

MANUEL POUR STATION SERVICE  
WORKSHOP MANUAL

**GILERA** {  
50 TOURING  
50 TRIAL  
50 TOURING RS  
50 TRIAL RS



**AZIENDA GILERA**



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## FOREWORD

In order to undertake repairs quickly and efficiently, it is essential that the mechanic is properly acquainted with the machine to be repaired, in addition to having that technical knowledge which qualifies him as a mechanic.

This Manual has been prepared as a guide for mechanics dealing with the repair of "50 Touring - 50 Trial - 50 Touring RS - 50 Trial RS" motorcycles, by describing their features in detail, by indicating the most efficient methods to be adopted for the various operations as well as permissible wear limits.

The Manual has been divided into several sections for easy reference purposes.

**Should modifications be introduced to the motorcycles in the future, which would necessitate the use of new equipment not shown in this Manual, amendments will be circulated.**

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### **SECTION 1 - Specific data**

#### **General rules for maintenance and lubrication**

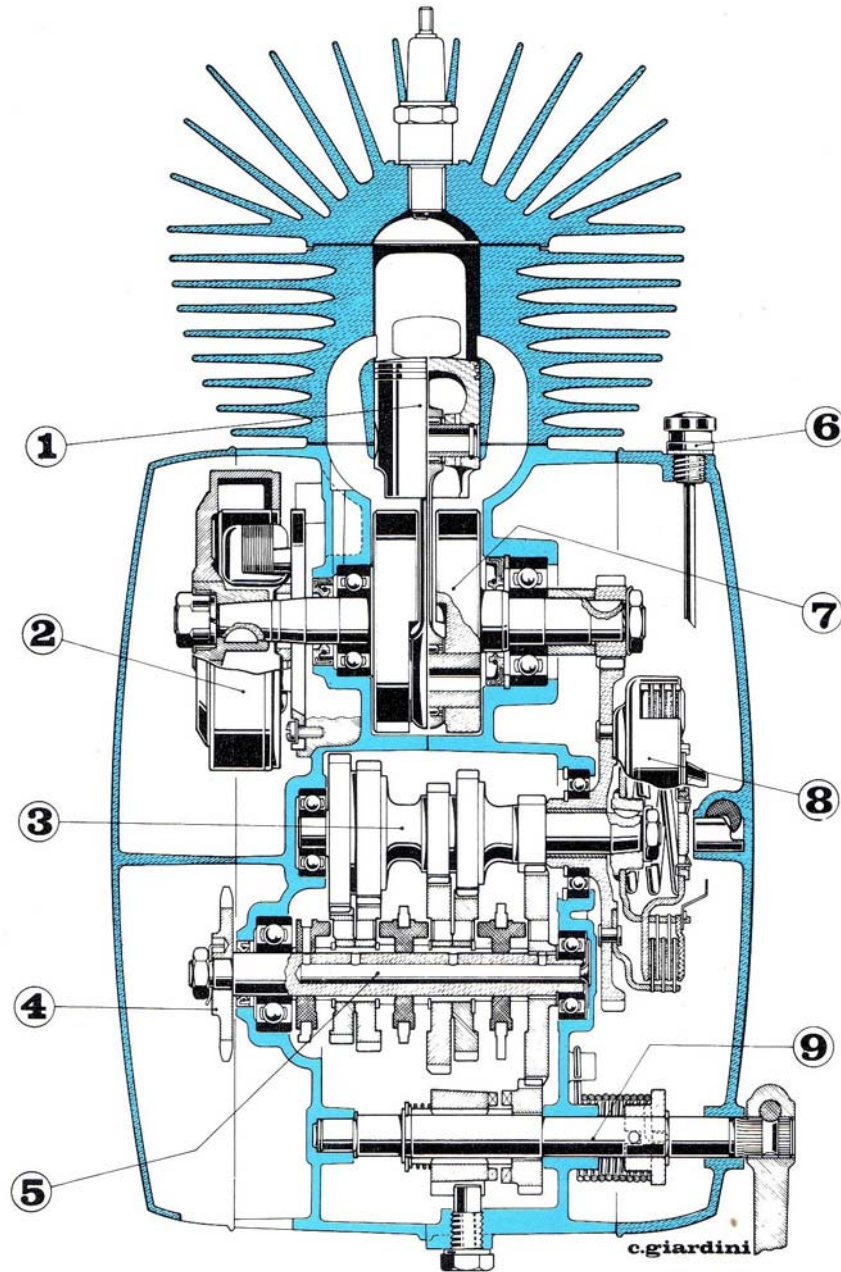
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SPECIFIC DATA OF MODELS GILERA 50				
Description	Touring	Trial	Touring RS	Trial RS
Bore Stroke Displacement	mm. 38.4 mm. 43 cc. 49.8			
Mixture	Oil-gasoline i. e. 4% Pure Mineral Oil SAE 30. The following oils can be used (Agip Speedy Mix; Esso 2-T Motor Oil; Shell Golden Motor Oil; Shell X-100 2-T; Total 2-T Castrol XL, Mobiloil A, B.P. Energol Two-stroke Oil): i. e. about 1/4 pint of oil per 1.5 gals of gasoline.			
Dell'Orto Carburettor	SHA 14/9		SHB 18/18 B	
Ignition (toler $\pm 1^\circ$ )	15° ( $\pm 1^\circ$ ) B.T.D.C.			
Spark plug	Bosch W 240 T 2 Marelli CW 260 L			
Tyre pressures front: solo pillion	25 lbs — 2.1/4-19" ribbed	21.5 lbs — 2.50-19" standard	21.5 lbs 24 lbs 2.1/2-17" ribbed	21.5 lbs 24 lbs 2.50-19" standard
rear: solo pillion	32 lbs — 2.1/4-19" standard	28.5 lbs — 3.00-17" cross	28.5 lbs 35.5 lbs 2.75-17" standard	28.5 lbs 35.5 lbs 3.00-17" cross

**SPECIFIC DATA OF MODELS GILERA 50**

Description	Touring	Trial	Touring RS	Trial RS																									
Primary transmission ratio	1 : 4.235 (Z=17/72)																												
Gear ratios (see fig. 7)	<table border="0" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:20%; padding-right: 10px;">1st. speed</td> <td style="width:20%;">1 : 3.250 (Z=12/39)</td> <td style="width:20%;"></td> <td style="width:20%;">1 : 3.250 (Z=12/39)</td> </tr> <tr> <td>2nd. speed</td> <td>1 : 1.888 (Z=18/34)</td> <td></td> <td>1 : 2.058 (Z=17/35)</td> </tr> <tr> <td>3rd. speed</td> <td>1 : 1.363 (Z=22/30)</td> <td></td> <td>1 : 1.430 (Z=21/30)</td> </tr> <tr> <td>4th. speed</td> <td>1 : 1.080 (Z=25/27)</td> <td></td> <td>1 : 1.080 (Z=25/27)</td> </tr> <tr> <td>5th. speed</td> <td align="center">—</td> <td></td> <td>1 : 0.857 (Z=28/24)</td> </tr> </table>				1st. speed	1 : 3.250 (Z=12/39)		1 : 3.250 (Z=12/39)	2nd. speed	1 : 1.888 (Z=18/34)		1 : 2.058 (Z=17/35)	3rd. speed	1 : 1.363 (Z=22/30)		1 : 1.430 (Z=21/30)	4th. speed	1 : 1.080 (Z=25/27)		1 : 1.080 (Z=25/27)	5th. speed	—		1 : 0.857 (Z=28/24)					
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Secondary transmission ratio	1 : 3.333 (Z=12/40)	1 : 4.000 (Z=12/48)	1 : 2.92 (Z=14/41)	1 : 3.42 (Z=14/48)																									
Engine to wheel total ratios	<table border="0" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:20%; padding-right: 10px;">1st. speed</td> <td style="width:20%;">1 : 45.874</td> <td style="width:20%;">1 : 55.05</td> <td style="width:20%;">1 : 40.14</td> <td style="width:20%;">1 : 47.02</td> </tr> <tr> <td>2nd. speed</td> <td>1 : 26.649</td> <td>1 : 34.86</td> <td>1 : 25.42</td> <td>1 : 29.77</td> </tr> <tr> <td>3rd. speed</td> <td>1 : 19.239</td> <td>1 : 24.22</td> <td>1 : 17.66</td> <td>1 : 20.69</td> </tr> <tr> <td>4th. speed</td> <td>1 : 15.244</td> <td>1 : 18.29</td> <td>1 : 13.34</td> <td>1 : 15.62</td> </tr> <tr> <td>5th. speed</td> <td align="center">—</td> <td>1 : 14.51</td> <td>1 : 10.58</td> <td>1 : 12.40</td> </tr> </table>				1st. speed	1 : 45.874	1 : 55.05	1 : 40.14	1 : 47.02	2nd. speed	1 : 26.649	1 : 34.86	1 : 25.42	1 : 29.77	3rd. speed	1 : 19.239	1 : 24.22	1 : 17.66	1 : 20.69	4th. speed	1 : 15.244	1 : 18.29	1 : 13.34	1 : 15.62	5th. speed	—	1 : 14.51	1 : 10.58	1 : 12.40
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SCHEMA MOTEUR A 5 VITESSES  
VIEW OF 5 SPEED ENGINE



1 - Piston; 2 - Volant magnétique; 3 - Arbre principal; 4 - Pignon de la chaîne; 5 - Arbre secondaire du changement de vitesses avec engrenages et fourchettes d'enclenchement des vitesses; 6 - Jauge d'huile pour la boîte de vitesses; 7 - Vilebrequin; 8 - Embrayage; 9 - Arbre de démarrage.

1 - Piston; 2 - Flywheel Magneto; 3 - Gearbox Layshaft; 4 - Chain Sprocket; 5 - Mainshaft with sliding pinions; 6 - Dipstick; 7 - Crankshaft; 8 - Clutch; 9 - Kickstart Shaft.

Fig. 5

**SCHEMA DU CHANGEMENT DE VITESSES  
VIEW OF GEARBOX**

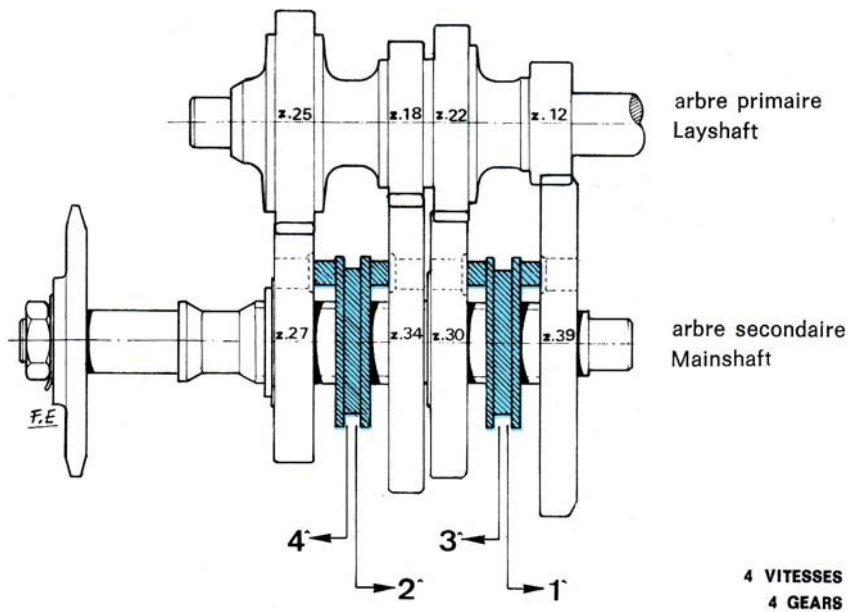
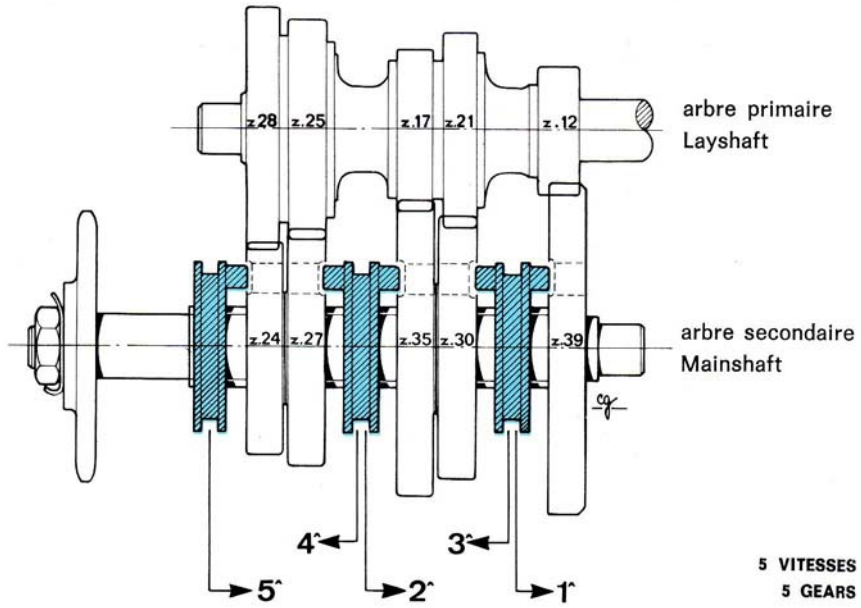


Fig. 6

## GENERAL RULES FOR MAINTENANCE AND LUBRICATION

GROUP	OPERATIONS TO BE CARRIED OUT				Lubricants	Notes
	After the initial 500 km (300 m/s approx)	Every 4000 km. (2500 m/s)	Every 8000 km (5000 m/s)	In case of overhaul		
Gearbox	Change oil (A) if motorcycle is new	Check and top up oil level. Check with dipstick	Change oil (A)	Change oil (A)	AGIP F. 1 Woom Stroke Oil or Motor Oil HD SAE 30 Esso Extra Motor Oil 20W/30 Shell 2T Two-Stroke Oil or Shell X-100 30 B.P. Castrol XL Energol Two-Mobiloil A	(A) To be carried out when engine is warm. Quantity of fresh oil: 550 g.
All principle nuts & bolts	Check for security	—	—	Check security		
Air Filter	—	Clean with low pressure air jet	Replace with same type	Clean or replace if necessary	—	
Silencer and exhaust pipe	—	Cleaning (B)	—	Clean (B)	—	(B) Remove Silencer Exhaust Pipe End by turning to the left (Bayonet type Joint) and pulling it out. Separate silencer and exhaust pipe before loosening ring.
Engine	Check security of carburettor screw and nuts	Remove carbon from piston/crown, cylinder ports and head. Clean exterior of cylinder.	—	Remove deposit from engine parts which can be used again	—	(C) When fork is fully extended, it must be 39 cm from handlebar support.  (D) Quantity of oil for leg: 110 cm <sup>3</sup> . After carefully cleaning, for complete overhaul: 130 cm <sup>3</sup> .  (E) Quantity of oil for leg: 60 cm <sup>3</sup> .
Spark plug	Check plug gap (0.5 — 0.7 mm)	Clean plug and adjust gap	—	Replace spark plug	—	
Flywheel magneto	—	—	Clean and adjust C.B. gap to 0,40 mm (± 0,05 mm)	Replace C. B. points (if necessary) or clean and adjust	—	
Telescopic forks 50 Trial 50 Touring RS and Trial RS	—	Check (C) level	Change oil (D)	Carefully clean (D) and change oil	SHELL TELLUX 23	
50 Touring With hydraulic front fork	—	—	—	Carefully clean (E) and change oil	We recommend to use an hydraulic oil having a Redwood viscosity of 75" at 130 °F.	
50 Touring With mechanical front fork	—	—	—	Grease	Agip F. 1 Grease 30 Esso Beacon 3 Shell Retinax A Mobilgrease MP Total Multis Esso Univis J 43 B.P. Energrease L. 2 Castrolase L. M.	
Front and rear wheel bearings, rear fork pivots, steering head races	—	—	Greasing	Grease	—	(F) Clean chain in the following manner: remove and wash in petrol. Then carefully dry. Immerse chain for half an hour in heavy oil-bath, in order to allow lubricant to penetrate between pins and rollers. Allow excessive oil to drain off.
Control cables for: clutch, throttle, front brake. Brake fulcrum pins, brake pedal, centre stand pivots	—	Greasing	—	Grease	—	
Chain	—	—	Lubricate (F) (periodically)	Lubricate (F)	Agip F.1 Shell X-100 Rotra Sae 140 Motor oil 30 Esso Motor oil 30 Mobiloil - A Shell X-100 Total Super Motor oil 2 T (Sae 30)	

If motorcycle is to be stored, proceed as follows: 1) Clean the motorcycle - 2) Drain fuel tank - 3) Pour 10 to 15 cm<sup>3</sup> of AGIP F. 1 Woom Motor Oil HD SAE 30 oil into stationary engine through spark plug hole (piston at bottom dead centre). Then actuate kick start lever 3 to 4 times - 4) Smear unpainted areas with antrust grease. - 5) Support machine on blocks so as to keep wheels off ground.



## SCHEMA EQUIPEMENT ELECTRIQUE

50 TOURING et 50 TRIAL

(bi-lumière avec volant magnétique 6 V - 18 W)

## WIRING DIAGRAM

50 TOURING and 50 TRIAL

(two lights with flywheel magneto 6 V - 18 W)

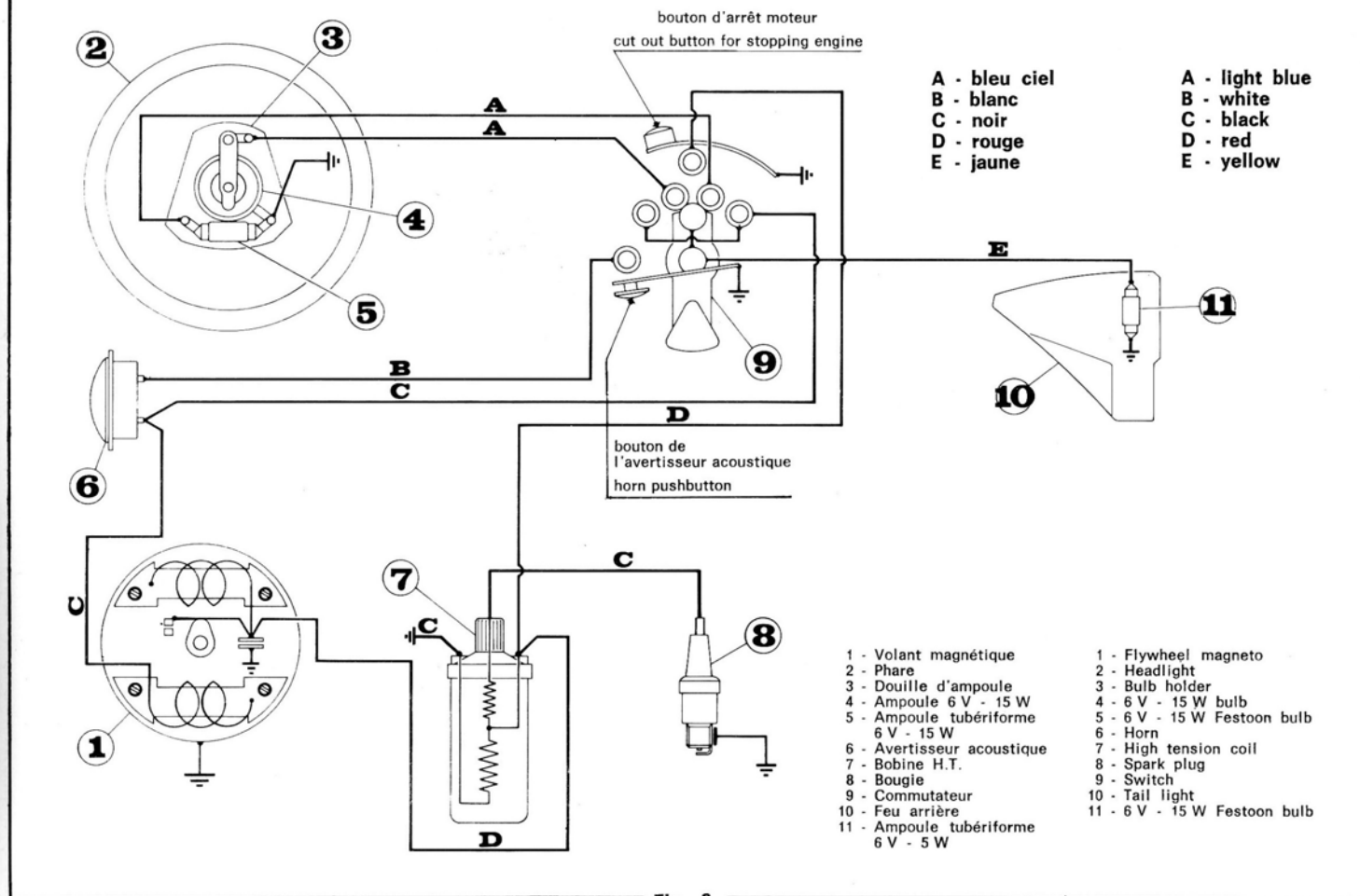


Fig. 8

**SCHEMA EQUIPEMENT ELECTRIQUE**  
**50 TOURING RS et 50 TRIAL RS**  
 (bi-lumière avec volant magnétique 6 V - 28 W)

**WIRING DIAGRAM**  
**50 TOURING RS and 50 TRIAL RS**  
 (two lights with 6 V - 28 W flywheel magneto)

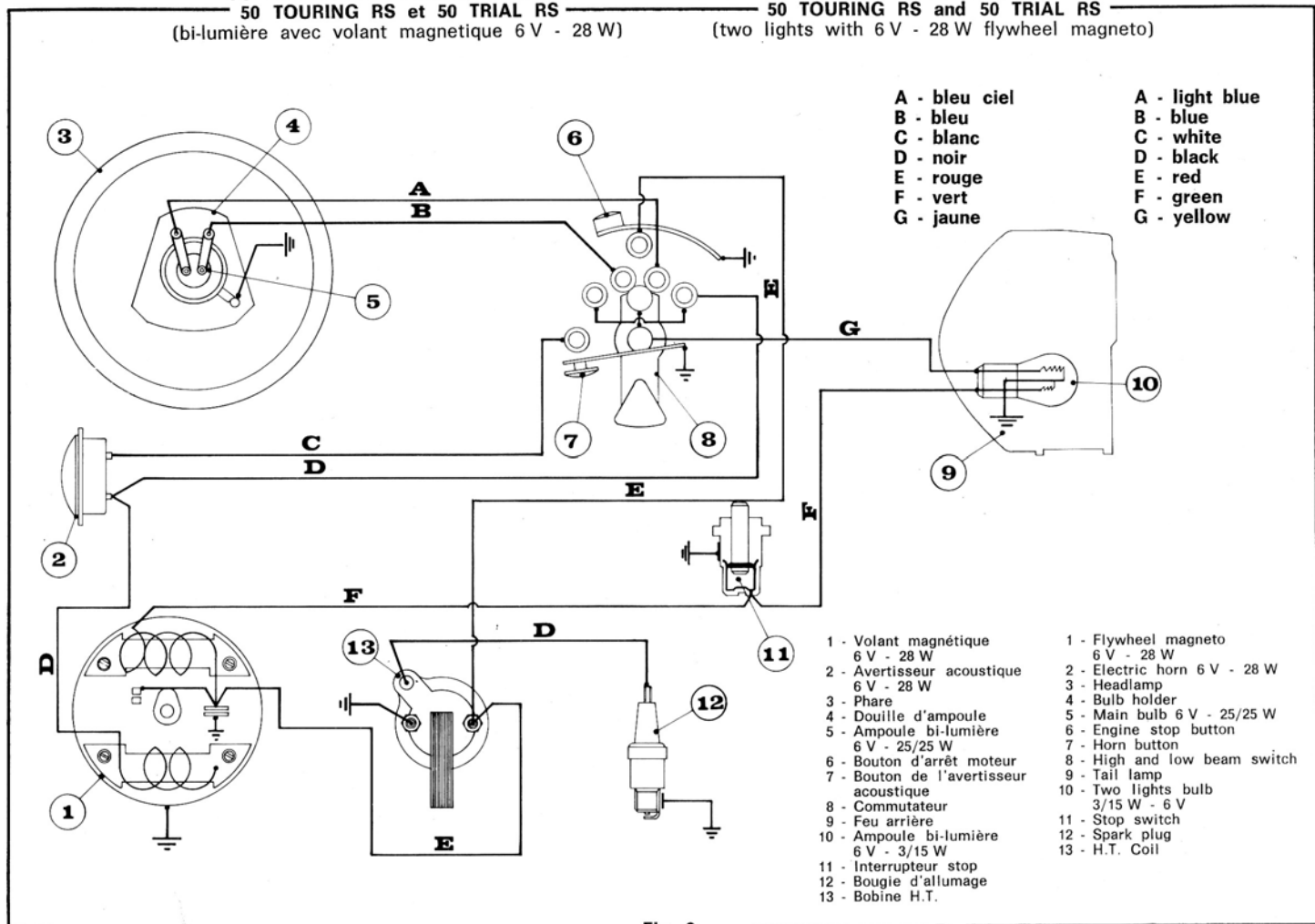


Fig. 9

**SCHEMA EQUIPEMENT ELECTRIQUE**  
**50 TOURING RS et 50 TRIAL RS**  
 (trois-lumières avec volant magnétique 6 V - 28 W)

**WIRING DIAGRAM**  
**50 TOURING RS and 50 TRIAL RS**  
 (three lights with 6 V - 28 W flywheel magneto)

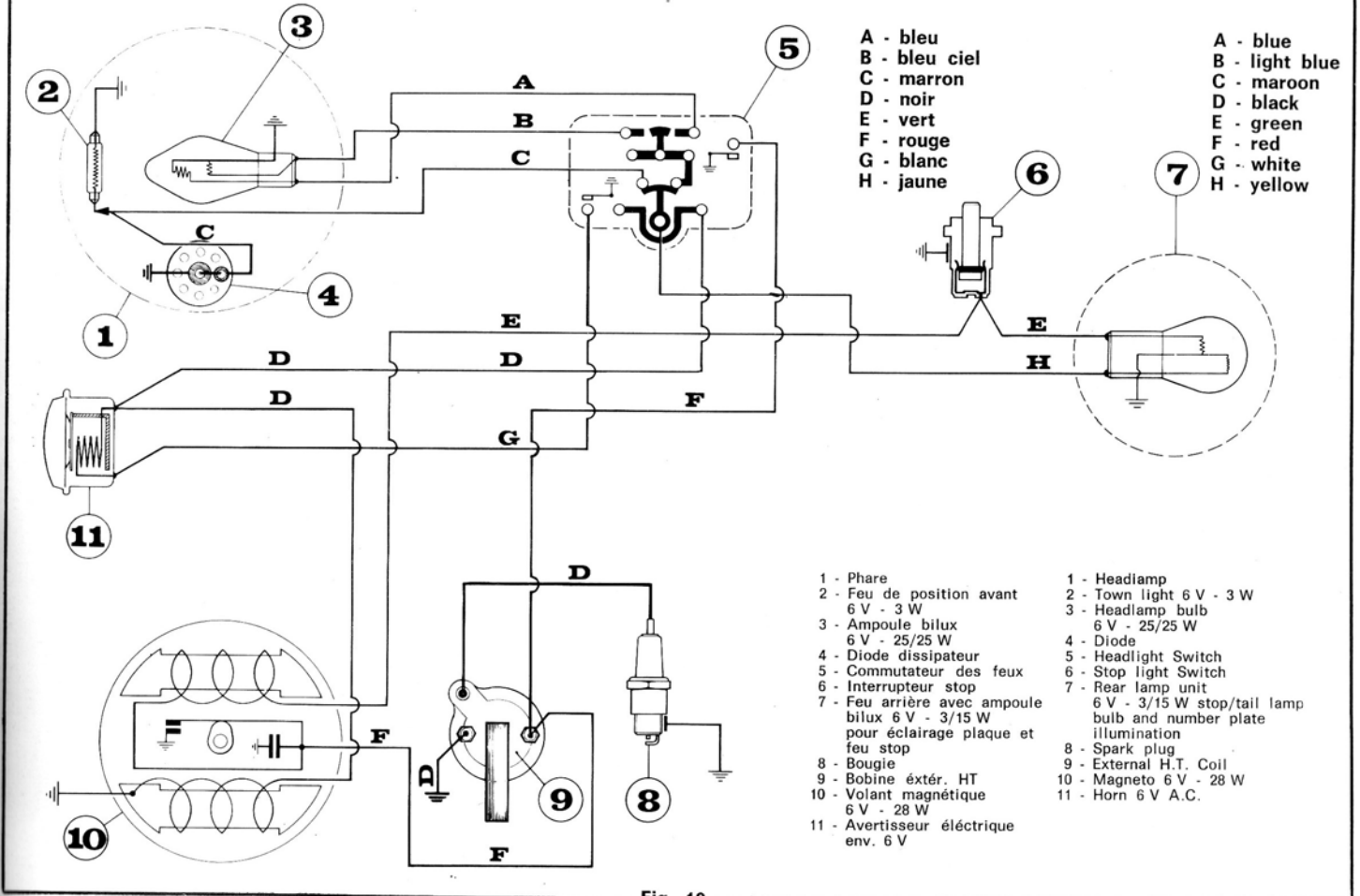


Fig. 10