.D. Radiator.....	18.5 qts.
402"	
All	
Man. Trans. or H.D. Radiator.....	18.5 qts.
Auto. Trans. or Air Conditioning	21 qts.

① - Add one quart if equipped with heater.

CAPACITIES
(EXCEPT COOLING)

Application	Quantity
Crankcase	① 4 qts.
Auto. Trans.	
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.....	②
Fuel Tank	
"G" Models.....	③ 24.5 gals.
Panel, Suburban & Jimmy	
1500 Series.....	20.5 gals.
2500 Series.....	23.5 gals.
"C" & "K" Models, All Others	
1500 Series.....	20.2 gals.
2500 & 3500 Series	21 gals.
P-1500.....	17 gals.
P-2500 & 3500.....	30 gals.

① - Add one quart with filter change.

② - Fill to bottom of filler plug hole.

③ - 22 gals. if equipped with anti-overfill.

FILTERS & CLEANERS

Filter or Cleaner	Service Interval (Miles)
Oil Filter.....	Replace 12,000
Air Cleaner	
Element Type	① Check 12,000
Oiled Element Type	Replace 12,000
Polyurethane Wrap Type.....	Clean 24,000
Oil Bath Type	② Check 12,000
Crankcase Ventilation Filter.....	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 Type	Replace 24,000
Distributor Cam Lubricator.....	Replace 24,000

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

② - Check oil level and add SAE 50 oil if necessary.