

WIPAC

Number 2 Manual

dealing with the servicing
and maintenance of

MAGNETOS

with

MOTOR CYCLE & CYCLE MOTOR APPLICATIONS

This manual is designed as a loose leaf
binder to simplify additions or
deletions and will be kept up to date
for you upon receipt of your name
and address

PRICE

TWO SHILLINGS & SIXPENCE

THE **WIPAC** GROUP

BLETCHLEY

Barnstormers.co.nz ENGLAND

RUNNING MAINTENANCE

The ignition generator requires very little maintenance and if the following notes are observed the life of the machine should prove trouble-free.

Check and if necessary re-adjust the contacts once every 5,000 miles.

Occasionally clean the contacts by inserting a dry smooth piece of paper between them and withdrawing while the contacts are in the closed position. Do not allow the engine to run with oil or petrol on the contacts or they will start to burn and blacken, and if they do, lightly polish with a piece of smooth emery cloth.

After every 5,000 miles it is necessary to re-lubricate the cam grease pad. This is done by removing the pad and squeezing and working into it a Summer grade of motor transmission grease which will very closely resemble that used at the factory. Do not use ordinary grease.

SERVICING

Checking ignition for spark

If the engine fails to start and there is indication that the ignition is at fault:—

- (A) Disconnect H.T. lead from the spark plug and hold it about $\frac{1}{16}$ " away from some unpainted portion of the frame or engine. Kick-start the engine in the usual way and a spark should jump this gap.
- (B) If no spark is visible:—
1. Check H.T. lead for continuity.
 2. Check contact breaker points for correct gap setting and see that they are clean. Check breaker point adjustment screws for tightness.
 3. By removing the flywheel examine the internal leads for breaks and see they are all properly secured. Make sure covered leads are not chafed and earthing.
 4. Make sure there are no metallic particles inside the unit.
 5. If the insulation of the H.T. coil has broken down it will show signs of charring on the outside but it is unlikely that this will happen in normal use.

Condenser

A weak or faulty condenser can be detected by badly burnt and pitted contacts or a continuous intense blue spark across the contacts when running. A very small white spark across the points when running is normal.

The condenser can be removed by undoing the screw securing it and releasing the lead from the terminal post.

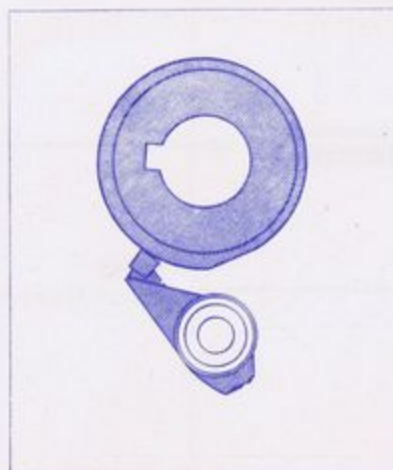
Contact breaker points

Adjustment. Turn engine over until points are fully open. See sketch.

Test with feeler gauge between "points". If the "points" require adjustment slacken the fixing screw and carefully move the fixed contact plate by means of a screwdriver until the correct gap is obtained. Tighten screw.

The breaker point setting should only be adjusted in the manner described and at no time should the breaker arm be bent to provide adjustment.

If the contact points need replacing both the fixed and movable points must be replaced at the same time.



THIS IGNITION GENERATOR IS
FITTED AS STANDARD EQUIPMENT
TO THE

B.S.A.

DANDY (Seventy)

LIGHT SCOOTER

(Up to Engine No. D.S.E. 1307)

MAIN DETAILS

Wipac Type	Series 141
Engine cylinder	Single
Rotation	Anti-clockwise
Flywheel weight	4½ lbs
Flywheel diameter	5½"
Ignition	Direct from magneto
Lighting	6 volt A.C. 21 watts at 2,800 r.p.m.
H.T. lead	16½" (7 mm.)
Breaker point setting	.018"
Recommended spark plug	P70

Replacement of ignition and lighting coils

First bend back coil retainer strip then release coil lead from contact breaker fixing post, then unsolder earth leads from lead clamp. Considerable force may be necessary to remove coil from core as a fibre wedge is used to ensure a tight fit and a varnish adherent is also used to secure the lighting coils.

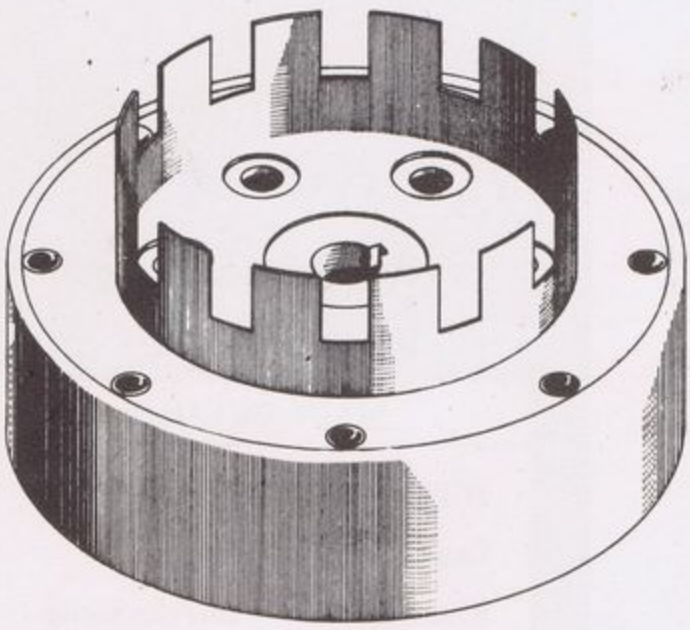



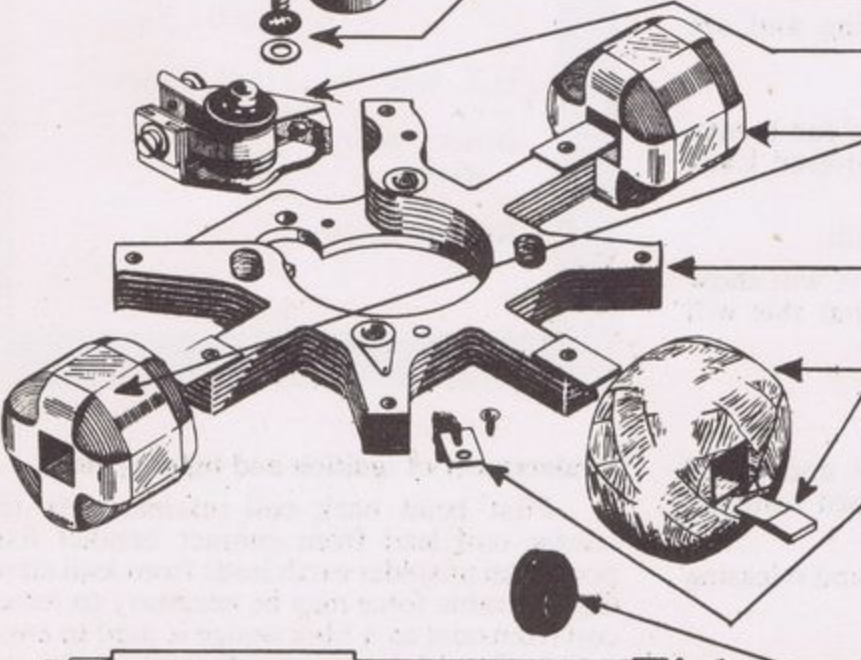
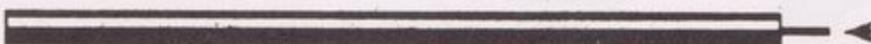


Flywheel

This unit is robustly constructed and it is unlikely to develop any faults in normal use. A KEEPER RING IS NOT NECESSARY WHEN WITHDRAWING IT FROM THE STATOR PLATE.

Removal. Refer to B.S.A. Instruction Book.

When replacing the flywheel make sure metalized dust or small steel items have not been attracted onto the magnets.



PARTS IN EXPLODED VIEW	COMPONENTS	SETS	UNITS
			<p>S0266 Flywheel and Clutch Cup Unit</p>
			<p>S0267 Breaker Cam</p>
	<p>S0052 Condenser Fixing Set</p>		
	<p>S0054 Contact Breaker Fixing Set</p>	<p>S0051 Condenser Set (includes S0052)</p>	
	<p>S0272 L.T. Coil Set</p> <p>S0057 Core and Plate Assembly Set (includes S0055)</p> <p>S0273 H.T. Coil Set</p> <p>S0055 Grease Pad Set</p>	<p>00695 Contact Breaker Set</p> <p>S0274 H.T. and L.T. Coils and Core Unit</p> <p>S0271 L.T. Lead and Grommet Set</p>	<p>S0325 Stator Unit</p>
			<p>S0059 H.T. Lead Wire (16½")</p>
	<p>S0270 Stator Fixing Set</p>		
			<p>S0269 Back Plate Set (includes S0270)</p>

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After every 5,000 miles it is necessary to re-lubricate the cam grease pad. This is done by removing the pad and squeezing and working into it a Summer grade of motor transmission grease which will very closely resemble that used at the factory. Do not use ordinary grease.

SERVICING

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 1. Check H.T. lead for continuity.
 2. Check contact breaker points for correct gap setting and see that they are clean. Check breaker point adjustment screws for tightness.
 3. By removing the flywheel examine the internal leads for breaks and see they are all properly secured. Make sure covered leads are not chafed and earthing.
 4. Make sure there are no metallic particles inside the unit.
 5. If the insulation of the H.T. coil has broken down it will show signs of charring on the outside but it is unlikely that this will happen in normal use.

Condenser

A weak or faulty condenser can be detected by badly burnt and pitted contacts or a continuous intense blue spark across the contacts when running. A very small white spark across the points when running is normal.

The condenser can be removed by undoing the screw securing it and releasing the lead from the terminal post.

Contact breaker points

Adjustment. Turn engine over until points are fully open. See sketch.

Test with feeler gauge between "points". If the "points" require adjustment slacken the fixing screw and carefully move the fixed contact plate by means of a screwdriver until the correct gap is obtained. Tighten screw.

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B.S.A.

DANDY (Seventy)

LIGHT SCOOTER

(From Engine No. D.S.E. 1308 up to
Engine No. D.S.E. 3700)

MAIN DETAILS

Wipac Type	Series 141
Engine cylinder	Single
Rotation	Anti-clockwise
Flywheel weight	4½ lbs
Flywheel diameter	5½"
Ignition	Direct from magneto
Lighting	6 volt A.C. 21 watts at 2,800 r.p.m.
H.T. lead	16½" (7 mm.)
Breaker point setting	.018"
Recommended spark plug	P70

Replacement of ignition and lighting coils

First bend back coil retainer strip then release coil lead from contact breaker fixing post, then unsolder earth leads from lead clamp. Considerable force may be necessary to remove coil from core as a fibre wedge is used to ensure a tight fit and a varnish adherent is also used to secure the lighting coils.

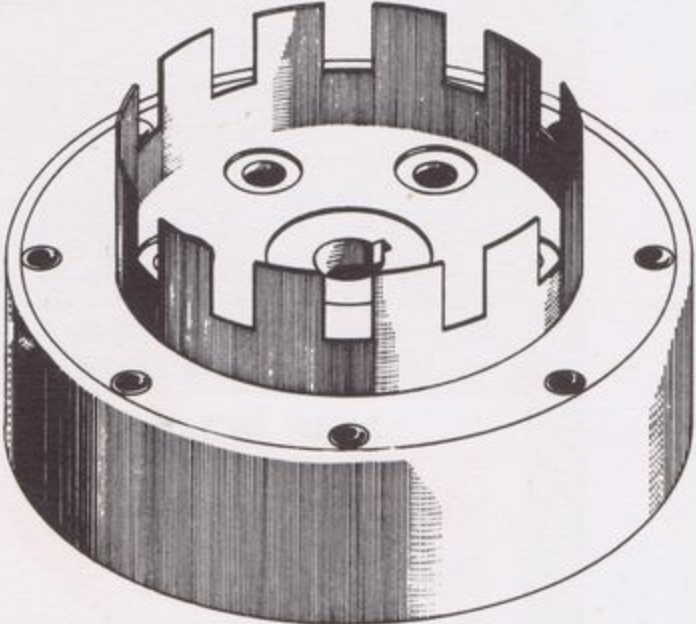




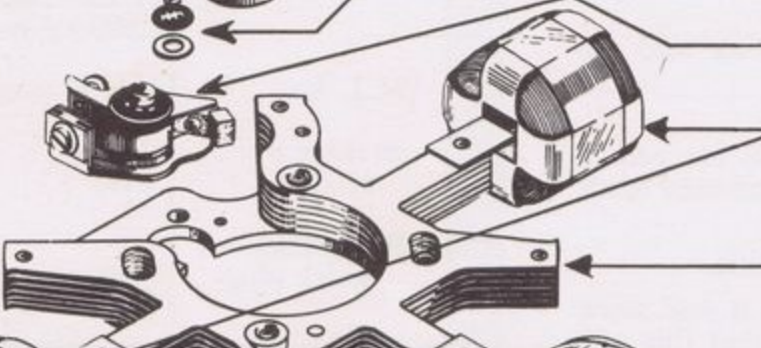


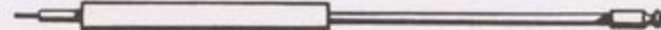
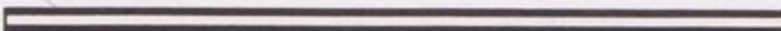


Flywheel

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Removal. Refer to B.S.A. Instruction Book.

When replacing the flywheel make sure metalized dust or small steel items have not been attracted onto the magnets.



PARTS IN EXPLODED VIEW	COMPONENTS	SETS	UNITS
			<p>S0479 Flywheel Cam and Clutch Cup Unit</p>
			<p>S0267 Breaker Cam</p>
	<p>S0052 Condenser Fixing Set</p>	<p>S0051 Condenser Set (includes S0052)</p>	
	<p>S0054 Contact Breaker Fixing Set</p>	<p>S0275 Contact Breaker Set</p>	
	<p>S0272 L.T. Coil Set</p>		
	<p>S0057 Core and Plate Assembly Set (includes S0055)</p>	<p>S0274 H.T. and L.T. Coils and Core Unit</p>	<p>S0268 Stator Unit</p>
	<p>S0273 H.T. Coil Set</p>		
	<p>S0055 Grease Pad Set</p>		
		<p>S0271 L.T. Lead and Grommet Set</p>	
			<p>S0480 H.T. Lead Wire (16½")</p>
	<p>S0270 Stator Fixing Set</p>		
			<p>S0269 Back Plate Set (includes S0270)</p>

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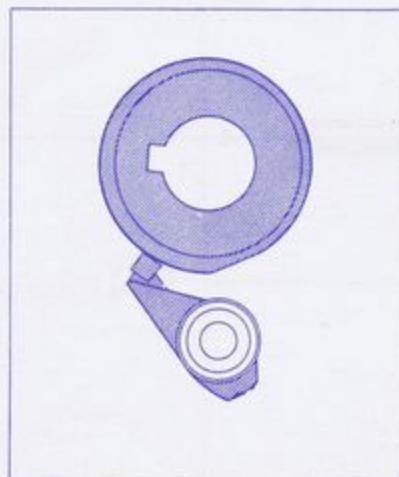
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B.S.A.

DANDY (Seventy)

LIGHT SCOOTER

(From Engine No. D.S.E. 3701)

MAIN DETAILS

Wipac Type	Series 141
Engine cylinder	Single
Rotation	Anti-clockwise
Flywheel weight	4½ lbs
Flywheel diameter	5½"
Ignition	Direct from magneto
Lighting	6 volt A.C. 21 watts at 2,800 r.p.m.
H.T. lead	16½" (7 mm.)
Breaker point setting	.018"
Recommended spark plug	P70

Replacement of ignition and lighting coils

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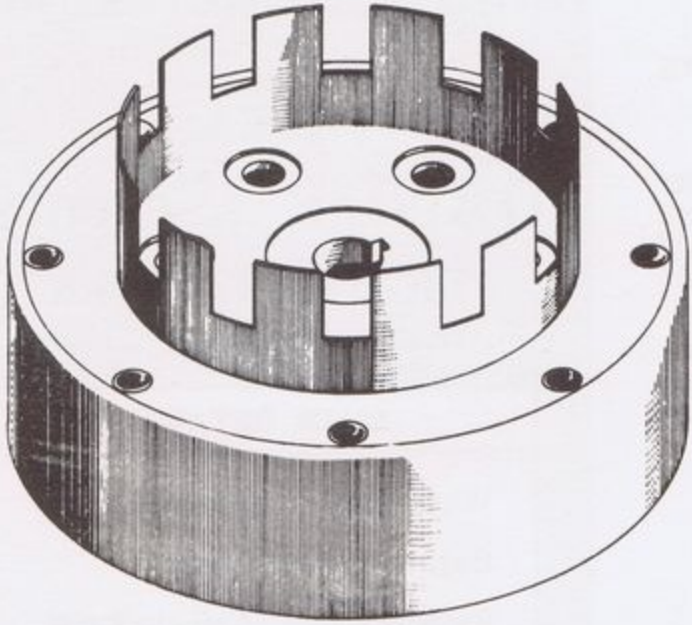







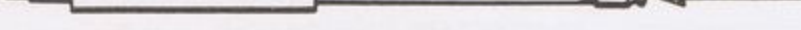



Flywheel

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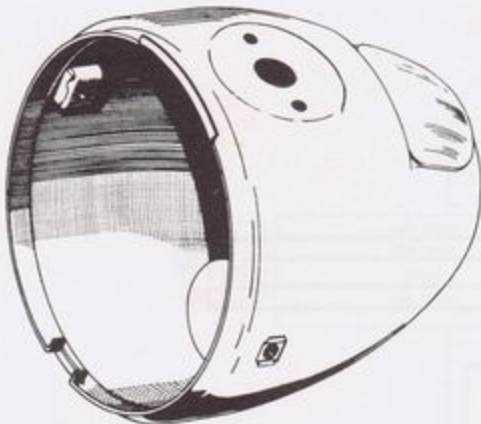
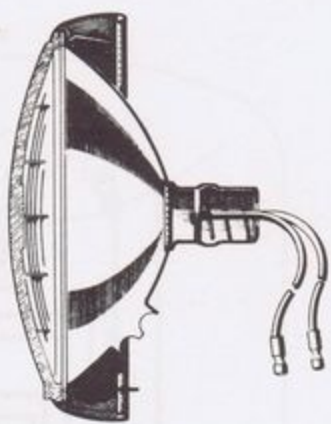
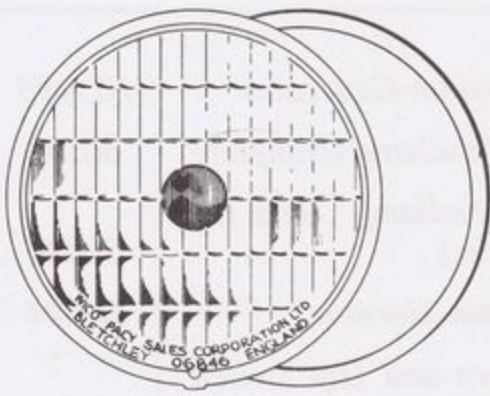

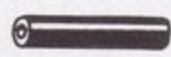


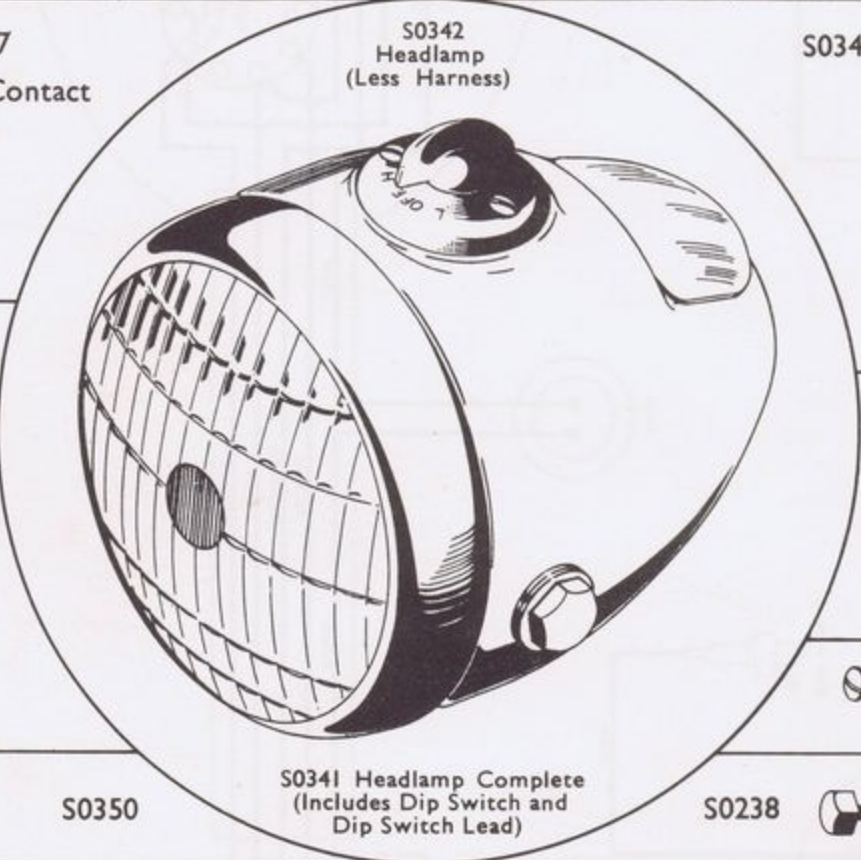











Removal. Refer to B.S.A. Instruction Book.

When replacing the flywheel make sure metalized dust or small steel items have not been attracted onto the magnets.



PARTS IN EXPLODED VIEW	COMPONENTS	SETS	UNITS
			<p>S0266 Flywheel and Clutch Cup Unit</p>
			<p>S0478 Breaker Cam</p>
	<p>S0052 Condenser Fixing Set</p>		
	<p>S0054 Contact Breaker Fixing Set</p>	<p>S0051 Condenser Set (includes S0052)</p>	
	<p>S0272 L.T. Coil Set</p>	<p>S0275 Contact Breaker Set</p>	
	<p>S0057 Core and Plate Assembly Set (includes S0055)</p>	<p>S0274 H.T. and L.T. Coils and Core Unit</p>	<p>S0268 Stator Unit</p>
	<p>S0273 H.T. Coil Set</p>		
	<p>S0055 Grease Pad Set</p>		
		<p>S0271 L.T. Lead and Grommet Set</p>	
			<p>S0480 H.T. Lead Wire (16½")</p>
	<p>S0270 Stator Fixing Set</p>		
			<p>S0269 Back Plate Set (includes S0270)</p>

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<p>S0343</p>  <p>Lamp Body Set</p>	<p>S0346</p>  <p>Lamp Front Unit (In Section)</p>	<p>S0348</p>  <p>Headlamp Glass Set</p>
<p>02485</p>  <p>Connector (4 Way)</p>	<p>00608</p>  <p>Connector (Single)</p>	<p>01874</p>  <p>Connector (Double)</p>
<p>S0347</p>  <p>Main Bulb Contact Set</p>	<p>S0342 Headlamp (Less Harness)</p>  <p>S0341 Headlamp Complete (Includes Dip Switch and Dip Switch Lead)</p>	<p>S0349 Rim</p> 
<p>S0352</p>  <p>Battery Clip Set (Box of 2)</p>		<p>06205</p>  <p>Horn and Dip Switch</p>
<p>S0351</p>  <p>Pilot Bulb Holder Set</p>		<p>S0064</p>  <p>Rim Locking Set</p>
<p>Reflector Clips (Box of 3)</p> 		<p>S0238</p>  <p>Headlamp Fixing Set</p>
<p>06587</p>  <p>Switch Body Unit</p>		<p>06588</p>  <p>Switch Cover and Knob Group</p>
<p>S0345</p>  <p>Horn and Dip Switch Harness</p>		
 <p>S0344 Main Harness</p>		

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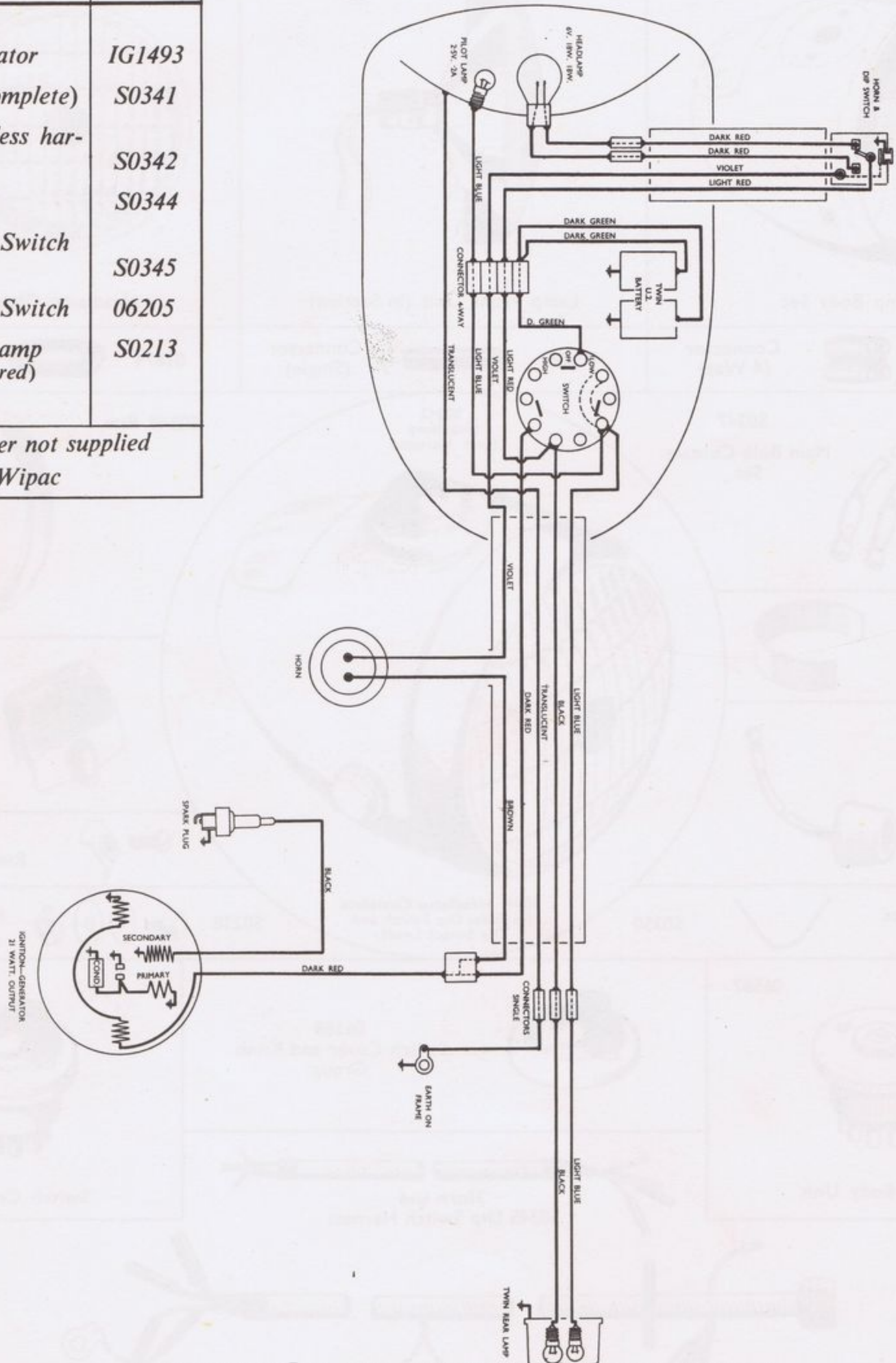
WIRING WIPAC DIAGRAM

B.S.A. DANDY SEVENTY LIGHT SCOOTER MODELS PRODUCED FROM OCTOBER 1956 TO APRIL 1957

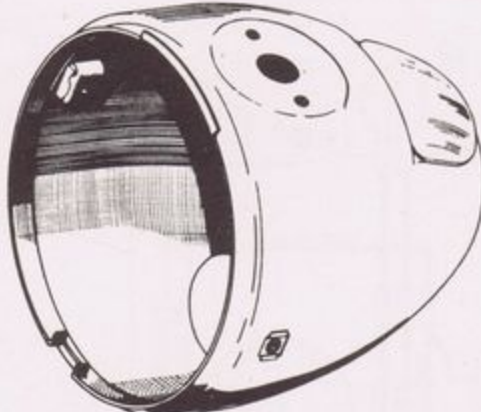

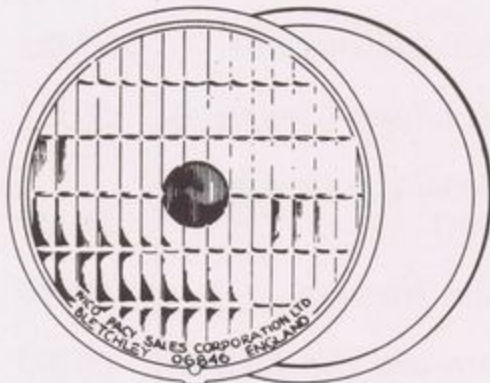

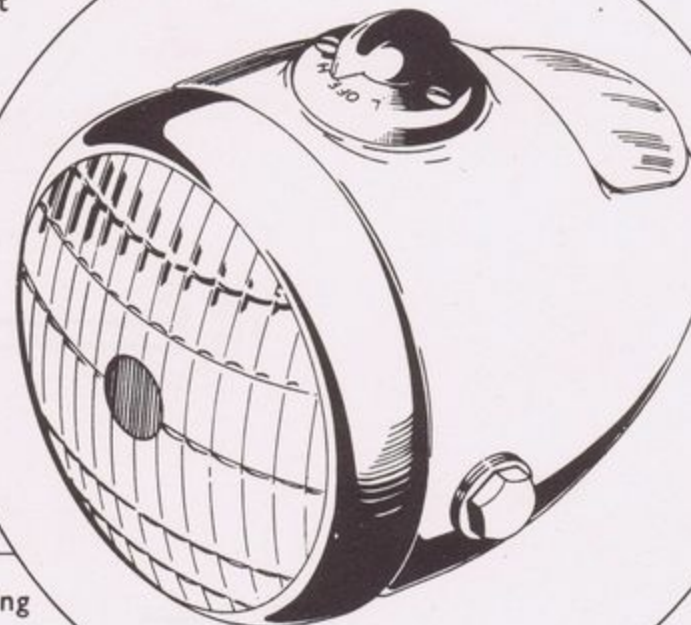







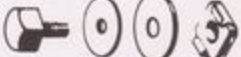


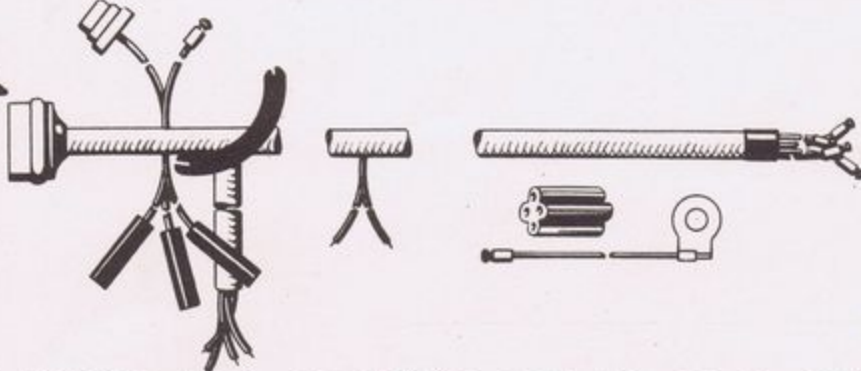
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SPARES UNITS	PART No.
Ignition-Generator	IG1493
* Headlamp (complete)	S0341
* Headlamp (less harness)	S0342
Main Harness	S0344
Horn and Dip Switch Harness	S0345
Horn and Dip Switch	06205
Stop & Rear Lamp (quote Bulbs required)	S0213

*Speedometer not supplied by Wipac



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<p>S0343</p>  <p>Lamp Body Set</p>	<p>S0508</p>  <p>Reflector and Glass Set</p>	<p>S0348</p>  <p>Headlamp Glass Set</p>
<p>S0347</p>  <p>Main Bulb Contact Set</p>	<p>S0342</p>  <p>Headlamp (Less Harness)</p> <p>S0341 Headlamp Complete (Includes Harness and Dip Switch)</p>	<p>S0349 Rim</p> 
<p>02485</p>  <p>Connector (4 Way)</p>		<p>06205</p>  <p>Horn and Dip Switch</p>
<p>00608</p>  <p>Connector (Single)</p>		<p>S0064</p>  <p>Rim Locking Set</p>
<p>Reflector Clips (Box of 3)</p>  <p>S0350</p>		<p>06291</p>  <p>Switch Complete</p>
<p>S0238</p>  <p>Headlamp Fixing Set</p>		
<p>06587</p>  <p>Switch Body Unit</p>		
<p>06588</p>  <p>Switch Cover and Knob Group</p>	<p>S0344 Main Harness</p>  <p>S0526 (Blue) Plug Unit</p>	

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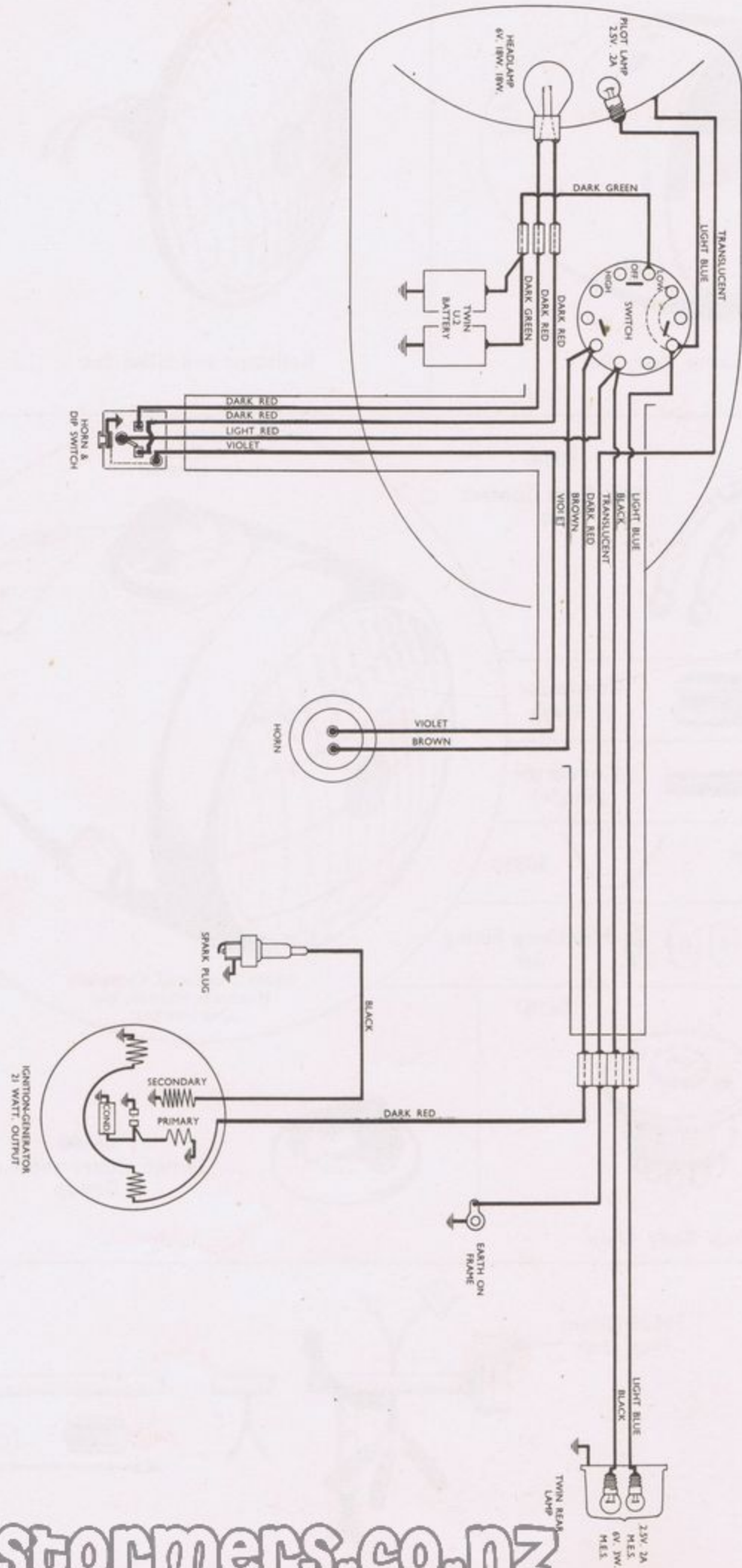
WIRING WIPAC DIAGRAM

B.S.A. DANDY SEVENTY LIGHT SCOOTER MODELS PRODUCED FROM MAY 1957

THE WIPAC GROUP · BLETCHLEY · ENGLAND

EQUIPMENT	PART No.
Ignition-Generator	1G1501
* Headlamp (complete)	S0341
* Headlamp (less harness)	S0342
Main Harness	S0344
Horn and Dip Switch	06205
Stop & Rear Lamp (quote Bulbs required)	S0213

* Speedometer not supplied by Wipac



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