1974-79 TUNE-UP PROCEDURES
Toyota 6-Cylinder

Corona MX & Mk II, Cressida, Land Cruiser, Supra

ENGINE IDENTIFICATION

Engines can be identified by prefix of engine serial number. Serial number is stamped on left side of engine block on Corona and Cressida; on right side of engine block on Land Cruiser and Supra.

ENGINE MODEL NUMBER

Application	Engine Number
Corona	4M
Cressida	4M
Land Cruiser	F, 2F
Supra	4M-E

MODEL IDENTIFICATION

VEHICLE IDENTIFICATION NUMBER

Vehicle Identification Number is located on firewall, top of dash, and driver's door post on Corona, Cressida and Supra. On Land Cruiser, number is on right or left front fender apron.

ENGINE COMPRESSION

Check compression pressure with engine at normal operating temperaure, all spark plugs removed, throttle valve wide open, and engine at cranking speed. Maximum variation between cylinders should not exceed 14 psi (.98 kg/cm²).

COMPRESSION PRESSURE SPECIFICATIONS

Application	Standard psi (kg/cm²)	Minimum psi (kg/cm²)
Corona, Cressida & Supra	156 (11)	128 (9)
Land Cruiser	149 (10.5)	114 (8)

VALVE CLEARANCE

Check or adjust valve clearance with engine at normal operating temperature.

VALVE CLEARANCE SPECIFICATIONS

Application	Intake In. (mm)	Exhaust In. (mm)
Corona	.007 (.18)	.010 (.25)
Cressida & Supra	.011 (.28)	.014 (.36)
Land Cruiser	.008 (.21)	.014 (.36)

VALVE ARRANGEMENT

Corona, Cressida & Supra
Left Side - All Intake.
Right Side - All Exhaust.

Land Cruiser
E-I-I-E-E-I-I-E-E-I-I-E - Front-to-rear.

SPARK PLUGS

SPARK PLUG SPECIFICATIONS

Application	Specification
Gap [1]	
Corona	.032" (.80 mm)
Cressida	.036" (.90 mm)
Land Cruiser	.039" (1.0 mm)
Torque	10-15 ft. lbs. (14-20 N.m)

[1] - Set gap to .032" (.80 mm) on all 1974 and 1979 models.

SPARK PLUG TYPE

Application	NGK No.
1974 Models	BP6ES
1975-78 Models	
Corona	BP5ES-L
Cressida	BPR5ES
Land Cruiser	BP5EZ
1979 Models	
Cressida & Supra	BPR5EA-L
Land Cruiser	BP5EA

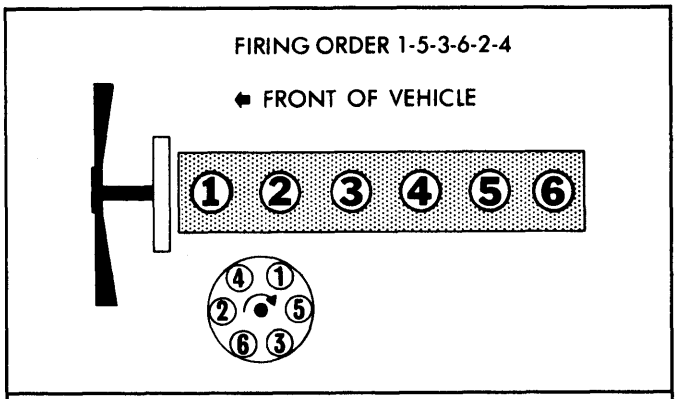

Fig. 1: Corona, Cressida & Supra Firing Order & Distributor Rotation

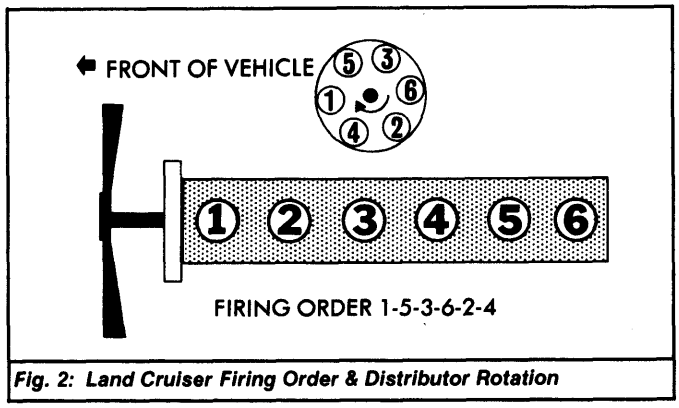

Fig. 2: Land Cruiser Firing Order & Distributor Rotation

HIGH TENSION WIRE RESISTANCE

Carefully remove high tension wires from spark plugs and distributor cap. Using an ohmmeter, check high tension wire resistance while gently twisting wires. If resistance is not to specifications, or fluctuates from infinity to any value, replace high tension wire(s).

HIGH TENSION WIRE RESISTANCE

Application	Resistance (Ohms)
All Models	16,000-25,000

DISTRIBUTOR

Models are equipped with Nippondenso single-point distributors or Nippondenso electronic ignition system.

DISTRIBUTOR SPECIFICATIONS

Application	Specification
Air Gap [1]	.008-.016" (.20-.40 mm)
Point Gap	.016-.020" (.40-.50)
Dwell Angle	38-44°
Breaker Arm Spring Tension	18-25 ozs. (500-700 g)
Condenser Capacity	
Corona	.14-.16 mfd.
All Others	.20-.24 mfd.

[1] - Electronic ignition system only.

1974-79 TUNE-UP PROCEDURES
Toyota 6-Cylinder (Cont.)

IGNITION TIMING

1974-79 Models - Check or adjust ignition timing with engine at normal operating temperature and idle speed set to specifications. On 1978-79 Cressida, disconnect and plug hose to distributor subdiaphragm. If timing is incorrect, loosen distributor hold-down clamp and turn distributor.

1974-78 IGNITION TIMING SPECIFICATIONS

Application	RPM	Timing
Corona [1]		
Federal	[2] 800	10°BTDC
Calif.	[2] 800	5°BTDC
Cressida	750	10°BTDC
Land Cruiser	650	7°BTDC

[1] - Set ignition timing to 5°BTDC on 1974 models.
[2] - Set to 750 RPM on automatic transmission equipped models.

1979 IGNITION TIMING SPECIFICATIONS

Application	RPM	Timing
Cressida		
Federal	900	10°BTDC
California	900	8°BTDC
Land Cruiser	900	7°BTDC
Supra	900	12°BTDC

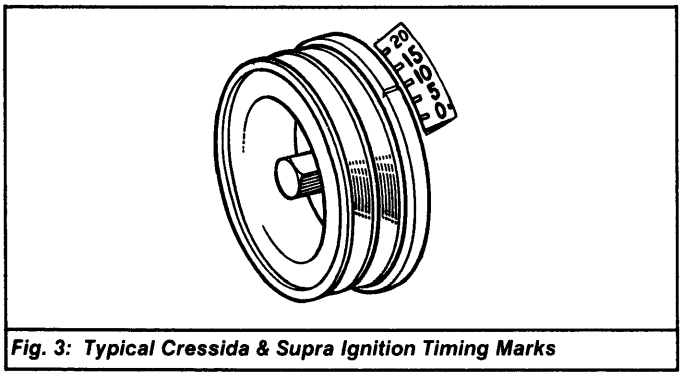

Fig. 3: Typical Cressida & Supra Ignition Timing Marks

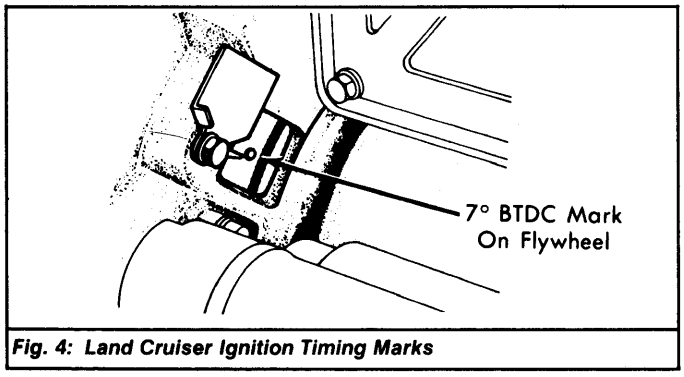

Fig. 4: Land Cruiser Ignition Timing Marks

IDLE SPEED & MIXTURE

1974 Models - **1)** Place transmission in Neutral and warm engine to normal operating temperature. With ignition timing set to specification, be sure choke valve is fully open and all accessories are off.
2) Remove intake manifold vacuum plug and connect vacuum gauge to manifold. Turn idle speed adjusting screw and idle mixture screw to obtain maximum vacuum reading at specified idle RPM.
3) Momentarily raise engine speed to 2500 RPM, release throttle, and make sure engine returns to idle. If engine idle is rough, readjust idle speed and mixture to obtain smoothest possible idle at specified idle RPM.
4) Connect exhaust gas analyzer to vehicle and check CO% level. If idle speed drops more than 50 RPM when adjusting CO% level, readjust idle speed screw and repeat adjustment procedure until correct CO% level is obtained at specified idle RPM.

1974 IDLE SPEED & CO% LEVEL SPECIFICATIONS

Application	Idle RPM	CO%
Corolla		
Man. Trans.	750	1.0-3.0
Auto. Trans.	700	1.0-3.0
Land Cruiser	650	1.0-3.0

1975-79 Carbureted Models - **1)** Place transmission in Neutral and warm engine to normal operating temperature. With ignition timing set to specification, be sure choke valve is fully open and all accessories are off.
2) With air cleaner installed and vacuum lines connected, ensure carburetor fuel level is correct. Adjust idle mixture screw until fastest idle RPM is obtained. Now adjust idle mixture to specified adjustment RPM.
3) Repeat procedure until RPM cannot be increased by adjusting mixture screw. Set idle to specified base idle RPM by adjusting idle speed screw in a clockwise direction.

1975-79 IDLE SPEED & MIXTURE SPECIFICATIONS

Application	Idle Mixture RPM	Base Idle RPM
1975-76 Models		
Corona		
Man. Trans.	870	800
Auto. Trans.	820	750
Land Cruiser	690	650
1977 Models	690	600-700
1978-79 Models		
Cressida	820	750
Land Cruiser	850	800
Supra		800

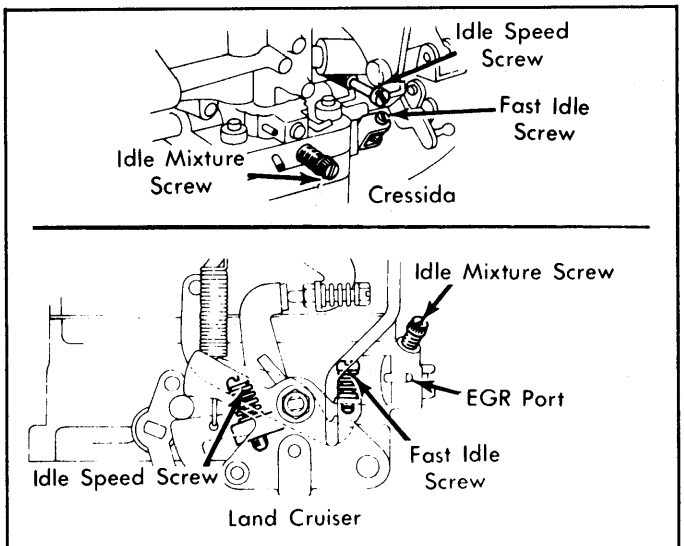

Fig. 5: Typical Carburetor Adjusting Screw Locations

1979 Fuel Injected Models - **1)** Remove rubber cap from service connector on left front fender. Connect EFI Idle Adjusting Wiring Harness (09842-14010) to service connector
2) Connect voltmeter to EFI idle adjusting wiring harness. Voltmeter positive probe should go to Red lead, negative probe to Black lead. DO NOT connect voltmeter probes directly to service connector.
3) Warm engine to normal operating temperature and run engine at 2500 RPM for 2 minutes. Voltmeter needle should fluctuate. If it does not, adjust the idle mixture screw until it does. *See Fig. 6.*

1974-79 TUNE-UP PROCEDURES
Toyota 6-Cylinder (Cont.)

4) Set idle speed to 800 RPM with idle speed adjusting screw. *See Fig. 7.* Remove rubber cap from idle adjusting connector and short both terminals with a jumper wire. Note voltage reading with engine at idle. **5)** Remove jumper wire and race engine to 2500 RPM once. Adjust idle mixture screw until voltmeter needle fluctuation is centered on the voltage reading noted in step **4)**. Remove voltmeter and wiring harness and install rubber caps on connectors.

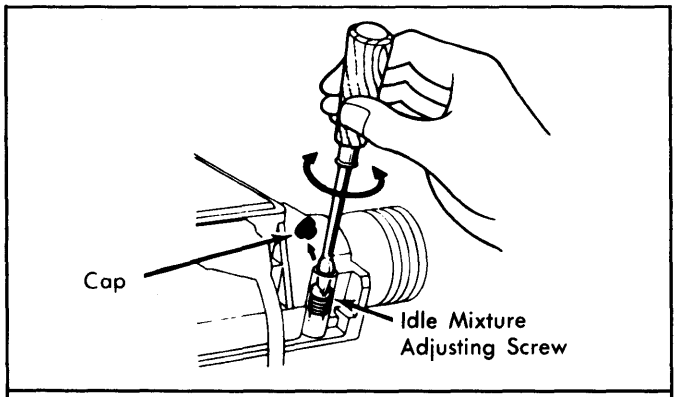

Fig. 6: EFI Idle Mixture Adjusting Screw

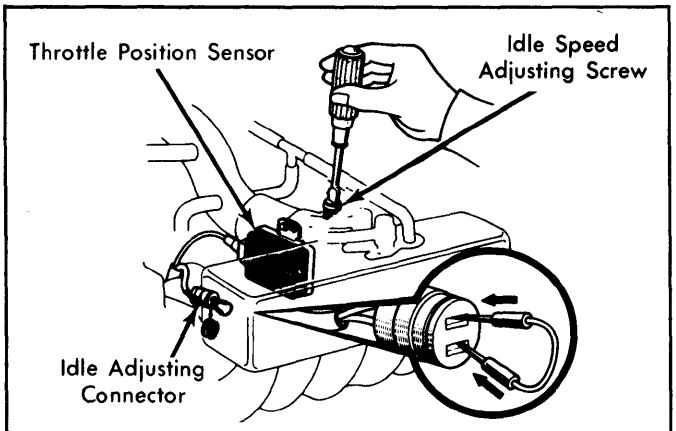

Fig. 7: EFI Idle Speed Adjusting Screw

COLD (FAST) IDLE RPM

NOTE: Fast idle is not adjustable on EFI equipped models.

1974 Corona & Land Cruiser - On Corona, place fast idle lever at top of fast idle cam. Adjust fast idle speed screw until throttle is open 13 degrees from full closed position. On Land Cruiser, adjust fast idle speed screw until throttle is open 21 degrees from full closed position.
1975-76 Corona & Land Cruiser - Warm engine to normal operating temperature. With throttle and choke valves fully closed, adjust fast idle speed until specified fast idle RPM is obtained.
1978-79 Cressida - With engine stopped, disconnect and plug hose from choke opener diaphragm. Close choke valve. Start engine without depressing accelerator. Adjust fast idle speed screw until engine reaches specified speed. Reconnect choke opener diaphragm hose.

FAST IDLE SPECIFICATIONS

Application	RPM
Corona & Cressida	2500
Land Cruiser	1800

1977-78 Land Cruiser - **1)** Pull choke knob out fully. On California models, pinch off hose between EGR port and BVSV. On high altitude models, pinch off hose between EGR port and 3-way connector.
2) On all models, open choke valve with a screwdriver and start engine. Adjust fast idle speed by turning fast idle screw. Engine should return to base idle when choke knob is pushed in fully. Reconnect hose to EGR port.
1979 Land Cruiser - **1)** Pull choke knob out fully. Disconnect and plug diaphragm vacuum hose closest to distributor cap. Disconnect hose to port "S" on Vacuum Control Valve (VCV) and hose to port "P" on EGR vacuum modulator.
2) Use a vacuum hose to connect VCV and EGR pipes going to thermo switch. *See Fig. 8.* Start engine and adjust engine speed with fast idle screw. Engine should return to normal idle when choke knob is pushed in fully. Reconnect all hoses.

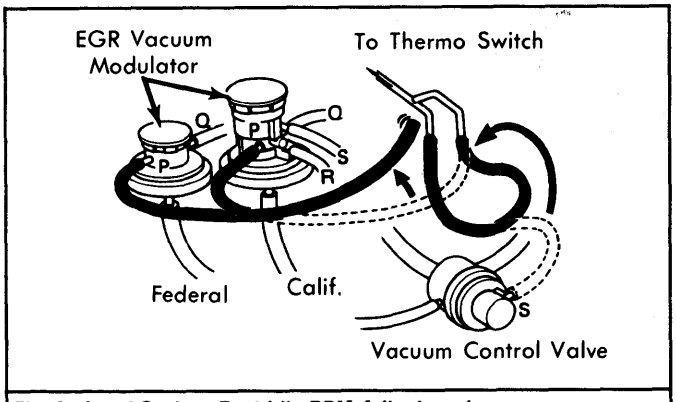

Fig. 8: Land Cruiser Fast Idle RPM Adjustment

THROTTLE POSITIONER ADJUSTMENT

1974-77 Corona & Land Cruiser - **1)** Warm engine to normal operating temperature. Disconnect throttle positioner diaphragm vacuum hose and thermo sensor (if equipped). Idle RPM should increase to specification. If not, turn throttle positioner adjusting screw.
2) Reconnect throttle positioner diaphragm vacuum hose and thermo sensor. Screw should move from throttle valve lever and engine speed should return to base idle. If not, check for a defective throttle positioner diaphragm, Vacuum Transmitting Valve (VTV), or plugged or leaking vacuum hoses.

THROTTLE POSITIONER SPECIFICATIONS

Application	RPM
1974-76 Models	1200
1977 Models	
Federal	1100-1300
Calif. & High Altitude	1300-1500

FUEL PUMP

FUEL PUMP SPECIFICATIONS

Application	Specification
Pressure	
Corona & Cressida	4.2-5.4 psi (.30-.38 kg/cm²)
Land Cruiser	3.4-4.8 psi (.24-.34 kg/cm²)
Supra	[1] 33-38 psi (2.3-2.7 kg/cm²)
Volume	
Corona & Cressida	2 pts. in 60 sec.
Land Cruiser	2.5 pts. in 30 sec.

[1] - Pressure is 28 psi (2.0 kg/cm²) with pressure regulator vacuum hose connected.

1974-79 TUNE-UP PROCEDURES
Toyota 6-Cylinder (Cont.)

EXHAUST EMISSION SYSTEMS

See appropriate articles in EXHAUST EMISSION SYSTEMS section.

IGNITION SYSTEM

DISTRIBUTOR

Models are equipped with Nippondenso single-point distributors or Nippondenso electronic ignition system.

Other Data & Specifications - See appropriate Nippondenso ignition system article in DISTRIBUTORS & IGNITION SYSTEMS section.

IGNITION COIL

IGNITION COIL SPECIFICATIONS

Application	Resistance (Ohms)
Primary	
Corona	1.4-1.6
Cressida & Land Cruiser	1.3-1.7
Supra	0.5-0.6
Secondary	
Corona	12,400
Cressida	12,000-16,000
Land Cruiser	9500-14,500
Supra	11,500-15,500

FUEL SYSTEMS

CARBURETORS

CARBURETORS

Application	Model
Corona, Cressida & Land Cruiser	Aisan 2-Bbl.

Other Data & Specifications - See Aisan Carburetor article in FUEL SYSTEMS section.

FUEL INJECTION

FUEL INJECTION

Application	Type
Supra	Bosch L-Jetronic (AFC)

Other Data & Specifications - See Bosch AFC Fuel Injection article in FUEL SYSTEMS section.