TUNE-UP

MGB

ENGINE IDENTIFICATION

MGB number is stamped on a plate attached to right side of cylinder block. Engine may be identified by prefix of engine number as follows:

Application	Engine Code
MGB	18V

COMPRESSION PRESSURE

Application	Pressure
MGB	①130 psi (9.1 kg/cm²)

① – Minimum.

VALVE CLEARANCE

Remove valve cover and observe opening and closing of valves. Measure clearance between rocker arms and valve stems for a "sliding" fit. To check clearance, turn crankshaft until first valve listed is open, then check or adjust second valve listed. Adjust in following order: 8 (open) - 1 (adjust), 6-3, 4-5, 7-2, 1-8, 3-6, 5-4, 2-7.

NOTE – *Count valves from front to rear.*

Valve Clearance

Application	①Clearance
MGB (Hot)	.013" (.33 mm)

① – Intake and exhaust valves set to same clearance.

VALVE ARRANGEMENT

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

SPARK PLUGS

Application	Gap In. (mm)	Torque Ft. Lbs. (mkg)
All Models	.035 (.9)	18 (2.5)

Spark Plug Type

Application	Champion No.
MGB	N-9Y

HIGH TENSION WIRE RESISTANCE

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

Resistance (Ohms) Per Wire

Application	Ohms
All Models	25,000-30,000

DISTRIBUTOR

All models are equipped with breakerless, electronic ignition systems.

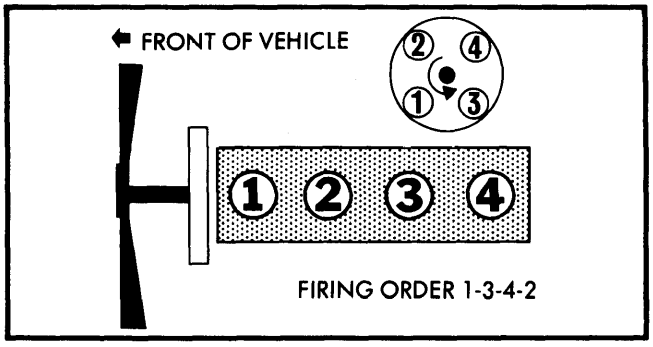

Fig. 1 MGB Firing Order and Distributor Rotation

IGNITION TIMING

Check or adjust engine timing with engine speed as specified. Rotate distributor to obtain correct timing.

Ignition Timing Specifications

Application	RPM	Timing
MGB	1500	10°BTDC

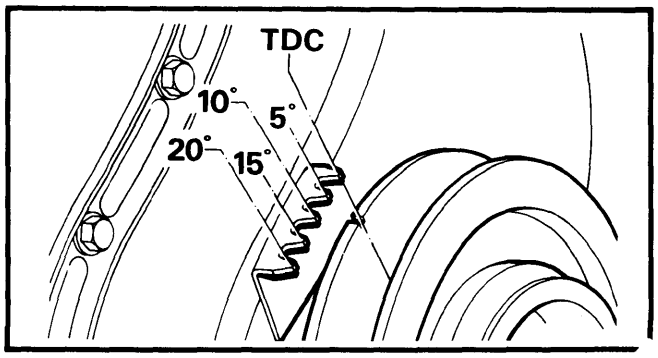

Fig. 2 MGB Ignition Timing Mark Location

IDLE SPEED & MIXTURE

NOTE – *Before checking idle speed and CO% level, be sure valve clearance, spark plug gap and ignition timing are to specifications. Install tachometer on engine.*

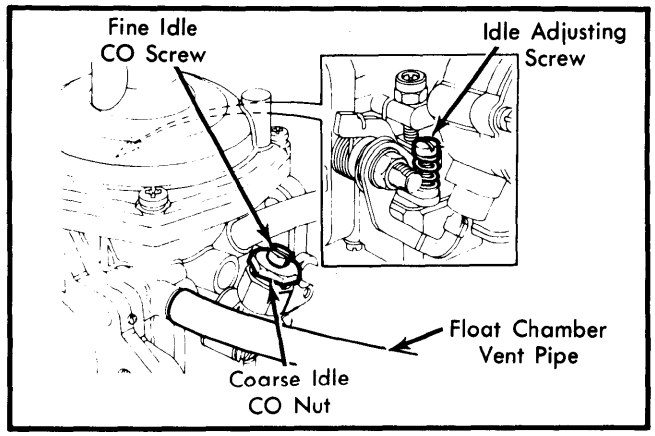

Fig. 3 Adjusting Idle Speed & CO%

TUNE-UP (Cont.)

1) Top up carburetor damper piston with engine oil and run engine until it reaches operating temperature.

2) Disconnect air manifold hose from check valve and plug hose. Disconnect float chamber vent pipe from carburetor. See *Fig. 3.*

3) Run engine at 2500 RPM for 30 seconds and check idle speed. Adjust idle speed to specifications, using idle adjusting screw.

4) Connect an exhaust gas analyzer to vehicle. If CO% level is not within specifications, turn FINE idle CO screw clockwise to enrich and counterclockwise to weaken mixture.

5) If correct CO level cannot be obtained by means of the fine idle CO screw, remove piston damper and insert adjusting tool (BLT 2010) into dashpot. Ensure that outer tool is engaged in piston and inner tool engages hexagon hole in needle adjuster plug.

6) Hold outer tool firmly and turn inner tool clockwise to enrich or counterclockwise to weaken mixture. After each adjustment, top up piston with engine oil, reinstall damper and recheck CO level. When proper CO level is obtained, recheck idle speed. Restore all components to original positions.

Idle Speed & CO Level

Application	Idle RPM	①CO%
MGB	750-950	4.5-6.5

① – With air injection disconnected.

COLD (FAST) IDLE RPM

1) All models are equipped with automatic chokes for fuel enrichment. To check and adjust, remove carburetor. Open throttle butterfly and wedge open. Remove bolt and washer holding water jacket and three screws retaining heat mass.

2) Rotate the operating arm and check vacuum kick piston and rod for full, free movement; fast idle cam and thermostat lever freeness to pivot; and spring operation on cam and lever.

3) Remove wedge from throttle opening.

4) Set gap between choke and throttle levers to proper clearance. Adjust by turning idle speed screw.

5) Adjust throttle stop screw to obtain proper clearance between end of fast idle pin and cam. Lock adjusting screw with lock nut.

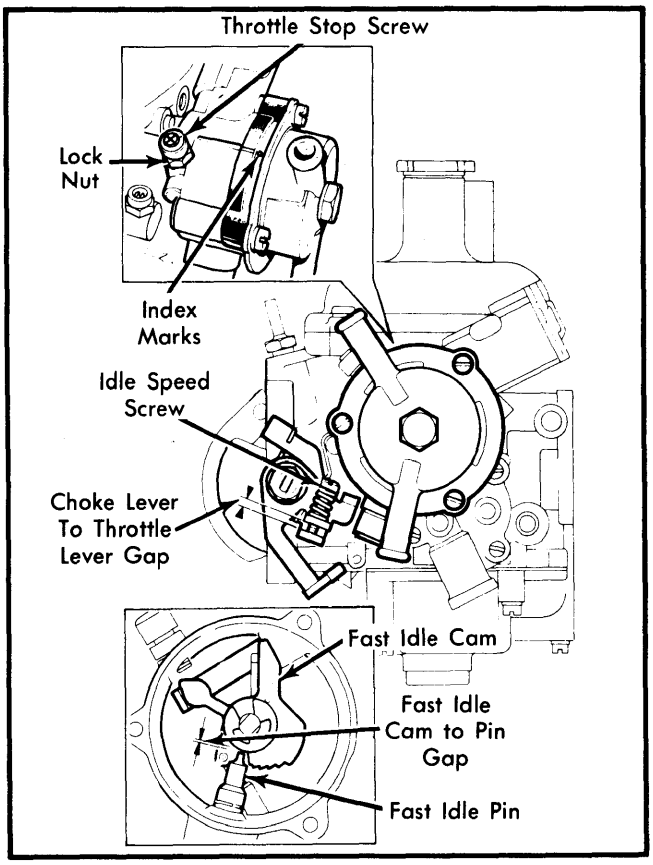

Fig. 4 Setting Fast Idle Clearances

6) Install parts previously removed, being sure to align index marks on heat mass and automatic choke body. Reinstall carburetor and check or adjust idle speed and CO% level.

Fast Idle Gap Settings

Application	Clearance
Choke Lever-to-Throttle Lever	.094" (2.4 mm)
Fast Idle Pin-to-Cam	.025" (.6 mm)

FUEL PUMP PRESSURE & VOLUME

Pressure (At Idle)	2.8-3.8 psi (.20-.27 kg/cm²)
Volume	1 pint in 30 sec.

EXHAUST EMISSION SYSTEMS

See EXHAUST EMISSION SYSTEMS section.

GENERAL SERVICING

IGNITION

DISTRIBUTOR

All models are equipped with Lucas Opus breakerless, electronic ignition systems.

Other Data & Specifications – *See Tune-Up article and appropriate article in DISTRIBUTORS & IGNITION SYSTEMS section.*

IGNITION COIL

Coil Resistance (Ohms@68° F)

Application	Primary	Secondary
All Models	1.43-1.58	.....

1980 MG 4 Tune-Up

TUNE-UP (Cont.)

FUEL SYSTEMS

CARBURETORS

Application	Model
MGB 1-Bbl.	175CD5T

Other Data & Specifications – *See Tune-Up and Zenith-Stromberg Carburetors in FUEL SYSTEMS Section.*

ELECTRICAL

BATTERY

Battery Location – Battery is located under floor in rear of passenger compartment.

Application	Amp. Hr. Rating
MGB	66

STARTER

All models are equipped with Lucas Starters.

Free Speed Amperage	
MGB	40 at 6000 RPM

ALTERNATOR

Application	Rated Amp. Output
MGB	45

ALTERNATOR REGULATOR

Lucas – Non-Adjustable; Integral with Alternator.

BELT ADJUSTMENT

Adjust belts to give ½" deflection when depressed with moderate hand pressure on longest belt span.

FILTERS

Filter	Service Interval (Miles)
Oil Filter	Replace every 6,500
Air Filter	Replace every 12,500
Fuel Filter	Replace every 12,500

CAPACITIES

Application	Quantity
Crankcase (Includes Filter)	3.6 qts.
Cooling System (Includes Heater)	7.2 qts.
Man. Trans. (SAE 20W-50)	3.6 pts.
Rear Axle (SAE 90)	2.0 pts.
Fuel Tank	13.0 gals.