

1966-74 CHRYSLER CORP. EXHAUST EMISSION TUNE-UP

DESCRIPTION

Refer to **EMISSION CONTROL APPLICATION** Section for individual systems as applied to particular combinations of vehicle model, engine, and transmission.

Several systems are used to control emissions of pollutants. Each system is designed to affect particular vehicle emission situations. In addition, specially calibrated carburetors, distributors, modified combustion chambers, and valve timing are used with these systems.

SERVICE PROCEDURES

In addition to servicing an individual emission system or component, all ignition system and carburetor adjustments necessary must also be correctly performed.

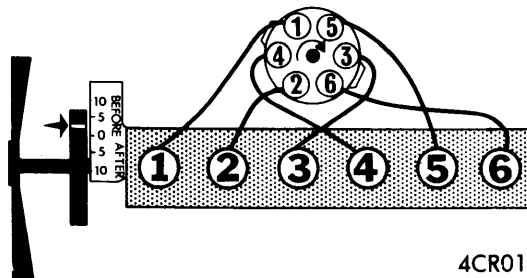
NOTE — Due to late changes and corrections, always refer to Engine Tune-Up decal in engine compartment before beginning Tune-Up. In event of any conflict between decal specifications and given specifications, decal specifications should prevail.

NOTE — To by-pass Starter Interlock, turn ignition "ON" and locate by-pass relay switch in engine compartment. Press and release button on relay. Engine can now be cranked or started. If ignition is turned to "OFF" or "LOCK" position, reactivation of relay button will again be required before engine can be cranked or started.

IGNITION SYSTEM

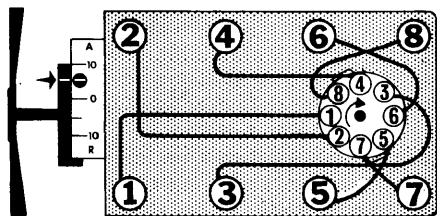
IGNITION TIMING

Refer to appropriate Tune-Up chart in **TUNE-UP SPECIFICATIONS** Section for ignition system and timing specifications.



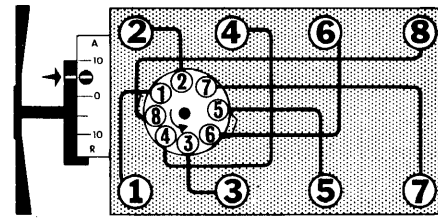
4CR01

170", 198", & 225"
6 CYLINDER FIRING ORDER (1966-74)



4CR002

273", 318", 340", & 360"
V8 FIRING ORDER (1966-74)



4CR003

361", 383", 400", 426",
& 440" V8 FIRING ORDER (1966-74)

All Engines (1966-74) — Check or adjust ignition timing with distributor cam angle correctly set, idle speed adjusted to specified RPM and distributor vacuum line disconnected and plugged. After timing is set, reconnect vacuum line and bring idle speed to recommended idle RPM.

CARBURETION

For service procedures and specifications, refer to following individual carburetor articles in **CARBURETION** Section, or for idle speed and mixture specifications, refer to the appropriate Tune-Up chart in **TUNE-UP SPECIFICATIONS** Section.

Application	Carburetor Type
170" 6 Cylinder	
1-Bbl. (1966-69).....	Holley 1920 or Carter BBS
198" 6 Cylinder	
1-Bbl. (1970-74).....	Holley 1920 & 1945, Carter BBS
225" 6 Cylinder	
1-Bbl. (1966-74).....	Holley 1920 & 1945, Carter BBS
273" V8	
2-Bbl. (1966-69).....	Carter BBD
4-Bbl. (1966-67).....	Carter AFB
318" V8	
2-Bbl. (1966-74).....	Stromberg WW & WWC, Carter BBD, Rochester 2GV
340" V8	
4-Bbl. (1968-74).....	Carter AVS & T.Q.
Three 2-Bbls. (1971).....	Holley 2300
360" V8	
2-Bbl. (1971-74).....	Holley 2210 & 2245
361" V8	
2-Bbl. (1966).....	Stromberg WW & WWC, & Carter BBD
383" V8	
2-Bbl. (1966-71).....	Carter BBD, Holley 2210
4-Bbl. (1966-70).....	Carter AFB, AVS
400" V8	
2-Bbl. (1974).....	Holley 2245
4-Bbl. (1972-74).....	Carter T.Q.
426" V8	
4-Bbl. (1966).....	Carter AFB
Two 4-Bbl. (1966).....	Carter AFB
426" Hemi V8	
Two 4-Bbl. (1966-71).....	Carter AFB or Holley 4160
440" V8	
4-Bbl. (1966-74).....	Carter AFB, AVS & T.Q., or Holley 4160
Three 2-Bbls. (1969-72).....	Holley 2300

1966-74 CHRYSLER CORP. EXHAUST EMISSION TUNE-UP (Cont.)

IDLE SPEED ADJUSTMENT

EXHAUST GAS ANALYZER PROCEDURE (1966-72)

All Models — Check and adjust timing to specifications in Tune-Up section. Connect tachometer. With engine running at normal operating temperature, air cleaner installed, air conditioning on "OFF" (if equipped), and transmission in Neutral, proceed as follows:

1) Connect tachometer. Insert probe of exhaust gas analyzer in tail pipe as far as possible (2 ft. minimum). On dual exhaust cars, use left side tail pipe (side opposite heat valve). If a garage exhaust system is used to conduct exhaust gases away, a plenum chamber or other means must be used to reduce vacuum of exhaust system to $\frac{1}{2}$ " water or less.

2) Warm up and calibrate exhaust analyzer according to manufacturer's instructions. Set idle speed to specification listed on Tune-Up pages for specific engine-transmission combination. **CAUTION** — Do not turn mixture screw more than $\frac{1}{16}$ turn at a time in obtaining air/fuel ratio as analyzer is so sensitive that ratio must be changed in very small increments to obtain accurate readings.

3) Adjust each screw $\frac{1}{16}$ turn richer (counterclockwise) and wait 30 seconds before reading meter. If necessary, repeat this step until a definite increase in richness (lower reading) is indicated. This step is very important since meter reverses its reading and indicates a richer mixture as carburetor is leaned out if carburetor is set too lean.

4) When it is certain that the meter is indicating a lower reading (richer mixture) when idle mixture screws are turned in the richer direction, proceed to adjust carburetor to give 14.2 air/fuel ratio, turning screws counterclockwise (richer) to lower reading and clockwise (leaner) to increase meter reading.

NOTE — Do not remove plastic limiter caps in order to obtain an over-rich mixture.

5) If idle speed changes as mixture screws are turned, adjust speed to specified value and readjust mixture as required so that 14.2 air/fuel ratio is obtained at specified idle speed.

EXHAUST GAS ANALYZER PROCEDURE (1973-74)

All Models (except 4-Bbl. with Idle Speed Solenoid) — **NOTE** — Idle speed adjustment must be set using an Exhaust Gas Analyzer. With engine at normal operating temperature, timing set, air cleaner installed, transmission in "N" and air conditioning OFF (on Chrysler and Imperial, disconnect electrical lead from compressor), disconnect outlet hose from air pump (if so equipped) and plug tube to exhaust manifold. Insert analyzer probe two feet into tailpipe and calibrate meter. Adjust mixture screws, (DO NOT REMOVE LIMITER CAPS), $\frac{1}{16}$ turn out (counterclockwise — richer) and wait 30 seconds before reading meter. If necessary, repeat until meter indicates a definite increase in richness. Adjust mixture, leaner or richer as required, to give CO percent or air/fuel ratio shown on engine compartment decal. If idle speed changes as mixture screws are turned, adjust RPM to specifications using idle speed screw, and readjust the mixture as required so that correct CO percent or air/fuel ratio is obtained at the specified idle RPM.

TACHOMETER (SPEED DROP) PROCEDURE

4-Bbl. With Idle Speed Solenoid Only — With engine at normal operating temperature, timing set, air cleaner installed, transmission in "N" and air conditioning "OFF", disconnect outlet hose from air pump (if so equipped) and plug tube to exhaust manifold. With engine running and Idle Speed Solenoid energized, turn solenoid adjusting screw in or out to obtain specified energized RPM. Adjust idle speed screw until it just touches stop on carburetor throttle lever, then back off one full turn. To test, disconnect solenoid wire, then reconnect. Solenoid plunger will have to be extended manually to obtain energized RPM.

IDLE MIXTURE ADJUSTMENT

All 6 Cylinder Models (1966-74) — Idle mixture will be correct when idle speed has been correctly set.

All V8 Models (1966-72) — Idle mixture will be correct when idle speed has been correctly set.

All V8 Models, 2-Bbl. & 4-Bbl. (1973-74) — If correct air/fuel ratio, CO level and HC level is not obtained during idle speed setting, or if a rough idle and low speed surge condition exists after setting idle, then remove limiter caps from mixture screws and proceed as follows: Turn mixture screws in until seated then back out each screw $1\frac{1}{2}$ turns. From this point on, follow the Exhaust Gas Analyzer, Hot (Slow) Idle RPM procedure. When specifications are reached with mixture screws turned out equally from seated position, install new limiter caps.

ROUGH IDLE & LOW SPEED SURGE

All Engines (1966-72) — Rough idle and low speed surge on vehicles equipped with Carter BBD, AVS, T.Q. and Holley 2-Bbl., or 4-Bbl. carburetors may be a result of improper balance between right and left carburetor bores. To correct condition, proceed as follows:

1) Remove plastic limiter caps from two mixture screws located in base of carburetor (found in cup in sides of primary metering block on Holley). With engine thoroughly warmed up, install suitable exhaust gas analyzer for idle speed and mixture adjustment as outlined in "IDLE SPEED & MIXTURE ADJUSTMENT" section.

2) Turn both mixture screws clockwise until they are both seated, then turn both mixture screws $1\frac{1}{2}$ turns counterclockwise as a starting point. Always turn screws by equal amounts.

3) Start engine and set to specified idle speed for engines with 500 or more miles. Set 75 RPM below specifications if under 50 miles or 50 RPM below specifications if 50 to 500 miles are on engine.

4) Observe air/fuel ratio reading exhaust gas analyzer. Turn each screw $\frac{1}{16}$ turn richer (counterclockwise) and note change in air/fuel reading. From this point on, follow instructions for "Engine Idle Adjustment" until 14.2 air/fuel ratio is obtained at appropriate idle speed. **NOTE** — It is important both mixture screws be turned the same amount on each adjustment so that when finally set, both screws will be the same number of turns from the seated position. Reinstall plastic limiter caps over mixture screws.