ENGINE TUNING DATA 1

MODEL: SPRITE Mk. II/MIDGET Mk. I (948-c.c. ENGINE)

ENGINE

Type	9CG.
Displacement	57·87 cu. in. (948 c.c.).
Compression ratio	9 : 1.
Compression pressure	168 lb./sq. in. (11·82 kg./cm.²).
Firing order	1, 4, 3, 2.
Static ignition timing	4° B.T.D.C.
Stroboscopic ignition timing	6° B.T.D.C. at 600 r.p.m. (engine).
Timing mark location	Pointer on timing chain cover and notch on crankshaft pulley.

DISTRIBUTOR

Make/Type	Lucas/DM2P4.
Serial No.	40561.
Contact breaker gap	·014 to ·016 in. (·36 to ·40 mm.).
Contact spring tension	18 to 24 oz. (510 to 680 gm.).
Rotation at rotor	Anti-clockwise.
Dwell angle	60°±3°.

Centrifugal advance

Crankshaft degrees/speed (vacuum pipe disconnected)	0°–4° at 1,200 r.p.m. 10°–15° at 2,000 r.p.m. 24°–28° at 4,600 r.p.m. 24°–28° at 5,600 r.p.m. (max.).

Vacuum advance

Starts	5 in. Hg.
Finishes	12 in. Hg.
Total crankshaft degrees	12°.

IGNITION COIL

Make/Type	Lucas/LA12.
Resistance	3·2 to 3·4 ohms.

SPARKING PLUGS

Make/Type	Champion/N5.
Gap	·024 to ·026 in. (·61 to ·66 mm.).

ELECTRICAL

Dynamo	Lucas/C39.
Battery	Lucas/BT7A or BT27A.
Volts/Polarity	12 volt/Positive earth.
Starter	Lucas/N35G/1.
Control unit	Lucas/RB106/2.

CARBURETTERS

Make/Type	S.U./HS2.
Jet	·090 in. (2·29 mm.).
Needle	Standard V3; Rich V2; Weak GX.
Piston spring	Light blue

ENGINE TUNING DATA 2

MODEL: SPRITE Mk. II/MIDGET Mk. I (1098-c.c. ENGINE)

ENGINE

Type	10CG.
Displacement	67 cu. in. (1098 c.c.).
Compression ratio	8·9 : 1.
Compression pressure	165 lb./sq. in. (11·6 kg./cm.²).
Firing order	1, 3, 4, 2.
Static ignition timing	5° B.T.D.C.
Stroboscopic ignition timing	8° B.T.D.C. at 600 r.p.m. (engine).
Timing mark location	Pointer on timing chain case and notch on crankshaft pulley.
Engine idle speed	1,000 r.p.m.

DISTRIBUTOR

Make/Type	Lucas/25D4.
Serial No.	40919.
Contact breaker gap	·014 to ·016 in. (·36 to ·40 mm.).
Contact spring tension	18 to 24 oz. (510 to 680 gm.).
Rotation at rotor	Anti-clockwise.
Condenser capacity	·22 mF.
Dwell angle	60°±3°.

Centrifugal advance

Crankshaft degrees/speed (vacuum pipe disconnected)	1° at 800 r.p.m. 4° at 1,200 r.p.m. 16° at 1,800 r.p.m. 28° at 4,400 r.p.m. 32° at 5,500 r.p.m.

Vacuum advance

Starts	4 in. Hg.
Finishes	13 in. Hg.
Total crankshaft degrees	20°.

IGNITION COIL

Make/Type	Lucas/LA12.
Resistance	3·2 to 3·4 ohms.

SPARKING PLUGS

Make/Type	Champion/N5.
Gap	·024 to ·026 (·610 to ·660 mm.).

ELECTRICAL

Dynamo	Lucas/C40.
Battery	Lucas/N9 or NZ9.
Volts/Polarity	12 volt/Positive earth.
Starter	Lucas/M35G.
Control unit	Lucas/RB106/2.

CARBURETTER

Make/Type	S.U./HS2.
Jet	·090 in. (2·29 mm.).
Needle	Standard GY; Rich M; Weak GG.
Piston spring	Blue.

ENGINE TUNING DATA 3

MODEL: SPRITE Mk. III/MIDGET Mk. II (1098-c.c. ENGINE)

ENGINE

Type	10CG.
Displacement	67 cu. in. (1098 c.c.).
Compression ratio	8·9 : 1.
Compression pressure	165 lb./sq. in. (11·6 kg./cm.²).
Firing order	1, 3, 4, 2.
Static ignition timing	5° B.T.D.C.
Stroboscopic ignition timing	8° B.T.D.C. at 600 r.p m. (engine).
Timing mark location	Pointer on timing chain case and notch on crankshaft pulley.
Engine idle speed	1,000 r.p.m.

DISTRIBUTOR

Make/Type	Lucas/25D4.
Serial No.	4091B.
Contact breaker gap	·014 to ·016 in. (·36 to ·40 mm.).
Contact spring tension	18 to 24 oz. (510 to 680 gm.).
Rotation at rotor	Anti-clockwise.
Dwell angle	60°±3°.

Centrifugal advance

Crankshaft degrees/speed (vacuum pipe disconnected)	0°–1° at 800 r.p.m. 2°–6° at 1,200 r.p.m. 17°–21° at 2,000 r.p.m. 19°–23° at 2,400 r.p.m. 26°–30° at 4,400 r.p.m. 30°–34° at 6,000 r.p.m.

Vacuum advance

Starts	4 in. Hg.
Finishes	13 in. Hg.
Total crankshaft degrees	20°.

IGNITION COIL

Make/Type	Lucas/LA.12.
Resistance	3·2 to 3·4 ohms.

SPARKING PLUGS

Make/Type	Champion/N5.
Gap	·024 to ·026 in. (·610 to ·660 mm.).

ELECTRICAL

Dynamo	Lucas/C40.
Battery	Lucas/N9 or NZ9.
Volts/Polarity	12 volt/Positive earth.
Starter	Lucas/M35G.
Control unit	Lucas/RB106/2.

CARBURETTER

Make/Type	S.U./HS2.
Jet	·090 in. (2·29 mm.).
Needle	Standard AN; Rich H6; Weak GG.
Piston spring	Blue.

ENGINE TUNING DATA 4

MODEL: SPRITE Mk. IV/MIDGET Mk. III (1275-c.c. ENGINE) TO ENGINE No. 12CC/Da/H16300

ENGINE

Type	12CC.
Displacement	77·8 cu. in. (1274·86 c.c.).
Compression ratio	8·8 : 1.
Compression pressure	120 lb./sq. in. (8·4 kg./cm.²) at 350 r.p.m.
Firing order	1, 3, 4, 2.
Static ignition timing	7° B.T.D.C.
Stroboscopic ignition timing (vacuum pipe disconnected)	22° B.T.D.C. at 1,200 r.p.m. (23D4), 13° B.T.D.C. at 1,000 r.p.m. (25D4).
Timing mark location	Pointer on timing chain case and notch on crankshaft pulley.
Engine idle speed	700 r.p.m. (hot).

DISTRIBUTOR

Make	Lucas.	
Contact breaker gap	·014 to ·016 in. (·36 to ·40 mm.).	
Contact spring tension	18 to 24 oz. (510 to 680 gm.).	
Rotation at rotor	Anti-clockwise.	
Dwell angle	60°±3°.	
Condenser capacity	·18 to ·24 mF.	
Type	**23D4**	**25D4**
Automatic advance	Centrifugal	Centrifugal and vacuum
Serial number	40819	41198
Centrifugal advance		
Crankshaft degrees speed (vacuum pipe disconnected)	0°–3° at 600 r.p.m. 6°–12° at 1,000 r.p.m. 11°–15° at 2,000 r.p.m. 22°–26° at 5,200 r.p.m. 28°–32° at 7,000 r.p.m.	0°–1° at 600 r.p.m. 2°–6° at 800 r.p.m. 4°–8° at 1,000 r.p.m. 10°–14° at 2,000 r.p.m. 20°–24° at 5,600 r.p.m.
Vacuum advance (25D4 Distributor only)		
Starts		5 in. Hg.
Finishes		8 in. Hg.
Total crankshaft degrees		6°±2°.

IGNITION COIL

Make/Type	Lucas/11C12.
Resistance	3·0 to 3·4 ohms.

SPARKING PLUGS

Make/Type	Champion/N9Y.
Gap	·024 to ·026 in. (·610 to ·660 mm.).

ELECTRICAL

Dynamo	Lucas/C40.
Battery	Lucas/N9 or NZ9.
Volts/Polarity	12 volt/Positive earth.
Starter	Lucas/M35G.
Control unit	Lucas/RB106.

CARBURETTER

Make/Type	S.U./HS2.
Jet	·090 in.
Needle	Standard AN; Rich H6; Weak GG.
Piston spring	Blue.

ENGINE TUNING DATA 5

MODEL: SPRITE Mk. IV/MIDGET Mk. III (1275-c.c. ENGINE) FROM ENGINE No. 12CE/Da/H101

ENGINE

Type	12CE and 12CD.
Displacement	77·8 cu. in. (1274·86 c.c.).
Compression ratio	8·8 : 1.
Compression pressure	120 lb./sq. in. (8·4 kg./cm.^{2}) at 350 r.p.m.
Firing order	1, 3, 4, 2.
Static ignition timing	7° B.T.D.C.
Stroboscopic ignition timing	13° B.T.D.C. at 1,000 r.p.m.
Timing mark location	Pointer on timing chain case and notch on crankshaft pulley.
Engine idle speed	700 r.p.m. (hot).

DISTRIBUTOR

Make/Type	Lucas/25D4.
Serial No.	41198.
Contact breaker gap	·014 to ·016 in. (·36 to ·40 mm.).
Contact spring tension	18 to 24 oz. (510 to 680 gm.).
Rotation at rotor	Anti-clockwise.
Dwell angle	60°±3°.

Centrifugal advance

Crankshaft degrees/speed (vacuum pipe disconnected)	0°–1° at 600 r.p.m. 2°–6° at 800 r.p.m. 4°–8° at 1,000 r.p.m. 10°–14° at 2,000 r.p.m. 20°–24° at 5,600 r.p.m.

Vacuum advance

Starts	5 in. Hg.
Finishes	8 in. Hg.
Total crankshaft degrees	6°±2°.

IGNITION COIL

Make/Type	Lucas/HA12.
Resistance	3·0 to 3·4 ohms.

SPARKING PLUGS

Make/Type	Champion/N9Y.
Gap	·024 to ·026 in. (·610 to ·660 mm.).

ELECTRICAL

Dynamo	Lucas/C40.
Battery	Lucas/N9 or NZ9. Later cars Lucas A9/AZ9 or A11/AZ11.
Volts/Polarity	12 volt/**Negative** earth.
Starter	Lucas/M35G. Later cars Lucas M35J.
Control unit	Lucas/RB106. Later cars Lucas RB340.

CARBURETTER

Make/Type	S.U./HS2.
Jet	·090 in.
Needle	Standard AN; Rich H6; Weak GG.
Piston spring	Blue.

ENGINE TUNING DATA 6

MODEL: MIDGET Mk. III (1275-c.c. ENGINE) FROM ENGINE No. 12V/586F/H101 and 12V/586F/L101

ENGINE

Type	12V, 586F.
Displacement	77·8 cu. in. (1274·86 c.c.).
Compression ratio	8·8 : 1.
Compression pressure	120 lb./sq. in. (8·4 kg./cm.^{2}) at 350 r.p.m.
Firing order	1, 3, 4, 2.
Static ignition timing	7° B.T.D.C.
Stroboscopic ignition timing	13° B.T.D.C. at 1,000 r.p.m.
Timing mark location	Pointer on timing chain case and notch on crankshaft pulley.
Engine idle speed	700 r.p.m. (hot).

DISTRIBUTOR

Make/Type	Lucas/25D4.
Serial No.	41198.
Contact breaker gap	·014 to ·016 in. (·36 to ·40 mm.).
Contact spring tension	18 to 24 oz. (510 to 680 gm.).
Rotation at rotor	Anti-clockwise.
Dwell angle	60°±3°.

Centrifugal advance

Crankshaft degrees/speed (vacuum pipe disconnected)	0°–1° at 600 r.p.m. 2°–6° at 800 r.p.m. 4°–8° at 1,000 r.p.m. 10°–14° at 2,000 r.p.m. 20°–24° at 5,600 r.p.m.

Vacuum advance

Starts	5 in. Hg.
Finishes	8 in. Hg.
Total crankshaft degrees	6°±2°.

IGNITION COIL

Make/Type	Lucas/HA12.
Resistance	3·0 to 3·4 ohms.

SPARKING PLUGS

Make/Type	Champion/N9Y.
Gap	·024 to ·026 in. (·610 to ·660 mm.).

ELECTRICAL

Dynamo	Lucas/C40.
Battery	Lucas A9/AZ9 or A11/AZ11.
Volts/Polarity	12 volt/Negative earth.
Starter	Lucas M35J.
Control unit	Lucas RB340.

CARBURETTER

Make/Type	S.U./HS2.
Jet	·090 in.
Needle	Standard AN; Rich H6; Weak GG.
Piston spring	Blue.