SWITCHES

SERVICE INFORMATION

• GENERAL INSTRUCTIONS

- Some wires have different colored bands around them near the connector. These are connected to other wires which correspond with the band color.
- All plastic plugs have locking tabs that must be released before disconnecting, and must be aligned when reconnecting.
- To isolate an electrical failure, check the continuity of the electrical path through the part. A continuity check can usually be made without removing the part from the motorcycle – by simply disconnecting the wires and connecting a continuity tester or voltmeter to the terminals or connections.

• SPECIFICATION

	XL500R	XL400R
Headlight (high/low)	12V–35/35W 12V–36/36W (F type)	12V–36/36W
Tail/stoplight	12V–5/21W	12V–5/21W
Turn signal light	12V–21W 12V–23W (D, U, SA type)	12V–21W
Speedometer light	12V–1.7W	12V–1.7W
Tachometer light	12V–3.4W	12V–3.4W
Neutral indicator light	12V–3.4W	12V–3.4W
Turn signal indicator light	12V–3.4W	12V–3.4W
High beam indicator light	12V–1.7W	12V–1.7W
Position light	12V–4W	12V–4W

TROUBLESHOOTING

No Lights Come On When Ignition Switch Is Turned ON:

1. Bulb at fault or burned out
2. Faulty switch
3. Wiring to that component has open circuit
4. Fuse blown
5. Wiring loose, broken, or at fault
6. Battery dead or disconnected

All Lights Come On, But Dimly, When Ignition Switch Is Turned ON:

1. Battery voltage low
2. Wiring or switch has excessive resistance

Headlight Beam Does Not Shift When HI-LO Switch Is Operated:

1. Beam filament burned out
2. Faulty dimmer switch

• IGNITION SWITCH

Continuity test:

Remove the coupler box cover.

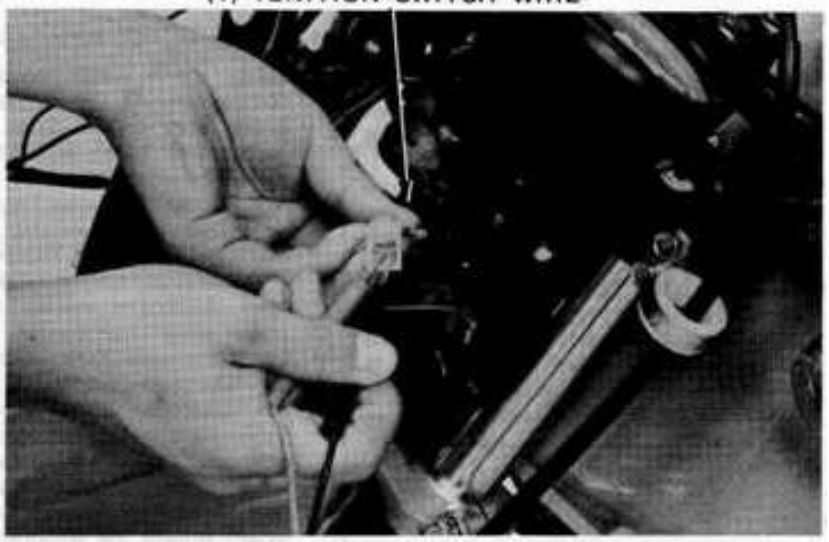
Disconnect the ignition switch coupler.

Check for continuity between terminals.

	Black	Red	Black/ White	Green
ON	○——○			
OFF			○——○	

Continuity should exist between color coded wires indicated by interconnected circles.

(1) IGNITION SWITCH WIRE

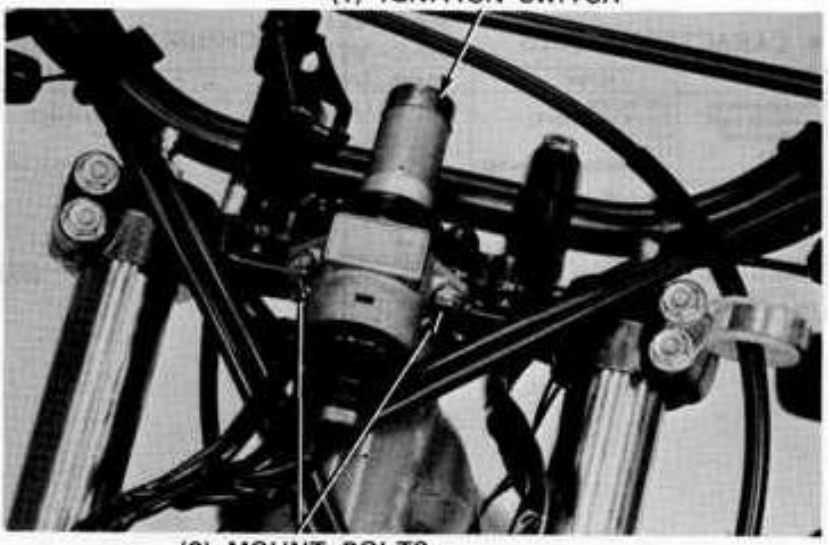


Removal:

Remove the headlight and instrument assembly (page 22–38).

Remove the ignition switch by removing mount bolts.

(1) IGNITION SWITCH



(2) MOUNT BOLTS

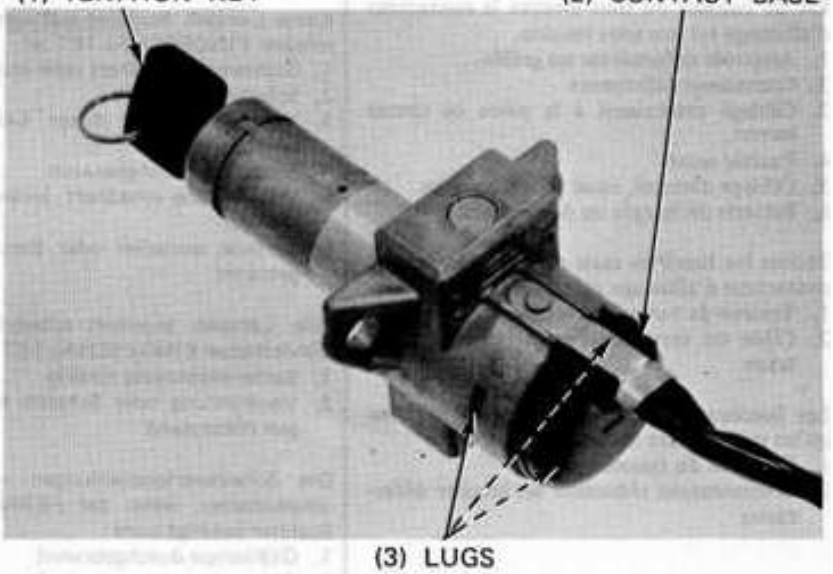
Disassembly:

Insert the key and position it in the middle of ON and OFF position.

Push the lugs from the slots and remove the contact base.

Assemble in the reverse order of removal.

(1) IGNITION KEY (2) CONTACT BASE

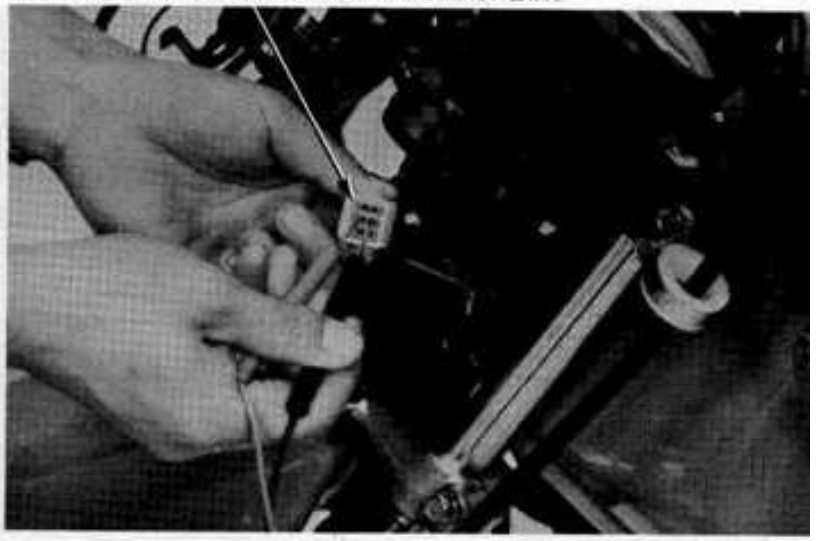


(3) LUGS

• LEFT HANDLEBAR SWITCH

Remove the coupler box cover and disconnect the left handlebar switch coupler.

(1) LEFT HANDLEBAR SWITCH COUPLER



Turn signal switch:

Check for continuity between terminal.

	LIGHT BLUE	GRAY	ORANGE
R	○	○	
(N)			
L		○	○

Continuity should exist between color coded wires indicated by interconnected circles.

Headlight dimmer switch:

NOTE

Select the headlight switch to "H" position before inspect the dimmer switch.

	BLUE	WHITE/ YELLOW	WHITE
Hi	○	○	
(N)	○	○	○
Lo		○	○

Horn Switch:

	BLACK	LIGHT GREEN
ON (PUSH)	○	○
OFF		

Headlight switch:

NOTE

Select the dimmer switch to "Hi" position before inspect the headlight switch.

	BLACK	BROWN/ WHITE	BLUE	WHITE/ YELLOW
• (OFF)				
P	○	○		
H	○	○	○	○

(Germany, Sweden type)

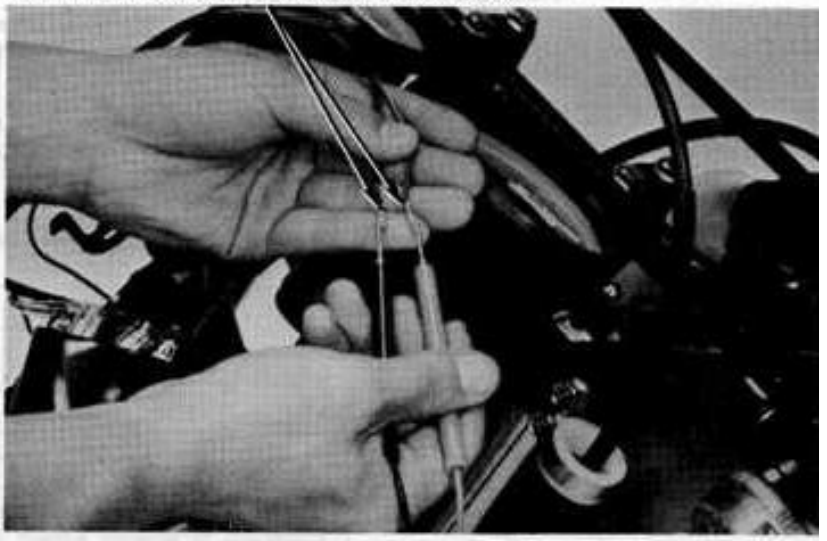
	WHITE/ YELLOW	BROWN/ WHITE	BLUE
• (OFF)			
P	○	○	
H	○	○	○

• FRONT STOPLIGHT SWITCH

Remove the headlight and disconnect the front stoplight switch connectors.
Check front brake light switch for continuity with front brake applied.

	BLACK	GREEN/ YELLOW
ON	○———	———○
OFF		

(1) FRONT STOPLIGHT SWITCH WIRES

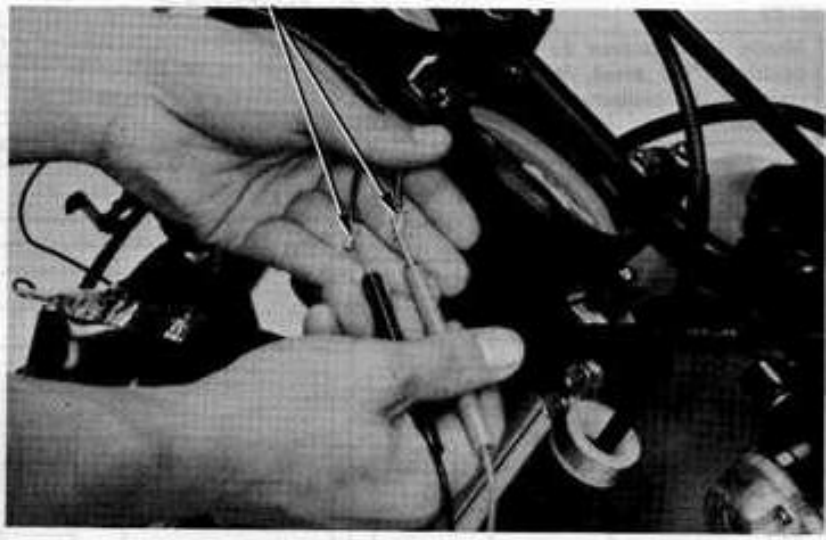


• ENGINE STOP SWITCH

Check engine stop switch for continuity.

	BLACK/ WHITE	GREEN
OFF	○———	———○
RUN		
OFF	○———	———○

(1) ENGINE STOP SWITCH WIRES



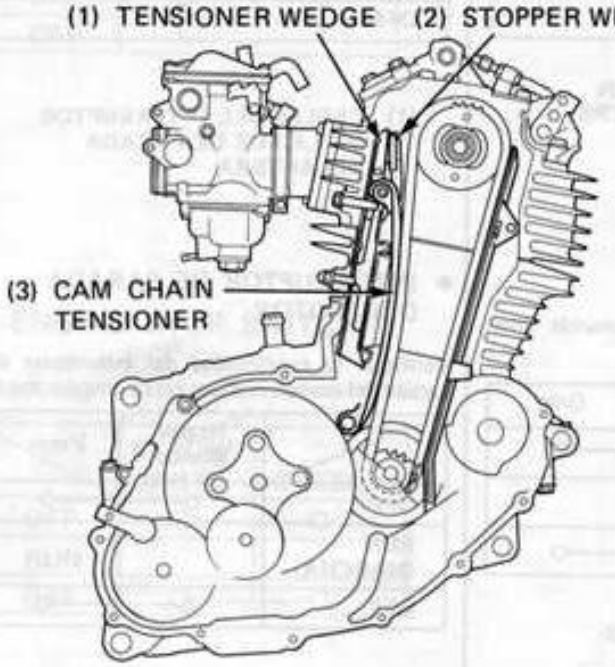
TECHNICAL FEATURES

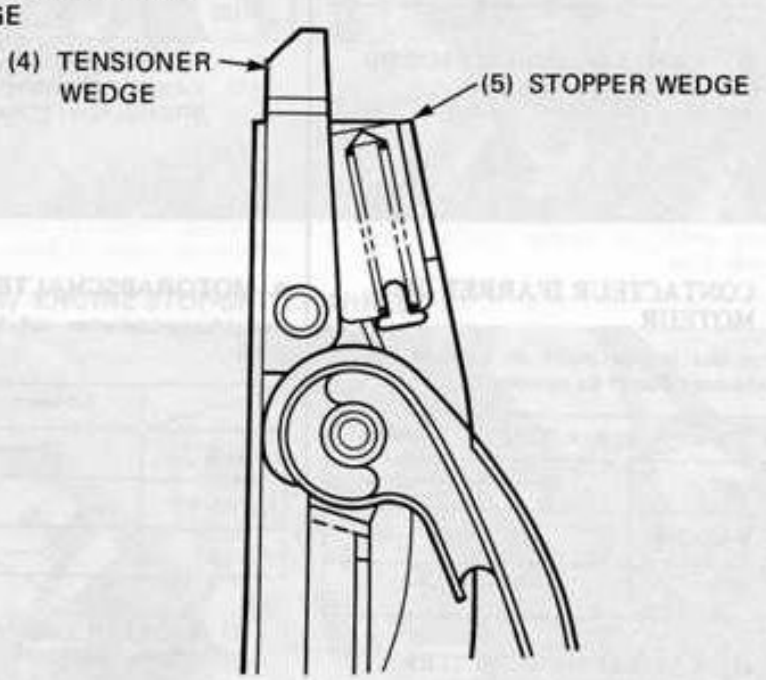
• AUTOMATIC CAM CHAIN TENSIONER

The XL400R and XL500R is equipped with an automatic cam chain tensioner to compensate for natural wear on the chain, eliminating periodic adjustment and maintenance. It operates as follows:

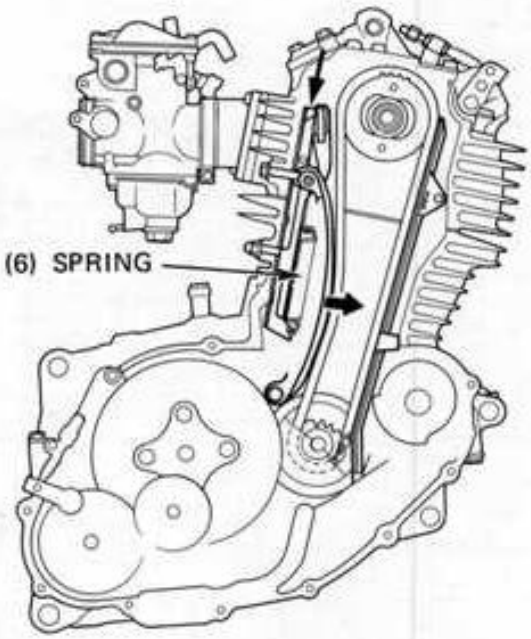
OPERATION

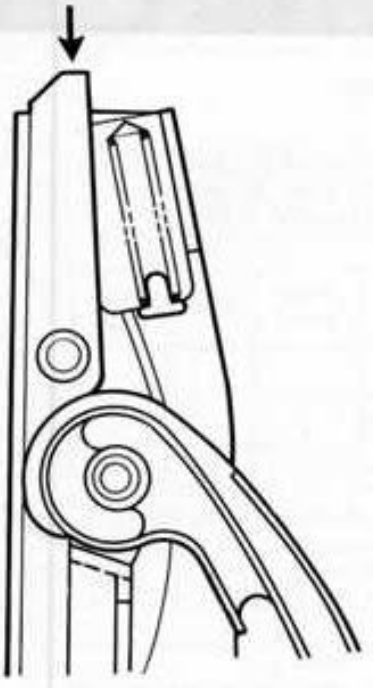
The device consists of the tensioner spring, tensioner, tensioner wedge, stopper wedge and tensioner base. The tensioner wedge is connected to the tensioner whereas the stopper wedge is attached to the tensioner base. The spring exerts pressure on the tensioner so as to deflect the tensioner against the chain at all times.





As the chain is elongated due to wear, the tensioner is pulled by the spring to take up slack on the chain. The wedges stopper and tensioner combine to prevent the tensioner from returning to its original shape, thus always applying correct pressure on the chain.

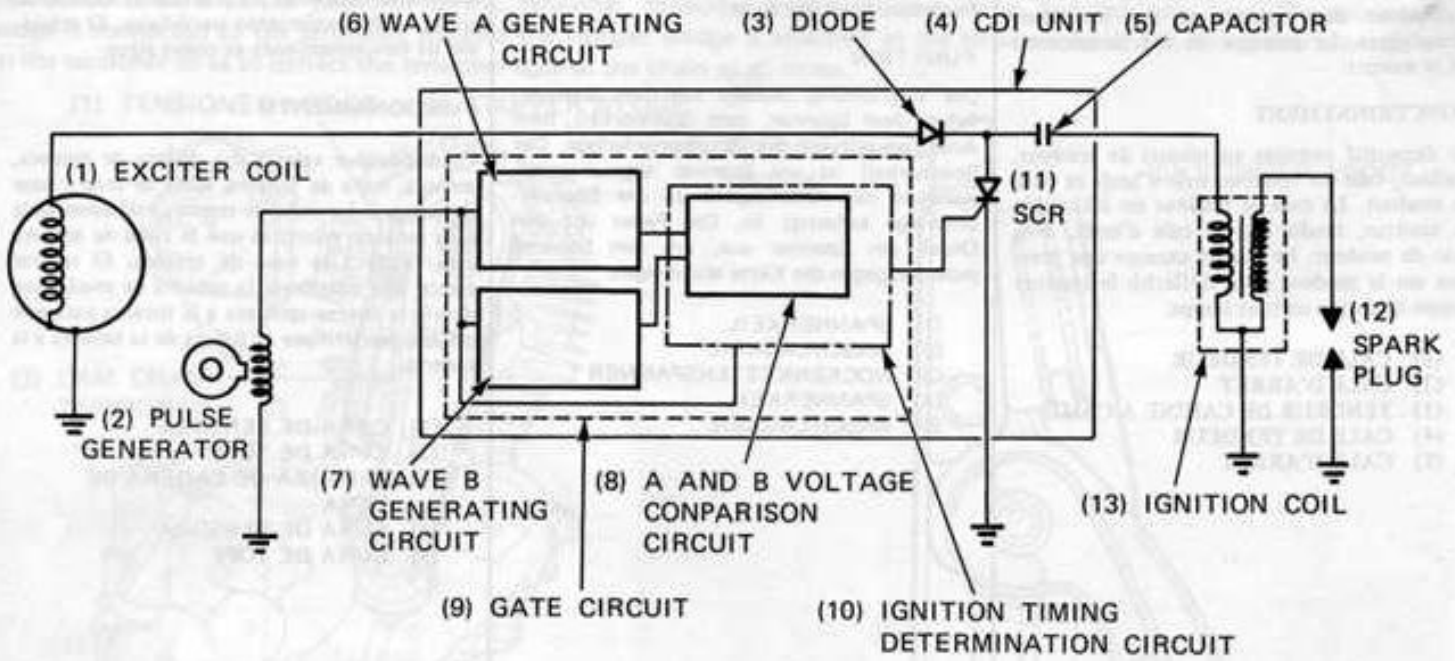




• ELECTRICAL CONTROL ADVANCE IGNITION

Electrical advance CDI ignition system is adopted on the XL400R and XL500R. Ignition principle of this system is the same as the conventional CDI system, however, it controls ignition timing advance electrically instead of mechanical advance system. It eliminates mechanical wear and stable ignition performance can be obtained.

BASIC CIRCUIT



The CDI unit contains two circuits, one is high tension energy circuit for ignition, and another one is gate circuit for determination of ignition timing.

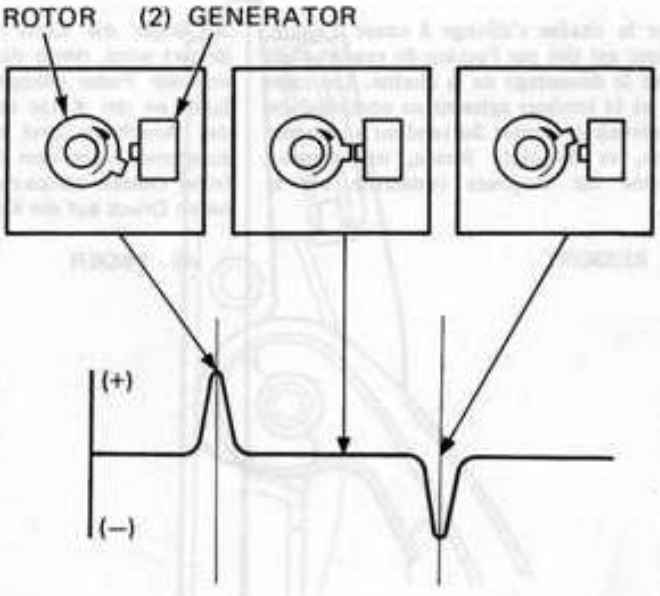
HIGH TENSION ENERGY CIRCUIT: Contains exciter coil rectifier diode and SCR, and has high voltage generating function.

GATE CIRCUIT: Consists of circuit for converting output wave from the pulse generator into basic waves A and B and cirucit for determination of ignition timing, and has advance function.

The high tension energy circuit is the same circuit and operation as the conventional CDI system.

ADVANCER OPERATION

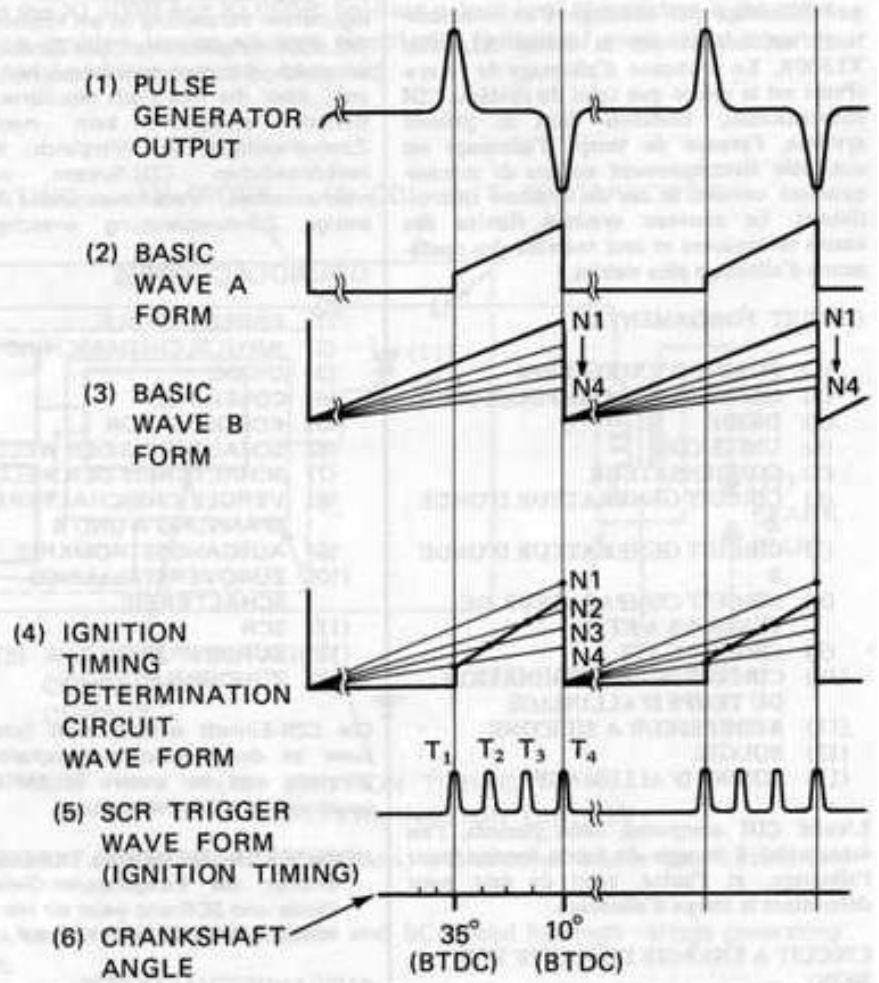
Pulse generator output wave form is generated in positive and negative voltages when the rotor pick-up edge just acrosses the generator.



Output from the pulse generator is converted into the basic waves through the basic wave A and B circuits.

The Basic wave A is designed so that it is not varried by variation of engine speed.

The basic wave B is varried its form from N1 to N4 by the variation of engine speed as shown.



The ignition timing determination circuit outputs SCR trigger wave to open the SCR gate and ignits the spark plug when the negative voltage from the pulse generator is intput into the ignition timing determination circuit, or when the basic wave A becomes greater than the B.

Since the basic wave B is varried by engine speed while the wave A is not varried, wave B becomes small against A as engine speed increases.

Therefore, timing that wave A becomes larger than the B, advances as engine speed increases. When engine speed increases above N4, ignition timing does not advance, since the basic wave A is not inclined, causing the timing to stop advancing.

At N1 condition, form of the wave B is larger than A and ignition timing is determined by negative voltage from the pulse generator.

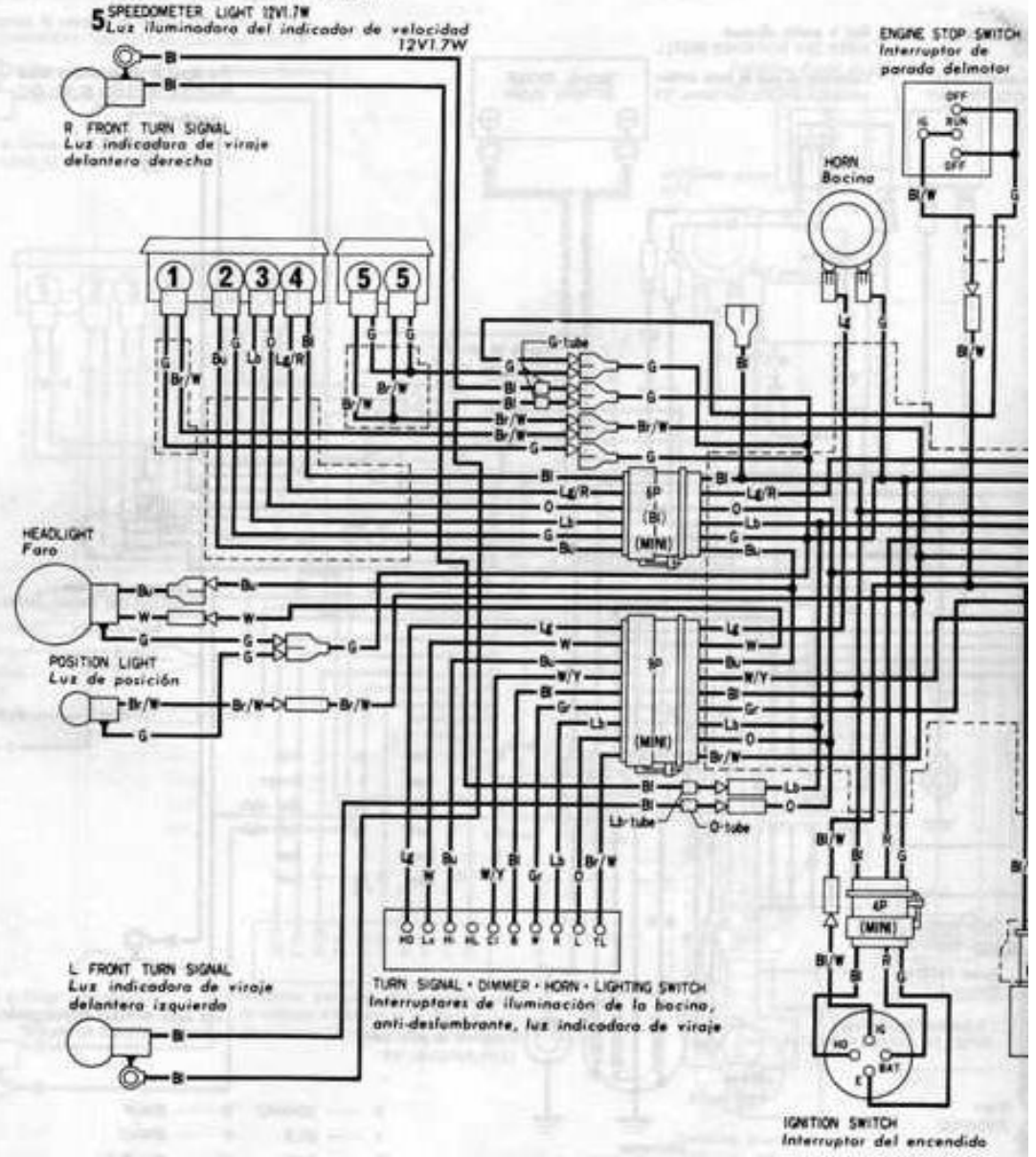
1 TACHOMETER LIGHT 12V3.4W
Luz iluminadora del tacómetro 12V3.4W

2 HIGH BEAM INDICATOR 12V1.7W
Luz indicadora del haz alto 12V1.7W

3 TURN SIGNAL INDICATOR 12V3.4W
Luz indicadora de viraje 12V3.4W

4 NEUTRAL INDICATOR 12V3.4W
Luz indicadora de neutro 12V3.4W

5 SPEEDOMETER LIGHT 12V1.7W
Luz iluminadora del indicador de velocidad 12V1.7W



SWITCH CONTINUITY
Conexion de los interruptores

ENGINE STOP SWITCH
Interruptor de parada delmotor

	IG	E
OFF	○—○	
RUN		
OFF	○—○	

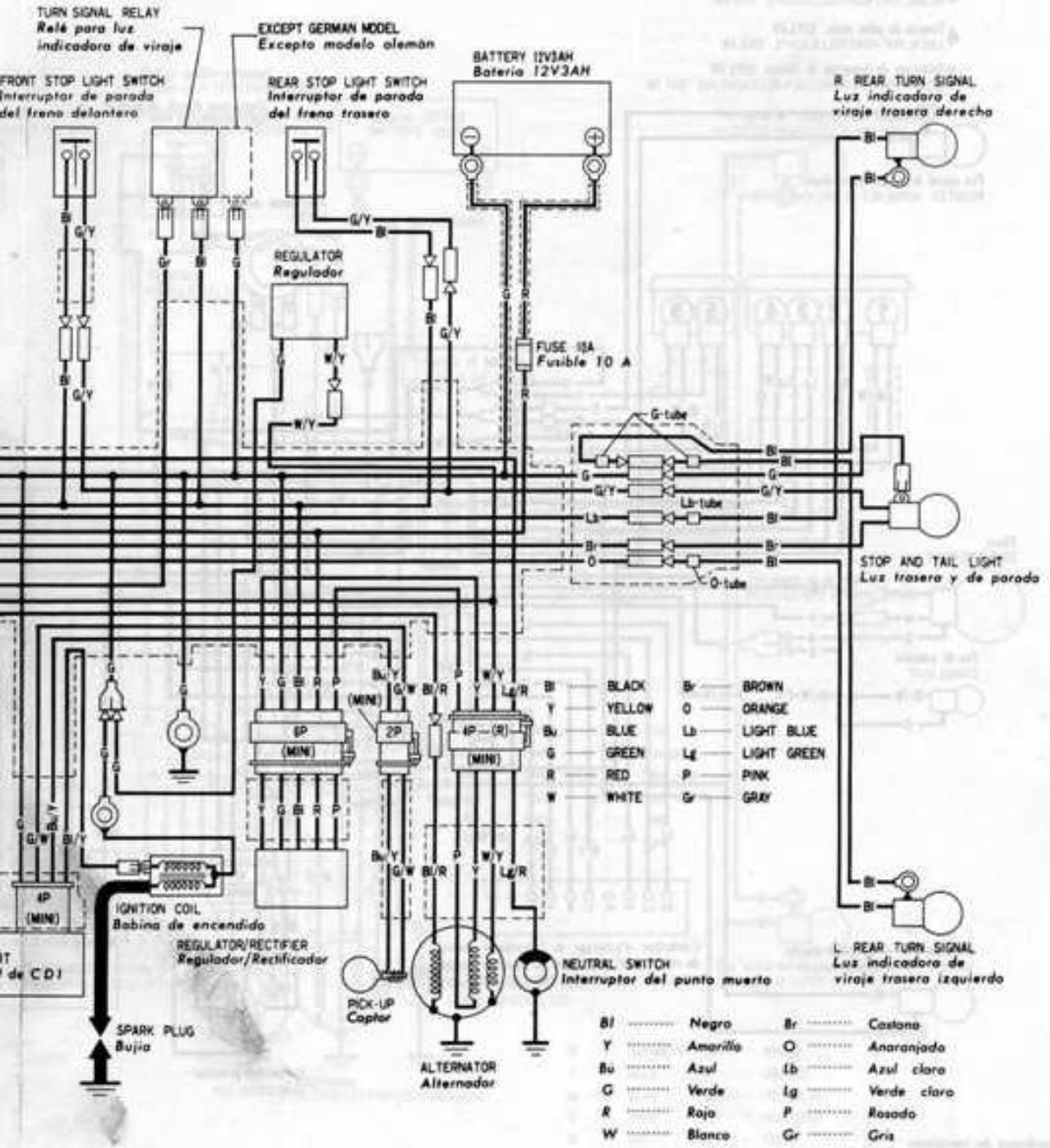
IGNITION SWITCH
Interruptor del encendido

	HO	BAT	IG	E
ON	○—○			
OFF			○—○	

TURN SIGNAL • DIMMER • HORN • LIGHTING SWITCH
Interruptor de iluminación del anti-deslumbrante, bocina paso, luz indicadora de viraje

	R	W	L		H	HL	Lo		B	TL	HL	CI
R	○—○			H	○—○			*				
N				(N)	○—○—○			P	○—○			
L		○—○		Lo		○—○		H	○—○		○—○	

	B	HO
ON	○—○	
OFF		



	AREA(TYPE) AREA(TIPO)	HEADLIGHT Faro	POSITION LIGHT Luz de posición	TURN SIGNAL LIGHT Luz indicadora de viraje delantera	STOP AND TAIL LIGHT Luz parada y de trasera
0030Z-MC4-6000	E · ED · B · IT	12V35/35W	12V4W	12V21W	12V21/5W
0030Z-MC4-6100	G1 · G2 · SD	12V35/35W	12V4W	12V21W	12V21/5W
0030Z-MC4-6200	F	12V36/36W	12V4W	12V21W	12V21/5W
0030Z-MC4-6800	DK · DM · U · SA	12V35/35W	12V3.4W	12V23W	12V23/8W

0030Z-MC4-6000, 6100, 6200, 6800

HONDA

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