

ENGINE TUNING DATA

Model: MINI-COOPER (998 c.c.)

Year: 1964-69

ENGINE

Type	.. .. .	.. .. .	9FA.
Capacity	.. .. .	.. .. .	998 c.c. (60.96 cu. in.).
Compression ratio:	High compression	.. .. .	9 : 1.
	Low compression	.. .. .	7.8 : 1.
Firing order	.. .. .	.. .. .	1, 3, 4, 2.
Compression pressure:	High compression	.. .. .	165 lb./sq. in. (11.6 kg./cm. ²).
	Low compression	.. .. .	150 lb./sq. in. (10.5 kg./cm. ²).
Idling speed	.. .. .	.. .. .	500 r.p.m.
Fast idle speed	.. .. .	.. .. .	900 r.p.m.
Ignition timing:			<i>High compression</i> <i>Low compression</i>
Static	.. .. .	.. .. .	5° B.T.D.C. 5° B.T.D.C.
			(91 to 96 octane fuel).
*Stroboscopic at 600 r.p.m.	.. .. .	.. .. .	7° B.T.D.C. 7° B.T.D.C.
Timing marks	.. .. .	.. .. .	Dimples on timing wheels, marks on flywheel.
Valve rocker clearance (cold)	.. .. .	.. .. .	.012 in. (.305 mm.).

* Crankshaft degrees and r.p.m.

DISTRIBUTOR

Make/type	.. .. .	.. .. .	Lucas 24D4.
Rotation of rotor	.. .. .	.. .. .	Anti-clockwise.
Dwell angle	.. .. .	.. .. .	60° ± 3°.
Contact breaker gap	.. .. .	.. .. .	.014 to .016 in. (.35 to .40 mm.).
Condenser capacity	.. .. .	.. .. .	.18 to .24 mF.
Serial No. ...	.. .. .	.. .. .	40955, 41032. 40958, 41031.
Centrifugal advance			<i>High compression</i> <i>Low compression</i>
Decelerating check*†	.. .. .	.. .. .	30° to 34° at 6,000 r.p.m. 28° to 32° at 5,500 r.p.m.
			28° to 32° at 5,400 r.p.m. 26° to 30° at 4,400 r.p.m.
			24° to 28° at 4,200 r.p.m. 22° to 26° at 2,200 r.p.m.
			18° to 22° at 2,300 r.p.m. 16° to 20° at 1,800 r.p.m.
			12° to 16° at 1,800 r.p.m. 3° to 9° at 1,000 r.p.m.
			1° to 5° at 800 r.p.m. 0° to 3° at 600 r.p.m.
No advance below	.. .. .	.. .. .	300 r.p.m. 400 r.p.m.
Vacuum advance			
Starts	.. .. .	.. .. .	3 in. (7.62 cm.) Hg. 3 in. (7.62 cm.) Hg.
Finishes†	.. .. .	.. .. .	14° at 8 in. (20.32 cm.) Hg. 16° at 7 in. (17.7 cm.) Hg.

* Vacuum pipe disconnected.

† Crankshaft degrees and r.p.m.

SPARKING PLUGS

Make	.. .. .	.. .. .	Champion.
Type	.. .. .	.. .. .	N5.
Gap	.. .. .	.. .. .	.025 in. (.625 mm.).

IGNITION COIL

Make/type	.. .. .	.. .. .	Lucas HA12.
Primary resistance at 20° C. (68° F.)	.. .. .	.. .. .	3.0 to 3.4 ohms. (cold).
Consumption—ignition on	.. .. .	.. .. .	3.9 amps.

CARBURETTORS

Make/type	.. .. .	.. .. .	Twin S.U. Type HS2.
Piston spring	.. .. .	.. .. .	Blue.
Jet size	.. .. .	.. .. .	.090 in. (2.29 mm.).
Needle: Standard	.. .. .	.. .. .	GY.
Rich	.. .. .	.. .. .	M.
Weak	.. .. .	.. .. .	GG.