

BSA SERVICE SHEET No. 415

September, 1954
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Models C10L and C11G

USEFUL DATA

	C10L	C11G & C12
Cylinder bore (mm.)	63	63
Engine stroke (mm.)	80	80
Engine capacity (c.c.)	249	249
Standard compression ratios	5:1	6.5:1
1954 Camshaft, Part No.	29 1993	29 2025
Tappet clearance, Inlet	.004 in.	.003 in.
Exhaust	.006 in.	.003 in.
Valve timing, Inlet opens before T.D.C.	25°	25°
Inlet closes after B.D.C.	70°	70°
Exhaust opens before B.D.C.	70°	70°
Exhaust closes after T.D.C.	25°	25°
1955-56 Camshaft, Part No.	29 2075	29-2076
Tappet clearance, Inlet	.012 in.	.010 in.
Exhaust	.015 in.	.012 in.
Valve timing, Inlet opens before T.D.C.	29°	29°
Inlet closes after B.D.C.	84°	84°
Exhaust opens before B.D.C.	80°	80°
Exhaust closes after T.D.C.	28°	28°
Piston ring gap, Compression	.010 in.	.010 in.
Oil control	.010 in.	.010 in.
Piston ring side clearance	.002 in.	.002 in.
Piston clearance at base of skirt	.0045/.0065 in.	.0035/.0055 in.
Contact breaker gap	.015 in.	.015 in.
Ignition setting, Fully advanced before T.D.C.	$\frac{5}{16}$ in.	$\frac{1}{4}$ in.
Fully retarded before T.D.C.	$\frac{1}{16}$ in.	T.D.C.
Plug type, Champion	N8B	L10S
Plug gap	.018/.020 in.	.018/.020 in.
Carburettor, Standard type	274BT/3EG	274BU/1EH
Choke size	$\frac{3}{16}$ in.	$\frac{3}{16}$ in.
Throttle slide	4/4	4/4
Needle position	2	3
Needle jet	.1055	.1065
Main jet	90	80
Carburettor, Monobloc type	375/2	375/4
Choke size	$\frac{3}{16}$ in.	$\frac{3}{16}$ in.
Throttle slide	375/3 $\frac{1}{2}$	375/3 $\frac{1}{2}$
Needle position	2	3
Needle jet	.1055	.1055
Main jet, without air cleaner	120	140
Main jet, with air cleaner	85	100

B.S.A. Service Sheet No. 415 (contd.)

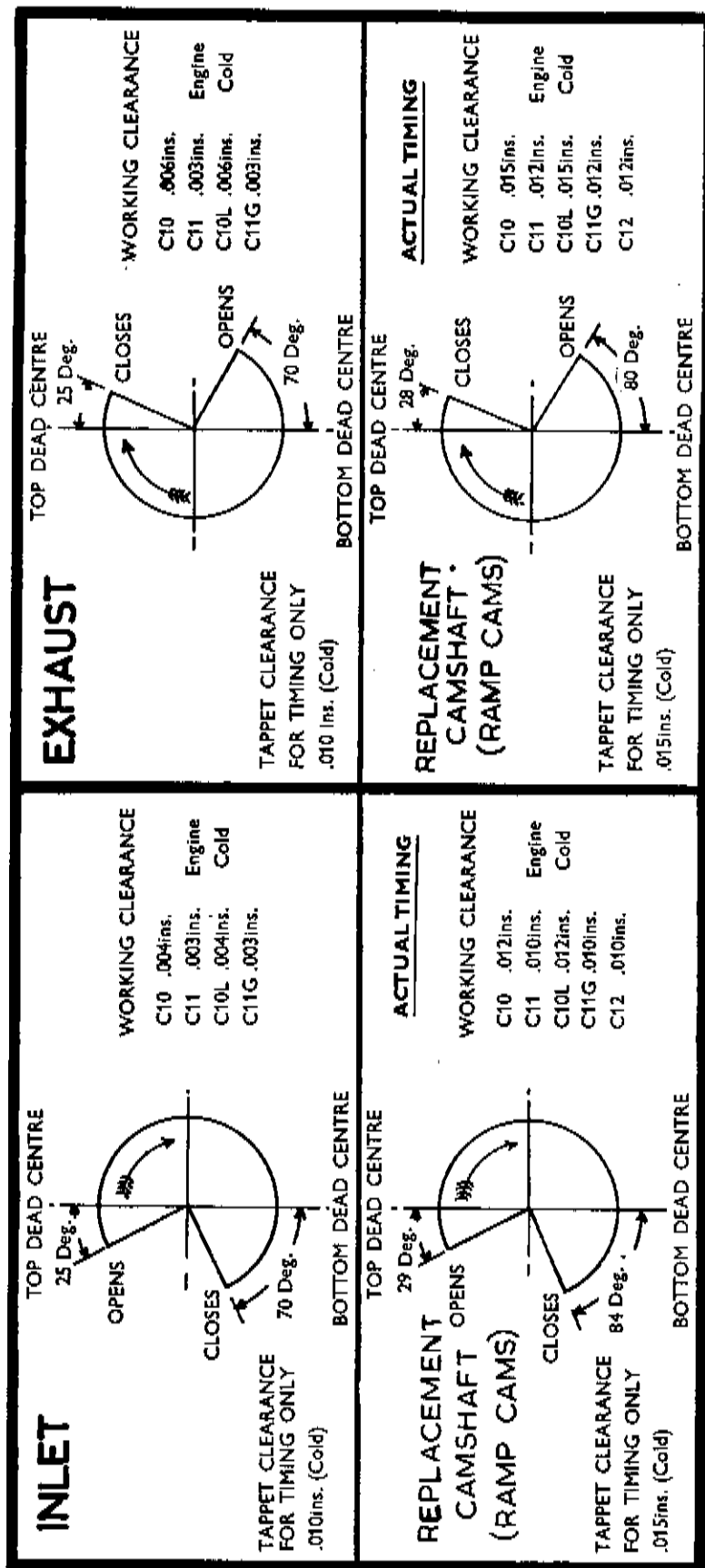
	C10L	C11G & C12
Petrol tank capacity (galls.)	2½	2½
Oil tank capacity (pints)	4	4
Gearbox capacity (pints) 1954-55	½ (3 speed)	½ (3 speed)
		1 (4 speed)
Standard gear ratios 4th	-	6.2
3rd	6.6	6.2 7.6
2nd	9.8	9.25 11.1
1st	14.5	14.1 16.15
Gearbox capacity (pints) 1956 4 speed	½	½
Standard gear ratios, 4th	6.6	6.26
3rd	8.0	7.64
2nd	11.7	11.1
1st	17.1	16.15
Engine sprocket	16T	17T
Clutch sprocket	43T	43T
Gearbox sprocket	19T	17T (C12 19T)
Rear wheel sprocket	47T	42T (C12 47T)
Primary chain size	½ × .305 in.	½ × .305 in.
No. of links	69	69 (C12 70)
Rear chain size	½ × .205 in.	½ × .305 in.
No. of links, Rigid frame 1954-55	-	104
No. of links, Spring frame 1954-55	110	107
No. of links, Spring frame 1956	111	115
Front fork movement, 1954-55	3¾ in.	6 in.
Front fork movement, 1956	6 in.	6 in.
Rear suspension movement	2 in.	2 in. (C12 2¾ in.)
Front fork capacity (engine oil) 1954-55	Grease	¼ pint (142 c.c.)
Front fork capacity (engine oil) 1956	¼ pint (142 c.c.)	¼ pint (142 c.c.)
Front brake size, 1954	5½ × 1 in.	5½ × 1 in.
Front brake size, 1955-56	5½ × 1 in.	7 × 1¼ in.
Rear brake size	5 × ¾ in.	5½ × 1 in.
Rim sizes	WM1 × 19	WM1 × 19
Standard tyre sizes	2.75 × 19	3.00 × 19
Tyre pressures, p.s.i. Front	18	18
Rear	27	26
Wheelbase	52½ in.	53½ in. (C12 54 in.)
Ground clearance	5 in.	4½ in. (C12 4 in.)
Saddle height	29½ in.	29½ in.
Dry weight (Rigid frame) 1954		301 lbs.
(Spring frame) 1954	256 lbs.	316 lbs.
(Spring frame) 1955	256 lbs.	304 lbs.
(Spring frame) 1956	260 lbs.	312 lbs.

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Fig. 1. 'C' GROUP MODELS VALVE TIMING CHART



NOTE: Ramp type camshafts bear the following part numbers:—
C.10—29-2078; C.11—29-2079; C.10L—29-2075; C.11G—29-2076, and can be used to replace the original camshafts in early models.

They are fitted as standard on and after Engine numbers:—
BC.10L—3562 and BC.11G—10438.

When ramp cams are fitted, the inlet valve clearance must be checked or adjusted when the exhaust valve is about to open. The exhaust valve clearance must be checked or adjusted when the inlet valve has just closed.

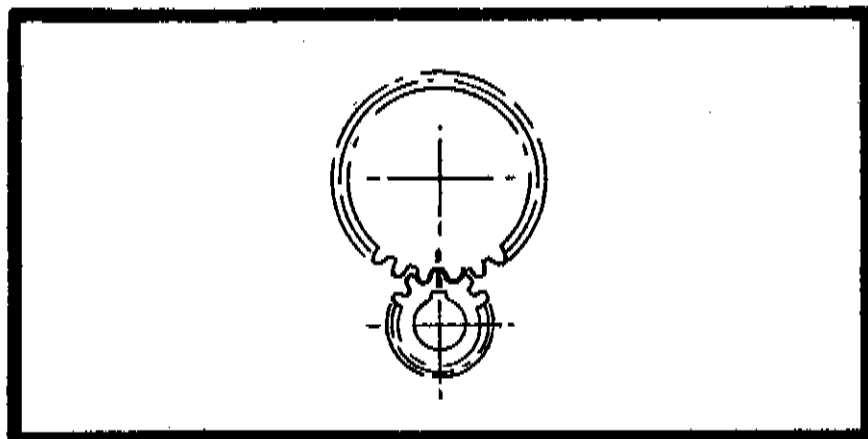


Fig. 2. VALVE TIMING MARKS