WIRING
WIPAC
DIAGRAM

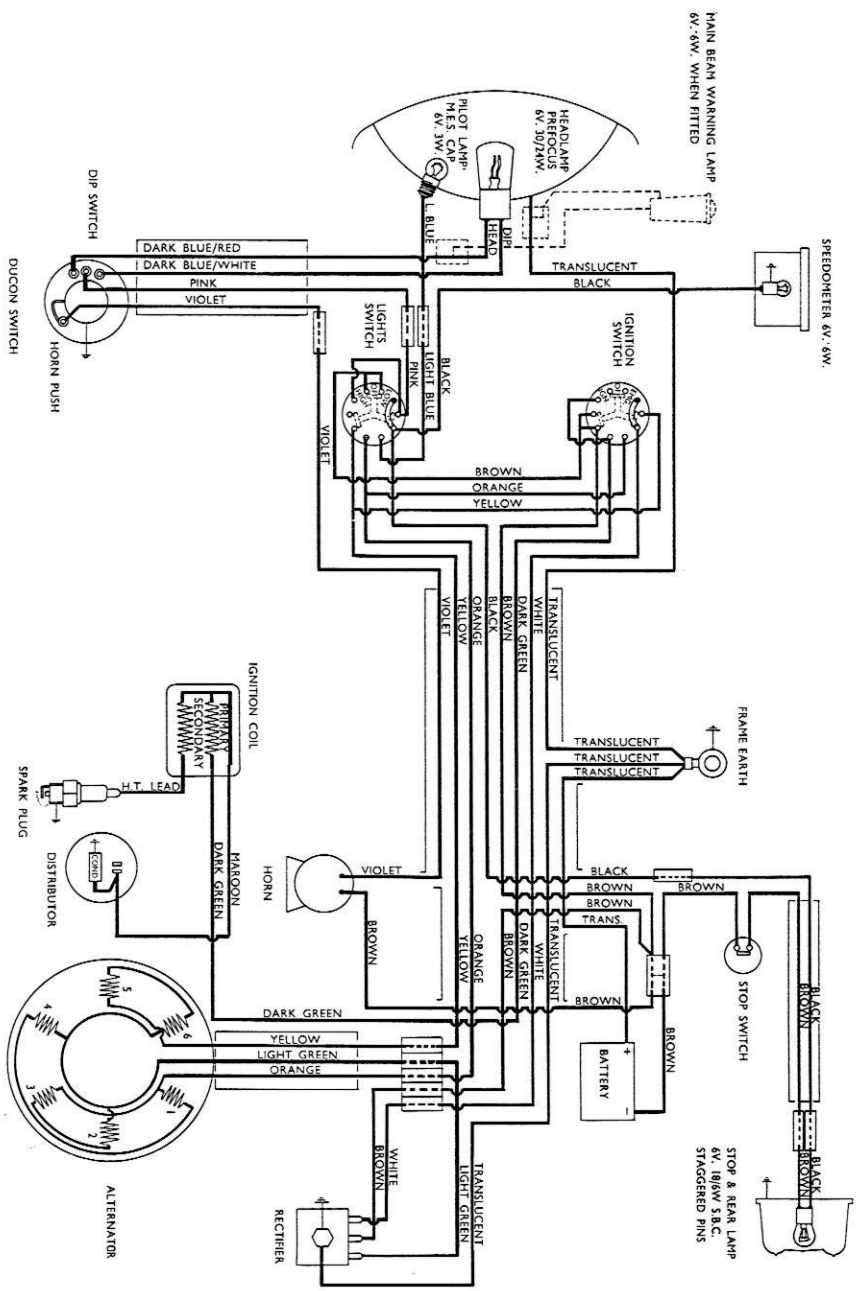
B.S.A. Bantam D10 and D14

Full D.C. Lighting with Coil Ignition

FROM JUNE 1966

THE WIPAC GROUP · BUCKINGHAM · BUCKS

UNIT FOR SPARES	*PART No.*
Alternator Unit	G1767
Distributor Unit	S4060
Headlamp Unit	S4067
Horn & Dip Switch	S3857
Harness (Dip Switch)	S2737
Harness (Main)	S4069
Stop & Rear Lamp (state bulb required)	S3611
Leads Set (Rear Lamp)	S2463
Rectifier Unit	S2642
Stop Switch Unit	S2370
Leads Set (Stop Switch)	S2861
Switch Unit (Lights)	S0781
Switch Unit (Ignition)	S0782
Ignition Coil	S0769



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WIRING
WIPAC
DIAGRAM

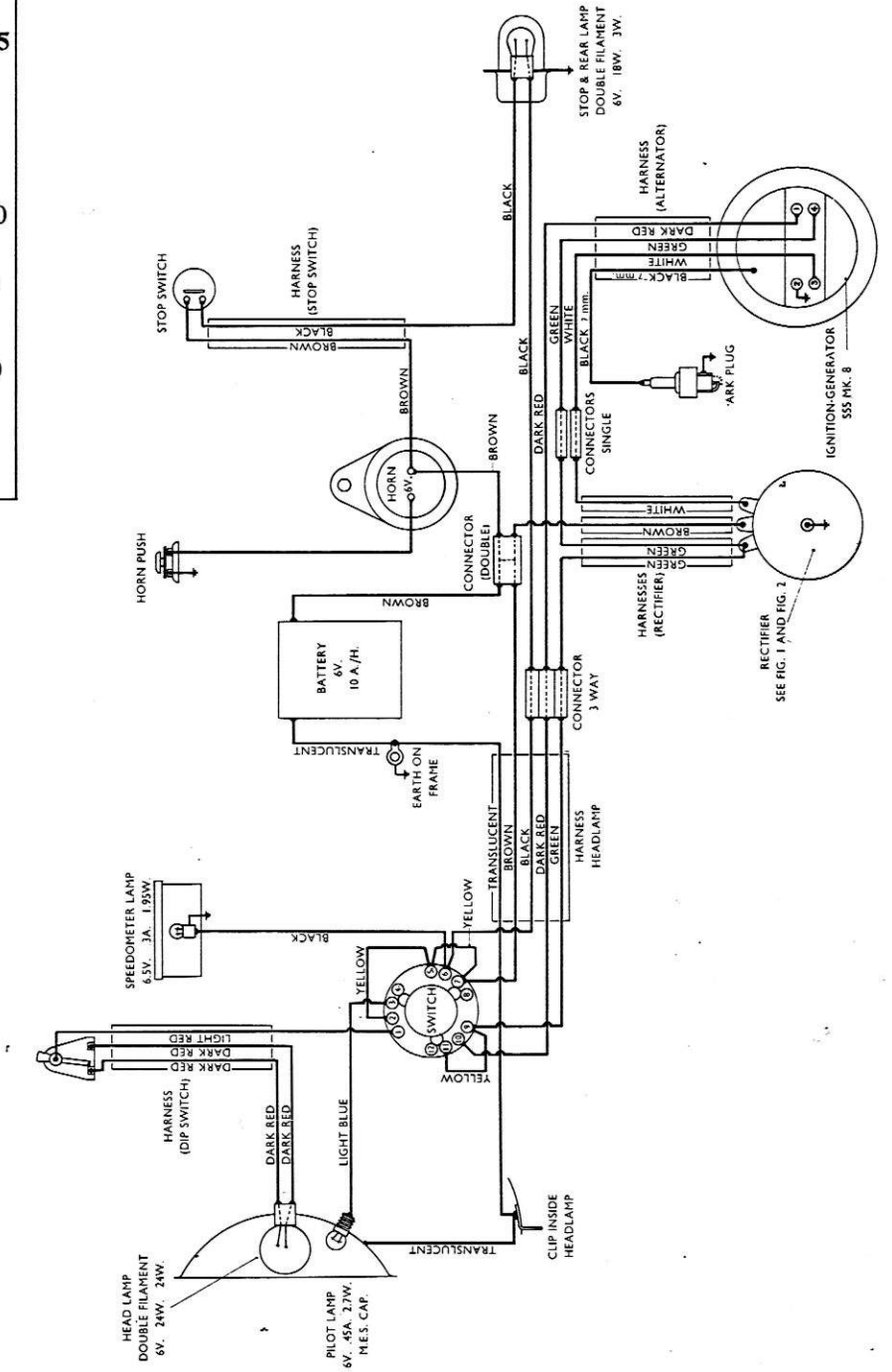
B.S.A. Bantam and Bantam Major

D.C. Circuit

FROM OCTOBER 1953 TO AUGUST 1954

THE WIPAC GROUP · BLETCHLEY ENGLAND

EQUIPMENT	PART No.
Set Complete	**G.A.1275**
Headlamp	02143
Dip Switch	06196
Rectifier	02145
Ignition—Generator	*I.G.*1130 *DC*
Battery (Varley)	*MC5/9*
Stop & Rear Lamp	02300
Horn	*H.F.*150
Stop Switch	03402



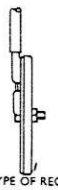


FIG. 1
FOR FLAT TYPE OF RECTIFIER
No. 02196. CONNECT BATTERY
POSITIVE LEAD TO FRAME EARTH

FIG. 2
FOR FINNED TYPE OF RECTIFIER
No. 02145. CONNECT BATTERY —
NEGATIVE LEAD TO FRAME EARTH

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WIRING
WIPAC
DIAGRAM

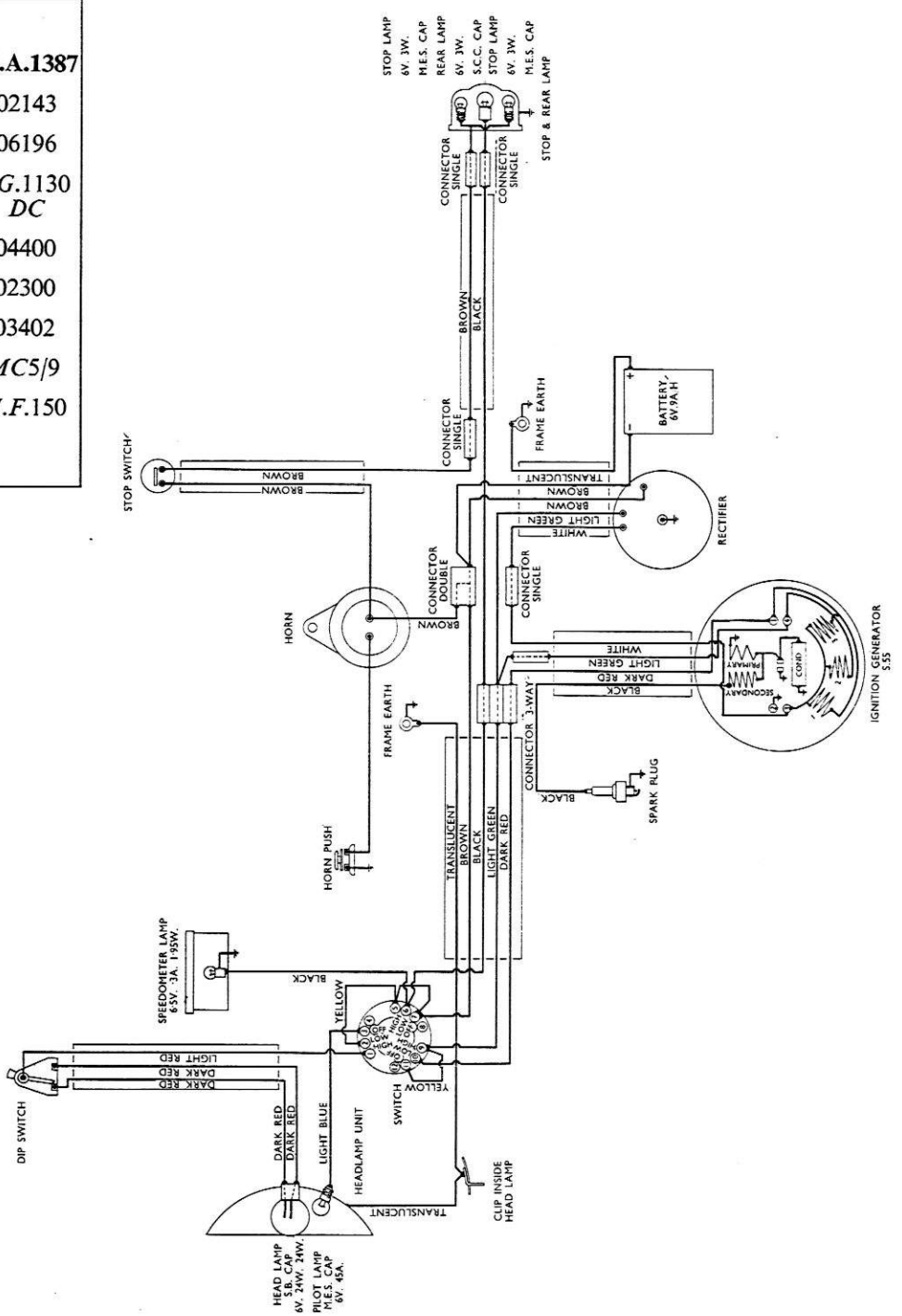
B.S.A. Bantam and Bantam Major

D.C. Circuit

FROM AUGUST 1954 TO JULY 1955

THE WIPAC GROUP BLETCHLEY ENGLAND

EQUIPMENT	PART No.
Set Complete	**G.A.1387**
Headlamp	02143
Dip Switch	06196
Ignition Generator	*I.G.*1130 *DC*
Rectifier	04400
Rear Lamp	02300
Stop Switch	03402
Battery (Varley)	*MC5/9*
Horn	*H.F.*150



WIRING
WIPAC
DIAGRAM

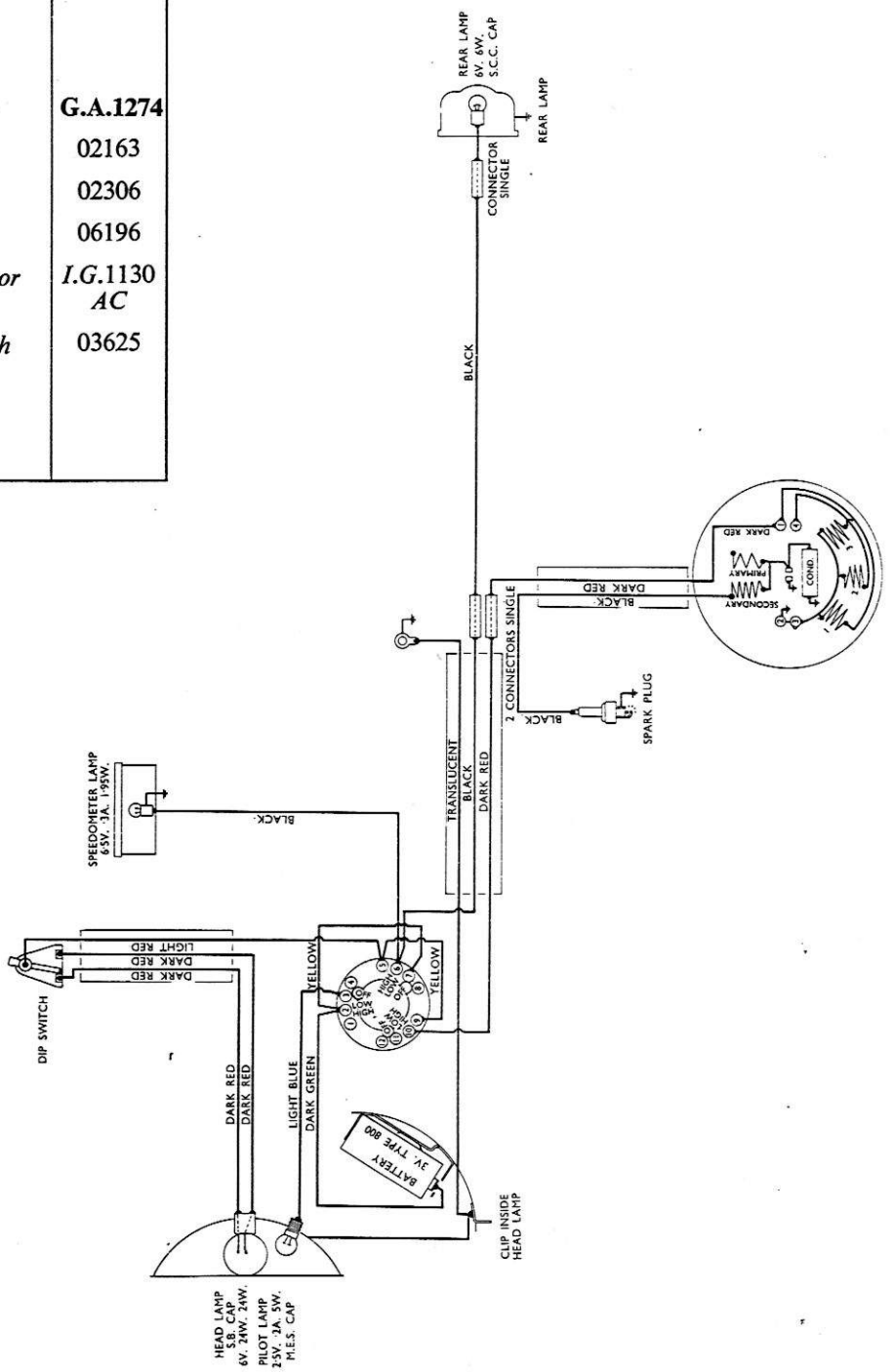
B.S.A. Bantam and Bantam Major

A.C. Circuit

FROM OCTOBER 1953 TO JULY 1955

THE WIPAC GROUP · BLETCHLEY · ENGLAND

EQUIPMENT	PART No.
Set Complete	**G.A.1274**
Headlamp	02163
Rear Lamp	02306
Dip Switch	06196
Ignition Generator	*I.G.*1130 *AC*
Headlamp Switch	03625



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WIRING
WIPAC
DIAGRAM

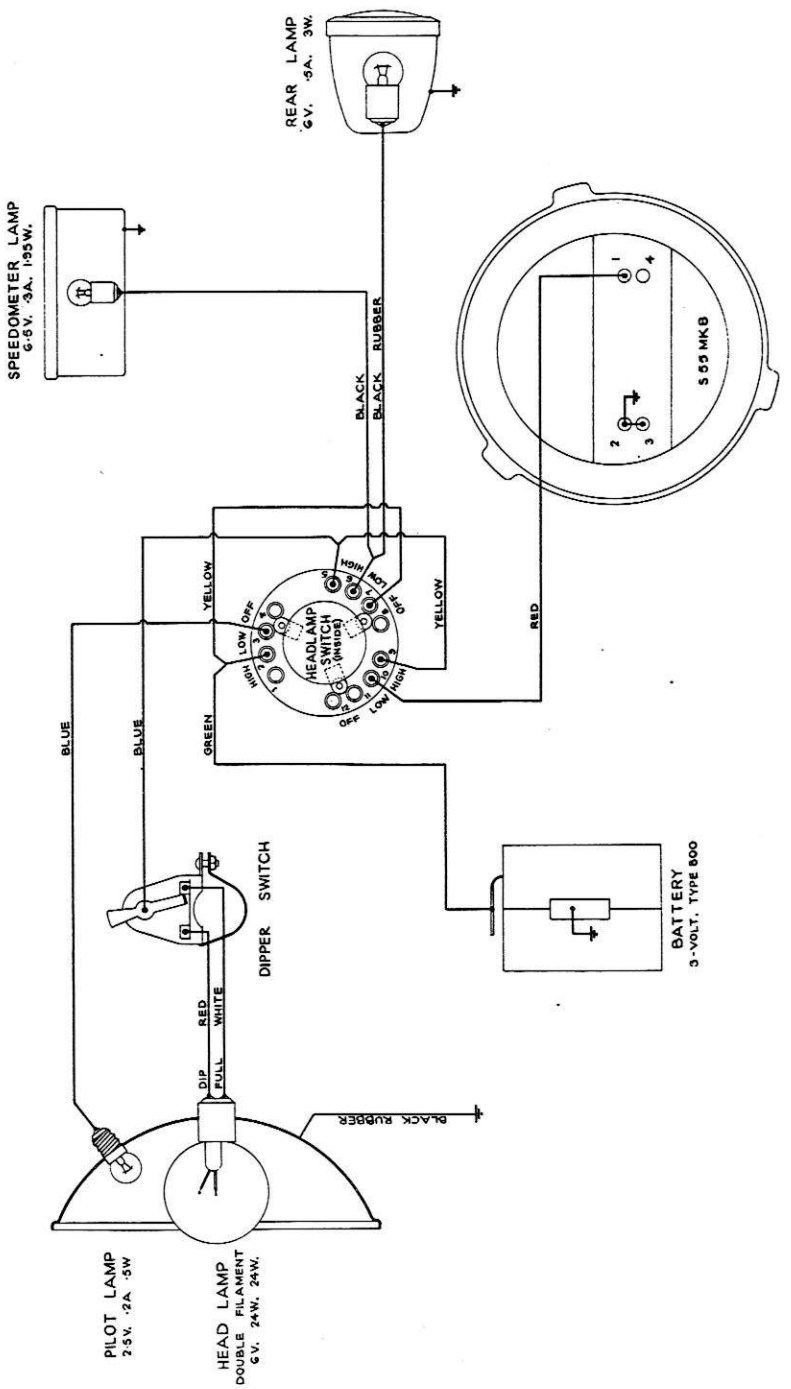
B.S.A. Bantam Models

A.C. Circuit

FROM JUNE 1950 TO OCTOBER 1953

THE WIPAC GROUP · BLETCHLEY · ENGLAND

EQUIPMENT	*PART No.*
Ignition Generator	*I.G.*1130 *AC*
Headlamp	03520
Dip Switch	06196
Headlamp Switch	03625
Harness	03649
Rear Lamp	05160



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REF. D1

WIRING
WIPAC
DIAGRAM

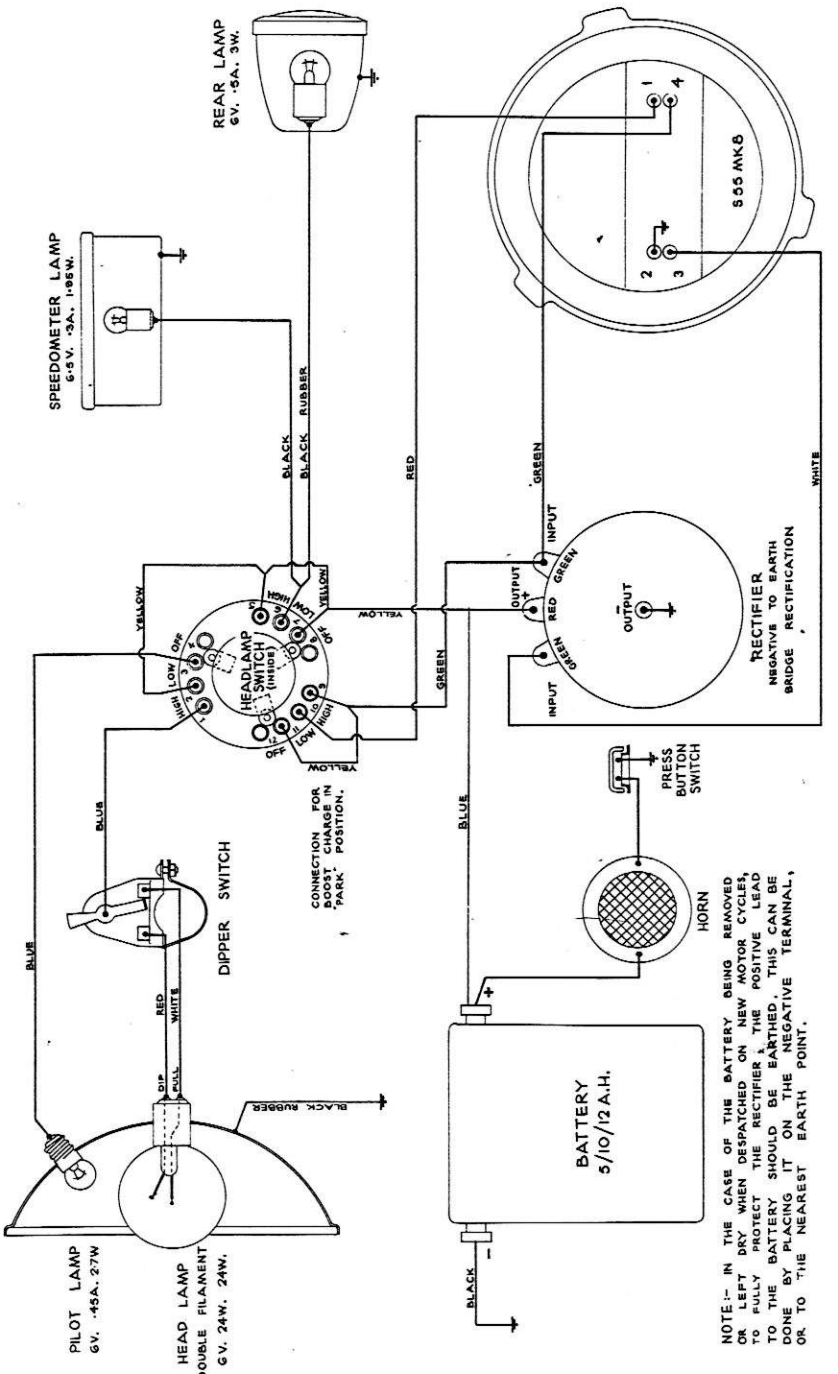
B.S.A. Bantam

D.C. Circuit

FROM JUNE 1950 TO OCTOBER 1953

THE WIPAC GROUP · BLETCHLEY · ENGLAND

EQUIPMENT	PART No.
Ignition Generator	*I.G.*1130 *DC*
Headlamp	03648
Dip Switch	06196
Horn	*H.F.*150
Battery (Varley)	*MC5/9*
Battery Carrier	03603
Rear Lamp	05160
Rectifier	03658



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WIRING
WIPAC
DIAGRAM

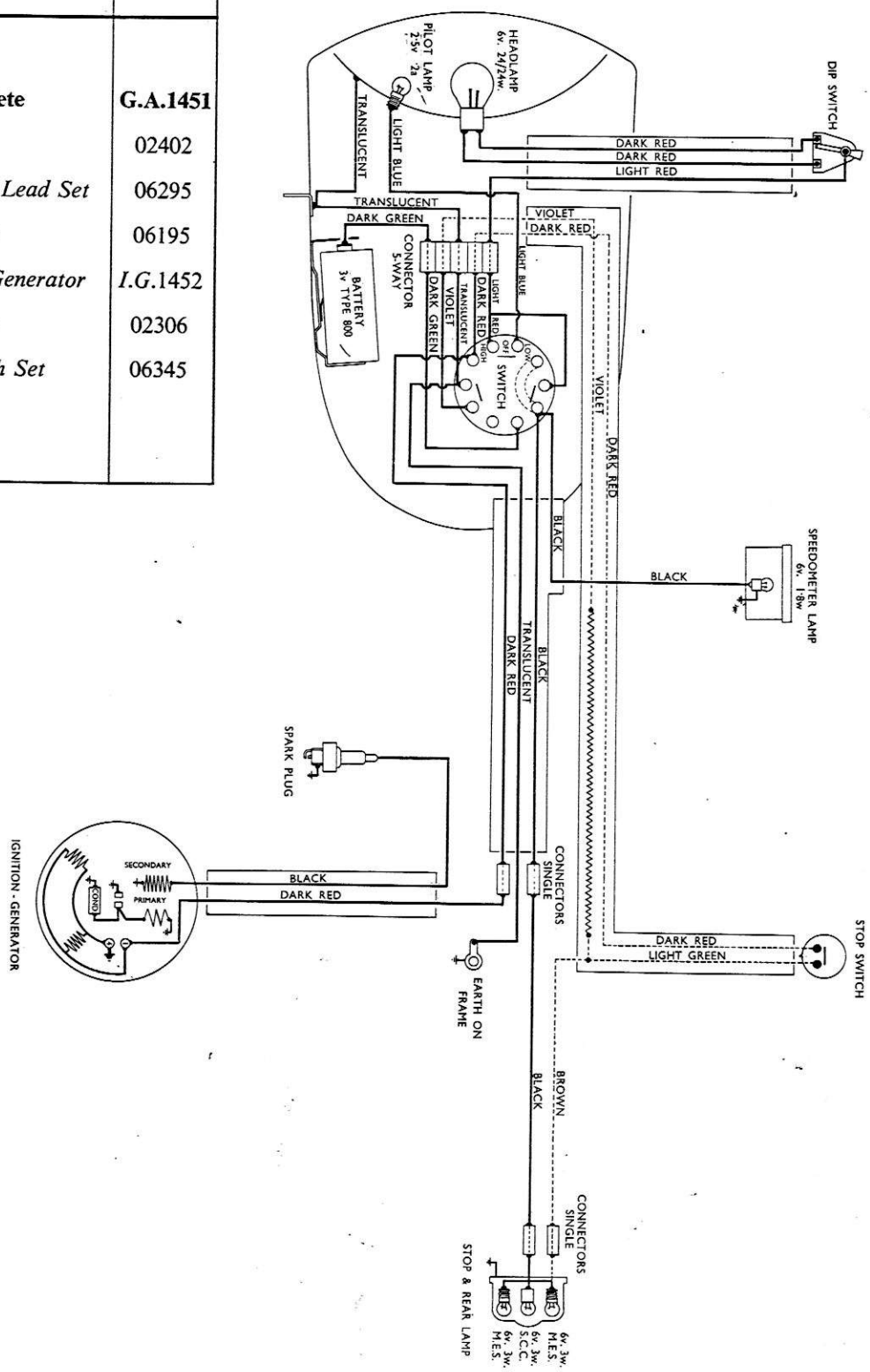
B.S.A. Bantam and Bantam Major

A.C. Circuit

MODELS PRODUCED FROM AUGUST 1955

THE WIPAC GROUP · BLETCHLEY · ENGLAND

EQUIPMENT	PART No.
Set Complete	**G.A.1451**
Headlamp	02402
Harness & Lead Set	06295
Dip Switch	06195
Ignition—Generator	*I.G.*1452
Rear Lamp	02306
Stop Switch Set (extra)	06345



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REF. WD2A
REF. WD2B

WIRING
WIPAC
DIAGRAM

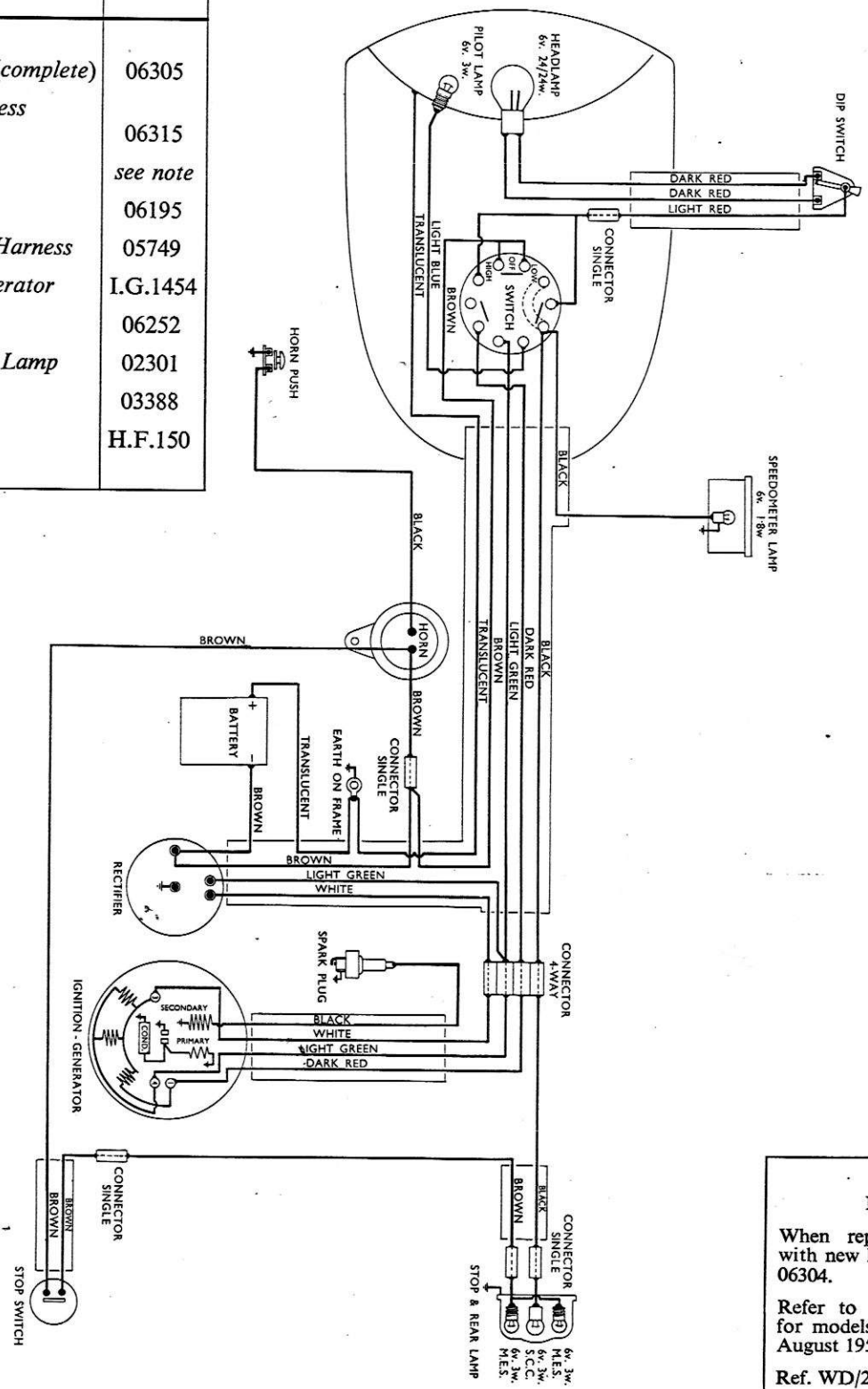
B.S.A. Bantam

D.C. Circuit

MODELS PRODUCED FROM AUGUST 1955 TO JULY 1956

THE WIPAC GROUP · BLETCHLEY · ENGLAND

UNITS FOR SPARES	*PART No.*
Headlamp (complete)	06305
Headlamp (less harness)	06315
Harness	*see note*
Dip Switch	06195
Dip Switch Harness	05749
Ignition Generator	I.G.1454
Rectifier	06252
Stop & Rear Lamp	02301
Stop Switch	03388
Horn	H.F.150



NOTE

When replacing harness with new harness PT. No. 06304.

Refer to wiring diagram for models produced from August 1956.

Ref. WD/2/625.

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WIRING
WIPAC
DIAGRAM

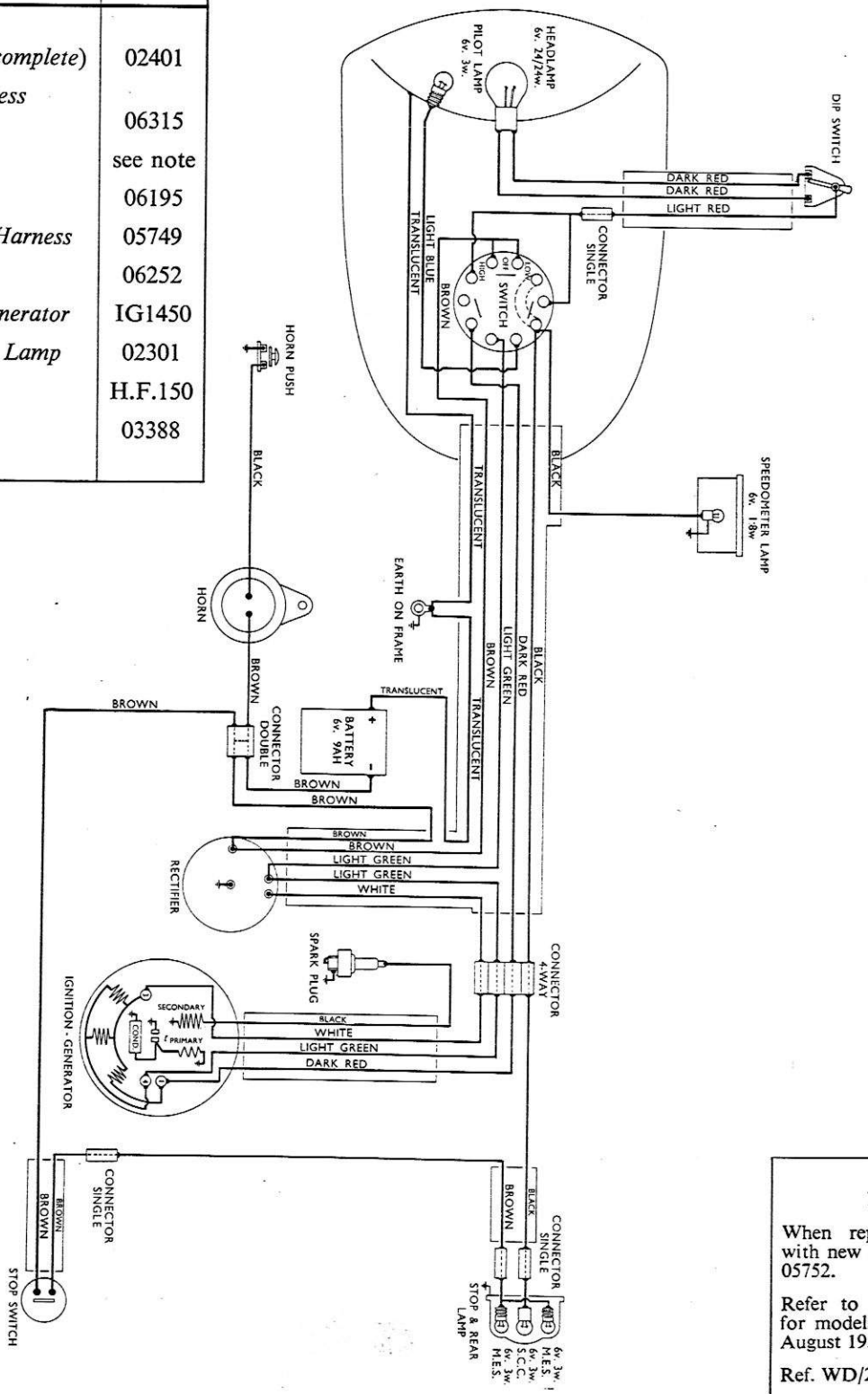
B.S.A. Bantam Major

D.C. Circuit

MODELS PRODUCED FROM AUGUST 1955 TO JULY 1956

THE WIPAC GROUP · BLETCHLEY · ENGLAND

UNITS FOR SPARES	*PART No.*
Headlamp (complete)	02401
Headlamp (less harness)	06315
Harness	see note
Dip Switch	06195
Dip Switch Harness	05749
Rectifier	06252
Ignition—Generator	IG1450
Stop & Rear Lamp	02301
Horn	H.F.150
Stop Switch	03388



NOTE

When replacing harness with new harness PT. No. 05752.

Refer to wiring diagram for models produced from August 1956.

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WIRING
WIPAC
DIAGRAM

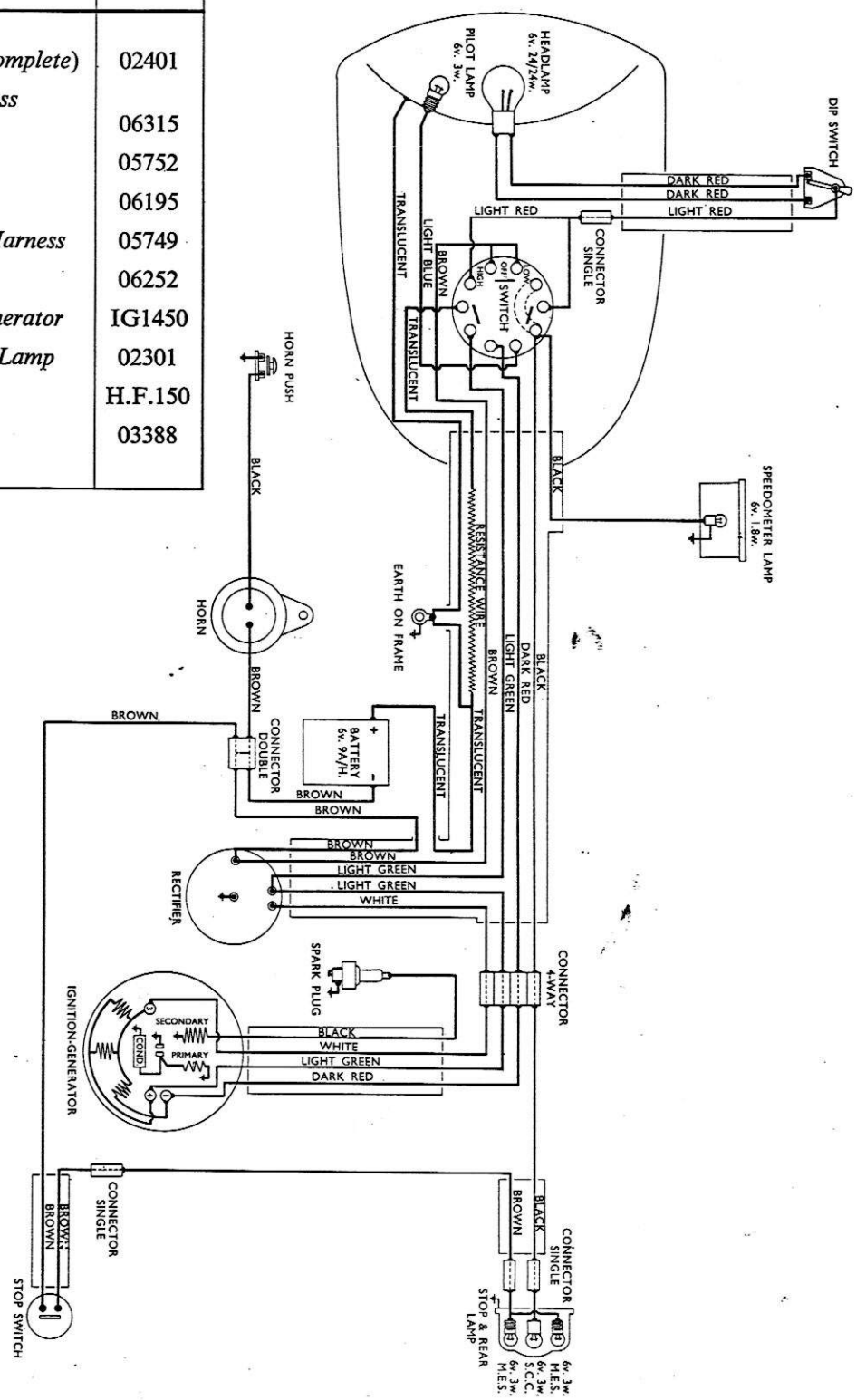
B.S.A. Bantam Major

D.C. Circuit

MODELS PRODUCED FROM AUGUST 1956

THE WIPAC GROUP · BLETCHLEY · ENGLAND

UNITS FOR SPARES	PART No.
Headlamp (complete)	02401
Headlamp (less harness)	06315
Harness	05752
Dip Switch	06195
Dip Switch Harness	05749
Rectifier	06252
Ignition—Generator	IG1450
Stop & Rear Lamp	02301
Horn	H.F.150
Stop Switch	03388



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WIRING DIAGRAM

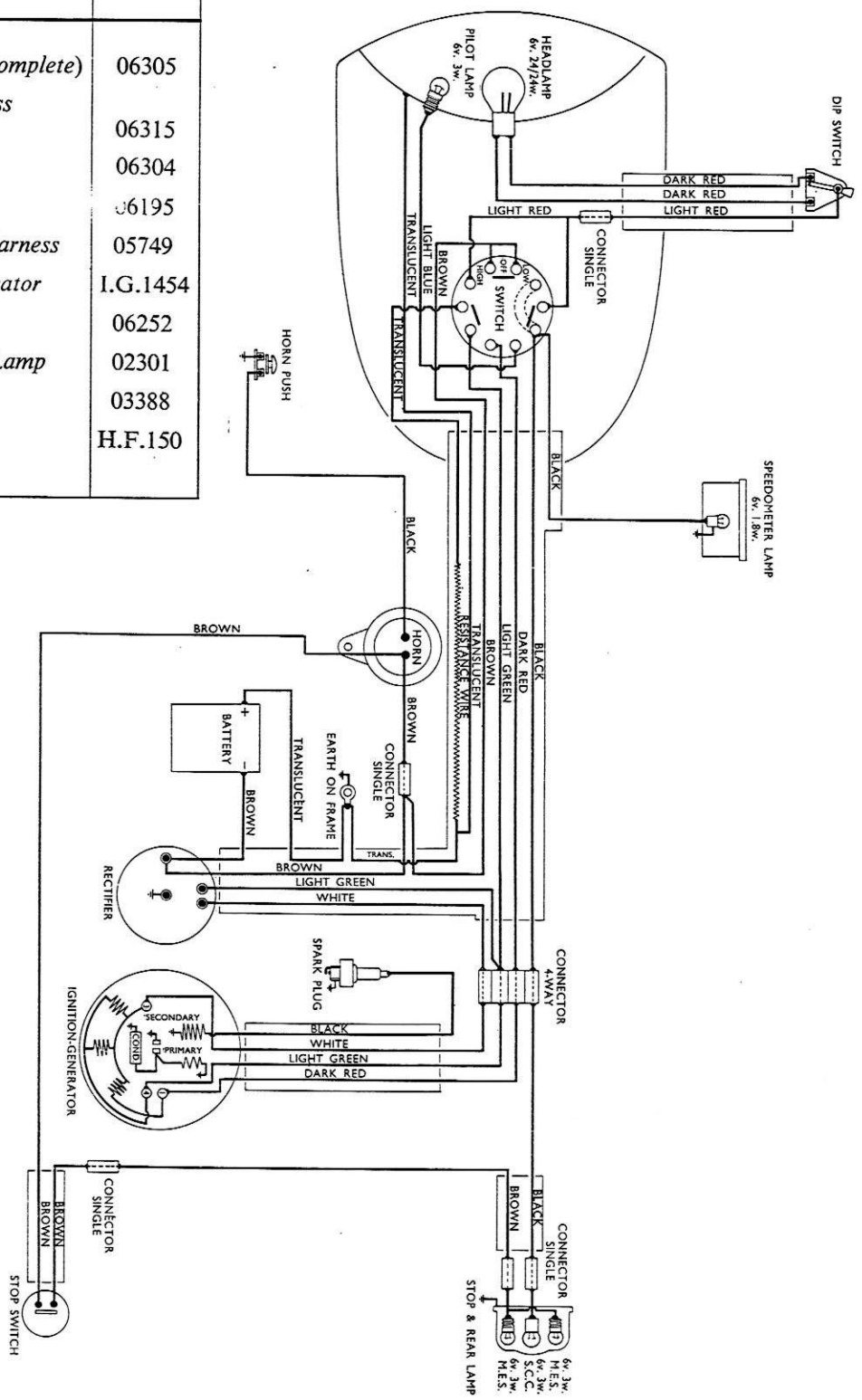
B.S.A. Bantam

D.C. Circuit

MODELS PRODUCED FROM AUGUST 1956

THE WIPAC GROUP · BLETCHLEY · ENGLAND

UNITS FOR SPARES	PART No.
Headlamp (complete)	06305
Headlamp (less harness)	06315
Harness	06304
Dip Switch	06195
Dip Switch Harness	05749
Ignition Generator	I.G.1454
Rectifier	06252
Stop & Rear Lamp	02301
Stop Switch	03388
Horn	H.F.150



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WIRING
WIPAC
DIAGRAM

CONVERTAKIT

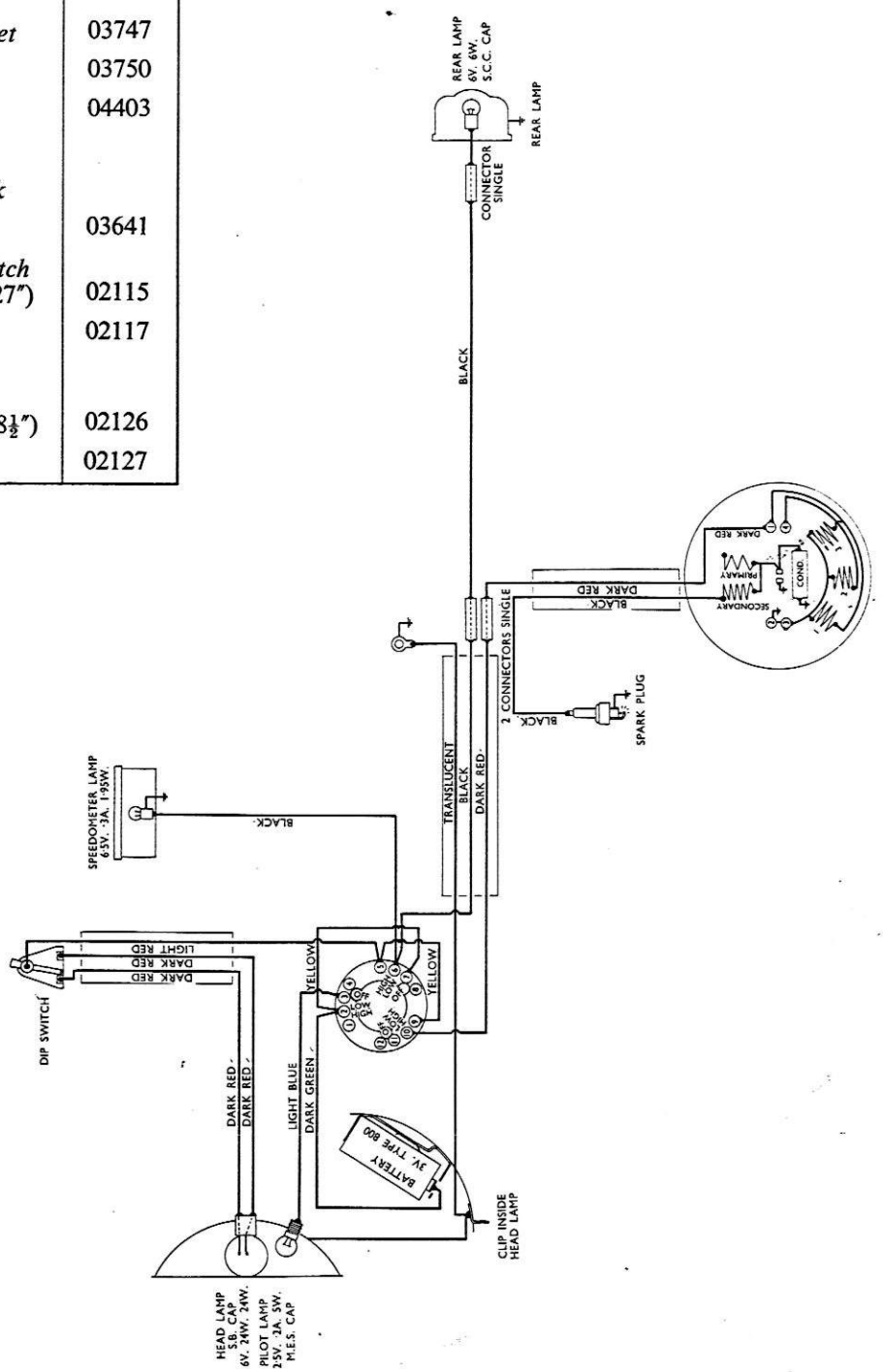
B.S.A. Bantam and Bantam Major

A.C. Circuit

FROM OCTOBER 1953 ONWARDS

THE WIPAC GROUP · BLETCHLEY · ENGLAND

KIT CONTAINS	PART No.
Battery Carrier	03603
Toolbox Bracket	03747
Template	03750
Rectifier	04403
LEADS	
Switch Interlink (Yellow)	03641
Rectifier to Switch (Light Green 27″)	02115
(Brown 29″)	02117
Generator to Rectifier (Light Green 18½″)	02126
(White 25½″)	02127



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WIRING

WIPAC

DIAGRAM

CONVERTAKIT

B.S.A. Bantam and Bantam Major

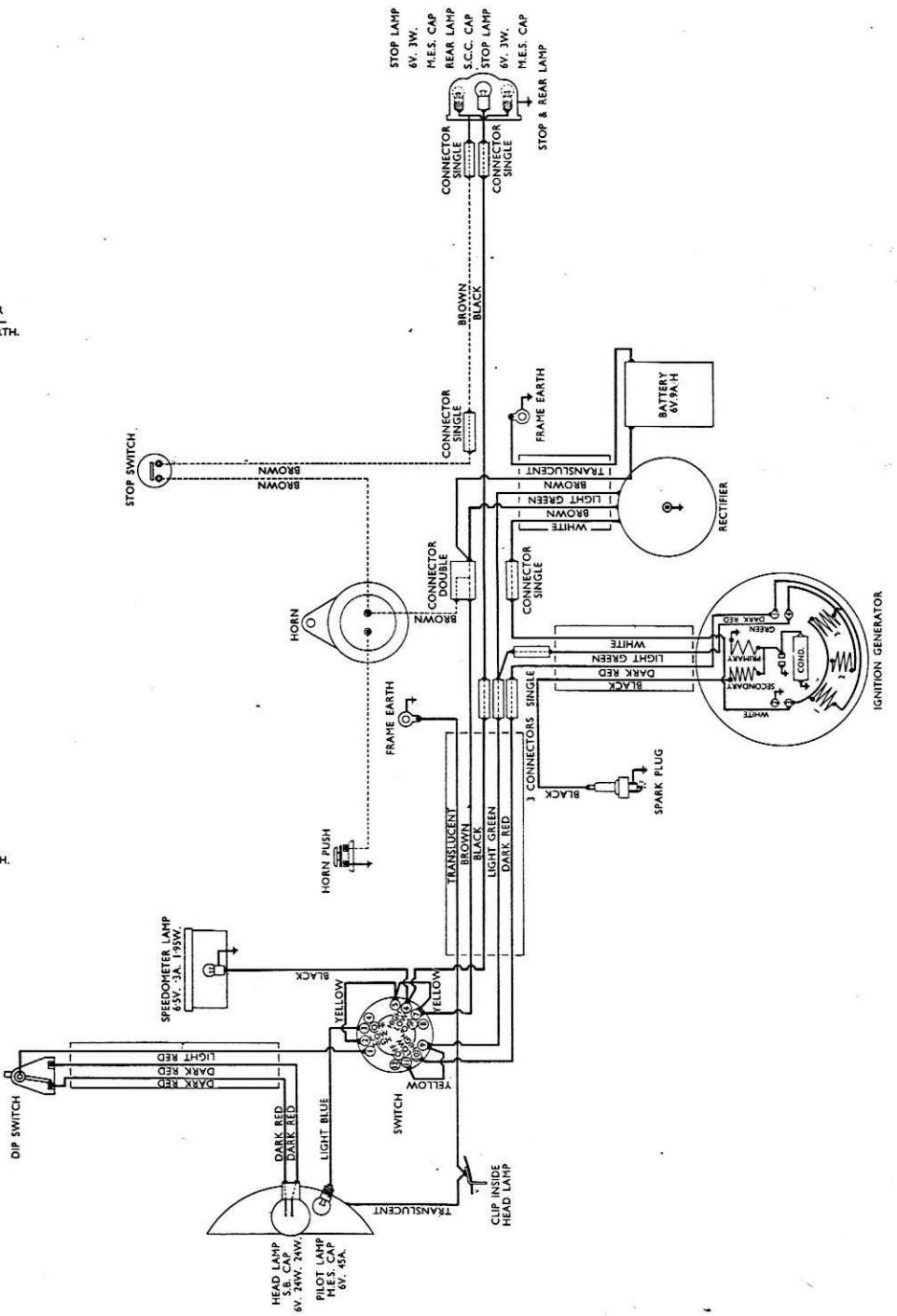
D.C. Circuit

AFTER USING CONVERTAKIT

THE WIPAC GROUP · BLETCHLEY · ENGLAND

FIG: 2
FOR FINNED TYPE OF RECTIFIER
No. 06190. CONNECT BATTERY —
NEGATIVE LEAD TO FRAME EARTH.

FIG: 1
FOR FLAT TYPE OF RECTIFIER
No. 04400 CONNECT BATTERY
POSITIVE LEAD TO FRAME EARTH.



NOTE :- After fitting Convertakit, stop lights and horn can be fitted and this circuit is shown dotted.

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B.S.A. BANTAM MODELS D.10 and D.14

FULL D.C. LIGHTS AND COIL IGNITION

General Description

The lighting and ignition systems of the Wipac alternator equipped models D.10 and D.14 Bantam consists of a simple six-pole alternator generating set which supplies current through a metal plate rectifier to a battery, which then feeds the ignition system, lights, horns, etc. The alternator ring carries six coils which are connected in three sets of two in series as illustrated in the schematic diagram Figure 1.

The headlamp has a reflector with an extremely efficient reflecting surface provided by the now widely adopted aluminisation process in which a thin film of aluminium is deposited on the reflector under vacuum. This reflecting surface should not be touched or cleaned in any way and it will retain its brilliance indefinitely. The bulb is a pre-focus twin filament type giving correct beam length and spread in main and dip positions.

The main connections in the Wipac system are made by

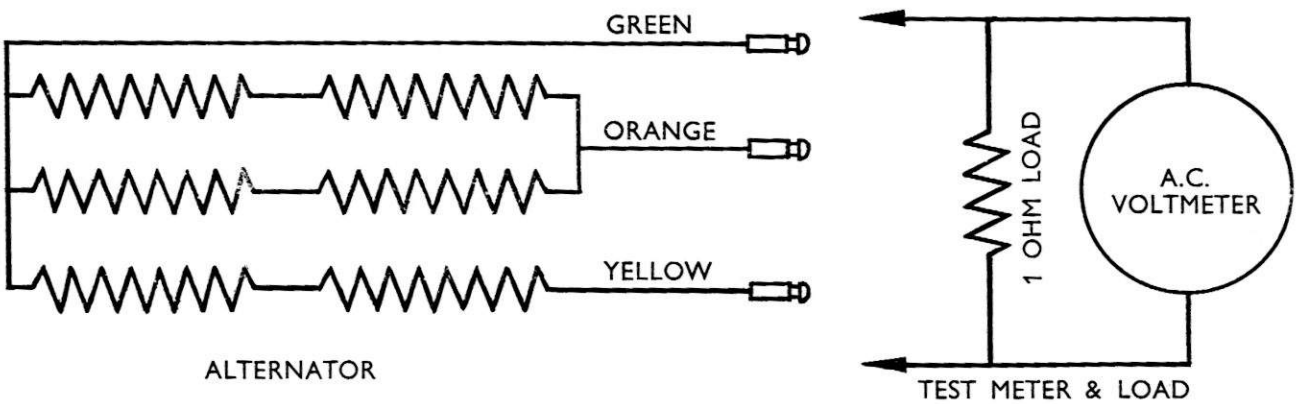


Figure 1.

By using one set of two coils in series, a certain output is obtained for daylight running and when the pilot or parking lights are switched on. When the headlight is brought into circuit, all six coils are connected as three pairs in series parallel as shown in Figure 1, giving maximum output, most of which is absorbed by the head-lamp bulb but still leaving sufficient current for maintaining the state of charge of the battery.

Alternating current supplied by the generator is converted to direct current by means of the rectifier which is of the very efficient full wave bridge connected type.

Wipac alternator equipment provides an emergency starting system which, when the ignition switch is put into the emergency position, connects all the six coils together and, providing the lighting switch is in the 'off' position, gives full output in order to bring up the voltage of a discharged battery and is effective in obtaining an immediate start under these conditions. The maximum charging current in the emergency position is high as there is no drain against it by the lighting system and the engine should not be run in this position for more than 10—15 minutes. This type of emergency starting being entirely DC enables the machine to be run through the complete operational range of the engine.

rubber socket connectors to the lighting and ignition switch and by individual rubber covered bullet type push-in connecto which are handy for wiring checks or the re-installation of ne wiring. These connectors are not intended as plugs ar sockets for frequent manipulation and are only used wh testing or fault finding. It is important that they should making perfect contact as should all other connection poir throughout the system.

Fault Finding

Equipment required:—

1. Wilkson Test Set.
2. 6v. 3w. bulb holder and two test leads about 24″ l
3. A well charged 6v. battery.

OR

A. A good quality moving coil AC volt meter to be u in conjunction with a one ohm resistive load.
B. 10-0-10 DC Ammeter.
C. 0-12 volts DC volt meter.
D. 6v. 3w. Bulb with holder and two test leads abou long.
E. A well charged 6v. battery.

Accurate high grade moving coil instruments must be used, and the one ohm resistor must be accurate to obtain correct readings.

No or Low charge

1. Before commencing any tests, check the voltage of the battery and if completely exhausted substitute one which is known to be capable of accepting a charge.
2. Connect in series with the battery, (easily done by disconnecting the brown negative lead from the double connector), the DC Ammeter and check off the charge rates as detailed below:—

Ignition Switch	Lights Switch	Minimum Charge Rates	r.p.m.
Ignition	Off	2.5 a.	3,000
Ignition	Low	.5 a.	3,000
Ignition	High	1.0 a.	3,000
Emergency	Off	4.5 a.	3,000

These figures should be checked at approximately 3,000 r.p.m. and are the minimum permissible readings. Charge rates will, of course, vary with engine speed, the state of charge and condition of the battery but the above figures will give a fair indication as to the correct functioning of the system.

N.B.—*It is essential that the correct wattage bulbs be used throughout the lighting system, as any deviation will seriously upset the charge rates.*

Bulb types:

Headlamp (Main bulb)	6v. 30/24w. British pre-focus
Headlamp (Pilot bulb)	6v. 3w. M.E.S.
Rear-Stop Light bulb	6v 6/18w. S.B.C. Staggered Pin
Speedometer	6v. 0.6w. B.A.7S Lug Cap.

If the meter readings are unsatisfactory, then:

3. Check the alternator ouptut by disconnecting the yellow, orange and light green leads from the five-way connector, into which the alternator harness is plugged. It will be seen from the appropriate wiring diagram, reference WD/88/1051 and from Figure 1 that the light green lead from the alternator is common to all coils whilst the yellow connects two coils only and the orange the remaining four. Connect one side of the Wilkson test meter (AC volts with one ohm load) or the AC volt meter with one ohm load parallelled across it, to the green lead and the other side of the meter to the yellow and orange leads in turn.

Check with the table below:—

Check Between	R.P.M.	Volts Output
Yellow/Green	2000 — 3000	4 — 4.75
Orange/Green	2000 — 3000	7.5 — 8.5

A low reading on one group of coils would indicate coil failure and the low reading on both groups of coils will, in all probability, be due to a low flux density in the magnetic rotor. No readings from both groups of coils indicates an open circuit in the green supply lead.

Winding resistance between

Lead Colours	Resistance
Yellow/Green	0.25 ohms
Orange/Green	0.4 ohms

N.B.—THE IMPORTANCE OF THE CORRECT BATTERY CONNECTIONS CANNOT BE OVER-EMPHASIZED. THE BATTERY POSITIVE LEAD SHOULD ALWAYS BE CONNECTED TO THE TRANSLUCENT LEAD AND THE BATTERY NEGATIVE TO THE BROWN LEAD. REVERSAL OF THESE CONNECTIONS WILL INVARIABLY BURN OUT THE RECTIFIER, AND IF THE ENGINE IS RUN UNDER THESE CONDITIONS, THE MAGNETIC ROTOR WILL BECOME DEMAGNETISED.

4. A further cause of low or no charge stems from the alternator short circuiting to earth. To check this, it is necessary to construct a simple continuity check circuit, viz.: a 6 volt battery introduced in series with the DC voltmeter will amply suffice. Connect one end of the circuit to the green lead and the other end to the machine frame earth. If a reading is obtained on the voltmeter then the alternator is short circuit to earth. It is desirable to carry out this check with both the stator and rotor in position on the machine, the reason being that in isolated cases careless handling of the stator may have caused one or more of the soldered coil link connections to have become displaced, thus coming into contact with the circumference of the rotor thereby short circuiting all coils. Before condemning the alternator, therefore, it is wise to check that all connections are well clear of the rotor, gently easing back any which look possible causes of future trouble.

Rectifier Testing

Before attempting to carry out tests on this unit, it is essential that the white, green and brown wires are disconnected from the rectifier at the rectifier plug sockets, then check the rectifier as shown in the Figure 2. Should it be found necessary to replace this component or to re-fit a proven good rectifier, ensure that it is rebolted securely on to a scrupulously clean part of the frame, remembering that the case of the rectifier is DC positive. The snap connectors should be clean and tight as poor connections can give rise to rectifier failure owing to overload or arc burning.

Procedure	Battery Connections	Bulb Connections	Conclusions
Rectifier Check Connect a 6 volt battery in series with a 6v. 3w. bulb across the rectifier terminals	Positive—Light Green	Earthed	Bulb lights Rectifier O.K.
	Positive—White	Earthed	
	Positive—Brown	Green	Bulb does not light.
	Positive—Brown	White	Rectifier faulty replace.
Reverse battery connections.	Negative—Light Green	Earthed	Bulb does not light. Rectifier O.K.
	Negative—White	Earthed	
	Negative—Brown	Green	
	Negative—Brown	White	Bulb lights Rectifier faulty replace.

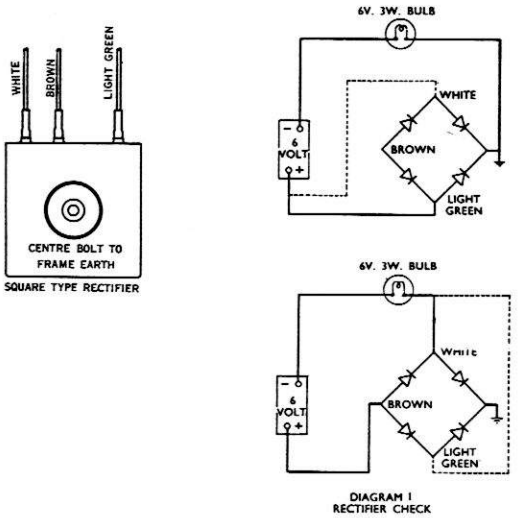


Figure 2.

N.B.—A RAPIDLY FLATTENING BATTERY NECESSITATES AN IMMEDIATE CHECK ON THE RECTIFIER AND ALTERNATOR.

Switches

Both ignition and lighting switches are mechanically identical. A faulty switch will invariably give itself away if the procedure outlined below is adopted.

Remove the lamp front and substitute the cable plugs from the ignition switch to the light switch and vice versa. If the switch is faulty then the fault will be transferred from one circuit to the other. Replace the faulty switch.

Premature Bulb Failure

The premature bulb failure involving all or many of the light bulbs at one time on a full DC battery system is caused by a defective connection in the battery "line"...

The following should be checked:

1. Battery Positive terminal
2. Battery Negative terminal
3. All connections in the four hole connection into which the battety negative lead is fitted.
4. Rectifier earth lead (translucent)
5. Harness frame earth.
6. Both ends of the short link wire in ignition switch joining brown lead from lighting switch to brown lead from main body of harness.
7. Check battery acid level and top up if necessary.

N.B.—IT SHOULD BE KNOWN THAT A BREAK OR POOR CONNECTION IN THE BATTERY LINE CAN CAUSE OVERLOADING TO THE RECTIFIER AND BRING ABOUT ITS EARLY FAILURE.

Contact Breaker

Check the contact breaker points gap and adjust to the recommended setting of 0.12". Check cleanliness of contact faces, these, if in good order, should have a light grey frosted appearance. Where fine matter, e.g. oil and grease have been present, the contacts may have a blackened burnt appearance. Should the condition not appear serious, then a light application of fine grade emery cloth will restore them. If in doubt replace the whole breaker group. Check the free action of the breaker arm on the pivot, as any sticking of this arm can cause intermittent difficulty.

N.B.—ON NO ACCOUNT SHOULD THE STAR SHAPED RETAINING WASHER ON THE BREAKER ARM BE REMOVED FROM THE PIVOT AS THE AMOUNT OF END FLOAT IS STRICTLY CONTROLLED, WHICH IS ESSENTIAL TO THE CORRECT FUNCTIONING OF THE CONTACT BREAKERS.

Condensers

Should the capacity be suspect, first check for good contact to earth and security to the contact breaker group. Secondly, a quick check can be made for short circuit to earth; the battery and bulb is a simple and quick test, but first remember to disconnect the condenser from the contact breaker group. Visual recognition of a defective condenser or condenser connections is vivid blue arcing at the contacts when an attempt is made to start the engine or when the engine is actually running.

Where an Avometer is available, a more conclusive check can be made. This is done by firstly, disconnecting the condenser lead from the contact breaker. Select the Avometer to the ohms x 100 range and, using the test prods from the meter, connect one to the condenser lead and the other to the condenser case. The needle on the Avo will move rapidly and return to infinity immediately. Remove the test meter prods and wait 15 seconds. Re-apply the prods and the needle should not again move.

If it does, the condenser requires replacement. It should be noted that a very small white spark across the contact breaker points when running is normal.

Ignition Coil Check

First, completely disconnect the ignition coil from the motorcycle circuit, and connect the DC volt meter across the 6v. battery to produce a continuity check. The meter should register the battery voltage. Now break this circuit at any point and across this break connect the two small screw terminals of the ignition coil. This test will indicate continuity to prove that the primary winding is intact. Likewise, one lead of the test circuit to either one of the primary terminals and the other to the H.T. pick-up will again show continuity but a lower reading due to the higher resistance of the secondary windings.

Third and last check is to ensure that the coil is not earthing out. To do this, leave one lead on one of the primary terminals and connect the other with the coil case. No reading should show. Similarly, with the H.T. pick-up point. Where an ohm meter is available, check the resistances as below:

Primary Resistance	1.3 ohms.
Secondary Resistance	4,500 ohms.

A defective primary winding may continue to produce a weak spark whereas intermittent performances invariably caused by a suspect secondary. Should there be any possible doubt about the ignition coil, however, a final check should be made by substitution.

WIPAC Stoplite OUTFIT

FOR BSA "BANTAM" AND "BANTAM MAJOR" MACHINES WITH A.C. CIRCUITS

In the past it has not been possible satisfactorily to fit stop lights to motor-cycles fitted with AC lighting due to the fact that with this system it is necessary at all times to absorb the complete output of the generator. In the design therefore, the generator output is matched to the normal bulb load so that if a stop bulb or even a tail lamp bulb were switched on without the head lamp this bulb would immediately blow.

In view of the large public demand from owners of B.S.A. "Bantam" machines for a stop lamp the Wipac engineers have been working on this problem for some time and have succeeded in designing a stop light outfit for "Bantam" owners, in which the additional load during day-time running is absorbed by means of special resistors incorporated in the wiring harness.

CONTENTS OF OUTFIT

- 1 RESISTOR HARNESS.
- 1 3-TERMINAL STOP SWITCH. Complete with fixing brackets.
- 1 3-BULB REARLAMP. Complete with bulbs.
- 1 HEADLAMP EARTH LEAD. Translucent covered.
- 4 CLIPS. For attaching harness to motor-cycle frame.
- 1 4 B.A. BRASS SCREW. For No. 12 terminal in headlamp switch.

Instruction sheet with wiring diagram.

STAGED FITTING INSTRUCTIONS

WIRE UP AND FIT STOP SWITCH

1. Remove ANY TWO rubber terminal covers from STOP SWITCH.
2. Fit terminal covers on the short RED and GREEN leads of the RESISTOR HARNESS.
3. Connect the RED and GREEN leads to the STOP SWITCH terminals and replace the covers over the terminals.
4. Fit STOP SWITCH to machine with large bracket and connect small bracket to brake rod. See that the coil spring is not in tension when brake is off. (The third terminal of stop switch is an auxiliary terminal.)

FIT 3-BULB REARLAMP AND WIRE UP

5. Attach the REARLAMP to number plate by the two screws protruding from back plate.
6. Connect the BLACK lead to existing rear lamp supply.
7. Connect the BROWN lead to long BROWN lead of the RESISTOR HARNESS.

FIT RESISTOR HARNESS AND WIRE TO HEADLAMP

8. Remove headlamp front.
9. Fit the HARNESS under petrol tank and push end (with VIOLET lead protruding) up into headlamp. Allowing enough play for steering, secure the Harness to frame with metal clips provided.
10. Connect VIOLET lead to No. 12 terminal of the Headlamp switch. (Looking into the headlamp from the front the No. 12 terminal is the nearest to you in the bank of four on the left-hand side. In most cases this terminal is screwless and a 4 B.A. Brass screw is provided in the kit.)
11. Take the separate TRANSLUCENT lead, fit trimmed end to No. 11 terminal of switch (one behind No. 12 terminal) and attach other end to the Headlamp Reflector (EARTH). A translucent lead is already attached to this point.

CONNECT HARNESS TO MAGNETO

12. Remove magneto cover.
13. The long GREEN lead (midway along harness) should be pushed through the sleeve covering the H.T. lead and into the Generator. Connect to No. 4 terminal of Generator. (This terminal should have a green lead already connected from inside the Generator.)
14. For satisfaction, check wiring before going out on the road.

WARNING

Do not operate the lighting switch with the brake pedal depressed, because the movement of the switch creates a brief duration open circuit of the loading, which blows the stop lamp bulbs.

NOTE

Stop lights will not work in the "L" position of the Headlamp Switch.

REF. S.L.155

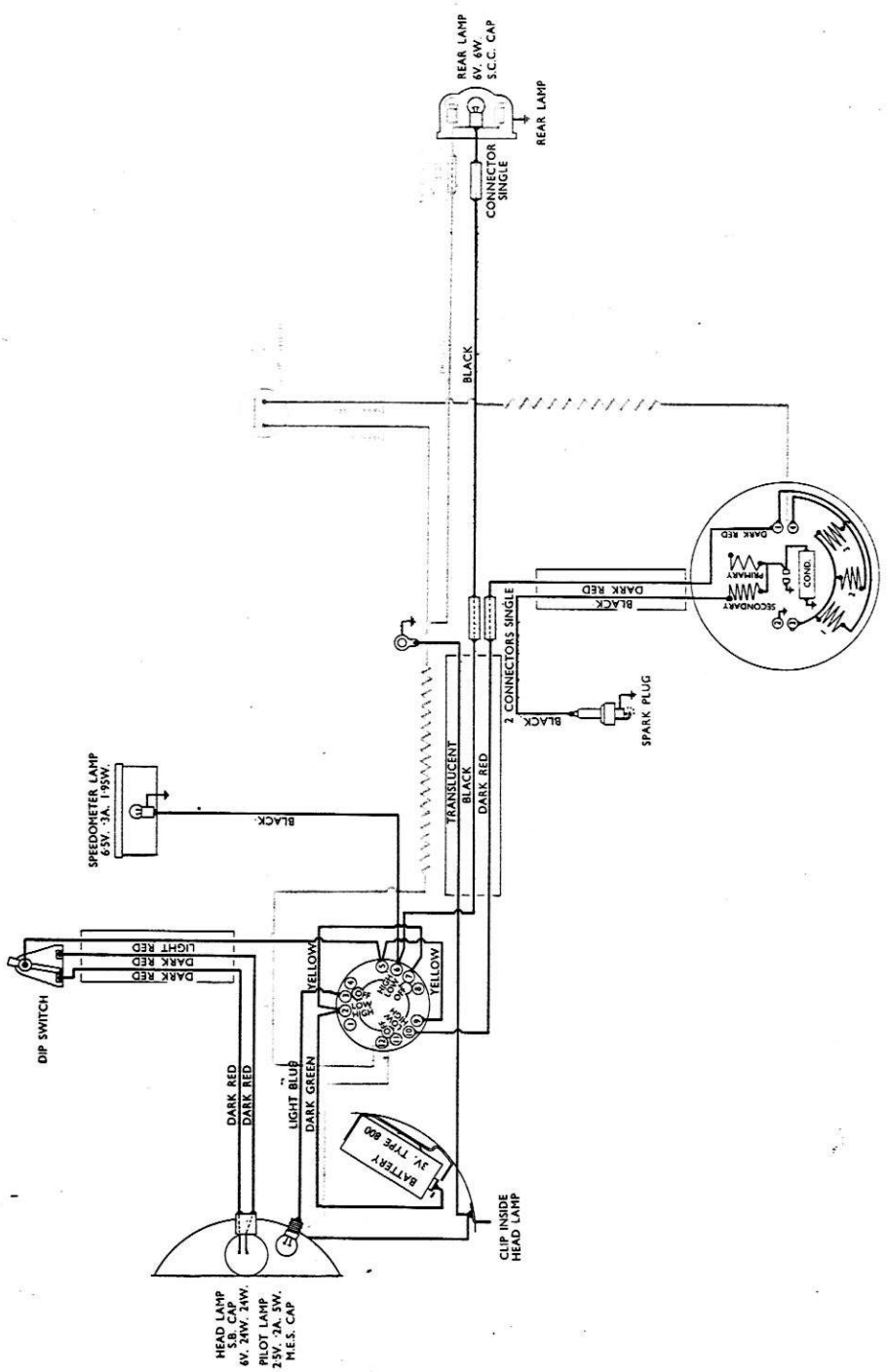
WIRING
WIPAC
DIAGRAM

B.S.A. Bantam and Bantam Major

A.C. Circuit

WITH "STOPLITE" OUTFIT ADDED

THE WIPAC GROUP · BLETCHLEY · ENGLAND



WIPAC Stoplite No. 2 OUTFIT

FOR BSA "BANTAM" AND "BANTAM MAJOR" 1955 MODELS WITH A.C. CIRCUITS AND WIPAC 3 BULB REAR LAMP ALREADY FITTED

In the past it has not been possible satisfactorily to fit stop lights to motor-cycles fitted with AC lighting due to the fact that with this system it is necessary at all times to absorb the complete output of the generator. In the design therefore, the generator output is matched to the normal bulb load so that if a stop bulb or even a tail lamp bulb were switched on without the head lamp this bulb would immediately blow.

In view of the large public demand from owners of B.S.A. "Bantam" machines for a stop lamp the Wipac engineers have been working on this problem for some time and have succeeded in designing a stop light outfit for "Bantam" owners, in which the additional load during day-time running is absorbed by means of special resistors incorporated in the wiring harness.

CONTENTS OF OUTFIT

- 1 RESISTOR HARNESS.
- 1 3-TERMINAL STOP SWITCH. Complete with fixing brackets.
- 1 HEADLAMP EARTH LEAD. Translucent covered.
- 4 CLIPS. For attaching harness to motor-cycle frame.
- 1 4 B.A. BRASS SCREW. For No. 12 terminal in headlamp switch.

Instruction sheet with wiring diagram.

STAGED FITTING INSTRUCTIONS

WIRE UP AND FIT STOP SWITCH

1. Remove ANY TWO rubber terminal covers from STOP SWITCH.
2. Fit terminal covers on the short RED and GREEN leads of the RESISTOR HARNESS.
3. Connect the RED and GREEN leads to the STOP SWITCH terminals and replace the covers over the terminals.
4. Fit STOP SWITCH to machine with large bracket and connect small bracket to brake rod. See that the coil spring is not in tension when brake is off. (The third terminal of stop switch is an auxiliary terminal.)
5. Solder short brown lead to either of stop lamp bulb tabs.
6. Screw in 2, 6-volt 3 watt stop bulbs.
7. Connect the short brown lead to long brown lead of the resistor harness.

FIT RESISTOR HARNESS AND WIRE TO HEADLAMP

8. Remove headlamp front.
9. Fit the HARNESS under petrol tank and push end (with VIOLET lead protruding) up into headlamp. Allowing enough play for steering, secure the Harness to frame with metal clips provided.
10. Connect VIOLET lead to No. 12 terminal of the Headlamp switch. (Looking into the headlamp from the front the No. 12 terminal is the nearest to you in the bank of four on the left-hand side. In most cases this terminal is screwless and a 4 B.A. Brass screw is provided in the kit.)
11. Take the separate TRANSLUCENT lead, fit trimmed end to No. 11 terminal of switch (one behind No. 12 terminal) and attach other end to the Headlamp Reflector (EARTH). A translucent lead is already attached to this point.

CONNECT HARNESS TO MAGNETO

12. Remove magneto cover.
13. The long GREEN lead (midway along harness) should be pushed through the sleeve covering the H.T. lead and into the Generator. Connect to No. 4 terminal of Generator. (This terminal should have a green lead already connected from inside the Generator.)
14. For satisfaction, check wiring before going out on the road.

WARNING

Do not operate the lighting switch with the brake pedal depressed, because the movement of the switch creates a brief duration open circuit of the loading, which blows the stop lamp bulbs.

NOTE

Stop lights will not work in the "L" position of the Headlamp Switch.

REF. S.L.255

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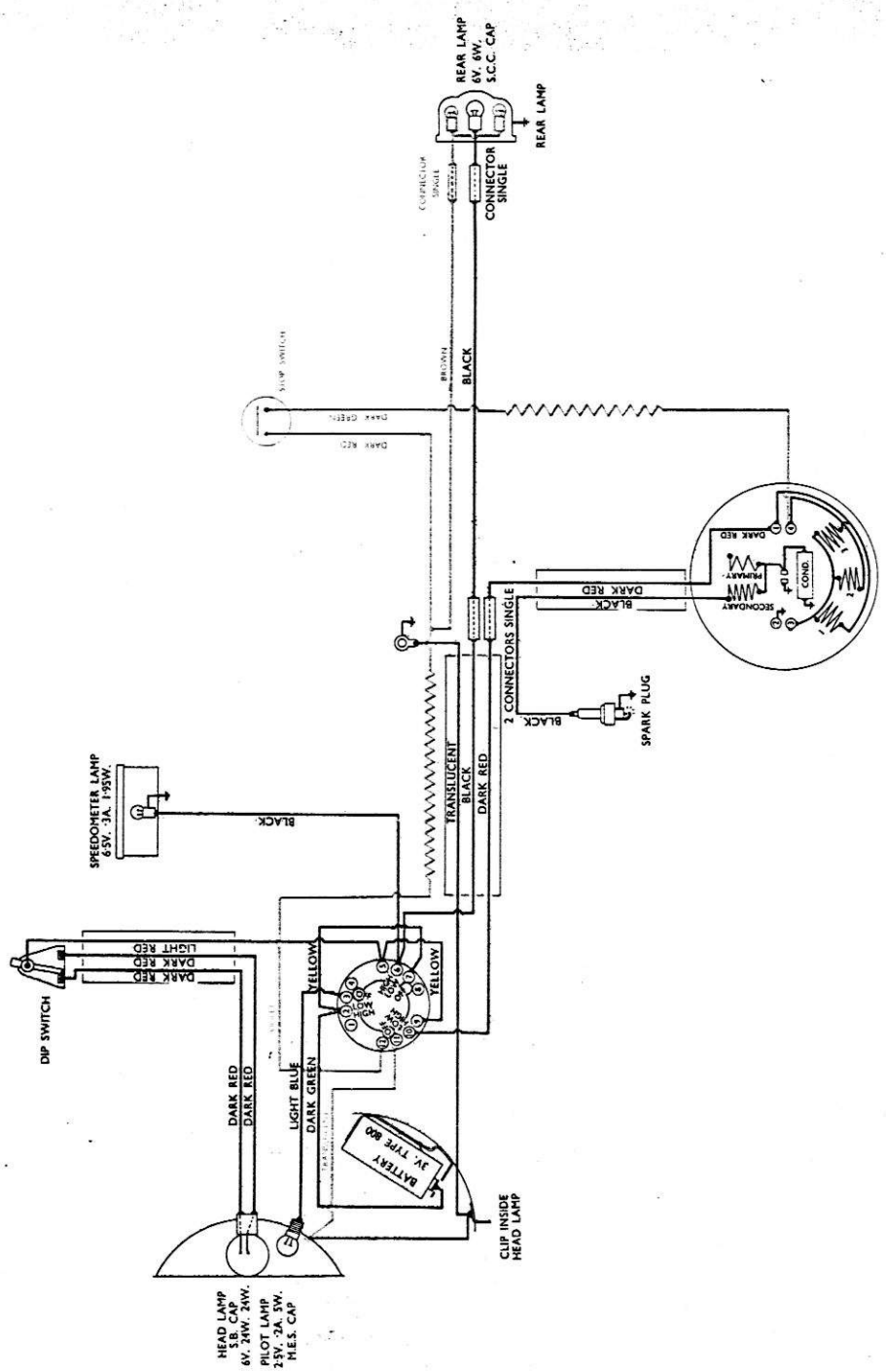
WIRING
WIPAC
DIAGRAM

B.S.A. Bantam and Bantam Major

A.C. Circuit

WITH "STOPLITE" OUTFIT ADDED

THE WIPAC GROUP · BLETCHLEY · ENGLAND



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WIPAC **Stoplite** **No. 3 OUTFIT**

FOR BSA "BANTAM" AND "BANTAM MAJOR" 1956 MODELS (AFTER AUG 1955) WITH A.C. CIRCUITS AND WIPAC 3 BULB REAR LAMP ALREADY FITTED

In the past it has not been possible satisfactorily to fit stop lights to motor-cycles fitted with AC lighting due to the fact that with this system it is necessary at all times to absorb the complete output of the generator. In the design therefore, the generator output is matched to the normal bulb load so that if a stop bulb or even a tail lamp bulb were switched on without the head lamp this bulb would immediately blow.

In view of the large public demand from owners of B.S.A. " Bantam " machines for a stop lamp the Wipac engineers have been working on this problem for some time and have succeeded in designing a stop light outfit for " Bantam " owners, in which the additional load during day-time running is absorbed by means of special resistors incorporated in the wiring harness.

CONTENTS OF OUTFIT

- 1 RESISTOR HARNESS.
- 1 3-TERMINAL STOP SWITCH. Complete with fixing brackets.
- 4 CLIPS. For attaching harness to motor-cycle frame.
- 1 Rubber covered connector.
- 1 Short Brown Lead with Bullet Terminal.
- 1 Instruction Sheet with wiring diagram.

STAGED FITTING INSTRUCTIONS

WIRE UP AND FIT STOP SWITCH

1. Remove ANY TWO rubber terminal covers from STOP SWITCH.
2. Fit terminal covers on the short RED and GREEN leads of the RESISTOR HARNESS.
3. Connect the RED and GREEN leads to the STOP SWITCH terminals and replace the covers over the terminals.
4. Fit STOP SWITCH to machine with large bracket and connect small bracket to brake rod. See that the coil spring is not in tension when brake is off. (The third terminal of stop switch is an auxiliary terminal.)
5. Solder short brown lead to either of stop lamp bulb tabs.
6. Screw in 2, 6-volt 3 watt stop bulbs.
7. Connect the short brown lead to long brown lead of the resistor harness.

FIT RESISTOR HARNESS

8. Remove headlamp front.
9. Fit Harness under petrol tank and push end with violet and dark red leads into headlamp. Allow enough play for steering movement, and secure Harness to frame with the metal clips provided.
10. Push in bullet terminals into the vacant holes in the five way rubber connector block, colour to colour, i.e. violet to violet and dark red to dark red.

NOTE

Stop lights will not work in the " L " position of the Headlamp Switch.

WARNING

Do not operate the lighting switch with the brake pedal depressed, because the movement of the switch creates a brief duration open circuit of the loading, which blows the stop lamp bulbs.

REF. S.L.355

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WIRING
WIPAC
DIAGRAM

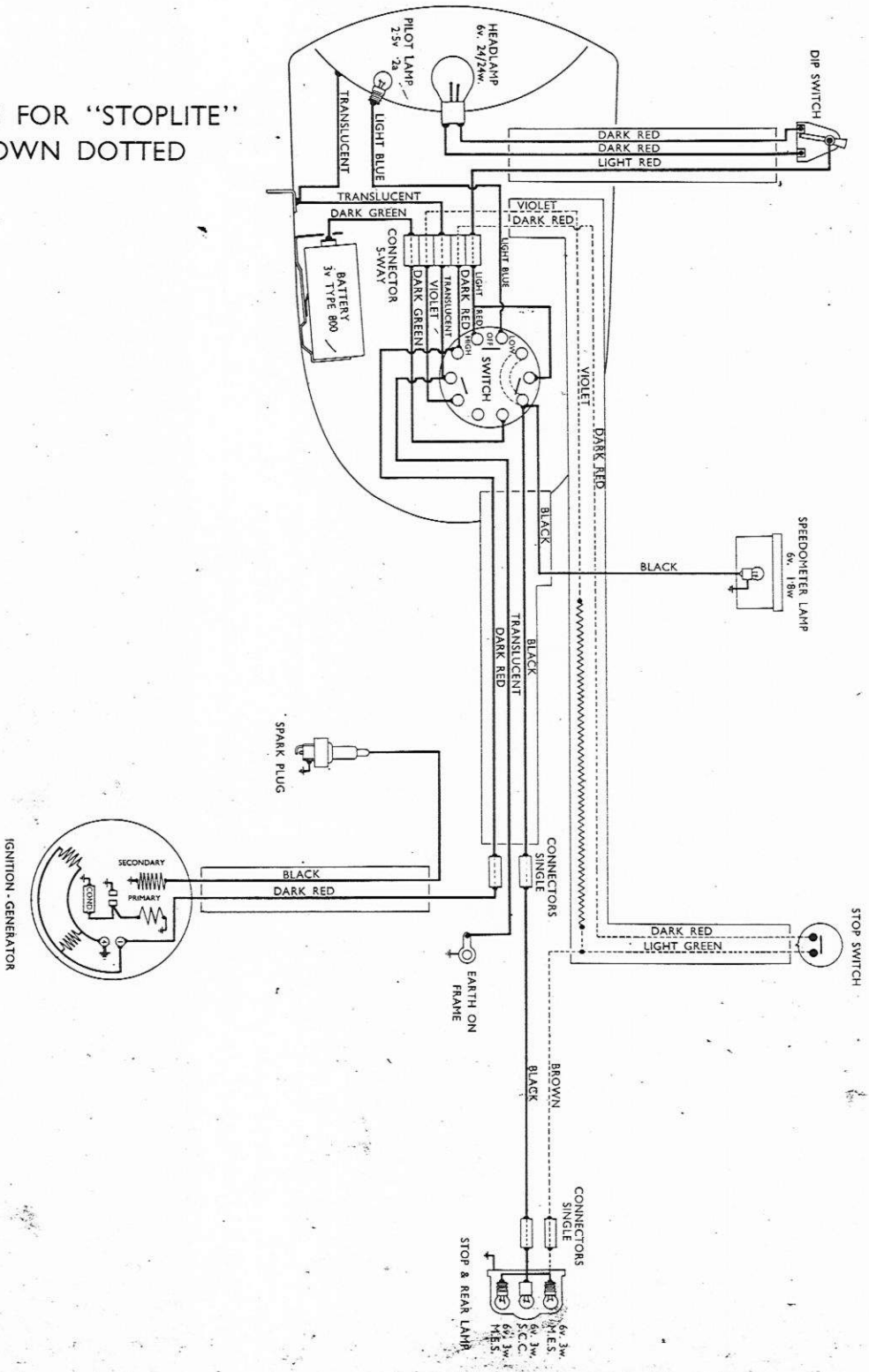
B.S.A. Bantam and Bantam Major

A.C. Circuit

WITH No. 3 "STOPLITE" OUTFIT ADDED

THE WIPAC GROUP · BLETCHLEY · ENGLAND

WIRING FOR "STOPLITE" SHOWN DOTTED



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REF. SL.356

SERVICE WIPAC BULLETIN	SUBJECT	B.S.A. Bantam Magneto Series 55 Contact Point Setting		
	Ref. No.	125/3	CANCELS	
	AUTHORITY	F.K.M.	INSERT THIS BULLETIN INTO :-	No. 3 Technical Manual
	DATE OF ISSUE	1-1-56		

FAULT:

It is sometimes reported that B.S.A. Bantam machines fitted with our series '55' Ignition Generator, will not start nor run unless the contact breaker point setting is about .006″ to .008″ instead of the correct figure of .015″.

CAUSE:

A build up of tolerances on the shaft, the cam and the key in one direction, may result in the points opening before the magnetic flux has been broken, so that no voltage is produced. The action of closing down the gap to about .008″ retards this timing relationship and the magneto then fires normally.

REMEDY:

The first remedy to employ is to reverse the small Woodruff Cam Key—that is, put the side which faces to the right, to face to the left. Should this effect no improvement, obtain from us, a special cam, the profile of which is specially ground 5 degrees late.

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SERVICE WIPAC BULLETIN	SUBJECT	STOP SWITCH. FAULTY FITTING ON B.S.A. BANTAM.		
	Ref. No.	4255	CANCELS	
	AUTHORITY	F.K.M.	INSERT THIS BULLETIN INTO:-	NO. 2. MANUAL.
	DATE OF ISSUE	JUNE 1955		

B.S.A. BANTAM D.C. MACHINES BUILT FROM APRIL TO JULY INCLUSIVE AND FITTED WITH A WIPAC STOP SWITCH AS STANDARD EQUIPMENT.

ON MACHINES MADE EARLY THIS YEAR, THE STOP SWITCH WAS LOCATED ON THE CHAIN SIDE OF THE LOWER REAR FRAME TUBE. THE CHAIN SOMETIMES STRUCK AND DAMAGED THE SWITCH AND SO THE SWITCH WAS MOVED TO A POSITION IMMEDIATELY OVER THE REAR TUBE.

CERTAIN MACHINES HAVE BEEN ASSEMBLED WITH THE CONTACTS OF THE SWITCH ALMOST TOUCHING THE FASTENING LUG AND HAVE GONE TO EARTH AND BURNED OUT THE WIRING.

REMEDY:-

FIT SLOT IN SWITCH BRACKET SO THAT THE SWITCH IS AS FAR AWAY FROM THE LUG AS POSSIBLE AND THEN MAKE THE SPRING ADJUSTMENT BY MOVING THE CLIP ON THE BRAKE ROD.

THE WIPAC GROUP — BLETCHLEY — ENGLAND
TELEPHONE: BLETCHLEY 320 TELEGRAMS: WICOMAGSCO BLETCHLEY

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SERVICE WIPAC BULLETIN				
	SUBJECT	B.S.A. BANTAM DC. JUNE. 1955 FITTING OF STATOR PLATE, TYPE IG. 1454.		
	Ref. No.	6255	CANCELS	
	AUTHORITY	F.K.M.	INSERT THIS BULLETIN INTO :-	NO. 2 MANUAL.
	DATE OF ISSUE	OCT. 1955		

On all B.S.A. D1 and D3 Bantam DC machines, manufactured between June 1950 and August 1955, the Ignition Generator was fitted with Stator Plate Type IG.1130..
(Identification:- The headlamp switch lever is detachable by means of the fixing screw in the centre).

On all B.S.A. Bantam DC machines manufactured after August 1955, the Ignition Generator is fitted with Stator Plate Type IG.1454. (Identification:- The headlamp switch lever is non-detachable and has no centre fixing screw).

The Stator Plate IG. 1454 can be fitted to 1950/5 models but in order to limit the charging rate in the "LOW" position the following modifications must be carried out on the headlamp switch:-

(1) Remove the yellow link between Terminals 9 and 11

(2) After removing this ensure that the Light Green wire is securely connected to Terminal 9.

THE WIPAC GROUP — BLETCHLEY — ENGLAND
TELEPHONE: BLETCHLEY 3321 TELEGRAMS: WICOMAGSCO BLETCHLEY

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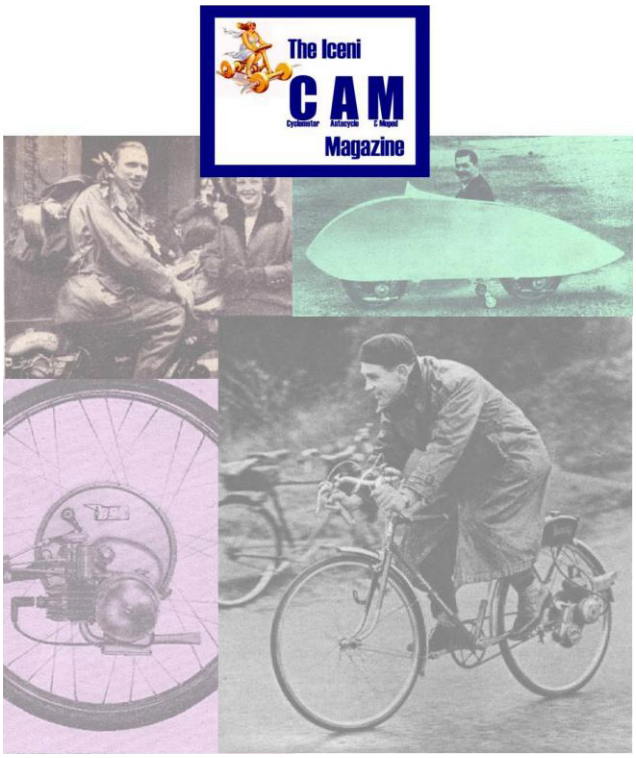

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