

LUCAS

Quality

EQUIPMENT



MOTOR-CYCLE EQUIPMENT DETAILS
AND SPARE PARTS FOR

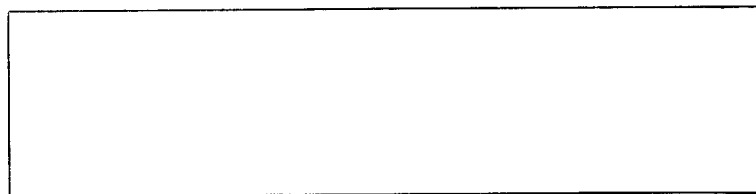
B.S.A.

ZA7 500 c.c. O.H.V. TWIN. ZB31 350 c.c. O.H.V. ZB32 350 c.c. O.H.V. (Trials).
ZB33 500 c.c. O.H.V. ZB34 500 c.c. O.H.V. (Trials). ZM20 500 c.c. S.V. ZM21 600 c.c. S.V.
ZM33 500 c.c. O.H.V. C10 250 c.c. S.V. C11 250 c.c. O.H.V. ZC11 250 c.c. O.H.V.

SUNBEAM

S7 and S8

1949



JOSEPH LUCAS LTD • BIRMINGHAM 19 • ENGLAND

LUCAS

ORIGINAL EQUIPMENT

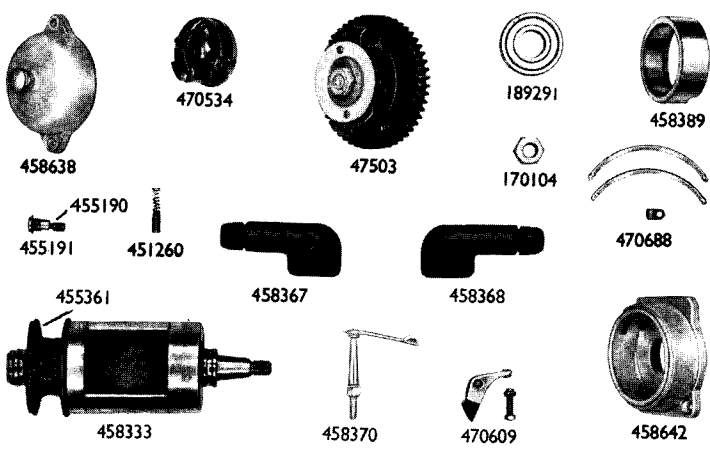
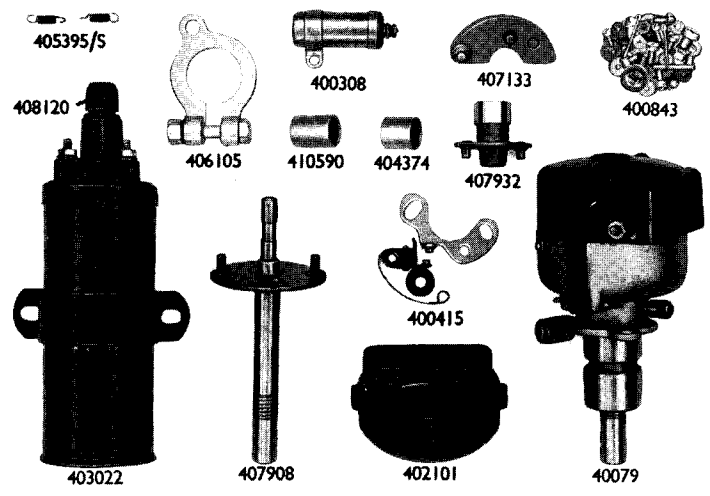
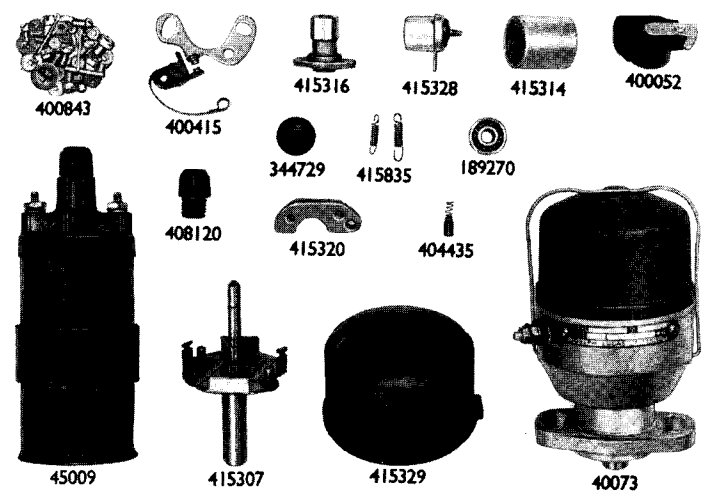
EQUIPMENT SPECIFICATION

UNIT	MODEL & TYPE	SERVICE No.	SERVED BY	REMARKS
DYNAMO	E3H AC33	200424	200424	ZA7 500 c.c. O.H.V. Twin and ZC11 250 c.c. O.H.V. models.
	E3L AC	20010A	20010A	From Frame No. ZA7/1549 ZA7 500 c.c. O.H.V. Twin. Also for C10 250 c.c. S.V. and C11 250 c.c. O.H.V. and ZC11 from Frame No. 4701 and Engine No. 3248.
MAGDYNO	MC45L AC/0	20151A	20151A	Sunbeam S7 and S8.
	M01/6 AC52	46020B	46020B	ZB31 350 c.c. O.H.V., ZB32 350 c.c. O.H.V. Trials, ZB33 500 c.c. O.H.V., ZB34 500 c.c. O.H.V. Trials, ZM20 500 c.c. S.V., ZM21 600 c.c. S.V., ZM33 500 c.c. O.H.V.
MAGNETO	K2F AC	42174A	42174A	ZA7 500 c.c. O.H.V. Twin.
AUTO ADVANCE UNIT		47503B	47503B	
DISTRIBUTOR	DKX1A AC33/1	40079B	40079B	C10 250 c.c. S.V., C11 250 c.c. O.H.V., and ZC11 250 c.c. O.H.V.
COIL	CQ LI	403022	403022	Sunbeam S7 and S8.
DISTRIBUTOR	DIA2	40073H	40073H	Sunbeam S7 and S8.
COIL, IGNITION	CQ	45009A	45009A	All models except C10, C11, and Sunbeam S7 and S8.
CONTROL BOX	MCR1 L31	33018A	33018A	ZA7 500 c.c. Twin from Frame No. 1549. ZC11 250 c.c. O.H.V. from Frame No. 4701 and Engine No. 3248. Sunbeam S7 and S8.
	MCR2	37097A	37097A	
BATTERY	PUW7E			
HEADLAMP	SSU700P	50788A	50788A	ZA7 500 c.c. Twin, ZM20 500 c.c. S.V., ZM21 600 c.c. S.V., ZM33 500 c.c. O.H.V.
	MU142	50212B	50212B	ZB31 350 c.c. O.H.V., ZB32 350 c.c. O.H.V. Trials, ZB33 500 c.c. O.H.V., ZB34 500 c.c. O.H.V. Trials.
	MU42	50185D	50185D	C10 250 c.c. S.V., C11 250 c.c. O.H.V., ZC11 250 c.c. O.H.V.
	MS142	50353A	50353A	Sunbeam S7 and S8.
LAMP, SIDECAR	LD109A	52003A	52153A	ZB31 350 c.c. O.H.V., ZB32 350 c.c. O.H.V. Trials, ZB33 500 c.c. O.H.V., ZB34 500 c.c. O.H.V. Trials.
	LD109A (When required)	52105A	52154	ZM20 500 c.c. S.V., ZM21 600 c.c. S.V., ZM33 500 c.c. O.H.V.
LAMP, TAIL	MT211	53056A	53056A	
AMMETER	CZ27-L	364454	364454	Sunbeam S7 and S8.
HORN	HFI234	70039A	069225	
HORN PUSH	4A AC	762007	762007	ZA7 500 c.c. O.H.V. Twin, Sunbeam S8, C10 250 c.c. S.V., C11 250 c.c. O.H.V., ZC11 250 c.c. O.H.V.
				ZB31 350 c.c. O.H.V., ZB32 350 c.c. O.H.V. Trials, ZB33 500 c.c. O.H.V., ZB34 500 c.c. Trials.
	4A	762164	762164	ZM20 500 c.c. S.V., ZM21 600 c.c. S.V., ZM33 500 c.c. O.H.V.
SWITCH, DIP	9 AC	380056	380056	All models except Sunbeam S8.
	99 L3	31220A	31220A	Sunbeam S7 and S8.
CABLE HARNESS		991481	991481	ZA7 500 c.c. O.H.V. Twin.
		990941	990941	ZB31 350 c.c. O.H.V., ZB32 350 c.c. O.H.V. Trials, ZB33 500 c.c. O.H.V., ZB34 500 c.c. O.H.V. Trials.
REGULATOR CABLES		983001	983001	ZM20 500 c.c. S.V., ZM21 600 c.c. S.V., ZM33 500 c.c. O.H.V.
CABLE HARNESS		990681	990681	C10 250 c.c. S.V., C11 250 c.c. O.H.V.
REGULATOR CABLES		983001	983001	ZC11 250 c.c. O.H.V.
CABLE HARNESS		994341	994341	Sunbeam S7 and S8.





LUCAS SPARE PARTS

ILLUSTRATION	DESCRIPTION OF PART	ORDERING No.
	MAGNETO, K2F AC 42174 Pick-up assembly, left hand... .. 458368 Pick-up assembly, right hand 458367 Brush and spring, pick-up 451260 Cover, contact breaker 458638 Contact breaker 470534 Contact set 470609 Springs, set 470688 Cam 458389 Plate assembly, contact breaker end 458642 Nut, spindle 170104 Armature assembly 458333 Slip ring 455361 Bearing, complete, A15 189291 Brush spring and holder 455191 Brush and spring 455190 Spring pin assembly 458370 Auto advance unit 47503	
	COIL, Ignition, CQ LI 403022 Nut, H.T. terminal 408120 DISTRIBUTOR, DKX1A AC33-1 40079 Plate assembly 406105 Cover 402101 Contact set 400415 Condenser 400308 Cam assembly 407932 Springs, auto advance 405395/S Weights, auto advance 407133 Shaft and action plate 407908 Bearing bush, top 404374 Bearing bush, bottom 410590 Sundry parts 400843	
	COIL, Ignition, CQ 45009 Nut, H.T. terminal 408120 Cover 344729 DISTRIBUTOR, DIA2 40073 Cover 415329 Brush and spring 404435 Rotor arm 400052 Contact set 400415 Condenser 415328 Cam 415316 Springs, auto advance 415835 Weights, auto advance 415320 Shaft and action plate 415307 Bush, bearing... .. 415314 Bearing, cam shaft 189270 Sundry parts, set 400843	



LUCAS SPARE PARTS

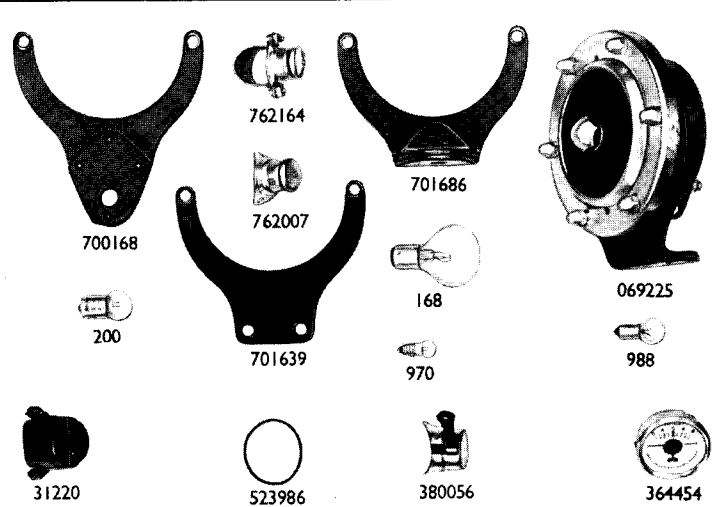
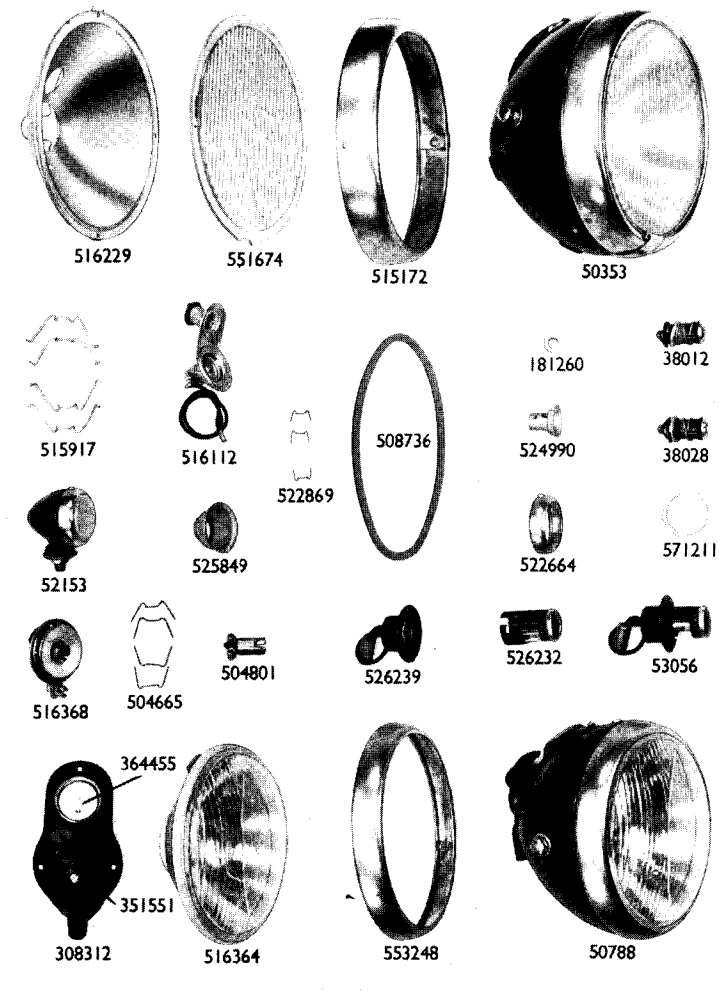
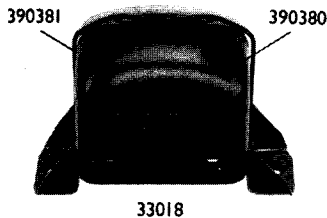
ILLUSTRATION	DESCRIPTION OF PART	ORDERING No.
		
	INSTRUMENT PANEL PARTS	
	Ammeter, CZ27-L	364454
	Rubber ring	523986
	Switch, dipper, 99L3	31220
	HORN, Electric, HF1234	069225
	Bracket	701686
	Push, 4A AC	762007
	Bracket	700168
	Push, 4A	762164
	Bracket	701639
	SWITCH, DIPPER, 9AC	380056
	BULBS	
	Headlamp, pilot (SSU700P)	988
	Headlamp, pilot (MS42, MU42, MUI42)	200
	Headlamp, main (MUI42)	168
	Headlamp, main (SSU700P)	169
	Headlamp, main (MU42)	180
	Headlamp, main (MS142)	70
	Tail lamp	200
	Warning light	970
		
	HEADLAMP, SSU700P	50788
	Rim assembly	553248
	Wire, light fixing	504665
	Panel	308312
	Switch	351551
	Ammeter	364455
	Unit, light	516364
	Bulb holder	504801
	Back shell assembly	516368
	HEADLAMP, MUI42	50212
	Rim assembly	507577
	Wire, glass fixing	500291
	Glass	507586
	Panel	308312
	Ammeter	364455
	Bead, rubber	509201
	Reflector	551912
	Switch	351551
	Bulb holder	504801
	Bulb holder, interior	500181
	HEADLAMP, MU42	50185
	Rim assembly	509484
	Wire, glass fixing	500291
	Glass	550875
	Panel	308343
	Ammeter	364456
	Bead, rubber	553065
	Reflector	553147
	Switch	344669
	Bulb holder	504801
	Bulb holder, interior	500181
	HEADLAMP, MS142	50353
	Rim assembly	515172
	Wire, glass fixing	515917
	Glass	551674
	Bead, rubber	508736
	Reflector	516229
	Bulb holder, double contact	504801
	Backshell	516112
	Warning light, red	38012
	Warning light, green	38028
	LAMP, TAIL, MT211	53056
	Cover assembly	526232
	Flange assembly	526239
	LAMP, SIDE, LDI09A	52153
	Rim assembly	522664
	Wires, fixing	522869
	Glass	571211
	Reflector	525849
	Nut, fixing	181260
	Adaptor and shell	524990
	LAMP, SIDE, LDI09A	52154
	Rim assembly	521989
	Wires, fixing	522869
	Glass	571211
	Adaptor assembly	524990
	Nut, fixing	181260
	Reflector assembly	525849

ILLUSTRATION	DESCRIPTION OF PART	ORDERING No.
	CONTROL BOX, MCRI L3I	33018
	Cover	390380
	Clip	390381
	CONTROL BOX, MCR2 L3I	37097
	Cover	391454
	Clip	391453

SERVICE NOTES AND TEST DATA

6 VOLT EQUIPMENT

NEGATIVE EARTH RETURN (Models fitted with Magneto and Magdyno)

POSITIVE EARTH RETURN (Coil Ignition)

DYNAMO

Compensated voltage control; clockwise rotation viewed from driving end.

Crossed connections will cause serious damage to the regulator. Connect lead with **YELLOW IDENTITY TAG** to main terminal, and **GREEN AND BLACK TRACER CABLE** to field terminal.

TEST DATA. E3H: 400424 (B.S.A.). (Single wound pole).

Dynamo cold:

Cutting-in speed 1,250—1,500 r.p.m. at 7.0 dynamo volts.

Output 5 amps. at 2,100—2,300 r.p.m. at 7.0 dynamo volts, taken on 1.4 ohm resistance load without regulator. (Resistance must be able to carry 10 amps. without overheating).

Brush tension 12—15 ozs.

Field resistance 2.6 ohms.

TEST DATA. E3L: 40010A (B.S.A.). (Single wound pole).

Dynamo cold:

Cutting-in speed 1,050—1,200 r.p.m. at 6.5 dynamo volts.

Output 8.5 amps. at 1,850—2,000 r.p.m. at 7.0 dynamo volts, taken on 1.2 ohm resistance load without regulator. (Resistance must be able to carry 10 amps. without overheating).

Brush tension 10—15 ozs.

Field resistance 2.9 ohms.

TEST DATA. MC45L: 20151 (Sunbeam). (Four-pole dynamo).

Dynamo cold:

Cutting-in speed 750—850 r.p.m. at 7.0 dynamo volts.

Output 10 amps. at 1,250—1,400 r.p.m. at 7.0 dynamo volts, taken on 0.7 ohm resistance load without regulator. (Resistance must be able to carry 12 amps. without overheating).

Brush tension 12—15 ozs.

Field resistance 2.6 ohms.



TEST DATA. Magdyno 46020 (B.S.A.).

Dynamo cold:

Cutting-in speed 1,200—1,400 r.p.m. at 7.0 dynamo volts.

Output 5.0 amps. at 1,800—2,000 r.p.m. at 7.0 dynamo volts, taken on 1.4 ohm resistance load without regulator. (Resistance must be able to carry 7.5 amps. without overheating).

Brush tension 10—15 ozs.

Field resistance 3.1—3.3 ohms.

MAGNETO

K2F: 42174 (B.S.A.).

Anti-clockwise rotation viewed from driving end.

Contact breaker gap .010"—.012".

Condenser capacity 0.13—0.15 microfarad.

TEST DATA

Centrifugal advance commences at 625—725 r.p.m. and gives maximum advance of 15°—18° at 1,100 r.p.m.

DISTRIBUTOR

DKX1A: 400079 (B.S.A.).

Clockwise rotation viewed from driving end.

Contact breaker gap .010"—.012".

Contact breaker spring tension 20—24 ozs. measured at contacts.

Condenser capacity 0.18—0.23 microfarad.

TEST DATA

Centrifugal advance commences at 250—340 r.p.m. (distributor) and gives maximum advance of 9°—11° at 680 r.p.m.

IGNITION COIL

Current consumption: 2.0 amps. (approx.) running.

2.5 amps. (approx.) stall.

Moulding must be kept clean.

DISTRIBUTOR

DIA2: 40073 (Sunbeam).

Anti-clockwise rotation viewed from driving end.

Contact breaker gap .010"—.012".

Contact breaker spring tension 20—24 ozs. measured at contacts.

Condenser capacity 0.18—0.23 microfarad.

TEST DATA

Centrifugal advance commences at 190—410 r.p.m. (distributor) and gives maximum advance of 14°—16° at 1,800 r.p.m.

IGNITION COIL

Current consumption: 1.9 amps. (approx.) running.

2.5 amps. (approx.) stall.

Moulding must be kept clean.

CONTROL BOX Houses cut-out and dynamo voltage regulator.

TEST DATA

- (a) Cut-out. Cut-in voltage 6.3—6.7 volts.
 Drop-off voltage 4.5—5.0 volts.
- (b) Regulator. Setting at 10°C. (50°F.) 7.8—8.2 volts.
 Setting at 20°C. (68°F.) 7.8—8.2 volts.
 Setting at 30°C. (86°F.) 7.7—8.15 volts.
 Setting at 40°C. (104°F.) 7.6—8.1 volts.

HEADLAMP Correct lamp setting is important to prevent dazzle.

HORN High-frequency type.
 Current consumption 4 amps. (approx.).

BATTERY Capacity 12 ampere hours at 10 hour rate.

The importance of carefully carrying out the initial charging cannot be overstressed as non-adherence to correct initial charging procedure will result in a considerably shortened service life of the battery.

First Charge: Some batteries have seals in the filler plug apertures and these should be carefully broken. Half fill each cell (quarter-pint to each cell) with dilute sulphuric acid of specific gravity 1.270. Allow battery to stand at least six hours and then add further sulphuric acid to bring the level in each cell to the top of the separators. Stand for a further two hours before applying the initial charge.

Initial charge rate 0.8 amperes for 50 hours.

Correct the specific gravity of electrolyte to 1.280—1.300 at completion of charge when voltage and specific gravity remain constant.

The figures given are for climates where temperature is normally below 80°F. (27°C.).

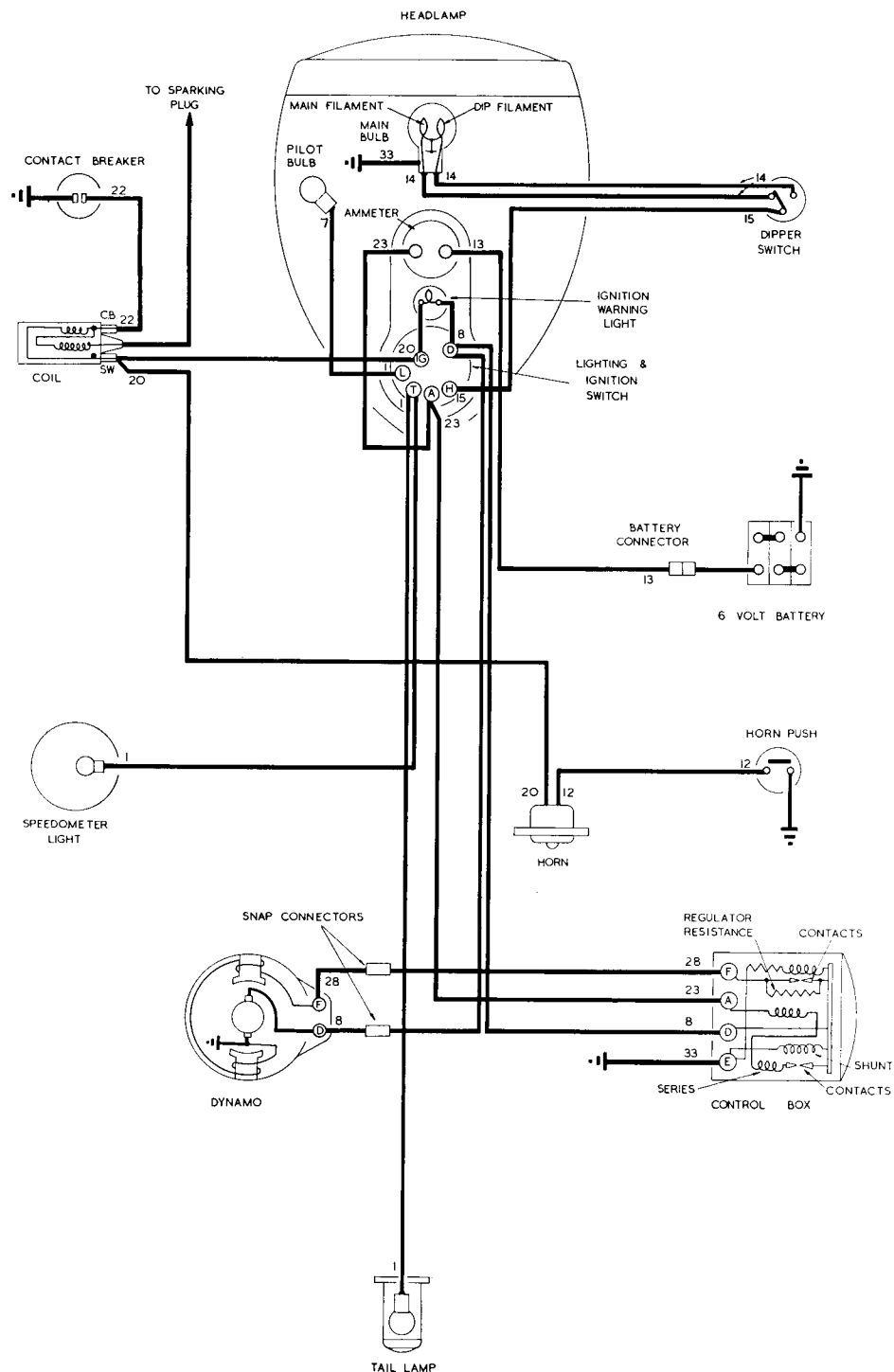
For sub-tropical climates where temperatures range between 80°—100°F. (27°—38°C.) the appropriate figures are: Filling, 1.320; Fully charged, 1.250—1.270.

For tropical climates where temperatures are over 100°F. (38°C.) the figures are: Filling, 1.320; Fully charged, 1.220—1.240.

In service, the battery should be kept topped up to the level of the separators, using distilled water only, and terminals should be kept clean and connectors tight.

LUCAS ELECTRICAL EQUIPMENT

B.S.A. SINGLE CYLINDER COIL IGNITION C10, C11, AND ZC11



KEY TO CABLE COLOURS

1 RED	12 YELLOW & PURPLE	23 WHITE & PURPLE
2 RED & YELLOW	13 YELLOW & BLACK	24 WHITE & BLACK
3 RED & BLUE	14 BLUE	25 GREEN
4 RED & WHITE	15 BLUE & WHITE	26 GREEN & BROWN
5 RED & GREEN	16 BLUE & GREEN	27 GREEN & PURPLE
6 RED & BROWN	17 BLUE & BROWN	28 GREEN & BLACK
7 RED & BLACK	18 BLUE & PURPLE	29 BROWN
8 YELLOW	19 BLUE & BLACK	30 BROWN & PURPLE
9 YELLOW & BLUE	20 WHITE	31 PURPLE
10 YELLOW & GREEN	21 WHITE & GREEN	32 PURPLE & BLACK
11 YELLOW & BROWN	22 WHITE & BROWN	33 BLACK

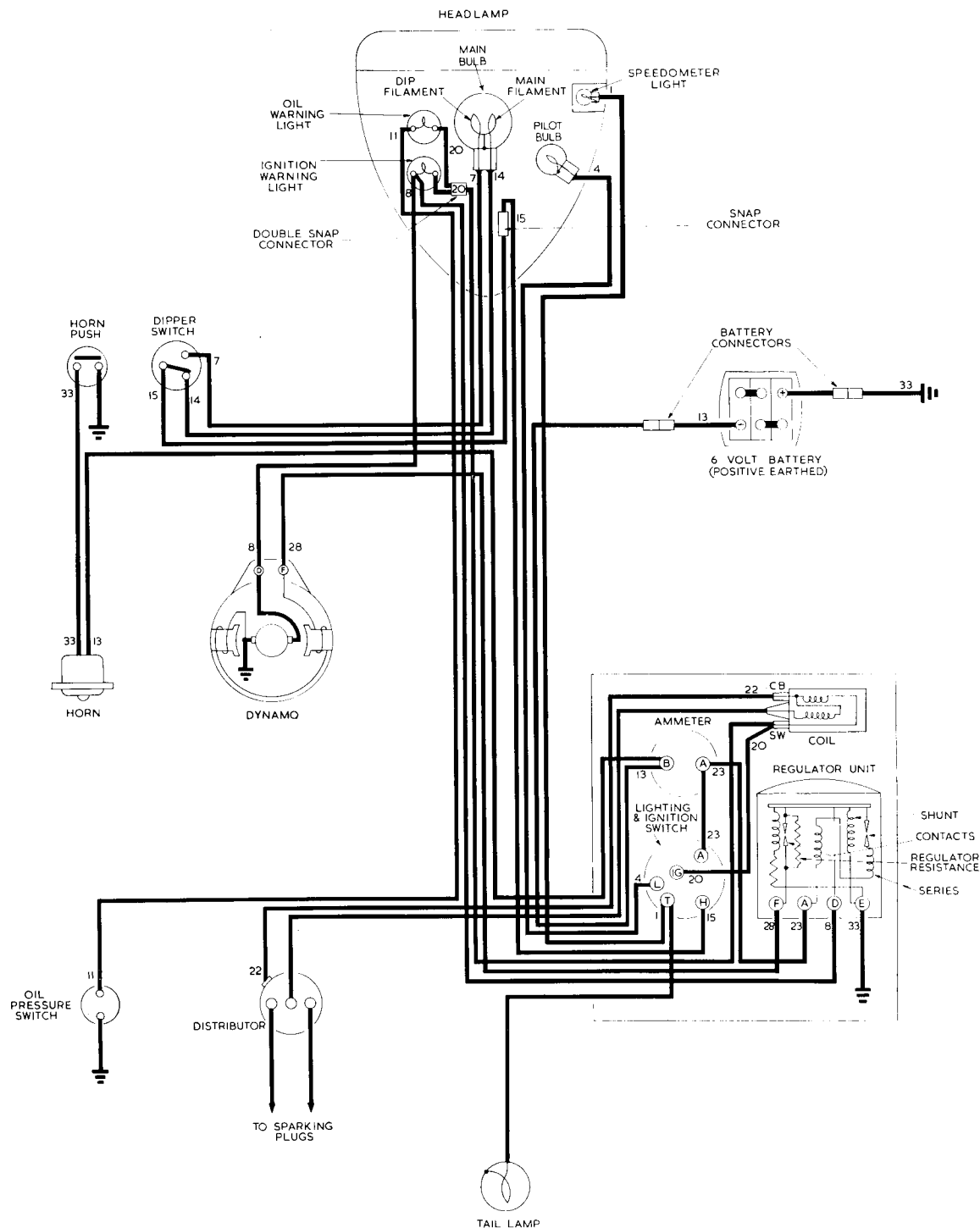
WIRING DIAGRAM
No. W95131
6-VOLT

LUCAS

ELECTRICAL EQUIPMENT

SUNBEAM

S7 AND S8 COIL IGNITION
TWIN CYLINDER



KEY TO CABLE COLOURS

1 RED	12 YELLOW & PURPLE	23 WHITE & PURPLE
2 RED & YELLOW	13 YELLOW & BLACK	24 WHITE & BLACK
3 RED & BLUE	14 BLUE	25 GREEN
4 RED & WHITE	15 BLUE & WHITE	26 GREEN & BROWN
5 RED & GREEN	16 BLUE & GREEN	27 GREEN & PURPLE
6 RED & BROWN	17 BLUE & BROWN	28 GREEN & BLACK
7 RED & BLACK	18 BLUE & PURPLE	29 BROWN
8 YELLOW	19 BLUE & BLACK	30 BROWN & PURPLE
9 YELLOW & BLUE	20 WHITE	31 PURPLE
10 YELLOW & GREEN	21 WHITE & GREEN	32 PURPLE & BLACK
11 YELLOW & BROWN	22 WHITE & BROWN	33 BLACK

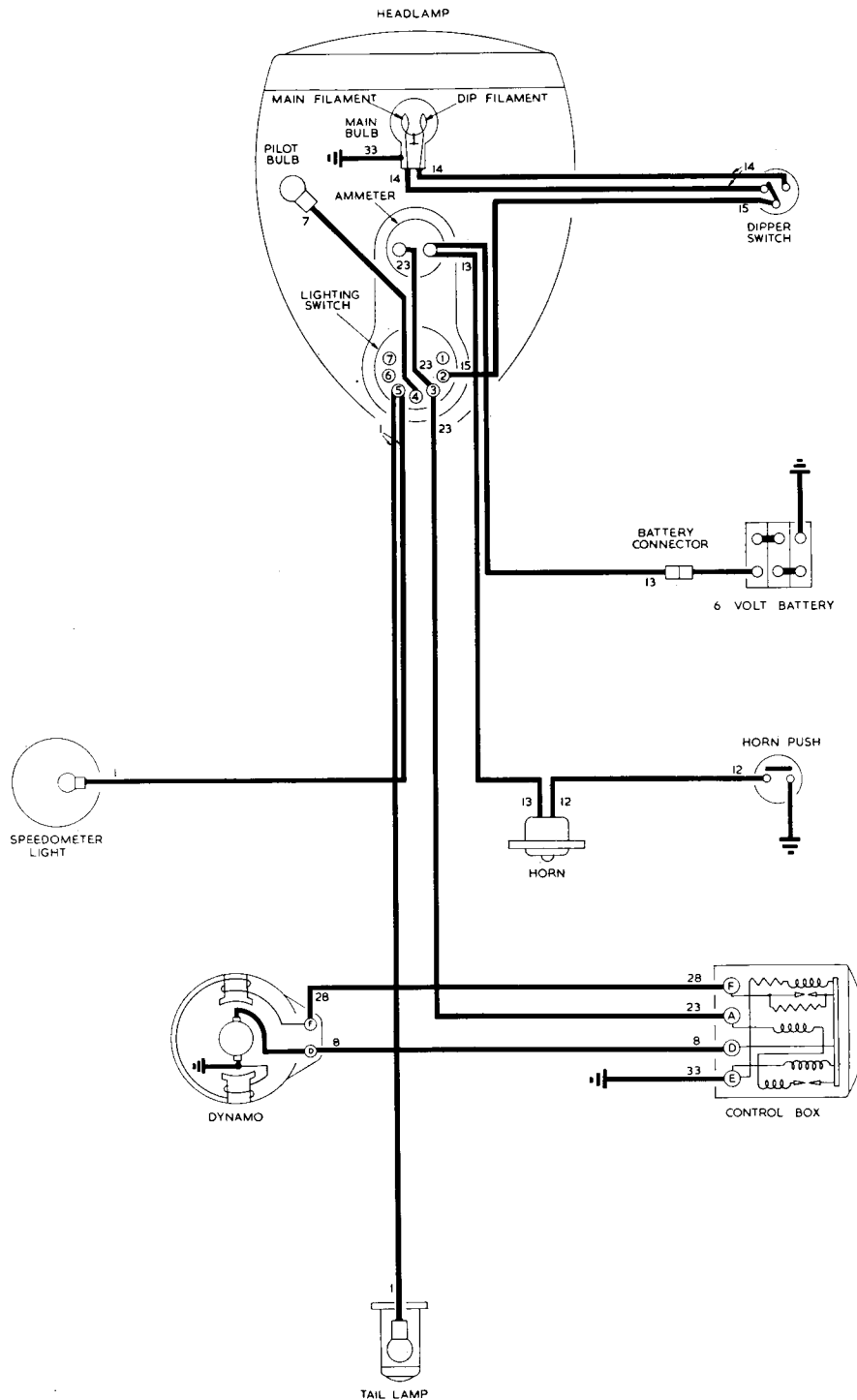
WIRING DIAGRAM

No. W9434I

6-VOLT

LUCAS ELECTRICAL EQUIPMENT

B.S.A. MAGNETO IGNITION



KEY TO CABLE COLOURS

1 RED	12 YELLOW & PURPLE	23 WHITE & PURPLE
2 RED & YELLOW	13 YELLOW & BLACK	24 WHITE & BLACK
3 RED & BLUE	14 BLUE	25 GREEN
4 RED & WHITE	15 BLUE & WHITE	26 GREEN & BROWN
5 RED & GREEN	16 BLUE & GREEN	27 GREEN & PURPLE
6 RED & BROWN	17 BLUE & BROWN	28 GREEN & BLACK
7 RED & BLACK	18 BLUE & PURPLE	29 BROWN
8 YELLOW	19 BLUE & BLACK	30 BROWN & PURPLE
9 YELLOW & BLUE	20 WHITE	31 PURPLE
10 YELLOW & GREEN	21 WHITE & GREEN	32 PURPLE & BLACK
11 YELLOW & BROWN	22 WHITE & BROWN	33 BLACK

WIRING DIAGRAM
No. W91481
6-VOLT