

TO ALL LAMBRETTA DEALERS

NO. 9/71

TECHNICAL BULLETIN - ELECTRONIC IGNITION

Since the introduction of the GP200 Electronic we have had numerous enquiries as to the workings. Naturally, to fully understand such a set up, one would need to be conversant with electronics. However, we trust that the explanations and checks described within this Bulletin will be understood by both the conventional fitter and the electronics expert.

Purpose

The purpose of the electronic ignition basically is to eliminate regular maintenance of the contact breaker points and also ensure a high standard of efficiency of the ignition circuit at all times. This, of course, is possible due to there being no consumable parts.

Description and Operation

Transducer

The ignition circuit includes an electronic unit (transducer) in substitution for the standard HT coil and electronic pick-up mounted on the flywheel stator in substitution for the contact breaker points. The transducer composed of a small printed circuit, includes a condenser, HT coil, controlled diode and a rectifier diode and, furthermore, a resistance connected to earth which serves as an engine cut-out.

Stator

The electronic pick-up is made up of two plates containing a permanent magnet on which two coils are mounted in series which serve for the excitation of the controlled diode. The HT coil feed is by means of a standard coil mounted on the stator, the pick-up includes two rectifier diodes and two resistances, and is covered with insulation (Araldite).

When the overlapping segments mounted on the inner portion of the flywheel pass in front of the pick-up plate, an electric impulse is induced which reacts the controlled diode, in turn discharging the condenser within the transducer unit.

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Ignition Timing

When the white mark on the pick-up is in line with the mark on the flywheel, the piston must be at 2.43mm plus or minus 0.23mm before t.d.c., which corresponds to 21° plus or minus 1° before t.d.c.

Checks to be carried out should difficulties be experienced within the Ignition Circuit

Most checks involve the use of a megohmmeter. The range a megger would need to cover is 0 to 10 kilohms (10,000 ohms).

Transducer

Connect the megger leads between the green tag and the red tag and there should be a resistance reading of less than 100 ohms; as a rule this would be between 60 and 70 ohms. Connect the megger between the black earth lead and the HT lead, and a reading of 7,500 ohms should be reached. The above checks should be carried out with the transducer completely disconnected.

Feed Coil

Connect the megger leads between the green cable and the white cable; a resistance of about 450 ohms should be obtained.

Pick-Up

Connect the megger between the green cable and the red cable and you should achieve a reading of about 100 ohms. The same check should be carried out with the leads from the megger inverted; the same reading of 100 ohms should be reached.

PLEASE NOTE that when replacing the pick-up, the locking screw should be covered in Locktight to prevent any possibility of the unit coming loose.

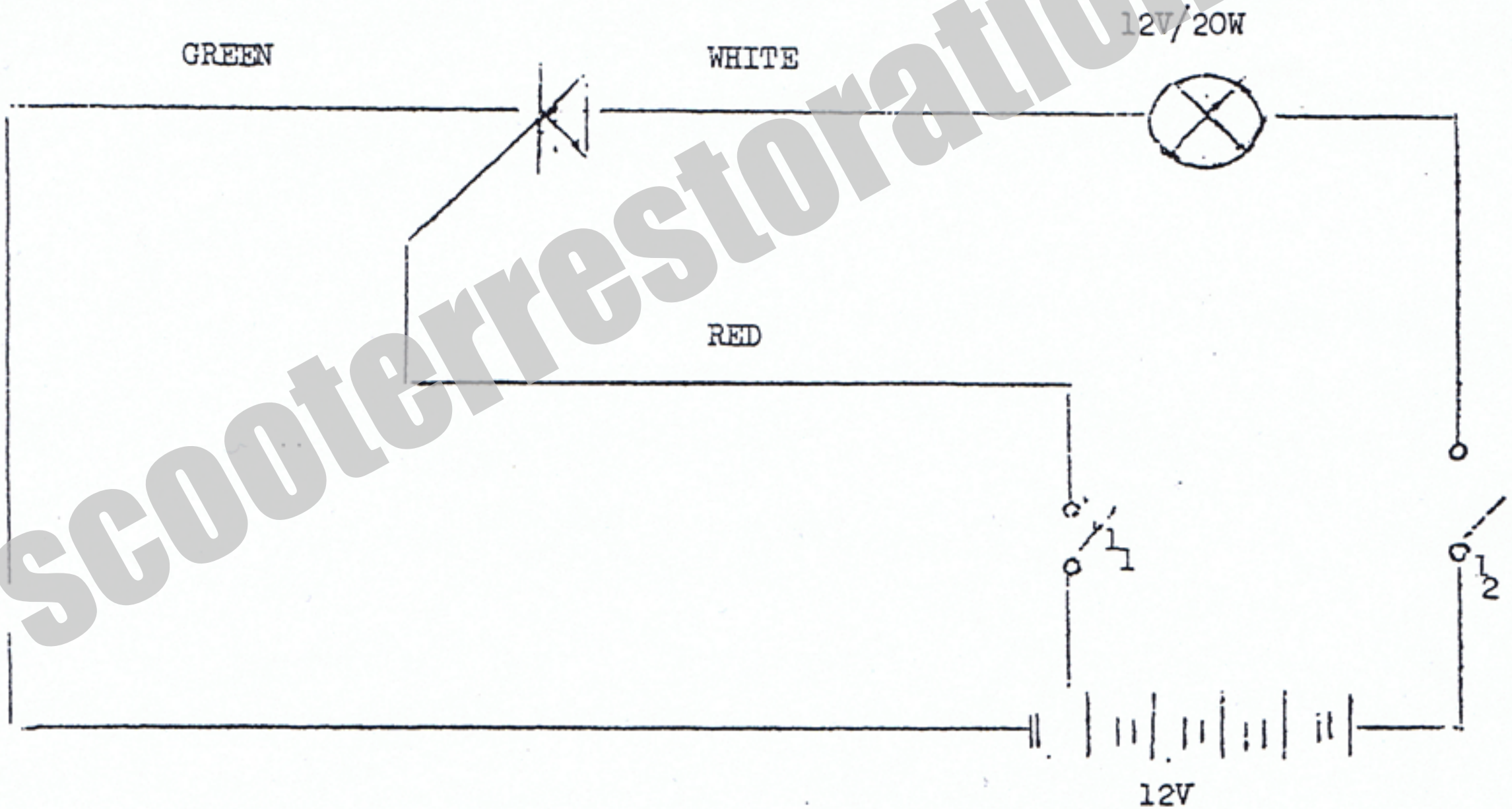
When replacing the feed coil, the new unit - once in position - should be covered in Araldite.

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Controlled Diode (Transducer)

The circuit shown below illustrates how the controlled diode (situated within the transducer unit) can be checked. As you can see from the diagram, the only parts required for this check are a 12-volt battery, two 'on/off' switches, and one 12-volt 21-watt bulb and holder. The checks when carried out will indicate whether or not the diode is (a) operating correctly, (b) short circuit, (c) open circuit.

When switch one is in 'on' position, the light should stay off. When both switches are in the 'on' position, the bulb should light up.



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OGGETTO Lambretta 200GP (with and without battery)
SUBJET Electronic ignition
OBJET

MOD. N° 3/70
3-2-1970

Tavola Section Planche	FIG. NO.	Veicolo-Vehicle-Vehicule				DENOMINAZIONE - DESCRIPTION - DESIGNATION	PRE-MOD.		POST-MOD.		NOTE REMARKS REMARQUES
		with battery	without battery				MATR. N. PART. NO. N. REF.	Qt.	MATR. N. PART. NO. N. REF.	Qt.	
XIII/ BIS	XI	9	o	o		Earth wire			22282300	1	
	XII	12	o	o		H.T. Lead			22217013	1	
	XII	36	o	o		Plate			22217017	2	
	XII	37	o	o		Grommet			22217018	1	
		-		o		Magneto assy			00840198	1	
		-		o		Magneto assy			00840200	1	
		1		o		Stator assy			00840199	1	
		1		o		Stator assy			00840210	1	
		2		o		Coil No. 1			00840092	1	
		2		o		Coil No. 1			00840206	1	
		3		o		Pick-up			00840201	1	
		4		o		Asbestos ring			00840202	1	
		5		o		Aluminium ring			00840203	1	
		6		o		Washer			83100006	3	
	7		o		Screw			70300622	3		
	8		o		Coil No. 2			00840204	1		
	9		o		Flywheel			00840205	1		
	10		o		Coil No. 3			00840206	1		
	10		o		Recharge coil No. 3			00840211	1		
	11		o		Coil No. 4			00840207	1		
	11		o		Recharge coil No. 4			00840212	1		
	12		o		Feed coil No. 5			00840208	1		
	13		o		Ignition coil (transducer)			00840209	1		
	14		o		Washer			83000050	2		

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OGGETTO Page No. 2
SUBJET
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		with battery	without battery			MATR. N. PART. NO. N. REF.	Qt.	MATR. N. PART. NO. N. REF.	Qt.	
XIII/Bis	15	o	o		Spring washer			83070512	2	
	16	o	o		Screw			81428253	2	
	17	o	o		Spring washer			83100012	1	
	18	o	o		Nut			22017024	1	
	19	o	o		Cover			00840069	1	
	20	o	o		Spring			00840070	1	
	24	o	o		Adhesive finisher			22250507	1	

*by a rubber line -
Lambretta
style!*

