

1970 Dodge 6 Tune-Up

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.

Application	Numerals
198"	198
225"	225

MODEL IDENTIFICATION

VEHICLE IDENTIFICATION NUMBER

Number is located on left front door lock pillar on all models.

A13AAOU100001

- First & Second Digits - Model Code.
- Third Digit - Body Type.
- Fourth Digit - Gross Vehicle Weight.
- Fifth Digit - Engine Type.
- Sixth Digit - Model Year.
- Seventh Digit - 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.

COMPRESSION PRESSURE

With engine warm, all spark plugs removed, and throttle wide open, the maximum variation between cylinders should not exceed 20 psi ("B" Models, 25 psi).

Application	PSI
Man. Trans. (Exc. "B" Models).....	130-160 psi
Auto. Trans. (Exc. "B" Models).....	110-140 psi
"B" Models.....	100 psi min.

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

Gap035"
Torque.....	30 Ft. Lbs.

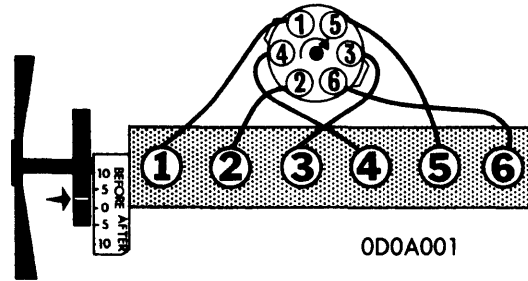
Spark Plug Type

Application	Champion No.
All	N-11Y

DISTRIBUTOR

Point Gap.....	.017-.023"
Cam Angle.....	① 40-45°
Breaker Arm Spring Tension	17-20 ozs.
Condenser Capacity25-.285 mfd.

① - "B" Models, 41-46°



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.

Application	Timing
198"	TDC
225" W/O Cleaner Air Package.....	5° BTDC
225" W/Cleaner Air Package.....	TDC

HOT (SLOW) IDLE RPM

Without Cleaner Air System - With engine at normal operating temperature, timing checked, choke valve wide open, headlights on (high-beam), and transmission throttle rod 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 throttle rod length so that it does not interfere with idle setting and install (automatic transmission only).

With Cleaner Air System - With engine running at normal operating temperature, timing checked, air cleaner installed, air conditioning on (Holley carburetors only), 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 $\frac{1}{6}$ 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 $\frac{1}{6}$ 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*.

TUNE-UP (Cont.)

Idle Speed RPM

Application	RPM
Holley Carburetors	
Man. Trans.	700
Auto. Trans.	650
Carter Carburetors, BBS Series	
4837S, 4838S, 4905S, 4906S.....	750
4836S, 4839S.....	700

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
Holley Carburetors Man. Trans.	1600
Holley Carburetors Auto. Trans.	1800
Carter Carburetors.....	1800

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 (RPM, No Load)

Application	Factory Setting
600-774	3600

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.

IGNITION

DISTRIBUTOR

Application	Chrysler Part No.	
	Man. Trans.	Auto. Trans.
198"	3438238	2875827
225"	2875823	2875827

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

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 "B" models should be 2000 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. 3419129) every 4,000 miles.

EMISSION CONTROL

See appropriate article in **EMISSION CONTROL** 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

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CARBURETION

CARBURETORS

Carter BBS Series 1-Bbl.

Carter Part No.

Application	Man. Trans.	Auto. Trans.
225"	4838S, 4905S	4839S, 4906S
225" Calif. only.....	4836S	4837S

Holley No. 1920 1-Bbl.

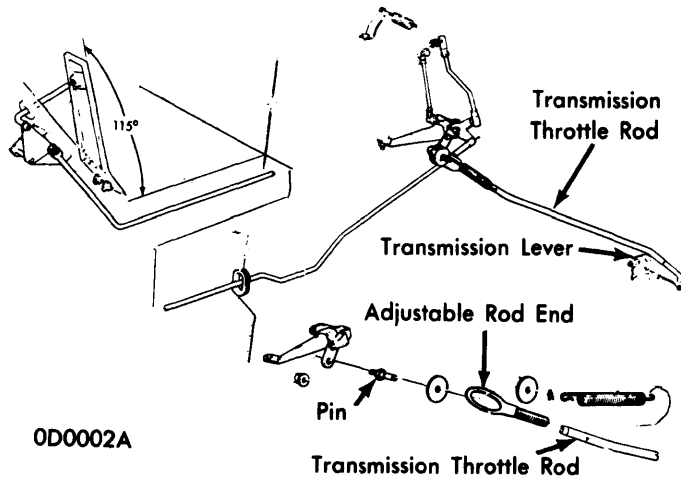
Holley Part No.

Application	Man. Trans.	Auto. Trans.
198"	R-4356A	R-4358A
225" "A", "B" Models	R-4641A	R-4642A
225" Calif. Only	R-4357A	R-4359A
225"	R-4750A	R-4751A

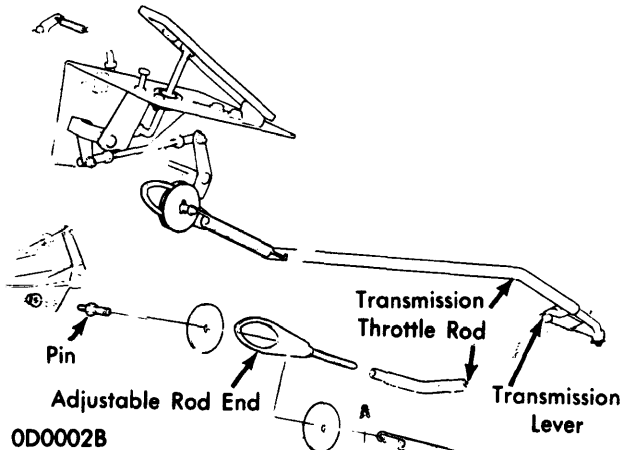
Other Data & Specifications — See Tune-Up and Carter or Holley Carburetors in CARBURETION Section.

ACCELERATOR AND DOWNSHIFT LINKAGE ADJUSTMENT

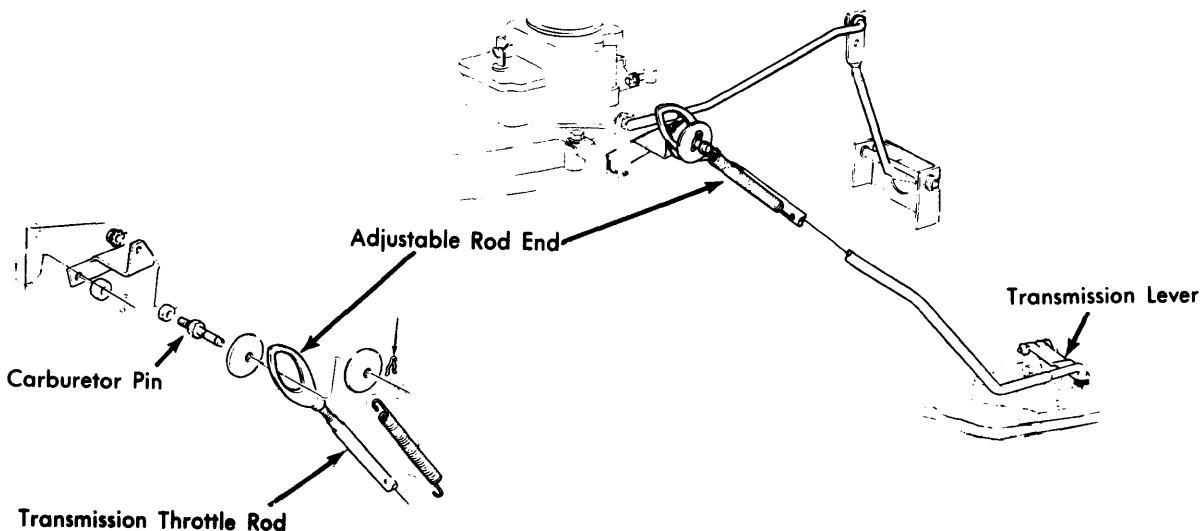
Auto. Trans. (Exc. "B" Models) — Adjust hot (slow) idle speed to specifications. Remove clip, spring, flat washer and transmission throttle rod from carburetor pin. Hold throttle rod forward so that transmission lever is against its stop and adjust rod end so that rear of slot is against carburetor pin. 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.



ACCELERATOR AND DOWNSHIFT LINKAGE ADJUSTMENT "A" MODELS



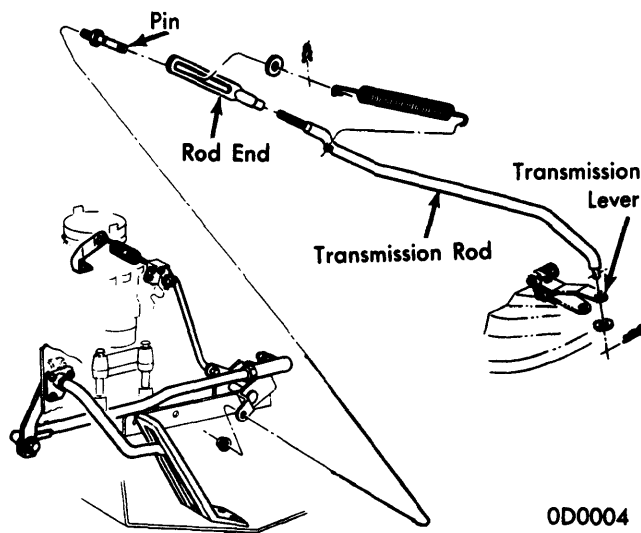
ACCELERATOR AND DOWNSHIFT LINKAGE ADJUSTMENT "P" MODELS



ACCELERATOR AND DOWNSHIFT LINKAGE ADJUSTMENT "D" MODELS

CARBURETION (Cont.)

Auto. Trans. "B" Models — Adjust hot (slow) idle speed to specifications. With linkage clean and properly lubricated, block choke in full open position and release fast idle cam. Remove return spring from carburetor pin and tab on throttle rod. Remove clip, washer and slotted throttle rod end from carburetor pin and rotate threaded rod end so that rear edge of slot contacts the carburetor pin when transmission throttle lever is held forward against its stop. Reassemble and check transmission linkage freedom by moving throttle rod rearward and allowing it to return slowly, making sure it returns to the full forward position. Remove block from choke and road test vehicle. If transmission does not downshift, lengthen throttle rod one turn and repeat road test.



ACCELERATOR AND DOWNSHIFT LINKAGE ADJUSTMENT ("B" MODELS)

ELECTRICAL

BATTERY

12 Volt — Negative Ground.

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

STARTER

Application	Chrysler Part No.
All	2875560

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

ALTERNATOR

Application	Amps	Chrysler Part No.
All	30	2098835
All	35	2098265
All	40	2098320
All	60	3438174
All	60	3438180

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

ALTERNATOR REGULATOR

Application	Chrysler Part No.
All (Exc. 60 Amp)	2444980
60 Amp	3438150

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

ENGINE

INTAKE MANIFOLD TIGHTENING

Intake to exhaust manifold bolts are tightened to 20 ft. lbs. Manifold to cylinder head stud nuts are tightened to 10 ft. lbs.

BELT ADJUSTMENT

Deflection Applied At Belt Midpoint Under 5 Lb. Load

Application	① Used Belt	New Belt
Power Steering	$\frac{5}{32}$ "	$\frac{3}{32}$ "
Air Cond. Idler	$\frac{1}{8}$ "	$\frac{3}{32}$ "
Alternator	$\frac{3}{32}$ "	$\frac{3}{16}$ "

① — Any belt operated more than ½ hour.

FILTERS & CLEANERS

Filter or Cleaner	Service Interval (Miles)
Oil Filter	Replace 8,000
Air Cleaner	
Oil Bath	① Clean 12,000
Paper Element	② Clean 6,000
Breather Cap	① Clean 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 Oil Cup & Wick	① Oil 12,000
Distributor Cam	③ Lubricate 12,000

① — Use SAE 30.

② — Replace at 24,000 miles.

③ — Lubricate with Distributor Cam Lubricant.

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ENGINE (Cont.)

COOLING CAPACITIES

Application	Quantity
All	13 qts.
All W/Auxiliary Heater.....	15 qts.
All W/Air Cond.	15 qts.

CAPACITIES (EXCEPT COOLING)

Application	Quantity
Crankcase	① 5 qts.
Automatic Transmission	
All (Exc. "B" Models).....	19 pts.
"B" Models.....	18.5 pts.
Manual Transmissions.....	②
Front & Rear Axles & Transfer Case	②
Four Wheel Drive Knuckle Ends.....	②
Fuel Tank	
"A" Models	21 gals.
"B" Models.....	23 gals.
"D" Models	17 gals.
"P" Models.....	15.25 gals.

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