

## TUNE-UP

### ENGINE IDENTIFICATION

The Engine Identification Number is stamped on boss on right side of block beneath number 1 spark plug. The first three numerals designate engine cubic inch displacement.

<b>Application</b>	<b>Numerals</b>
170" .....	170
225" .....	225

### MODEL IDENTIFICATION

#### VEHICLE IDENTIFICATION NUMBER

Number is located on left front door lock pillar on all models except "A". On "A" Models number is located on top inside surface of left wheelhouse opening.

116 - 2135000

**First & Second Digits** - Model Code.  
**Third Digit** - Number of Cylinders.  
**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.

### COMPRESSION PRESSURE

With engine warm, all spark plugs removed, and throttle wide open, the maximum variation between cylinders should not exceed 20 psi.

Man. Trans. ....	130-160 psi
Auto. Trans. ....	110-140 psi

### VALVE TAPPET CLEARANCE

Valve adjustment on mechanical lifters is made at the self-locking rocker arm adjusting screws.

Intake (Hot).....	.012"
Exhaust (Hot).....	.024"

### VALVE ARRANGEMENT

E-I-E-I-E-I-E-I-E-I-E (Front to rear.)

### SPARK PLUGS

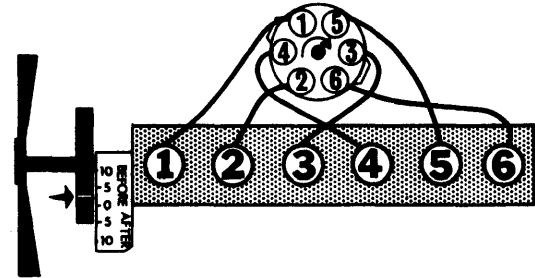
Gap .....	.035"
Torque .....	30 Ft. Lbs.

#### Spark Plug Type

<b>Application</b>	<b>Champion No.</b>
All .....	N-11Y

### DISTRIBUTOR

Point Gap .....	.017-.023"
Cam Angle.....	40-45°
Breaker Arm Spring Tension .....	17-20 ozs.
Condenser Capacity .....	.25-.285 mfd.



8DOA001

### FIRING ORDER & TIMING MARKS

### IGNITION TIMING

Check or adjust timing with engine at normal operating temperature, distributor vacuum advance line disconnected and plugged, and transmission in Neutral.

<b>Application</b>	<b>Timing</b>
170" Man. Trans. ....	5° ATDC
170" Auto. Trans. ....	2.5° ATDC
225" W/O Cleaner Air Package.....	5° BTDC
225" W/Cleaner Air Package.....	TDC

### HOT (SLOW) IDLE RPM

**Without Cleaner Air Package** - With engine at normal operating temperature, air cleaner installed, choke valve wide open, headlights on (high-beam), and ball joint connection at accelerator shaft bellcrank disconnected (automatic transmission only), adjust idle speed screw to obtain specified RPM. Adjust idle mixture screw to obtain highest RPM. Turn mixture screw in (lean) until speed drops, then turn screw out (rich) just far enough to recover highest RPM. Readjust idle speed screw and check mixture. Readjust idle mixture if necessary. Adjust ball joint connector until ball on bellcrank mates exactly with socket (automatic transmission only) and install.

**With Cleaner Air Package** - With engine running at normal operating temperature, timing checked, air cleaner installed, and transmission in Neutral, connect tachometer and insert probe of 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 1/16 turn richer (out) and wait ten seconds before reading meter and, if necessary, adjust again until meter shows a definite increase in richness. Adjust idle mixture screw 1/16 turn at a time to obtain 14.2 air/fuel ratio changing idle speed screw, if necessary, to maintain specified RPM. Remove clamp from distributor vacuum valve hose. If engine speed changes materially, check and set valve. See *Distributor Vacuum Control Valve Adjustment*.

#### Idle Speed RPM

<b>Application</b>	<b>RPM</b>
170" .....	700
225" W/O Cleaner Air Package.....	550
225" W/Cleaner Air Package.....	650

# 1968 Dodge 6 Tune-Up

## TUNE-UP (Cont.)

### COLD (FAST) IDLE RPM

With engine at normal operating temperature, transmission in Neutral, choke open, slow idle and timing set, and air cleaner installed (Cleaner Air Package engine only), place fast idle speed adjusting screw on lowest step of fast idle cam on standard carburetors and on second highest step of cam on Cleaner Air Package carburetors. Adjust screw to obtain specified RPM. Reposition cam and throttle after every screw adjustment to apply normal throttle closing torque.

#### Fast Idle Speed (RPM)

Application	RPM
170" .....	1400
225" .....	
W/O Cleaner Air Package.....	700
Man. Trans. "A" Models.....	1400
Auto. Trans. (Exc. "A" Models) .....	1550
Auto. Trans. "A" Models .....	1600

### GOVERNOR ADJUSTMENTS

**NOTE** — All governor adjustments are made with engine tuned and at normal operating temperature.

**Speed Adjustment** — Remove seal from speed screw adjusting cap and turn cap ½ turn at a time, out to increase speed and in to decrease speed. More than two turns out from factory setting is not recommended.

#### Governor Speed Range (RPM, No Load)

Application	Factory Setting
V6-631 .....	3500-3700
V655-632 .....	2700-2900

**Surge and Stability Adjustment** — Block throttle linkage to provide surge at governed speed. With suitable hex wrench (A25264) holding speed screw, turn suitable hollow wrench (A24283) on calibrating nut clockwise ¼ turn at a time until surge is minimized. Turn calibrating nut counterclockwise to improve stability. Reset speed screw if necessary.

### AUTOMATIC CHOKE SETTING

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

### DISTRIBUTOR VACUUM CONTROL VALVE ADJUSTMENT

Adjust dashpot so that it does not contact throttle, connect tachometer, vacuum gauge (0-30 in. Hg) and remove distributor vacuum tube at distributor and clamp tube closed. Set timing and hot (slow) idle to specifications. Reconnect vacuum tube and run engine at 2000 RPM for five seconds in Neutral. When throttle is released, distributor vacuum should increase to over 16 inches of mercury for a minimum of one second and fall below six inches within three seconds. Remove vacuum control cover and turn adjusting screw for adjustment. Readjust dashpot. See *Dashpot Adjustment*. Recheck valve performance. If distributor vacuum does not fall below six inches of mercury within four seconds after throttle is released, readjust or replace dashpot.

### 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. The engine speed on "A" models should be 2500 RPM and on all others 1000 RPM. To adjust, screw dashpot in or out as required.

### FUEL PUMP PRESSURE & VOLUME

Pressure (At Idle).....	3.5-5 psi
Volume (At Idle).....	1 qt. in 1 min.

### MANIFOLD HEAT CONTROL VALVE

Check valve for freedom of movement and lubricate with suitable solvent (Part No. 2525054) every 4,000 miles.

### EMISSION CONTROL

See appropriate article in *EMISSION CONTROL* Section.

## IGNITION

### DISTRIBUTOR

Application	Chrysler Part No.	
	Man. Trans.	Auto. Trans.
170" .....	2875199 .....	2875202
225" .....	2875206 .....	2875206
225"Ⓞ .....	2875364 .....	2875366

Ⓞ — With Cleaner Air Package.

**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 .....	1.65-1.79
Secondary .....	9,400-11,700
Ballast Resistor.....	.5-.6

## CARBURETION

### CARBURETORS

#### Carter BBS Series 1-Bbl.

##### Carter Part No.

Application	Man. Trans.	Auto. Trans.
225".....	4334S.....	4342S
225"⓪.....	4478S.....	4341S

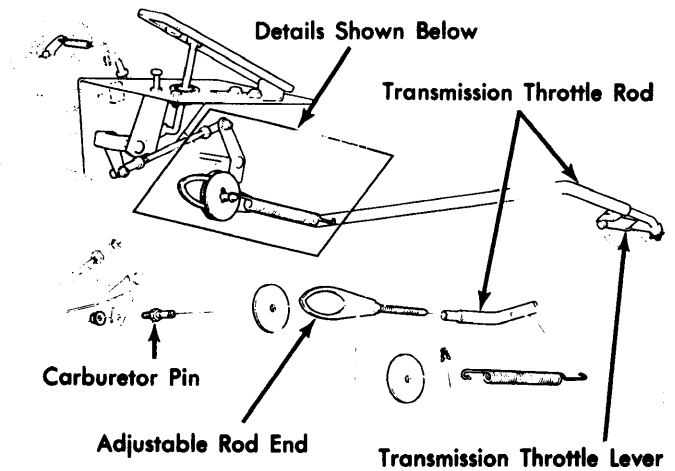
⓪ — With Cleaner Air Package.

#### Holley No. 1920 1-Bbl.

##### Holley Part No.

Application	Man. Trans.	Auto. Trans.
170".....	R-3982A.....	R-3983A
225".....	R-3984A.....	R-3985A

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

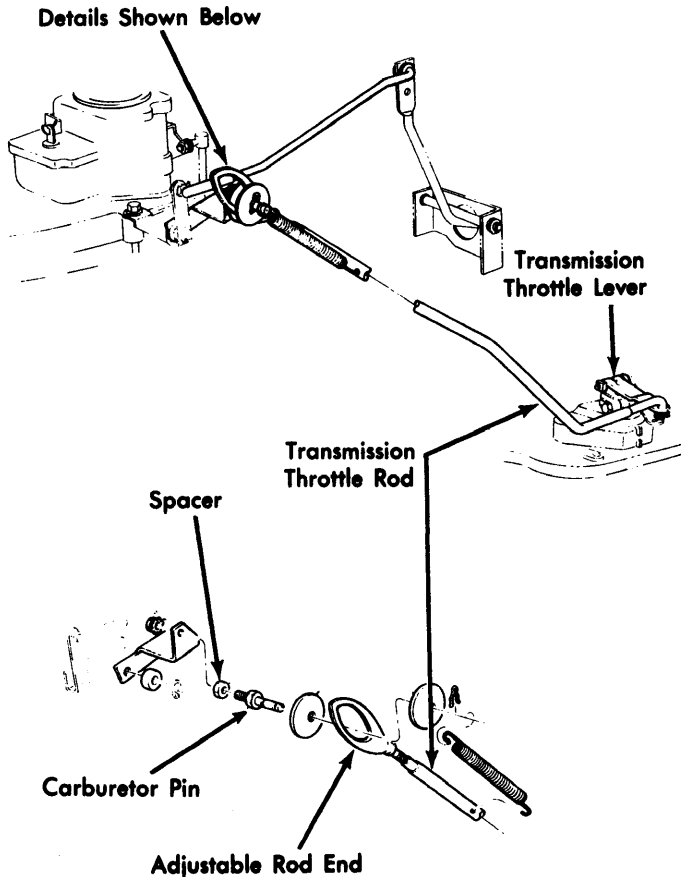


8DO003

### ACCELERATOR AND DOWNSHIFT LINKAGE ADJUSTMENT "P" MODELS

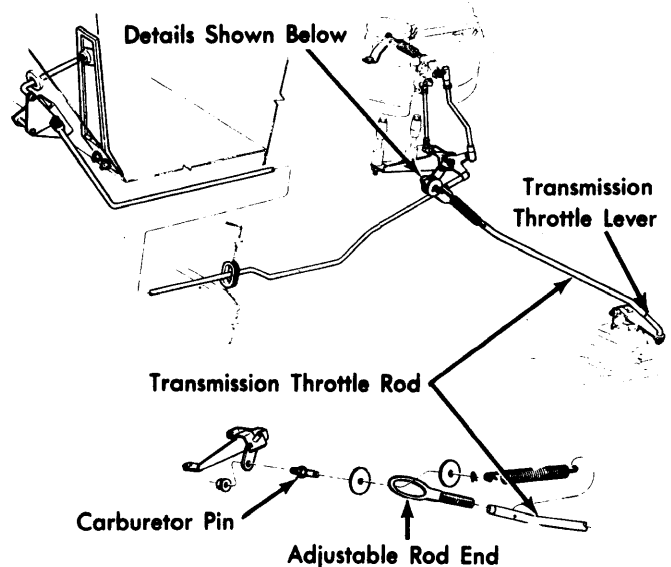
#### ACCELERATOR AND DOWNSHIFT LINKAGE ADJUSTMENT

**Auto. Trans. —** Adjust hot (slow) idle speed to specifications. Remove clip, spring, flat washer and transmission throttle rod from carburetor pin. Hold throttle rod forward so that transmission lever is against its stop and adjust rod end so that rear of slot is against carburetor pin. Replace washer, spring and clip ("A" Models Only). Pry accelerator adjustable rod end from ball stud and adjust rod length so that pedal is at 115° angle from floor when rod end is installed. (All) Road test vehicle to check downshift operation. If transmission does not downshift, lengthen transmission throttle rod one turn and repeat road test.



8DO002

### ACCELERATOR AND DOWNSHIFT LINKAGE ADJUSTMENT "D" & "W" MODELS



8DO004

### ACCELERATOR AND DOWNSHIFT LINKAGE ADJUSTMENT "A" MODELS

# 1968 Dodge 6 Tune-Up

## ELECTRICAL

### BATTERY

12 Volt - Negative Ground.

Application	Capacity (Amps.)
All Standard.....	53
All Optional.....	59, 70

### STARTER

Application	Chrysler Part No.
170".....	2098500
225".....	2095150

Other Data & Specifications - See Chrysler Starters in ELECTRICAL Section.

### ALTERNATOR

Application	Amps.	Chrysler Part No.
170".....	30.....	2642538
170" & 225".....	37.....	2642537
170" & 225".....	46.....	2444599
170" & 225".....	60.....	2642121

Other Data & Specifications - See Chrysler Alternators in ELECTRICAL Section.

### ALTERNATOR REGULATOR

Application	Essex Part No.
All.....	2444980

Other Data & Specifications - See Essex Alternator Regulators in ELECTRICAL Section.

## ENGINE

### INTAKE MANIFOLD TIGHTENING

Intake to exhaust manifold bolts are tightened to 15 ft. lbs.  
Manifold to cylinder head stud nuts are tightened to 10 ft. lbs.

### FILTERS & CLEANERS

Filter or Cleaner	Service Interval (Miles)
Oil Filter.....	Replace 8,000
Air Cleaner	
Oil Bath.....	①Clean 8,000
Paper Element.....	②Clean 8,000
Breather Cap.....	①Clean 4,000
Brake Booster Air Cleaner.....	Replace 8,000
Fuel Filter	
Ceramic Element.....	Clean 2,000
Paper Element.....	Replace 10,000
Disposable Canister.....	Replace 20,000
Distributor Wick.....	①Oil 12,000

① - Use SAE 30.

② - Replace at 24,000 miles.

### CAPACITIES (EXCEPT COOLING)

Application	Quantity
Crankcase	
170".....	①4 qts.
225" (Exc. "A" Models).....	①5 qts.
225" "A" Models.....	①4 qts.
Automatic Transmission.....	18.5 qts.
Manual Transmissions.....	②
Front & Rear Axles & Transfer Case.....	②
Four Wheel Drive Knuckle Ends.....	②
Fuel Tank	
"A" Models.....	21 gals.
"D", "W" Models.....	18 gals.
"P" Models.....	15.25 gals.

① - Add 1 quart with filter change.

② - Fill to bottom of filler plug hole.

### COOLING CAPACITIES

Application	Quantity
170".....	①12.5 qts.
225" (Exc. "A" Models).....	①14 qts.
225" "A" Models.....	①13.5 qts.

① - Add 1 quart if equipped with heater.

### BELT ADJUSTMENT

Deflection Applied At Belt Midpoint Under 5 Lb. Load

Application	①Used Belt	New Belt
Power Steering.....	1/8".....	1/16"
Alternator 170".....	1/8".....	3/32"
Alternator 225".....	1/4".....	1/8"
Alternator W/A/C.....	1/4".....	1/8"

① - Any Belt operated for 1/2 hour or more.