

# 1974 Dodge V8 Tune-Up

## TUNE-UP

### ENGINE IDENTIFICATION

The Engine Identification Number is located as follows:

- 318" & 360" — Left front of block, below cylinder head.
- 400" — Right side of block, adjacent to number two cylinder.
- 440" — Left side of block, adjacent to front tappet rail.

First five digits contain engine cubic inch displacement.

Application	Digits
318" .....	XX-318
360" .....	XX-360
400" .....	XX-400
440" .....	XX-440

### MODEL IDENTIFICATION

Number is located on left front door lock pillar.

**D11AB4J000001**

- First & Second Digits — Model Designation.
- Third Digit — Body Type.
- Fourth Digit — Gross Vehicle Weight.
- Fifth Digit — Engine Type.
- Sixth Digit — Model Year.
- Seventh Digit — Plant.
- Remaining Digits — Sequential Serial 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** — For Tune-Up purposes only: Light Duty will refer to D100, W100, and all "B" models except B300 Van, B300 Sportsman 15 Passenger, CB300, and MB300. Heavy Duty will refer to D200, D300, W200, W300, B300 Van, B300 Sportsman 15 Passenger, CB300, and MB300.

**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 engine warm, spark plugs removed, and throttle wide open, compression pressure should be as specified. Maximum variation between cylinders should not exceed 25 psi.

Application	Minimum PSI
All .....	100

### VALVE TAPPET CLEARANCE

All (Hydraulic) .....Zero Lash

### VALVE ARRANGEMENT

E-I-I-E-E-I-I-E (Front to rear, both banks).

### SPARK PLUGS

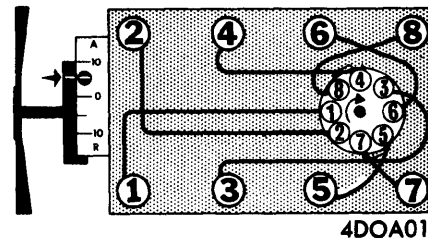
Gap ..... .035"  
Torque..... 30 ft. lbs.

Application	Spark Plug Type	Champion No.
318" .....		N-11Y
360" .....		N-12Y
400" Light Duty .....		J-13Y
400" Heavy Duty .....		J-11Y
440" .....		J-11Y

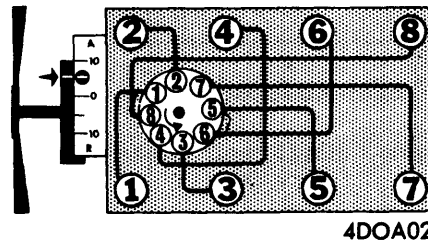
### DISTRIBUTOR

Electronic Ignition Air Gap  
Go..... .008"  
No Go..... .010"  
Cam Angle..... ①

① — Not Adjustable.



FIRING ORDER & TIMING MARKS  
318" & 360"



FIRING ORDER & TIMING MARKS  
400" & 440"

### IGNITION TIMING

Adjust timing with hot (slow) idle speed set, engine running at normal operating temperature, distributor vacuum advance line disconnected and plugged, and transmission in Neutral.

Application	①Timing
318"	
Light Duty .....	TDC
Heavy Duty .....	2.5° ATDC
360"	
W/Dist. No. 3755820 or 3755821 .....	2.5° BTDC
W/Dist. No. 3755475 or 3755841 .....	5° BTDC
W/Dist. No. 3756672 .....	TDC
400"	
Light Duty .....	7.5° BTDC
Heavy Duty .....	2.5° BTDC
440"	
W/Dist. No. 3755157 .....	7.5° BTDC
W/Dist. No. 3755518 .....	10° BTDC
W/Dist. No. 3755522 .....	5° BTDC

① — Tolerance ±2°.

## TUNE-UP (Cont.)

### HOT (SLOW) IDLE RPM

With engine running at normal operating temperature, timing checked, air cleaner installed, air conditioning off, and transmission in Neutral, connect tachometer and insert probe of suitable exhaust gas analyzer a minimum of two feet into tail pipe. Warm up and calibrate analyzer according to manufacturer's instructions and clamp hose between distributor vacuum control valve and intake manifold. Adjust idle mixture screw  $\frac{1}{16}$  turn richer (out) and wait 30 seconds before reading meter and, if necessary, adjust again until meter shows a definite increase in richness. Adjust idle mixture screw  $\frac{1}{16}$  turn at a time to obtain air/fuel mixture specified on Vehicle Emission Control Information label located in engine compartment. If idle speed changes as mixture screw is turned, adjust speed to specified value and readjust mixture as required so that specified air/fuel ratio is obtained at specified idle speed.

Application	Idle Speed	RPM
All (Exc. 440")		750
440"		700

### IDLE SPEED SOLENOID ADJUSTMENT

**Carter Thermo-Quad Only** - Warm up engine and attach tachometer. With engine running (solenoid energized), turn solenoid adjusting screw to obtain specified engine RPM. See preceding Idle Speed table. Then adjust engine-off throttle stop screw until end of screw just touches stop. Back off screw one full turn obtaining low speed setting. Test by disconnecting solenoid wire at solenoid (do not let wire ground to engine). Engine RPM should drop.

### COLD (FAST) IDLE RPM

Remove air cleaner and cap vacuum fittings to heated air control and OSAC (eliminates vacuum advance). With engine off, close throttle and position fast idle speed screw on highest speed step of fast idle cam. Move fast idle cam until speed screw drops one place to second highest step of cam. Start

engine without touching throttle, allow speed to stabilize, and adjust engine speed to specifications by turning screw.

Application	Fast Idle Speed	RPM
Man. Trans. (Exc. 400")		1700
400"		1800
Auto. Trans.		
318" (Exc. Carb. No. 6613S)		1500
Carb. No. 6613S		1600
360"		1800
400" (Exc. Carb. No. R-6990A)		1800
Carb. No. R-6990A		1600
440"		1700

### DASHPOT ADJUSTMENT

With hot (slow) idle speed set to specifications, position throttle lever so that tab on lever is just touching dashpot stem but not depressing it. Allow 30 seconds for engine speed to stabilize. Engine speed should be 2300 RPM. Adjust by loosening lock nut and screwing dashpot in or out as required.

### AUTOMATIC CHOKE SETTING

Nonadjustable. Check for free movement on pivot by moving choke rod up and down. If unit binds, install new one.

### FUEL PUMP PRESSURE & VOLUME

Pressure (At Idle)..... 5-7 psi

### MANIFOLD HEAT CONTROL VALVE

Check valve for freedom of movement and lubricate (when manifold is cool) with suitable solvent (Part No. 3419129) every 4,000 miles.

### EMISSION CONTROL

See appropriate article in EMISSION CONTROL Section.

## IGNITION

### DISTRIBUTOR

Application	Chrysler Part No.
318"	
Light Duty	3656763
Heavy Duty	3755201
360"	
Light Duty	
Man. Trans.	3755821
Auto. Trans. 2-Bbl.	3755475, 3755841
Auto. Trans. 4-Bbl.	3755820
Heavy Duty	3656672
400"	
Light Duty	3755681
Heavy Duty	3755150
440"	
Light Duty Federal	37555118
Light Duty Calif.	3755522
Heavy Duty	3755157

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

### IGNITION COIL

Application	Chrysler Part No.
All	2444242
Resistance	Ohms @ 70-80°F
Primary	1.60-1.79
Secondary	9,400-11,700
Ballast Resistor	
Coil Side	.5-.6
Control Unit Side	4.75-5.75

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## CARBURETION

### CARBURETORS

#### Carter BBD Series 2-Bbl.

Application	Carter Part No.	
	Man. Trans.	Auto. Trans.
318" Federal.....	6610S.....	6611S
318" Calif. ....	8008S.....	6613S
318" Fed. & Cal. ....	6536S.....	6537S

#### Carter Thermo-Quad 4-Bbl.

Application	Carter Part No.	
	360".....	TQ-9022S
440".....	TQ-9017S, TQ-9025S	

#### Holley 2210 Series 2-Bbl.

Application	Holley Part No.	
	Man. Trans.	Auto. Trans.
360".....	R-6764A.....	R-6765A
400".....	R-6886A.....	R-7052A

#### Holley 2245 Series 2-Bbl.

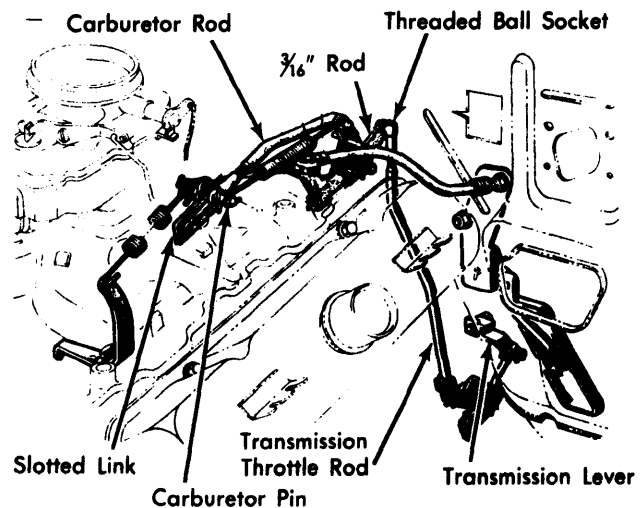
Application	Holley Part No.	
	360" Man. Trans. ....	R-6762-1A
360" Auto. Trans. ....	R-6860A	
400" Auto. Trans. ....	R-6990A	

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

### ACCELERATOR AND DOWNSHIFT LINKAGE ADJUSTMENT

**Accelerator Adj., Man. Trans.** — Make sure throttle return spring is connected, choke is open, and fast idle adjusting screw is off fast idle cam. Adjust accelerator pedal height to 121 to 123 degrees by adjusting rod length at threaded ball socket. Be sure wide open throttle is attained with stop against floor. Adjust throttle hand control stop location on throttle control wire (if so equipped) so that there is 1/4 inch free travel of wire before stop engages. Lubricate bell crank pivot with suitable lubricant (Lubriplate).

**Downshift & Accel. Adj., Auto. Trans.** — With linkage properly lubricated and hot (slow) idle speed set to specifications, block choke wide open. Have an assistant hold transmission throttle rod forward during the following steps. Insert a 3/16" diameter rod in holes in upper bellcrank and lever. Adjust length of intermediate transmission rod by turning threaded ball socket at upper end so that ball socket lines up with ball end with a slight downward pressure on rod. Reassemble and remove 3/16" rod. Disconnect return spring, clip, and washer and adjust length of carburetor rod so that rear of slot contacts carburetor pin with no forward force on pin. Reassemble and check freedom of operation by moving slotted link at carburetor to full rearward position, then allowing it to return slowly. It must return to full forward position. Unblock choke.



4D003

### ACCELERATOR AND DOWNSHIFT LINKAGE ADJUSTMENT

## ELECTRICAL

### BATTERY

12 Volt — Negative Ground.

Application	Capacity (Amps.)
Standard.....	48
Optional.....	59, 70, 90

### STARTER

Application	Chrysler Part No.
All.....	3656575

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

### ALTERNATOR

Application	Amps.	Chrysler Part No.
All.....	41.....	(Red Tag) 3755404
All.....	50.....	(Green Tag) 3755406
All.....	60.....	(Blue Tag) 3755407
All⊙.....	60.....	(No Color) 3755413

⊙ — With double groove pulley.

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

### ALTERNATOR REGULATOR

Application	Chrysler Part No.
All.....	3438150

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

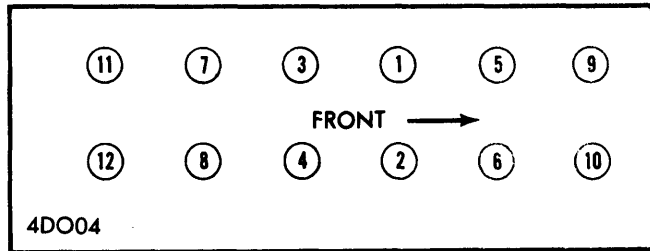
## ENGINE

### INTAKE MANIFOLD TIGHTENING

Tighten bolts in sequence shown in diagram to 35 ft. lbs. (318" & 360") or 40 ft. lbs. (400" & 440").

BELT ADJUSTMENT		
Tension (Lbs.) Using Strand Tension Gauge		
Application	New Belt	①Used Belt
All	120	70

① — A belt is considered "Used" after 15 minutes of running.



### INTAKE MANIFOLD TIGHTENING

FILTERS & CLEANERS	
Filter or Cleaner	Service Interval (Miles)
Oil Filter	Replace 8,000
Air Cleaner	
Oil Bath	①Clean 12,000
Paper Element	②Clean 8,000
Crankcase Inlet Air Cleaner	①Clean 12,000
Fuel Vapor Storage Canister Filter	Replace 12,000
Fuel Filter	
Paper Element	Replace 12,000
Disposable Canister	Replace 24,000

① — Use SAE 30.  
② — Replace at 24,000 miles.

CAPACITIES (EXCEPT COOLING)	
Application	Quantity
Crankcase (Includes 1 qt. filter)	5 qts.
Automatic Transmission	
1 1/4" Torque Converter	19 pts.
1 3/4" Torque Converter	16.25 pts.
Manual Transmission	①
Front & Rear Axles & Transfer Case	①
Four-Wheel Drive Knuckle Ends	①
Fuel Tank	N/A

① — Fill to bottom of oil filler hole.

COOLING CAPACITIES	
Application	Quantity W/Heater
318" D100 & W100	17 qts.
318" All Others	①17 qts.
360"	②16 qts.
400" (Exc. D300)	③16 qts.
400" D300	②17 qts.
440" (Exc. D100)	③17 qts.
440" D100	③④16 qts.

① — Add 1 1/2 quarts with air conditioning.  
② — Add 1 quart with air conditioning.  
③ — Add 1 quart with air conditioning and/or increased cooling.  
④ — Add 1 quart with Coolant Reserve System.