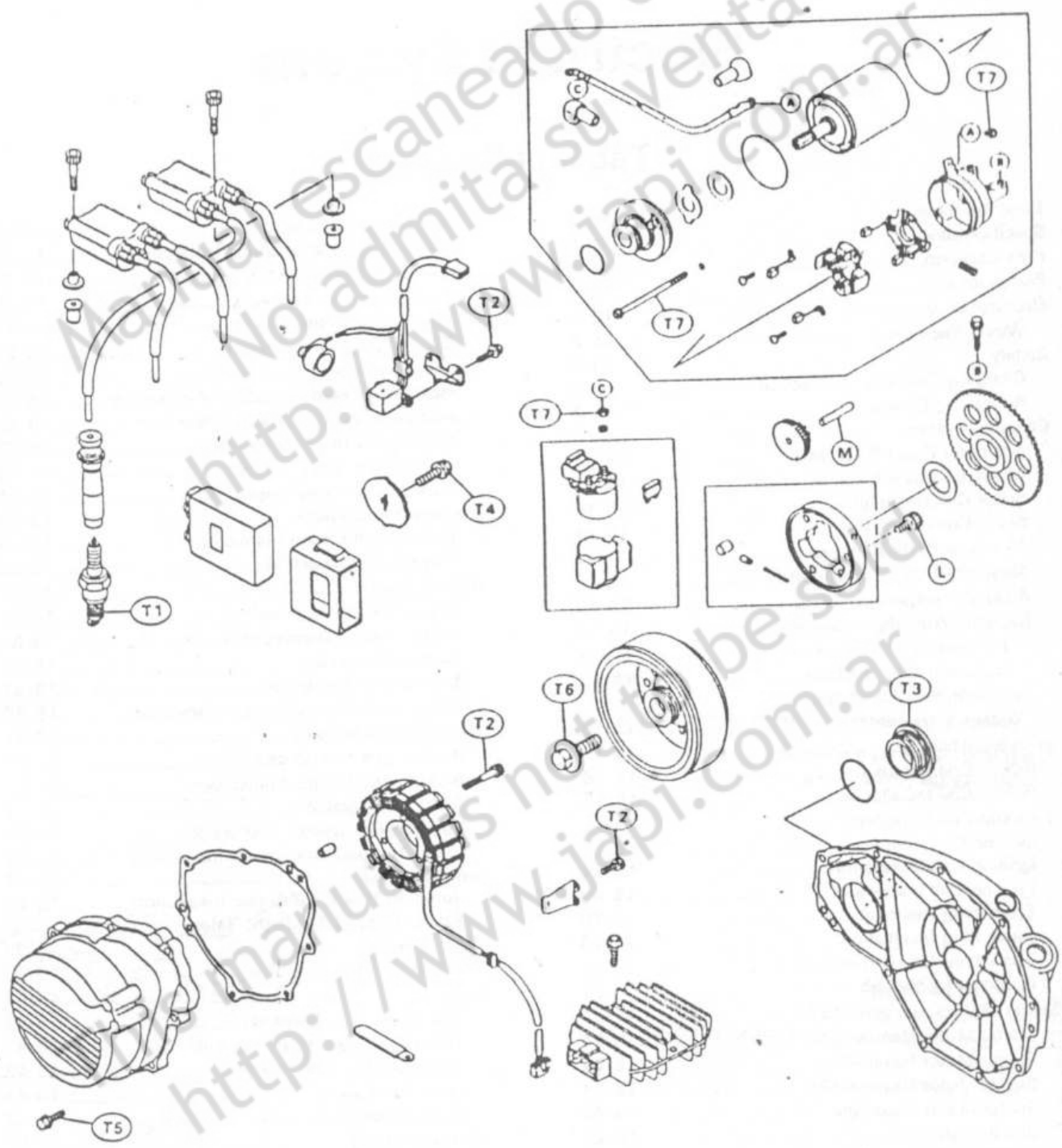
Electrical System

Table of Contents

Exploded View 15-2
Specifications 15-5
Parts Location 15-6
Precautions 15-7
Electrical Wiring 15-8
Wiring Inspection 15-8
Battery 15-9
Charging Condition Inspection 15-9
Refreshing Charge 15-9
Charging System 15-11
Alternator Cover Removal 15-11
Alternator Cover Installation 15-11
Stator Coil Removal 15-11
Stator Coil Installation 15-11
Alternator Rotor Removal 15-12
Alternator Rotor Installation 15-12
Alternator Inspection 15-13
Regulator/Rectifier Inspection 15-14
Rectifier Circuit Check 15-14
Regulator Circuit Check 15-15
Regulator/Rectifier Output Voltage Inspection 15-16
Ignition System 15-18
Pickup Coil Removal 15-18
Pickup Coil Installation 15-18
Pickup Coil Inspection 15-18
Ignition Coil Removal 15-19
Ignition Coil Installation 15-19
Ignition Coil Inspection 15-19
Spark Plug Removal 15-20
Spark Plug Installation 15-20
Spark Plug Gap Inspection 15-21
IC Igniter Inspection 15-21
Starter Motor 15-24
Starter Motor Removal 15-24
Starter Motor Installation 15-24
Starter Motor Disassembly 15-24
Starter Motor Assembly 15-25
Brush Inspection 15-25
Commutator Cleaning and Inspection 15-25
Armature Inspection 15-26
Brush Lead and Terminal Inspection 15-26
Starter Relay Inspection 15-26
Starter Clutch Removal 15-27
Starter Clutch Installation 15-27
Starter Clutch Inspection 15-27
Lighting System 15-29
Headlight Beam Horizontal Adjustment 15-29
Headlight Beam Vertical Adjustment 15-29
Headlight Bulb Replacement 15-29
High Beam Relay Inspection 15-29
Turn Signal Relay Inspection 15-31
Radiator Fan System 15-33
Fan System Circuit Inspection 15-33
Fan Motor Inspection 15-33
Meters, Gauge 15-34
Meter, Gauge Removal 15-34
Meter, Gauge Disassembly 15-34
Bulb Replacement 15-34
Tachometer Inspection 15-34
Water Temperature Gauge Inspection 15-36
Switches and Sensors 15-37
Brake Light Timing Inspection 15-37
Brake Light Timing Adjustment 15-37
Switch Inspection 15-37
Radiator Fan Switch Inspection 15-38
Water Temperature Sensor Inspection 15-38
Junction Box 15-39
Junction Box Fuse Circuit Inspection 15-39
Starter Circuit/Headlight Relay Inspection 15-39
Diode Circuit Inspection 15-40
Fuse 15-42
30A Main Fuse Removal 15-42
15A High Beam Fuse Removal 15-42
Junction Box Fuse Removal 15-42
Fuse Installation 15-42
Fuse Inspection 15-42
Wiring Diagram 15-43

Manual escaneado de onda
No admita suplenta
http://www.iapi.com.ar
This manual is not to be sold
http://www.iapi.com.ar

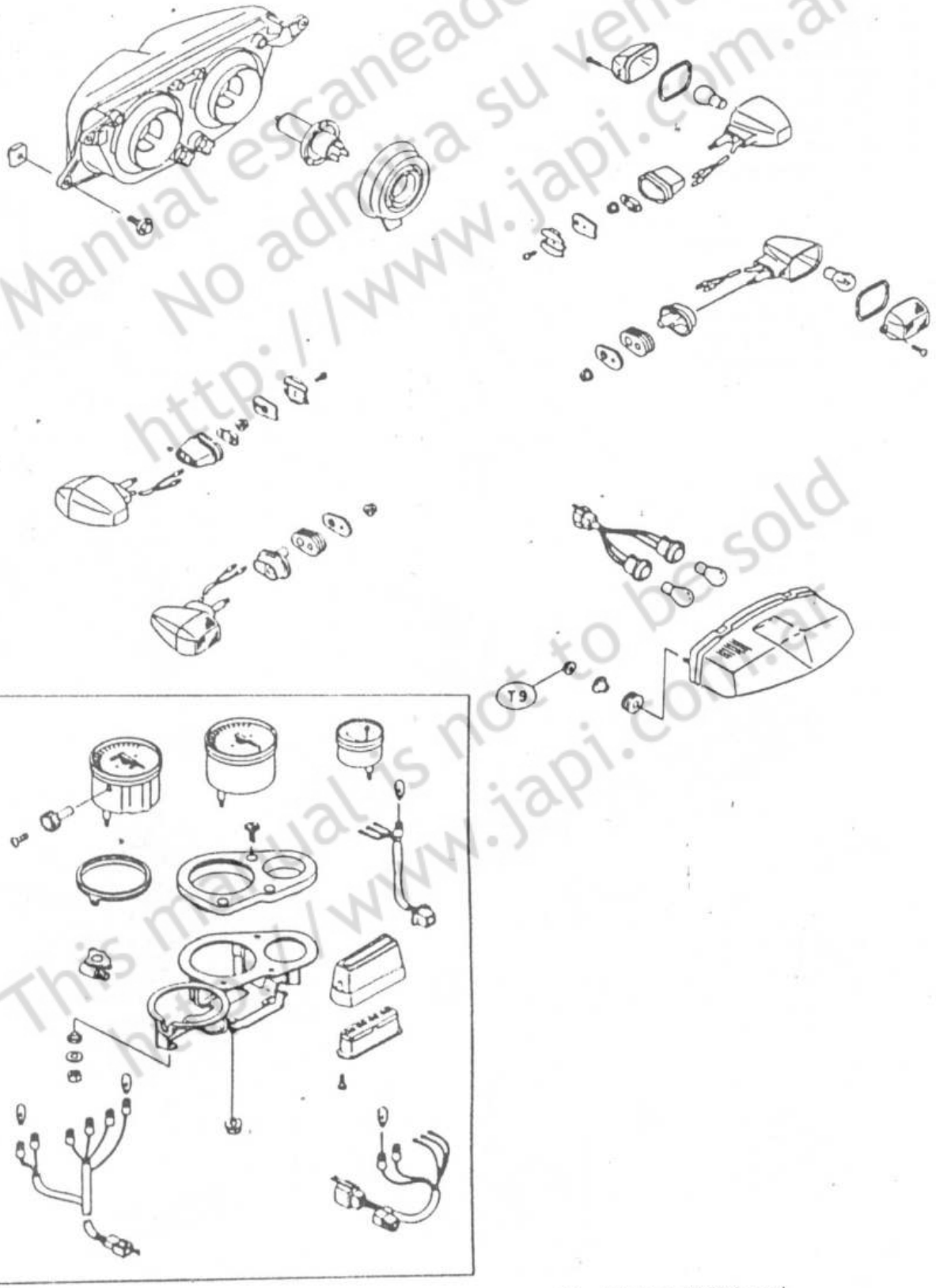
Exploded View



T1: 13 N·m (1.3 kg-m)
T2: 8.3 N·m (0.85 kg-m)
T3: 1.5 N·m (0.15 kg-m)
T4: 39 N·m (4.0 kg-m)
T5: 11 N·m (1.1 kg-m)
T6: 69 N·m (7.0 kg-m)
T7: 4.9 N·m (0.50 kg-m)
T8: 34 N·m (3.5 kg-m)

L: Apply a non-permanent locking agent.
M: Apply molybdenum disulfide grease.

Manual escaneado de onda
No admita suventa
http://www.japi.com.ar
Este manual es de libre distribución
http://www.japi.com.ar



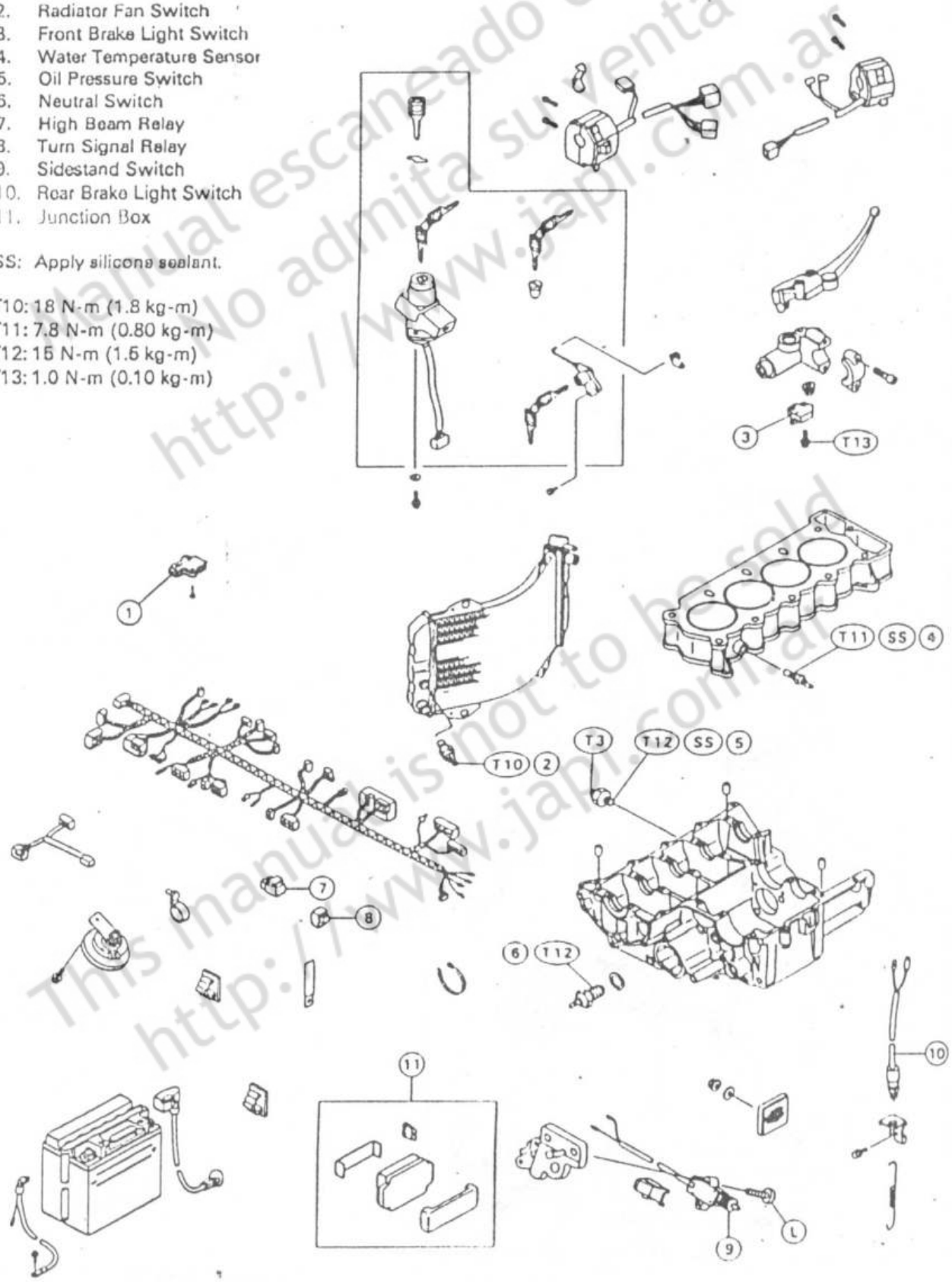
T9: 5.9 N·m (0.60 kg-m)

Manual escaneado de onda
No admite su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

1. Starter Lockout Switch
2. Radiator Fan Switch
3. Front Brake Light Switch
4. Water Temperature Sensor
5. Oil Pressure Switch
6. Neutral Switch
7. High Beam Relay
8. Turn Signal Relay
9. Sidestand Switch
10. Rear Brake Light Switch
11. Junction Box

SS: Apply silicone sealant.

T10: 18 N-m (1.8 kg-m)
T11: 7.8 N-m (0.80 kg-m)
T12: 15 N-m (1.5 kg-m)
T13: 1.0 N-m (0.10 kg-m)



Manual escaneado de onda
No admita su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

Specifications

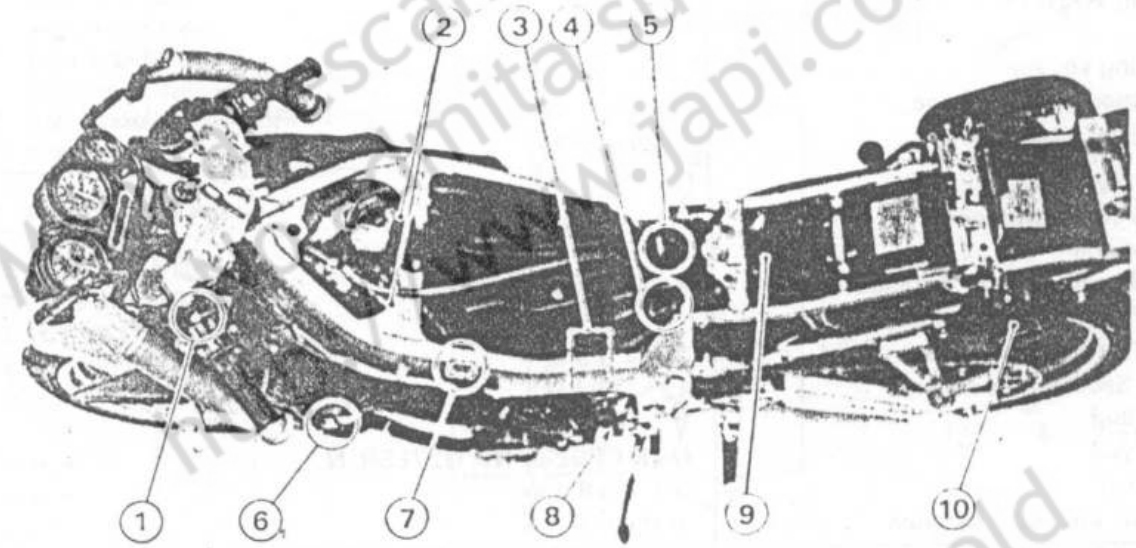
Item	Standard	Service Limit
Battery:		
Type	MF (Maintenance Free) Battery	- - -
Capacity	12 V 6 Ah	- - -
Voltage	12.6 V or more	- - -
Charging System:		
Type	Three-phase AC	- - -
Charging voltage	14 ~ 15 V @4000 r/min (rpm), night	- - -
Alternator output voltage	25 V or more @4 000 r/min (rpm)	- - -
Stator coil resistance	0.05 ~ 0.6 Ω	- - -
Ignition System:		
Pickup coil resistance	372 ~ 558 Ω	- - -
Ignition coil:		
3 needle arcing distance	6 mm or more	- - -
Winding resistance:		
Primary windings	2.3 ~ 3.5 Ω	- - -
Secondary windings	12 ~ 18 kΩ	- - -
Spark plug:		
Type	NGK CR9E or ND U27ESR-N	- - -
Gap	0.7 ~ 0.8 mm	- - -
IC igniter internal resistance	in the text	- - -
Electric Starter System:		
Starter motor:		
Carbon brush length	7 mm	3.5 mm
Commutator diameter	24 mm	23 mm
Switch and Sensor:		
Rear brake light switch timing	On after about 10 mm pedal travel	- - -
Engine oil pressure switch connections	When engine is stopped: ON	- - -
	When engine is running: OFF	- - -
Fan switch connections:		
Rising temperature	From OFF to ON @ 93 ~ 103°C (199 ~ 217°F)	- - -
Falling temperature	From ON to OFF @ 91 ~ 95°C (196 ~ 203°F)	- - -
Water temperature sensor resistance:	47 ~ 57 Ω @ 80°C (176°F) 25 ~ 30 Ω @ 100°C (212°F)	

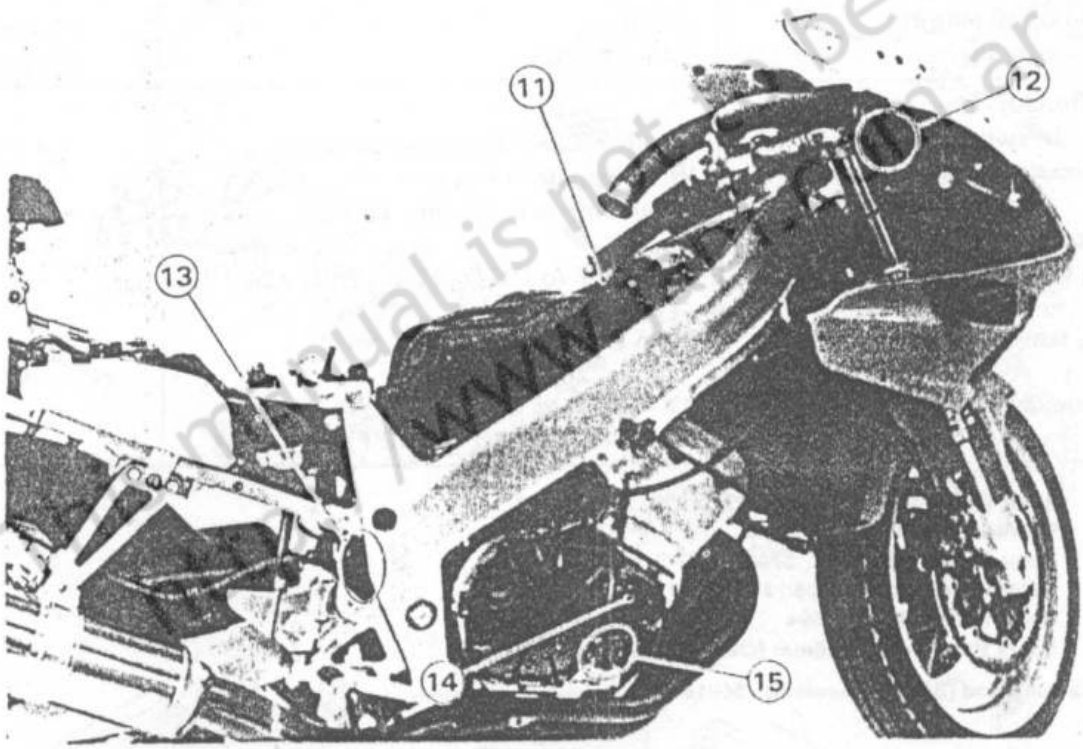
Special Tools – **Rotor Puller, M16/M18/M20/M22 x 1.5: 57001-1216**
Flywheel Holder: 57001-1313
Rotor Puller, M33 x 1.5: 57001-1277
Rotor Puller Adapter, Φ8: 57001-1279
Hand Tester: 57001-1394
Spark Plug Wrench, 18mm (Owner's Tool): 92110-1132

Sealant – **Kawasaki Bond (Silicone Sealant): 56019-120**

Manual escaneado de ómo... No admite su venta http://www.japi.com.ar This manual is not to be sold http://www.japi.com.ar

Parts Location





1. Starter Lockout Switch
2. Ignition Coils
3. Starter Motor
4. Turn Signal Relay
5. Starter Relay and Main Fuse
6. Radiator Fan Switch
7. Water Temperature Sensor
8. Neutral Switch
9. Junction Box
10. IC Igniter
11. Regulator/Rectifier
12. Front Brake Light Switch
13. Rear Brake Light Switch
14. Pickup Coil
15. Oil Pressure Switch

Precautions

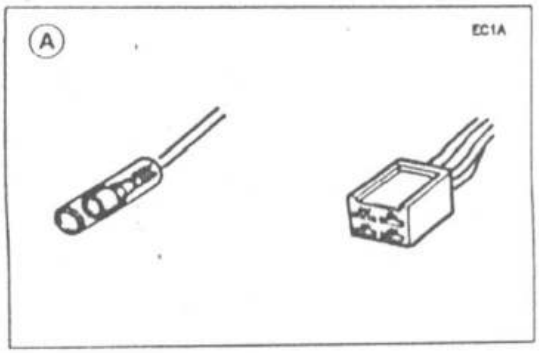
There are a number of important precautions that are musts when servicing electrical systems. Learn and observe all the rules below.

- Do not reverse the battery lead connections. This will burn out the diodes on the electrical parts.
- Always check battery condition before condemning other parts of an electrical system. A fully charged battery is a must for conducting accurate electrical system tests.
- The electrical parts should never be struck sharply, as with a hammer, or allowed to fall on a hard surface. Such a shock to the parts can damage them.
- To prevent damage to electrical parts, do not disconnect the battery leads or any other electrical connections when the ignition switch is on, or while the engine is running.
- Because of the large amount of current, never keep the starter button pushed when the starter motor will not turn over, or the current may burn out the starter motor windings.
- Do not use a meter illumination bulb rated for other than voltage or wattage specified in the wiring diagram, as the meter or gauge panel could be warped by excessive heat radiated from the bulb.
- Take care not to short the leads that are directly connected to the battery positive (+) terminal to the chassis ground.
- Troubles may involve one or in some cases all items. Never replace a defective part without determining what CAUSED the failure. If the failure was caused by some other item or items, they too must be repaired or replaced, or the new replacement will soon fail again.
- Make sure all connectors in the circuit are clean and tight, and examine wires for signs of burning, fraying, etc. Poor wires and bad connections will affect electrical system operation.
- Measure coil and winding resistance when the part is cold (at room temperature).
- Color Codes:

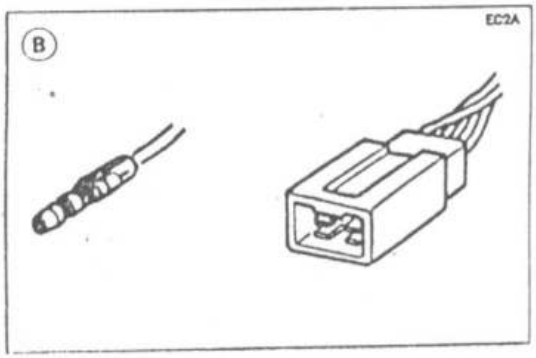
BK	Black	G	Green	P	Pink
BL	Blue	GY	Gray	PU	Purple
BR	Brown	LB	Light blue	R	Red
CH	Chocolate	LG	Light green	W	White
DG	Dark green	O	Orange	Y	Yellow

- Electrical Connectors

Female Connectors [A]



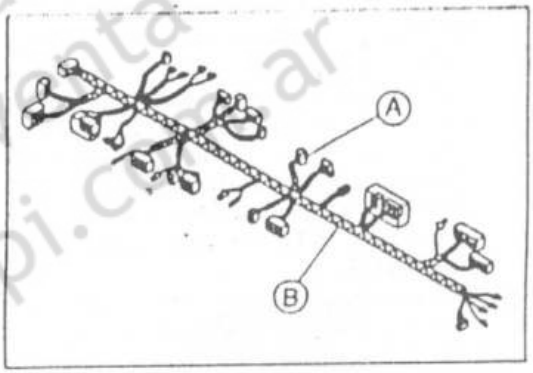
Male Connectors [B]



This manual is not to be sold
http://www.japi.com.ar

Electrical Wiring

Wiring Inspection



- ● Visually inspect the wiring for signs of burning, fraying, etc.
- ★ If any wiring is poor, replace the damaged wiring.
- ● Pull each connector [A] apart and inspect it for corrosion, dirt, and damage.
- ★ If the connector is corroded or dirty, clean it carefully. If it is damaged, replace it.
- ● Check the wiring for continuity.
- ○ Use the wiring diagram to find the ends of the lead which is suspected of being a problem.
- ○ Connect the hand tester between the ends of the leads.

Special Tool – Hand Tester: 57001-1394

- ○ Set the tester to the x 1 Ω range, and read the tester.
- ★ If the tester does not read 0 Ω, the lead is defective. Replace the lead or the wiring harness [B] if necessary.

Manual escaneado de ONO
No admita su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

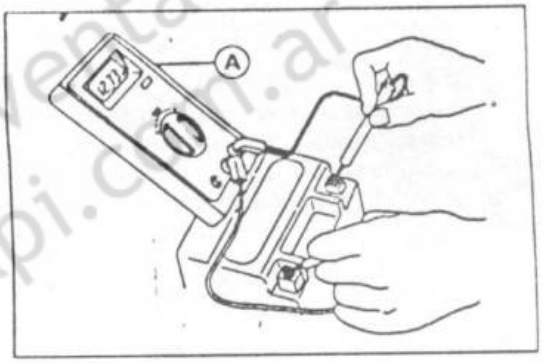
Battery

Charging Condition Inspection

Battery charging condition can be checked by measuring battery terminal voltage.

- Remove the seats (see Frame chapter)
- Disconnect the battery terminal leads

CAUTION
Be sure to disconnect the negative terminal lead first.



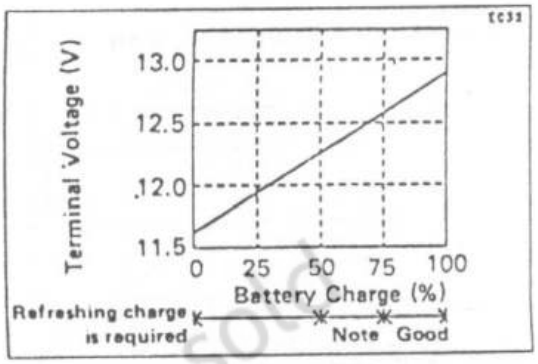
- Measure the battery terminal voltage.

NOTE

○ *Measure with a digital voltmeter [A] which can be read one decimal place voltage.*

★If the reading is below the specified, refreshing charge is required.

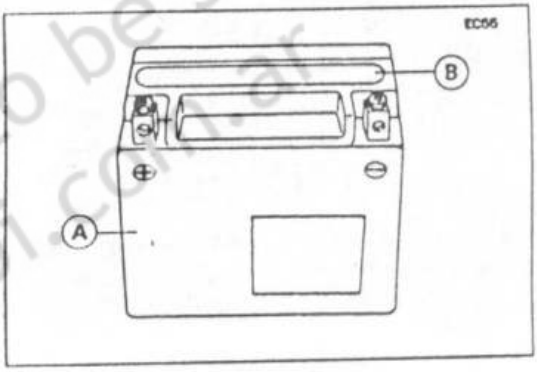
Battery Terminal Voltage
Standard: 12.8 V or more



Refreshing Charge

- Disconnect the battery terminal leads (see Charging Condition Inspection).
- Remove the battery [A].
- Refresh-charge by following method according to the battery terminal voltage.

CAUTION
This battery is sealed type. Never remove sealing caps [B] even at charging. Never add water. Charge with current and time as stated below.



Terminal Voltage: 11.5 ~ less than 12.6 V
Standard Charge
0.7 A x 5 ~ 10 h (see next page's chart)
Quick Charge
3.0 A x 1 h

CAUTION
If possible, do not quick charge. If the quick charge is done due to unavoidable circumstances, do standard charge later on.

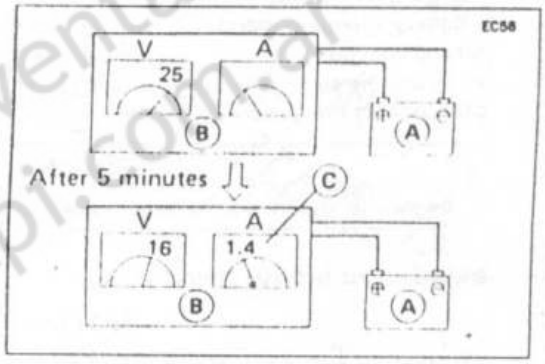
Terminal Voltage : less than 11.5 V
Charging Method : 0.7 A x 20 h

Manual escaneado de No admita su venta http://www.japi.com.ar
This manual is not to be sold http://www.japi.com.ar

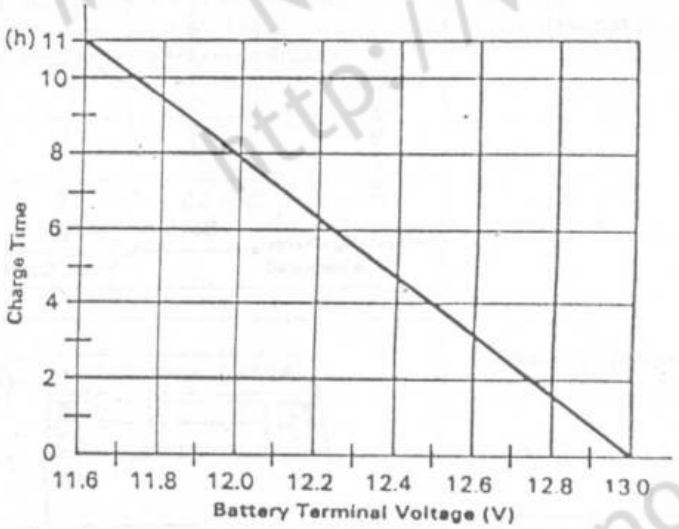
NOTE

○ *Raise the voltage initially (25 V as maximum), and charge for about 5 minutes as a yardstick. If ammeter shows no change in current after 5 minutes, you need a new battery. The current, if it can flow into the battery, tends to become excessive. Adjust the voltage as often as possible to keep the current at standard value (0.7 A).*

Battery [A]
Battery Charger [B]
Standard Value [C]



Battery Standard Charge Time Chart



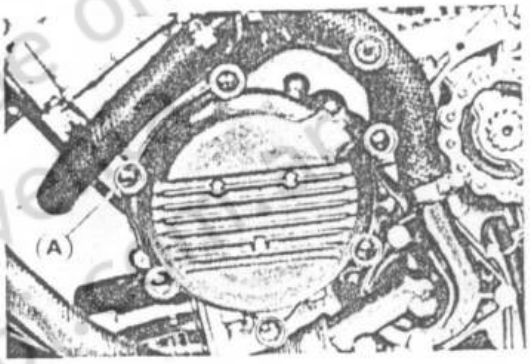
● Determine battery condition after refreshing charge.
○ Determine the condition of the battery 30 minutes after completion of the charge by measuring the terminal voltage according to the table below.

Criteria	Judgement
12.6 V or higher	Good
12.0 ~ 12.6 V or lower	Charge insufficient → Recharge
12.0 V or lower	Unserviceable → Replace

Manual escaneado de ofrecido en venta
No admita
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

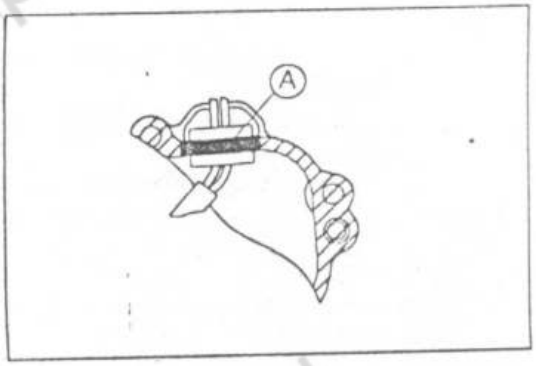
Charging System

Alternator Cover Removal



- Remove:
  Engine Oil (drain, see Engine Lubrication System chapter)
  Air Cleaner Housing (see Fuel System chapter)
  Alternator Lead Connector
  Lower Fairing (see Frame chapter)
  Cover Bolts [A]
  Alternator Cover

Alternator Cover Installation

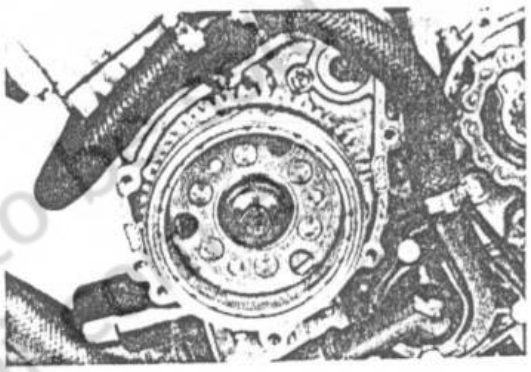


- Apply silicone sealant to the alternator lead grommet [A] and crankcase halves mating surface on the front and rear sides of the cover mount.

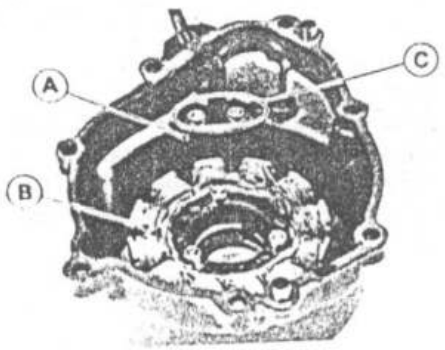
  Sealant – Kawasaki Bond (Silicone Sealant): 56019-120

- Install a new gasket and the alternator cover.
- Tighten the cover bolts.

  Torque – Alternator Cover Bolts : 11 N·m (1.1 kg·m)



Stator Coil Removal



- Remove:
  Alternator Cover (see Alternator Cover Removal)
  Allen Bolts [C]
  Alternator Lead Clamp [A]
  Stator Bolts
  Stator Coil [B]

Stator Coil Installation

- Tighten the stator coil bolts.

  Torque – Stator Coil Bolts: 8.3 N·m (0.85 kg·m)

- Apply silicone sealant to the circumference of the alternator lead grommet, and fit the grommet into the notch of the cover securely.
  Sealant – Kawasaki Bond (Silicone Sealant): 56019-120
- Be careful not to pile up the stator coil lead too high.
- Secure the stator coil lead with a clamp, tighten the bolts.

  Torque – Stator Coil Lead Clamp Bolts : 8.3 N·m (0.85 kg·m)

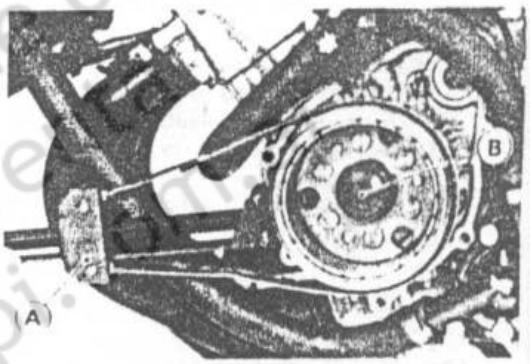
- Install the alternator cover (see Alternator Cover Installation).

Manual escaneado de onda
No admita su ya
http://www.jap
This manual is not to
http://www.jap

Alternator Rotor Removal

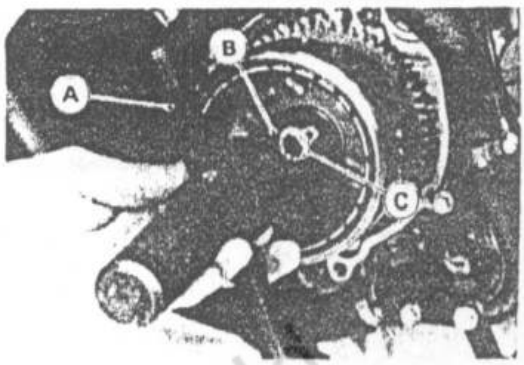
- Remove:
  Alternator Cover (see Alternator Cover Removal)
  Starter Idle Gear and Shaft
- Wipe oil off the outer circumference of the rotor
- Hold the alternator rotor steady with the flywheel holder [A], and remove the rotor bolt [B].

Special Tool – Flywheel Holder: 57001-1313



- Using the rotor pullers and adapter, remove the alternator rotor from the crankshaft.

Special Tools – Rotor Puller, M16/M18/M20/M22 x 1.5: 57001-1216 [A]
Rotor Puller, M33 x 1.5: 57001-1277 [B]
Rotor Puller Adapter, Φ8: 57001-1279 [C]



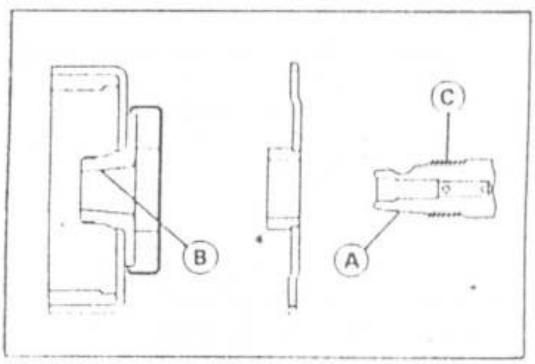
NOTE

○ *Screw in the puller while tapping the head of the puller with a hammer.*

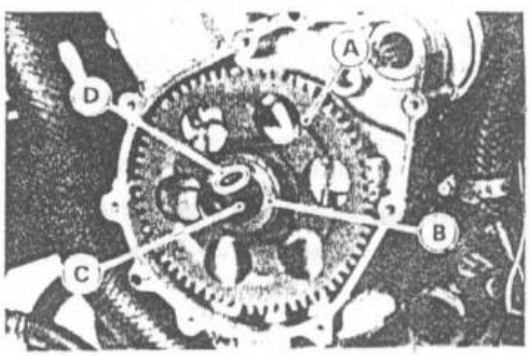
CAUTION
Do not attempt to strike the alternator rotor itself. Striking the rotor can cause the magnets to lose their magnetism.

Alternator Rotor Installation

- Using a cleaning fluid, clean off any oil or dirt on the following portions and dry them with a clean cloth.
  [A] Crankshaft Tapered Portion
  [B] Alternator Rotor Tapered Portion
- Apply a thin coat of molybdenum disulfide grease to the crankshaft [C].

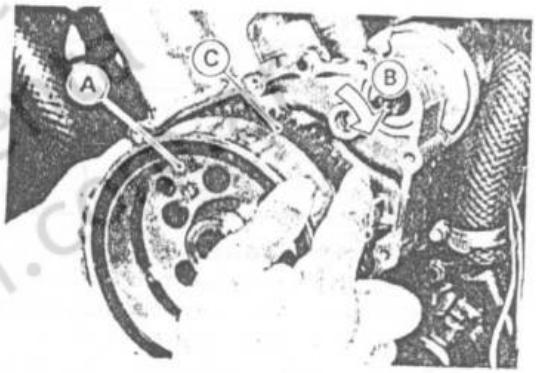


- Install the starter gear [A] and washer [B].
- Again, clean the crankshaft tapered portion [C] and dry there.
- Fit the woodruff key [D] securely in the slot in the crankshaft before installing the alternator rotor.



Manual escaneado de onda
No admita su versión
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

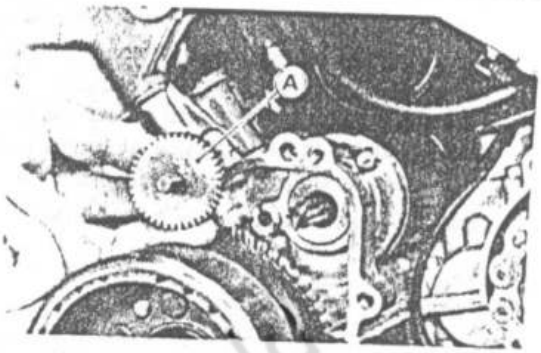
● Install the alternator rotor [A] while turning [B] the starter gear [C].



● Tighten the alternator rotor bolt while holding the alternator rotor steady with the flywheel holder.

Special Tool - Flywheel Holder: 57001-1313
Torque - Alternator Rotor Bolt : 69 N-m (7.0 kg-m)

● Install the shaft and starter idle gear [A]
● Install the alternator cover (see Alternator Cover Installation)



Alternator Inspection

There are three types of alternator failures: short, open (wire burned out), or loss in rotor magnetism. A short or open in one of the coil wires will result in either a low output, or no output at all. A loss in rotor magnetism, which may be caused by dropping or hitting the alternator, by leaving it near an electromagnetic field, or just by aging, will result in low output.

● To check the alternator output voltage, do the following procedures.
○ Turn off the ignition switch.
○ Remove the fuel tank (see Fuel System chapter)
○ Supply fuel to the carburetors with an auxiliary fuel tank.
○ Disconnect the regulator/rectifier lead connector.
○ Connect the hand tester as shown in the table 1.
○ Start the engine.
○ Run it at the rpm given in the table 1.
○ Note the voltage readings (total 3 measurements).

Table 1 Alternator Output Voltage

Tester Range	Connections		Reading @4,000 rpm
	Tester (+) to	Tester (−) to	
250 V AC	One yellow Lead	Another yellow lead	25 V or more

★ If the output voltage shows the value in the table, the alternator operates properly and the regulator/rectifier is damaged. A much lower reading than that given in the table indicates that the alternator is defective.

● Check the stator coil resistance as follows.
○ Stop the engine.
○ Remove the air cleaner housing (see Fuel System chapter).
○ Disconnect the alternator lead connector.
○ Connect the hand tester as shown in the table 2.
○ Note the readings (total 3 measurement)

Manual escaneado de onda
No admita su versión
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

Table 2 Stator Coil Resistance

Tester Range	Connections		Reading
	Tester (+) to	Tester (−) to	
× 1 Ω	One black lead	Another black lead	0.05 ~ 0.6 Ω

★If there is more resistance than shown in the table, or no hand tester reading (infinity) for any two leads, the stator has an open lead and must be replaced. Much less than this resistance means the stator is shorted, and must be replaced.

●Using the highest resistance range of the hand tester, measure the resistance between each of the black leads and chassis ground.

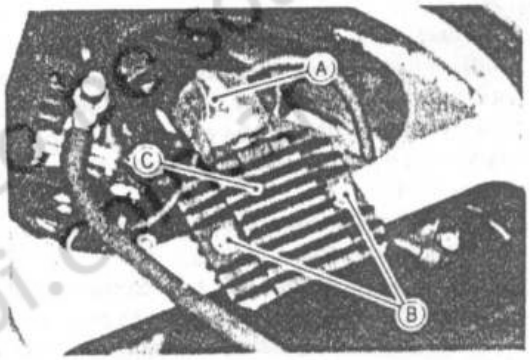
★Any hand tester reading less than infinity (∞) indicates a short, necessitating stator replacement.

★If the stator coils have normal resistance, but the voltage check showed the alternator to be defective; then the rotor magnets have probably weakened, and the rotor must be replaced.

Special Tool – Hand Tester: 57001-1394

Regulator/Rectifier Inspection

●Remove:
Fuel Tank (see Fuel System chapter)
Connector [A] (disconnect)
Mounting Bolts [B]
Regulator/Rectifier [C]

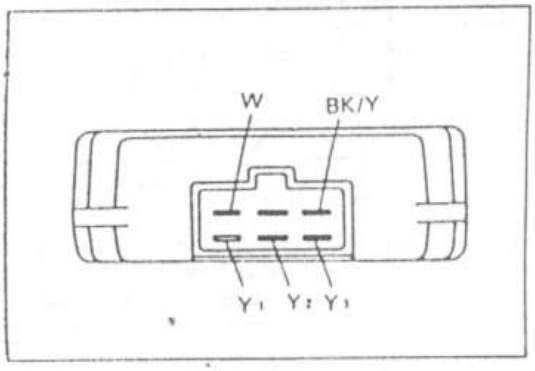


Rectifier Circuit Check:

●Check conductivity of the following pair of terminals.

Rectifier Circuit Inspection

Tester Connection	W-Y1	W-Y2	W-Y3
	BK/Y-Y1	BK/Y-Y2	BK/Y-Y3



★The resistance should be low in one direction and more than ten times as much in the other direction. If any two leads are low or high in both directions, the rectifier is defective and must be replaced.

NOTE

○*The actual meter reading varies with the meter used and the individual rectifier, but, generally speaking the lower reading should be from zero to one half the scale.*

Regulator Circuit Check:

To test the regulator out of circuit, use three 12 V batteries and a test light (12 V 3 ~ 6 W bulb in a socket with leads).

CAUTION
The test light works as an indicator and also a current limiter to protect the regulator/rectifier from excessive current. Do not use an ammeter instead of a test light.

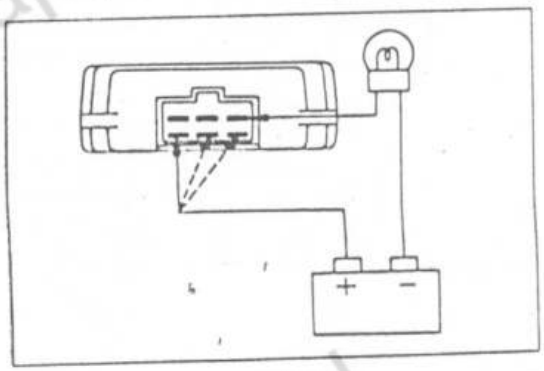
- Check to be sure the roctifier circuit is normal before continuing

Regulator Circuit Test-1st Step:

- Connect the test light and the 12 V battery to the regulator/rectifier as shown.
- Check Y_1, and Y_2, and Y_3 terminal respectively.

★If the test light turns on, the regulator/rectifier is defective. Replace it.

★If the test light does not turn on, continue the test.

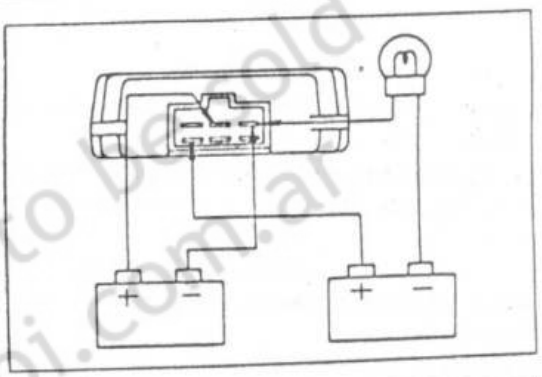


Regulator Circuit Test-2nd Step:

- Connect the test light and the 12 V battery in the same manner as specified in the "Regulator Circuit Test-1st Step".
- Apply 12 V to the BR lead (voltage detection) terminal [A].
- Check Y_1, Y_2, and Y_3 terminals respectively.

★If the test light turns on, the regulator/rectifier is defective. Replace it.

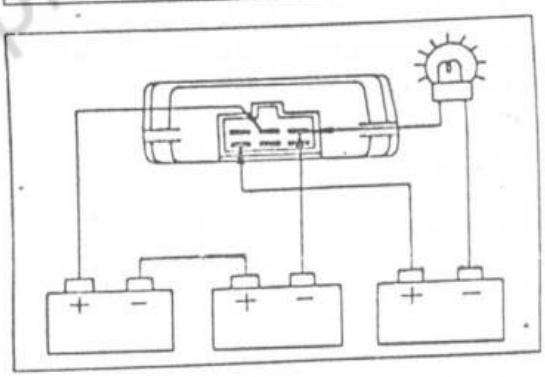
- If the test light does not turn on, continue the test.



Regulator Circuit Test-3rd Step:

- Connect the test light and the 12 V battery in the same manner as specified in the "Regulator Circuit Test-1st Step".
- Momentarily apply 24 V to the voltage BR lead terminal by adding a 12 V battery.
- Check Y_1, Y_2, and Y_3 terminals respectively.

CAUTION
Do not apply more than 24 V to the regulator/rectifier and do not leave the 24 V applied for more than a few seconds, or the unit will be damaged.



★If the test light did not light when the 24 V was applied momentarily to the voltage BR lead terminal, the regulator/rectifier is defective. Replace it.

★If the regulator/rectifier passes all of the tests described, it may still be defective. If the charging system still does not work properly after checking all of the components and the battery, test the regulator/rectifier by replacing it with a known good unit.

Manual escaneado de ondamotos
No admite su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

Regulator/Rectifier Output Voltage Inspection

- Remove the seats (see Frame chapter).
- Check the battery condition (see Battery section).
- Warm up the engine to obtain actual alternator operating conditions.
- Check that the ignition switch is turned off, and connect the hand tester as shown in the table.
- Start the engine, and note the voltage readings at various engine speeds with the headlight turned on and then turned off. (To turn off the headlight, disconnect the headlight connector in the upper fairing.) The readings should show nearly battery voltage when the engine speed is low, and as the engine speed rises, the readings should also rise. But they must be kept under the specified voltage.

Regulator/Rectifier Output Voltage

Tester	Connections		Reading
Range	Tester (+) to	Tester (−) to	
25 V DC	Battery (+)	Battery (−)	14 ~ 15 V

- Turn off the ignition switch to stop the engine, and disconnect the hand tester.

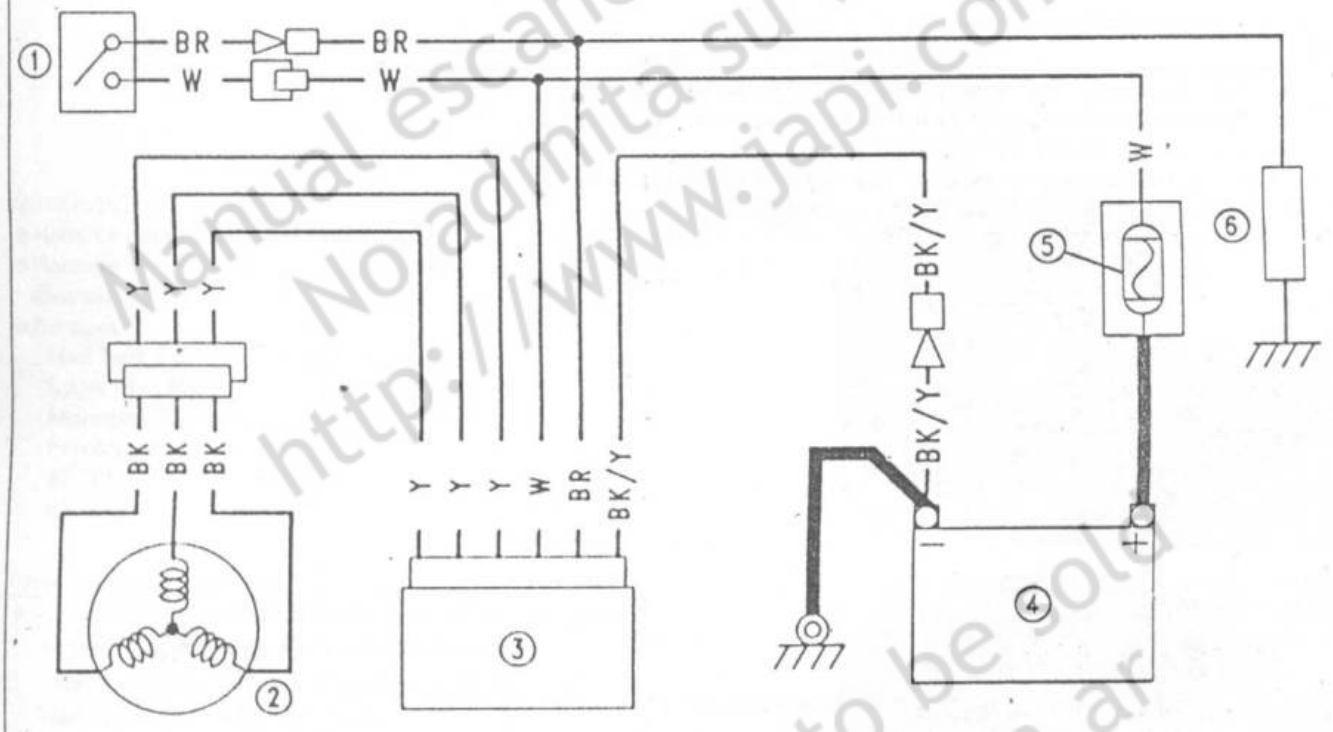
★If the regulator/rectifier output voltage is kept between the values given in the table, the charging system is considered to be working normally.

★If the output voltage is much higher than the values specified in the table, the regulator/rectifier is defective or the regulator/rectifier leads are loose or open.

★If the battery voltage does not rise as the engine speed increases, then the regulator/rectifier is defective or the alternator output is insufficient for the loads. Check the alternator and regulator/rectifier to determine which part is defective.

This manual is not to be sold
http://www.jspi.com.ar

Charging System Circuit



1. Ignition Switch
2. Alternator
3. Regulator/Rectifier
4. Battery
5. Main Fuse 30A
6. Load

Manual escaneado de ofrece
No admita su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

Ignition System

⚠WARNING

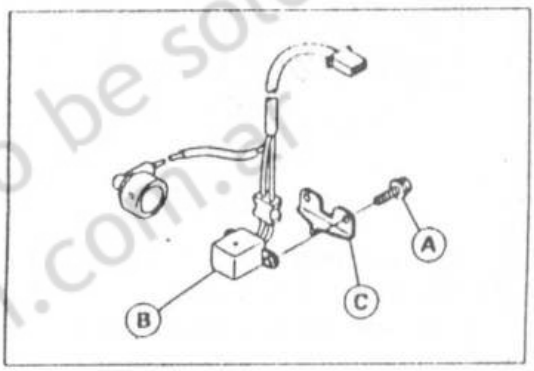
The ignition system produces extremely high voltage. Do not touch the spark plugs, ignition coils, or spark plug leads while the engine is running, or you could receive a severe electrical shock.

CAUTION

Do not disconnect the battery leads or any other electrical connections when the ignition switch is on, or while the engine is running. This is to prevent IC igniter damage.
Do not install the battery backwards. The negative side is grounded. This is to prevent damage to the diodes and IC igniter.

Pickup Coil Removal

- Remove:
  Lower Fairing (see Frame chapter)
  Engine Oil (drain, see Engine Lubrication System chapter)
  Clutch Cover (see Clutch chapter)
  Air Cleaner Housing (see Fuel System chapter)
  Pickup Coil Lead Connector
  Oil Pressure Switch Lead Connector
  Pickup Coil Bolts [A]
  Pickup Coil [B] and Timing Indicator [C]



Pickup Coil Installation

- Route the pickup coil lead correctly (see Cable, Wire, and Hose Routing in General Information chapter).
- Install the pickup coil and tighten the pickup coil bolts.

Torque – Pickup Coil Bolts: 8.3 N-m (0.85 kg-m)

- Install the clutch cover (see Clutch chapter).

Pickup Coil Inspection

- Remove the following.
  Air Cleaner Housing (see Fuel System chapter)
  Pickup Coil Lead Connector
- Set the hand tester to the x 100 Ω range and connect it to the black and yellow leads in the connector.

★If there is more resistance than the specified value, the coil has an open lead and must be replaced. Much less than this resistance means the coil is shorted, and must be replaced.

Pickup Coil Resistance: 372 ~ 558 Ω

Manual gratuito de onda
No apto para venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

● Using the highest resistance range of the tester, measure the resistance between the pickup coil leads and chassis ground.

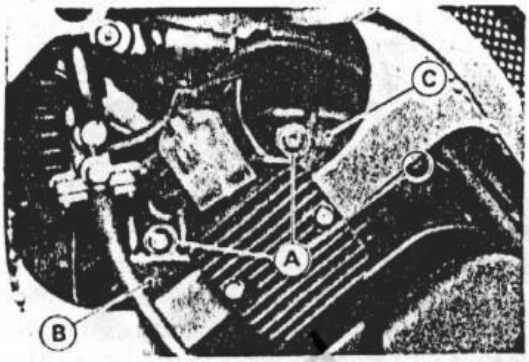
★ Any tester reading less than infinity (∞) indicates a short, necessitating replacement of the pickup coil assembly

Ignition Coil Removal

● Remove the lower fairing (see Frame chapter).

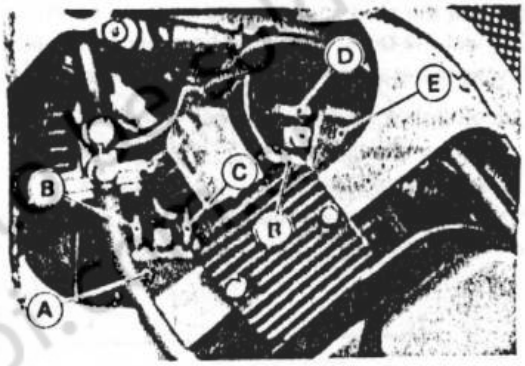
● Remove the radiator mounting bolts and then move the radiator forward.

● Remove:
Fuel Tank (see Fuel System chapter)
Spark Plug Caps
Mounting Bolts [A]
Primary Lead Connectors
#2, 3 Ignition Coil [B]
#1, 4 Ignition Coil [C]

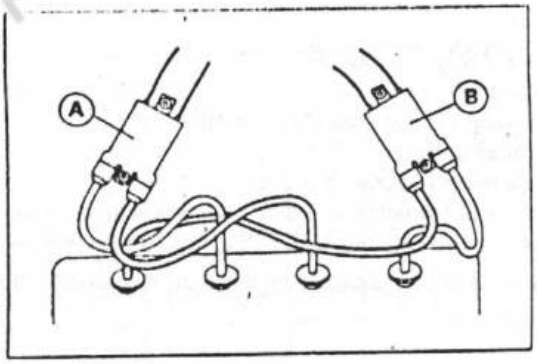


Ignition Coil Installation

● Connect the primary leads to the ignition coil terminals.
Green Lead [C] → to #2, 3 Ignition Coil [A]
Black Lead [D] → to #1, 4 Ignition Coil [E]
Red Leads [B] → to both Coils



[A] #2, 3 Ignition Coil
[B] #1, 4 Ignition Coil



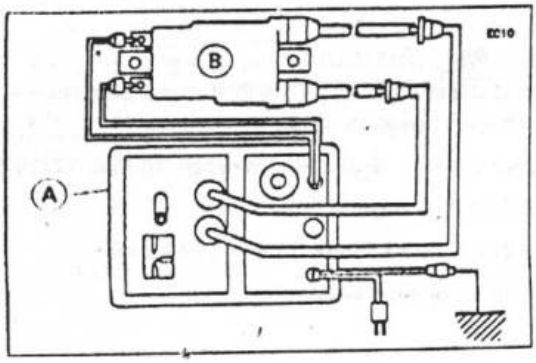
Ignition Coil Inspection

● Remove the ignition coils (see Ignition Coil Removal).

● Measure the arcing distance with the suitable commercially available coil tester [A] to check the condition of the ignition coil [B].

● Connect the ignition coil (with the spark plug cap left attached at the end of the spark plug lead) to the tester in the manner prescribed by the manufacturer and measure the arcing distance.

Ignition Coil Arcing Distance : 6 mm or more



Manual escaneado de onda
No admita su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

⚠WARNING

To avoid extremely high voltage shocks, do not touch the coil body or leads.

★If the distance reading is less than the specified value, the ignition coil or spark plug caps are defective.

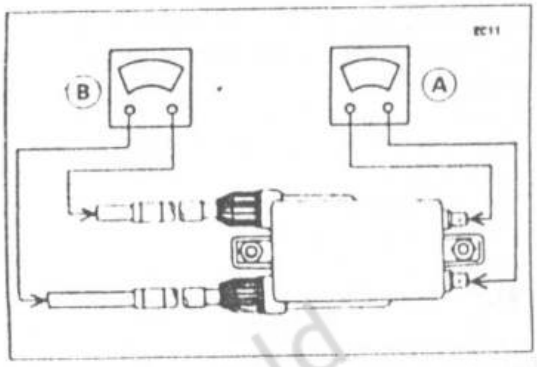
●To determine which part is defective, measure the arcing distance again with the spark plug caps removed from the ignition coil. Remove the caps by turning them counterclockwise.

★If the arcing distance is subnormal as before, the trouble is with the ignition coil itself. If the arcing distance is now normal, the trouble is with the spark plug cap.

★If the coil tester is not available, the coil can be checked for a broken or badly shorted winding with the hand tester.

NOTE

○*The hand tester cannot detect layer shorts and shorts resulting from insulation breakdown under high voltage.*



●Measure the primary winding resistance [A] as follows.

○Connect the hand tester between the coil terminals.

○Set the tester to the x 1 Ω range, and read the tester.

●Measure the secondary winding resistance [B] as follows.

○Remove the plug caps by turning them counterclockwise.

○Connect the tester between the spark plug leads.

○Set the tester to the x 1 kΩ range and read the tester.

Ignition Coil Winding Resistance

Primary Windings:	**2.3 ~ 3.5 Ω**
Secondary Windings:	**12 ~ 18 kΩ**

★If the tester does not read as specified, replace the coil.

○To install the plug cap, turn it clockwise.

Spark Plug Removal

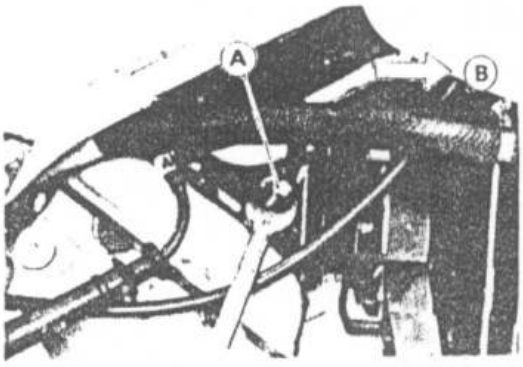
●Remove:
Lower Fairing (see Frame chapter)
Inner Cover
Radiator Mounting Bolts

●Move the radiator forward, and remove the spark plug caps.

●Remove the spark plugs using the 16 mm plug wrench [A].

Owner's Tool – Spark Plug Wrench, 16 mm: 92110-1132

[B] Front



Spark Plug Installation

●Insert the spark plug vertically into the plug hole with the plug installed in the plug wrench.

Owner's Tool – Spark Plug Wrench, 16 mm: 92110-1132

●Tighten the plugs.

Torque – Spark Plugs: 13 N-m (1.3 kg-m)

●Fit the plug caps securely.

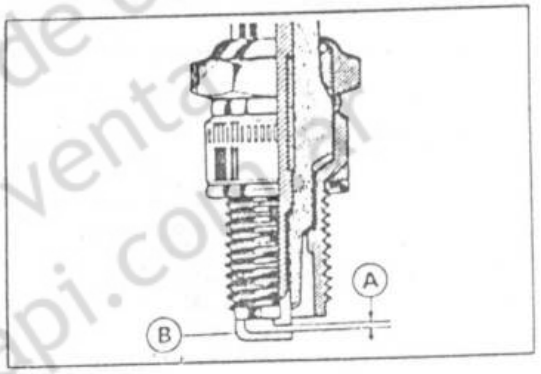
Manual escaneado de onda
No admite su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

Spark Plug Gap Inspection

● Measure the gaps [A] with a wire-type thickness gauge.

★ If the gaps are incorrect, carefully bend the side electrode [B] with a suitable tool to obtain the correct gaps.

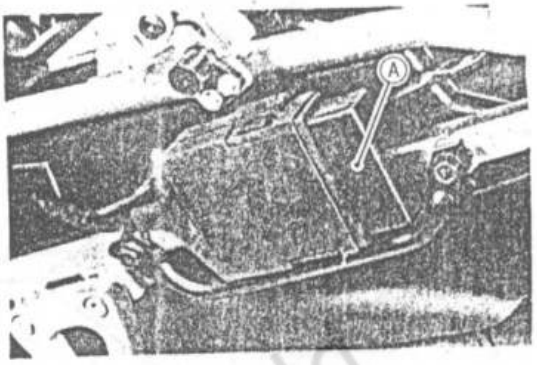
Spark Plug Gap : 0.7 ~ 0.8 mm



IC Igniter Inspection

CAUTION

When inspecting the IC igniter, observe the following to avoid damage to the IC igniter.
Do not disconnect the IC igniter with the ignition switch on. This may damage the IC igniter.
Do not disconnect the battery leads while the engine is running. This may damage the IC igniter.



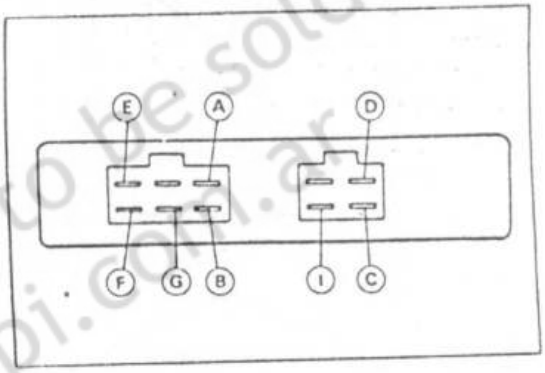
● Remove the left side cover (see Frame chapter)

● Remove the IC igniter [A] and disconnect the connectors.

● Set the hand tester to the x 1 kΩ range and make the measurements shown in the table.

Special Tool – Hand Tester: 57001-1394

★ If the tester readings are not as specified, replace the IC igniter.



CAUTION

Use only Hand Tester 57001-1394 for this test. A tester other than the Kawasaki Hand Tester may show different readings.
If a megger or a meter with a large-capacity battery is used, the IC igniter will be damaged.

IC Igniter Internal Resistance

Unit: kΩ

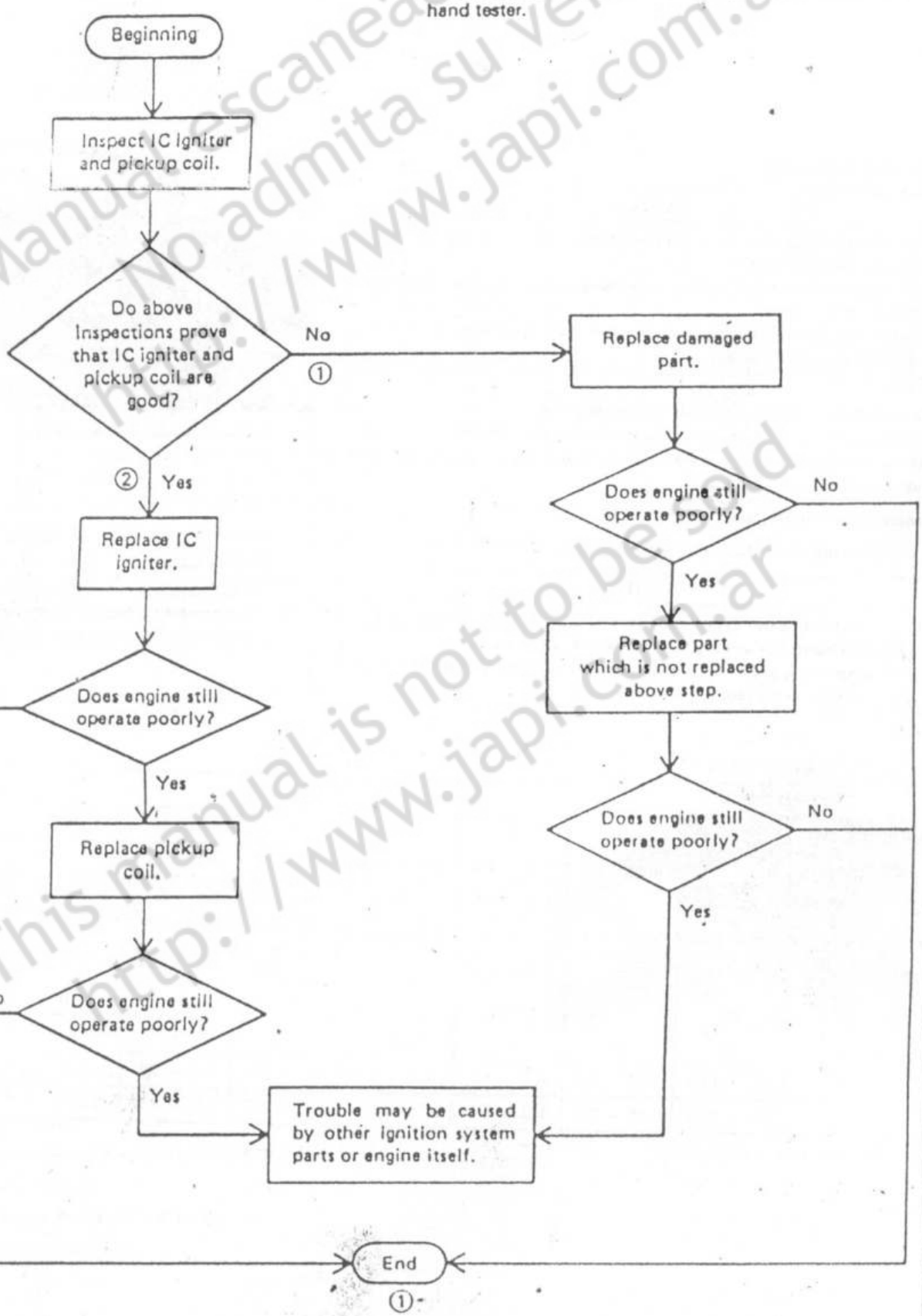
		Tester (+) Lead Connection							
	Terminal	A	B	C	D	E	F	G	I
(−)*	A	–	2.5 ~ 9.8	4.4 ~ 18	2.4 ~ 9.6	6.5 ~ 26	6.5 ~ 26	7.2 ~ 29	2.7 ~ 11
	B	39 ~ 160	–	1.1 ~ 4.4	0	1.6 ~ 6.4	1.6 ~ 6.4	2.9 ~ 12	0.22 ~ 0.86
	C	40 ~ 160	1.1 ~ 4.4	–	1.1 ~ 4.4	3.5 ~ 14	3.5 ~ 14	4.3 ~ 17	1.3 ~ 5.2
	D	39 ~ 160	0	1.1 ~ 4.4	–	1.7 ~ 6.6	1.6 ~ 6.4	2.9 ~ 12	0.2 ~ 0.8
	E	∞	∞	∞	∞	–	∞	∞	∞
	F	∞	∞	∞	∞	∞	–	∞	∞
	G	43 ~ 170	3.3 ~ 13	4.9 ~ 18	3.3 ~ 13	6.5 ~ 26	6.5 ~ 26	–	4.6 ~ 18
	I	40 ~ 160	0.15 ~ 0.6	1.3 ~ 5.2	0.15 ~ 0.6	1.9 ~ 7.4	1.9 ~ 7.4	3.2 ~ 13	–

(−)*: Tester (−) Lead Connection

Manual escaneado de onda
http://www.japi.com.ar
No admita su venta
This manual is not to be sold

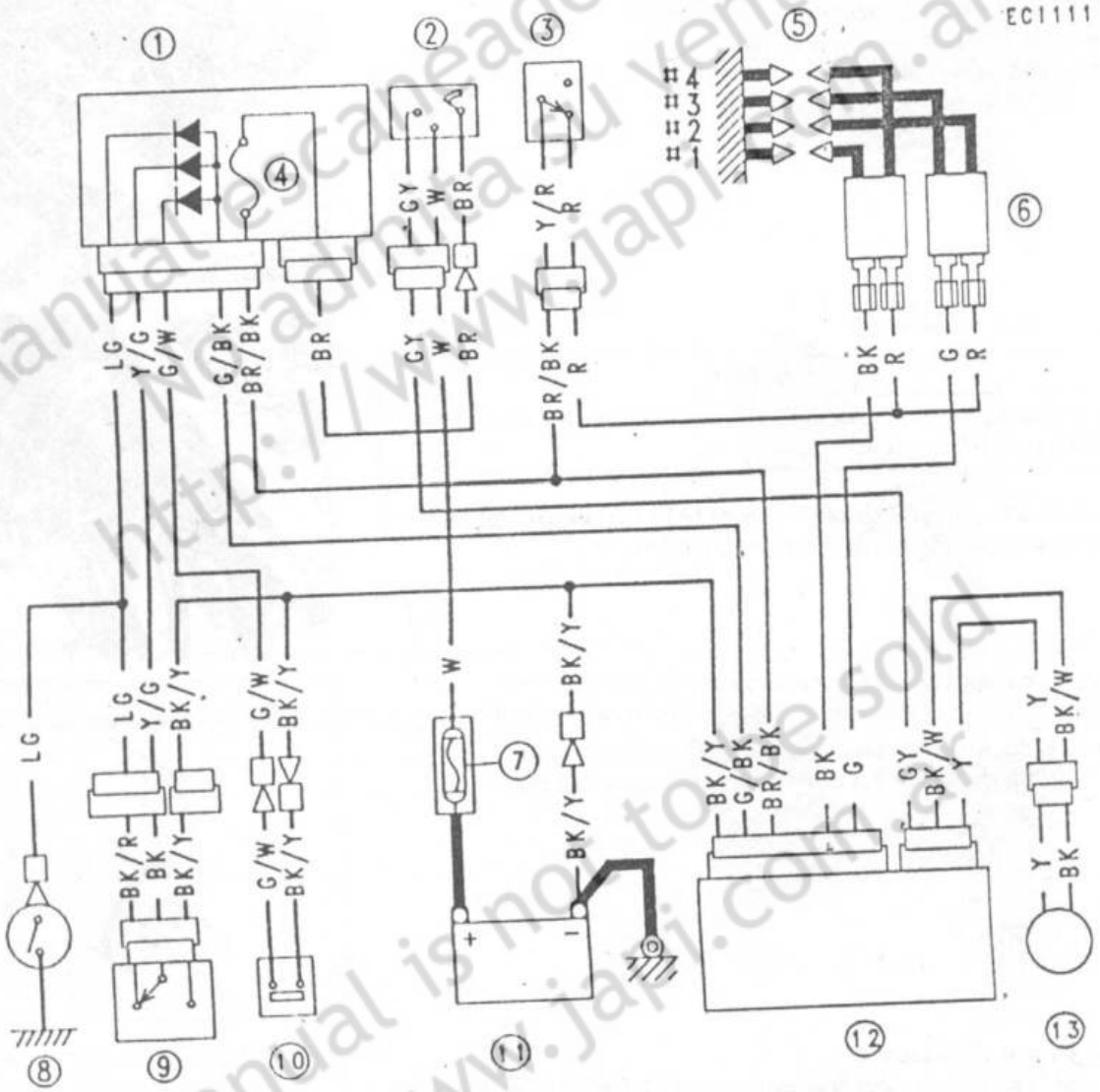
IC Igniter Troubleshooting

1) IC igniter or pickup coil damaged
2) Even if the preceding checks show good, it may be defective in some manner not readily detectable with the hand tester.



Manual escaneado de onda
No admita su versión
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

Ignition System Circuit



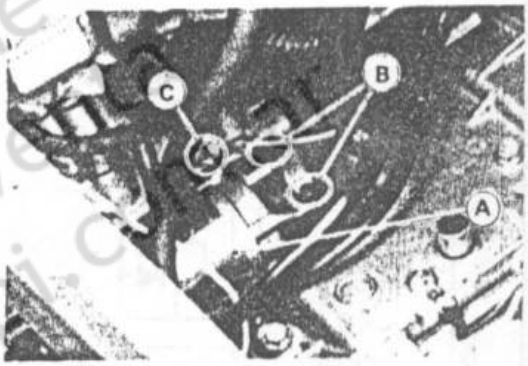
1. Junction Box
2. Ignition Switch
3. Engine Stop Switch
4. Ignition Fuse 10A
5. Spark Plugs
6. Ignition Coils
7. Main Fuse 30A
8. Neutral Switch
9. Starter Lockout Switch
10. Side Stand Switch
11. Battery
12. IC Igniter
13. Pickup Coil

Manual escaneado de onda
Nacional
http://www.japi.com.ar
Su venta
http://www.japi.com.ar
This manual is not to be sold

Starter Motor

Starter Motor Removal

● Remove:
Air Cleaner Housing (see Fuel System chapter)
Terminal Bolt [C]
Mounting Bolts [B]
Starter Motor [A]

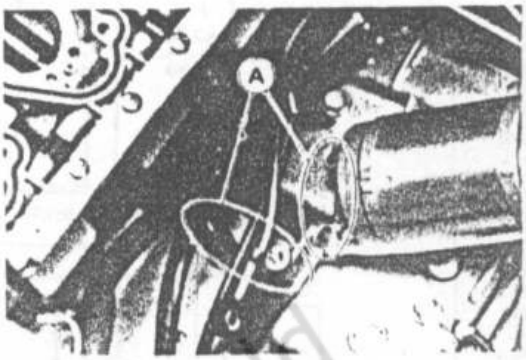


Starter Motor Installation

CAUTION

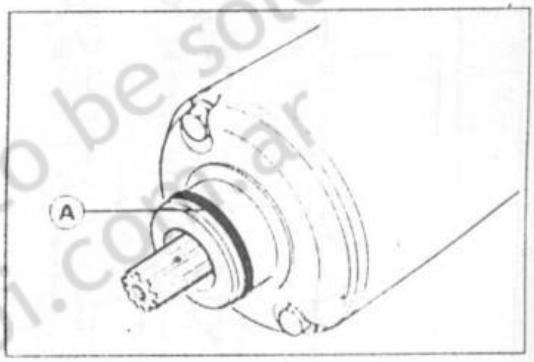
Do not tap the starter motor shaft or body. Tapping the shaft or body could damage the motor.

● When installing the starter motor, clean [A] the starter motor legs and crankcase where the starter motor is grounded.



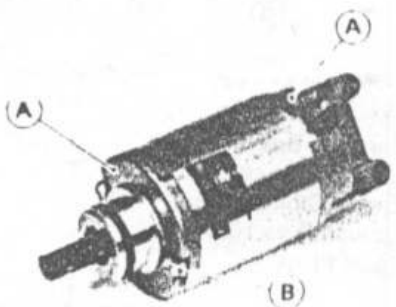
● Apply a small amount of engine oil to the O-ring [A].
● Apply a non-permanent locking agent to the mounting bolt.

Torque – **Starter Motor Mounting Bolts: 11 N-m (1.1 kg-m)**
Starter Motor Terminal Bolt: 4.9 N-m (0.50 kg-m)

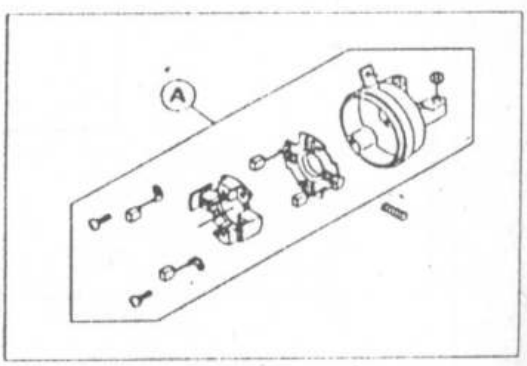


Starter Motor Disassembly

● Take off the starter motor through bolts [B] and remove both end covers [A], and then pull the armature out of the yoke.



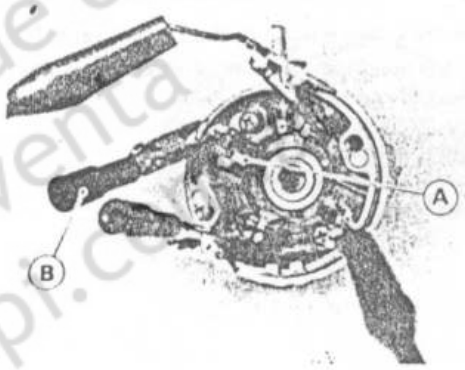
○ It is not necessary to disassemble the bracket assembly [A].



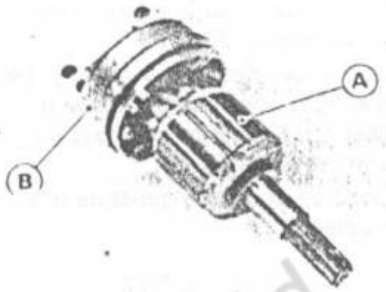
Manual escaneado de onda
No admita su versión
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

Starter Motor Assembly

● Holding the spring and brush [A] with suitable clips [B].

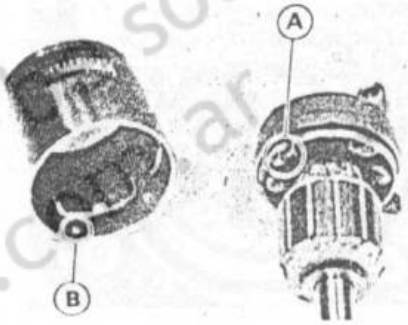


● Insert the armature [A] into the bracket assembly [B].
● Remove the clips.



● Fit the projection [B] of the yoke into the end cover groove [A].
● Tighten the through bolts.

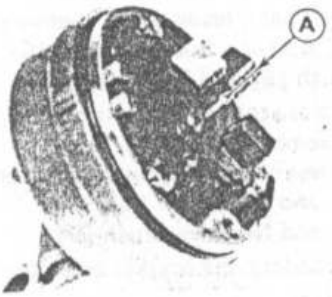
Torque - Starter Motor Through Bolts: 4.9 N-m (0.50 kg-m)



Brush Inspection

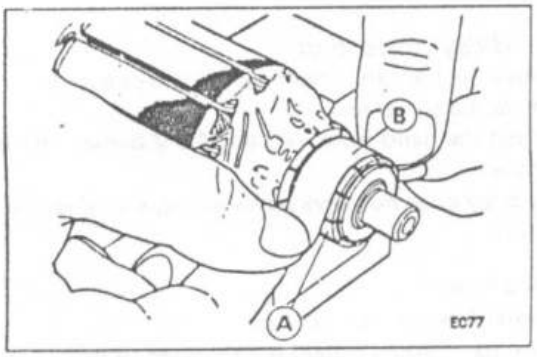
● Measure the length [A] of each brush.
★ If any is worn down to the service limit, replace the bracket assembly.

Starter Motor Brush Length
Standard: 7 mm
Service Limit: 3.5 mm



Commutator Cleaning and Inspection

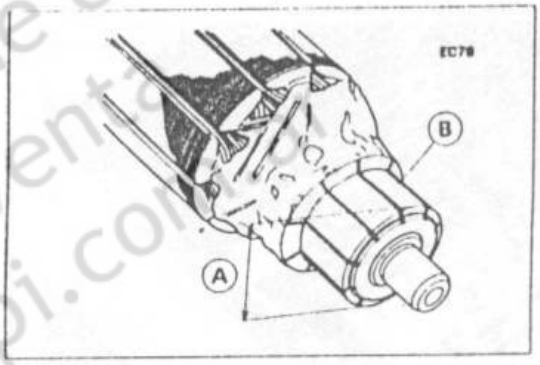
● Smooth the commutator surface [A] if necessary with fine emory cloth [B], and clean out the grooves.



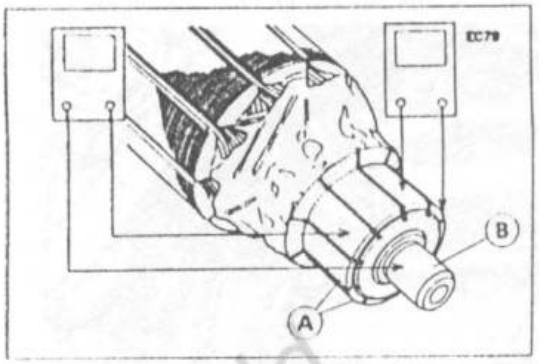
Manual escaneado de onda
No admita su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

● Measure the diameter [A] of the commutator [B].
★ Replace the starter motor with a new one if the commutator diameter is less than the service limit.

Commutator Diameter
Standard: 24 mm
Service Limit: 23 mm



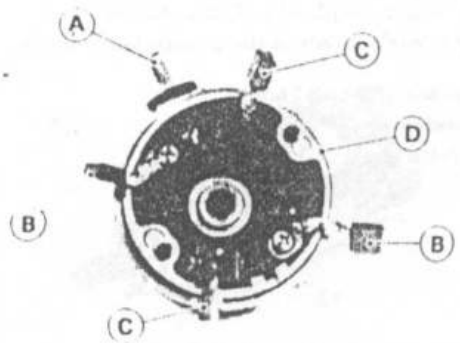
Armature Inspection
● Using the x 1 Ω hand tester range, measure the resistance between any two commutator segments [A].
★ If there is a high resistance or no reading (∞) between any two segments, a winding is open and the starter motor must be replaced.
● Using the highest hand tester range, measure the resistance between the segments and the shaft [B].
★ If there is any reading at all, the armature has a short and the starter motor must be replaced.



NOTE

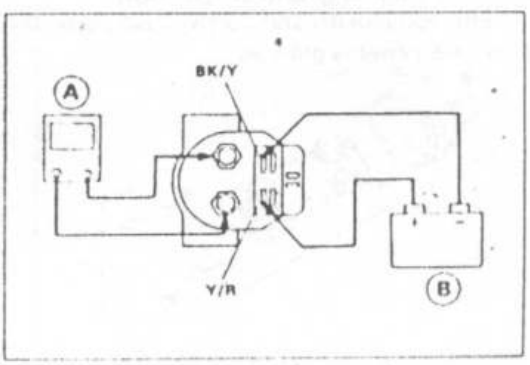
○ *Even if the foregoing checks show the armature to be good, it may be defective in some manner not readily detectable with the hand tester. If all other starter motor and starter motor circuit components check good, but the starter motor still does not turn over or only turns over weakly, replace the starter motor with a new one.*

Brush Lead and Terminal Inspection
● Using the x 1 Ω hand tester range, measure the resistance as shown.
Terminal [A] Bolt and Positive Brush [C]
Negative Brush [B] and End Cover [D]
★ If there is not close to zero ohms, the brush lead has an open. Replace the bracket assembly.
● Using the highest hand tester range, measure the resistance as shown.
Terminal [A] and End Cover [D]
Terminal [A] and Negative Brush [B]
★ If there is any reading, the bracket assembly have a short. Replace the bracket assembly.



Starter Relay Inspection
● Remove the fuel tank (see Fuel System chapter).
● Remove the starter relay.
● Connect the hand tester [A] and 12 V battery [B] to the starter relay as shown.
★ If the relay does not work as specified, the relay is defective. Replace the relay.

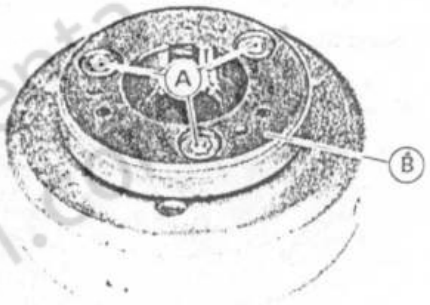
Testing Relay
Tester Range: x 1 Ω range
Criteria: When battery is connected → 0 Ω
When battery is disconnected → ∞ Ω



Manual escaneado de onda
http://www.japi.com.ar
no admita su venta
This manual is not to be sold

Starter Clutch Removal

- Remove:
  Alternator Rotor (see Alternator Rotor Removal)
  Starter Clutch Bolts [A] and Starter Clutch [B]



Starter Clutch Installation

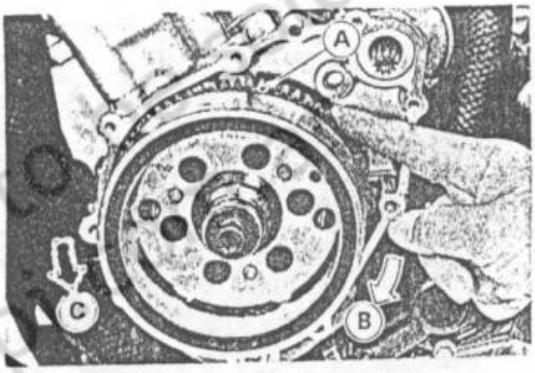
- Apply a non-permanent locking agent to the threads of the starter clutch bolts and tighten them.

Torque - Starter Clutch Bolts: 34 N·m (3.5 kg·m)

Starter Clutch Inspection

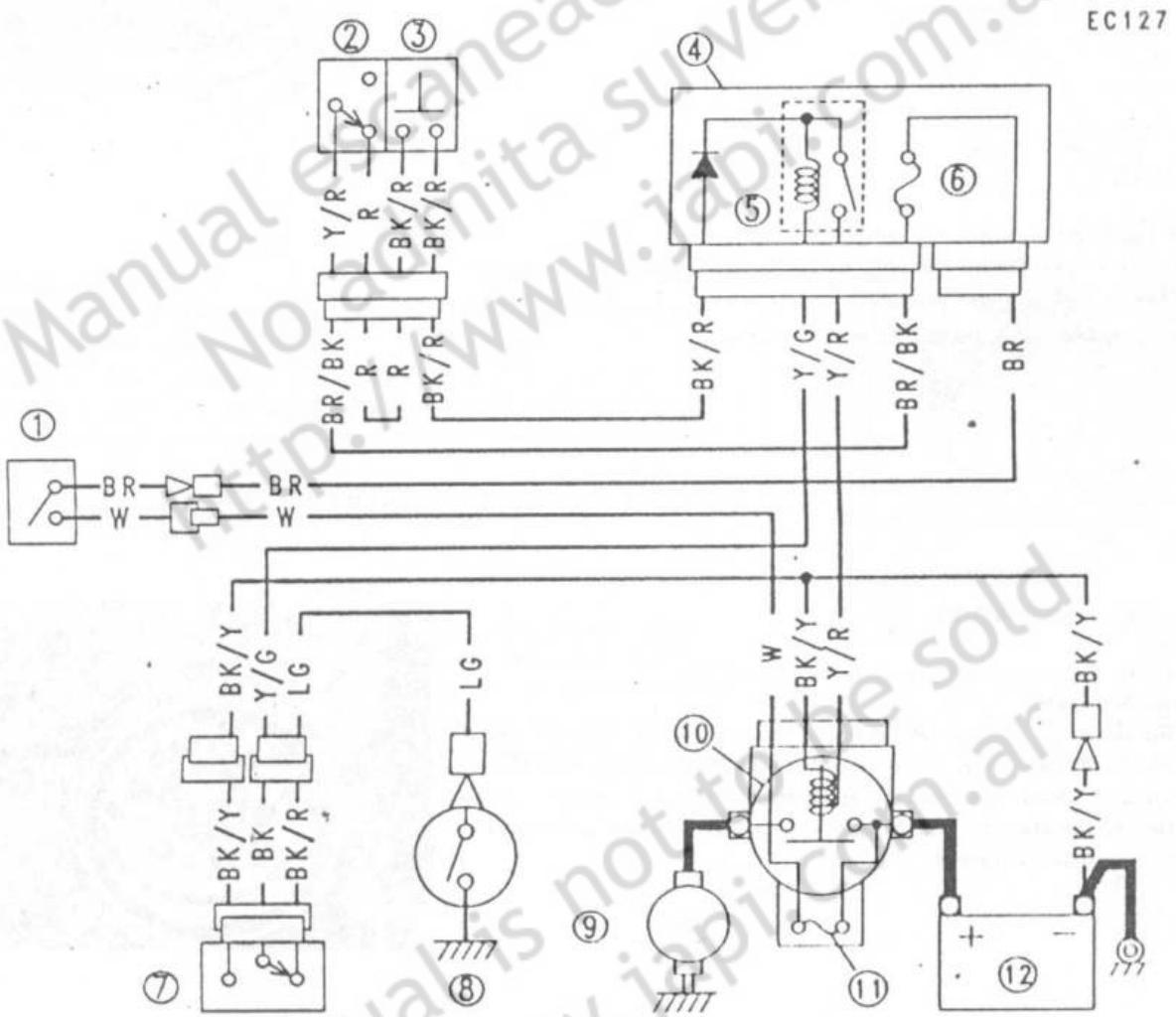
- Remove:
  Alternator Cover (see Alternator Cover Removal)
  Starter Idle Gear
- Turn the starter clutch gear [A] by hand. The starter clutch gear should turn clockwise [B] freely, but should not turn counterclockwise [C].

★If the clutch does not operate as it should or if it makes noise, disassemble the starter clutch, examine each part visually, and replace any worn or damaged parts.



Manual escaneado de ofrecido
No admita su venta
http://www.japi...
This manual is no...
http://www.jap...

Electric Starter Circuit



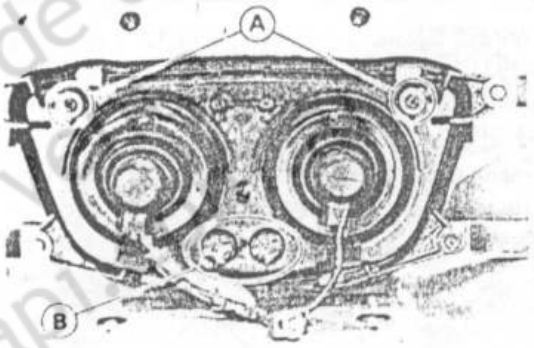
1. Ignition Switch
2. Engine Stop Switch
3. Starter Button
4. Junction Box
5. Starter Circuit Relay
6. Ignition Fuse 10A
7. Starter Lockout Switch
8. Neutral Switch
9. Starter Motor
10. Starter Relay
11. Main Fuse 30A
12. Battery

Manual escaneado de ondaventa
No admite suventa
http://www.japirom.ar
Este manual es not to be sold
http://www.japirom.ar

Lighting System

Headlight Beam Horizontal Adjustment

● Turn the horizontal adjusters [A] on the headlights in or out until both beams point straight ahead.



Headlight Beam Vertical Adjustment

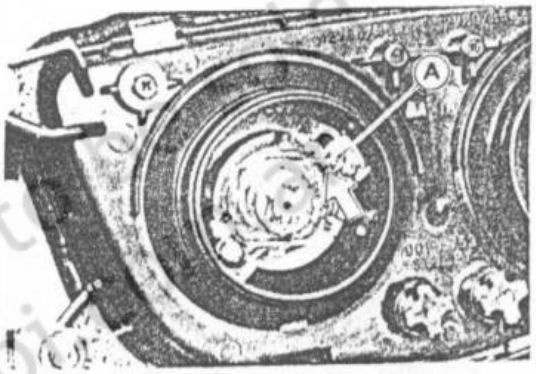
● Turn the vertical adjusters [B] on the headlights in or out to adjust the headlights vertically.

NOTE

○ *On high beam, the brightest points should be slightly below horizontal with the motorcycle on its wheels and the rider seated. Adjust the headlight(s) to the proper angle according to local regulations.*

Headlight Bulb Replacement

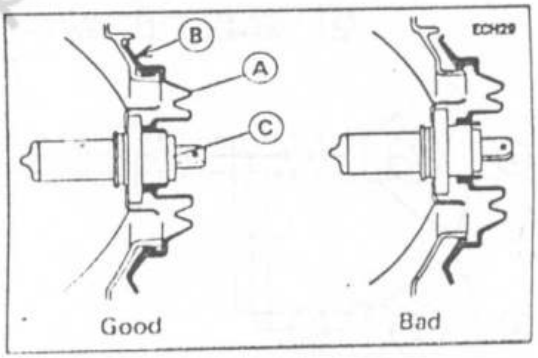
● Remove:
Upper Fairing (see Frame chapter)
Headlight Connector
Headlight Bulb Dust Cover
Hook [A]



CAUTION

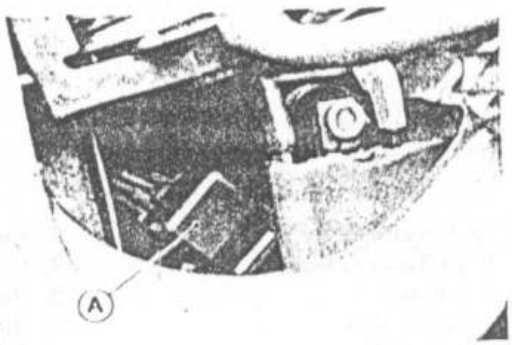
When handling the quartz-halogen bulb, never touch the glass portion with bare hands. Always use a clean cloth. Oil contamination from hands or dirty rags can reduce bulb life or cause the bulb to explode.

● Replace the headlight bulb.
● Fit the dust cover [A] with the Top mark [B] upward onto the bulb [C] firmly as shown.
● After installation, adjust the headlight aim (see this chapter).



High Beam Relay Inspection

● Remove:
Fuel Tank (see Fuel System chapter)
High Beam Relay [A]



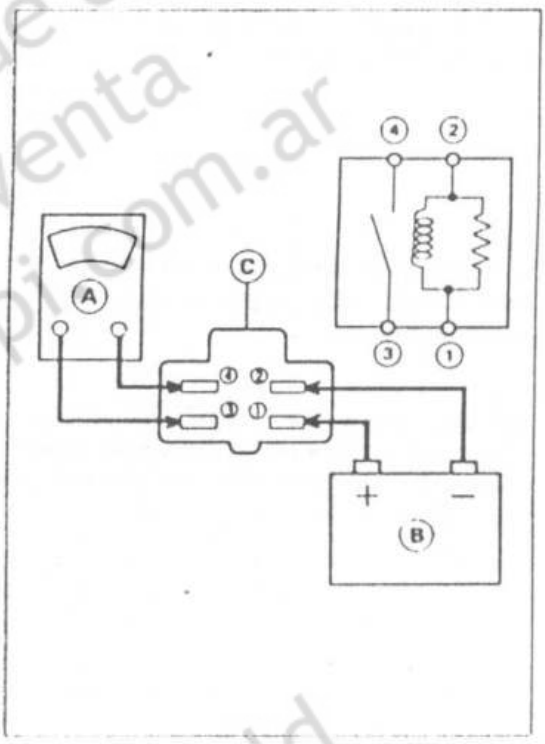
● Connect the hand tester [A] and 12 V battery [B] to the high beam relay [C] as shown.

★ If the relay does not work as specified, the relay is defective. Replace the relay.

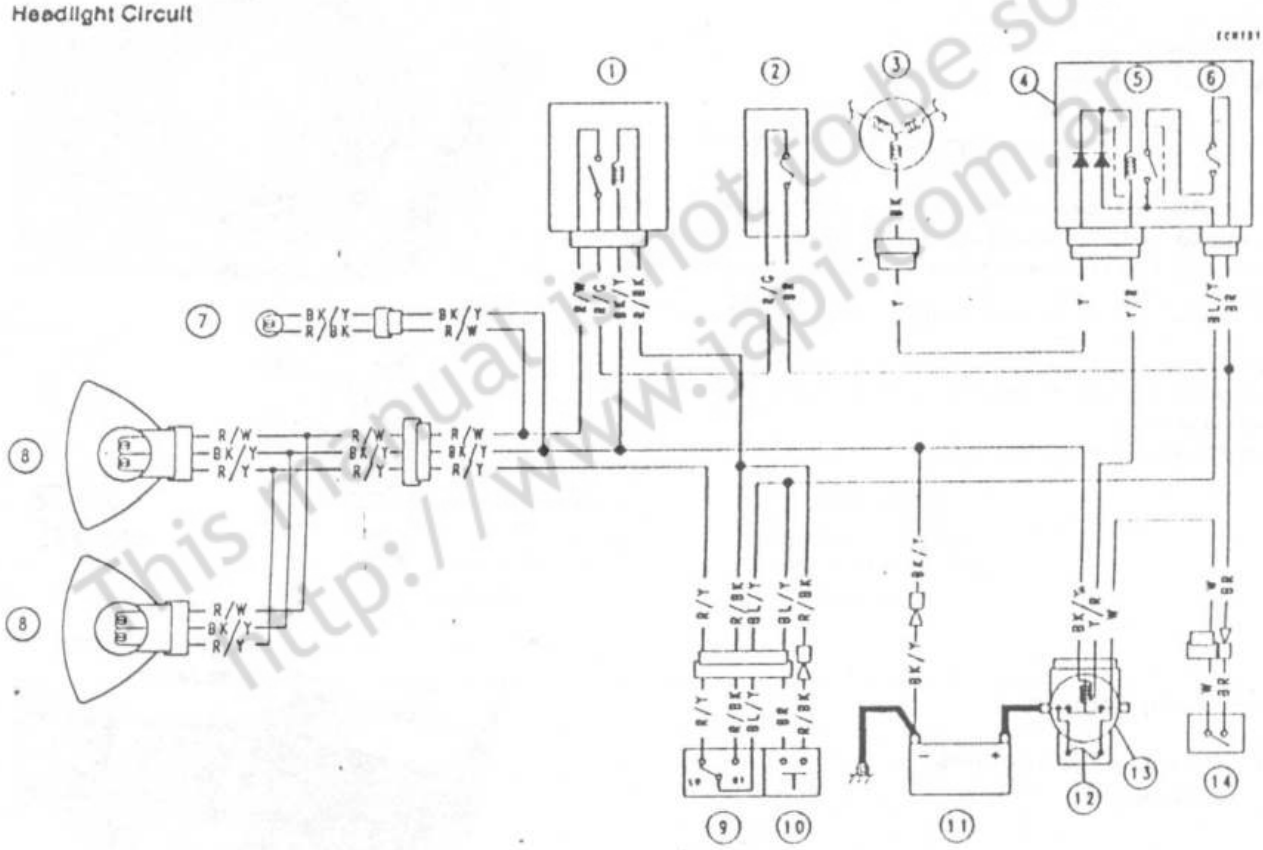
Testing Relay

Tester Range: × 1 Ω range

Criteria: **When battery is connected → 0 Ω**
When battery is disconnected → ∞ Ω



Headlight Circuit

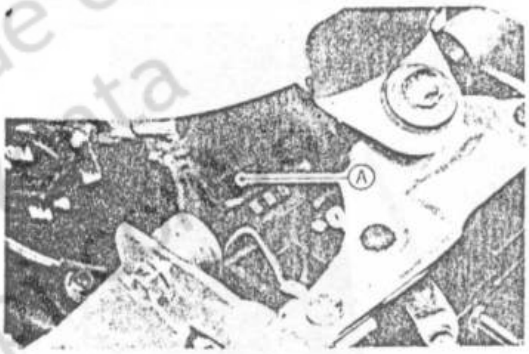


1. High Beam Relay
2. High Beam Fuse 15A
3. Alternator
4. Junction Box
5. Headlight Relay
6. Headlight Fuse 10A
7. High Beam Indicator Light
8. Headlights
9. Dimmer Switch
10. Passing Button
11. Battery
12. Main Fuse 30A
13. Starter Relay
14. Ignition Switch

Manual escaneado de onda
No admita su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

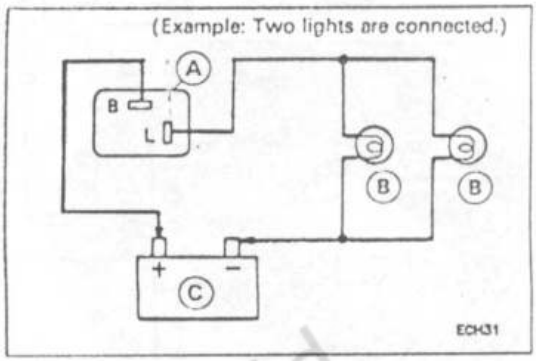
Turn Signal Relay Inspection

● Remove:
Fuel Tank (see Fuel System chapter)
Turn Signal Relay [A]



● Connect one 12 V battery and turn signal lights as indicated in the figure, and count how many times the lights flash for one minute.

[A] Turn Signal Relay
[B] Turn Signal Lights
[C] 12 V Battery



★If the lights do not flash as specified, replace the turn signal relay

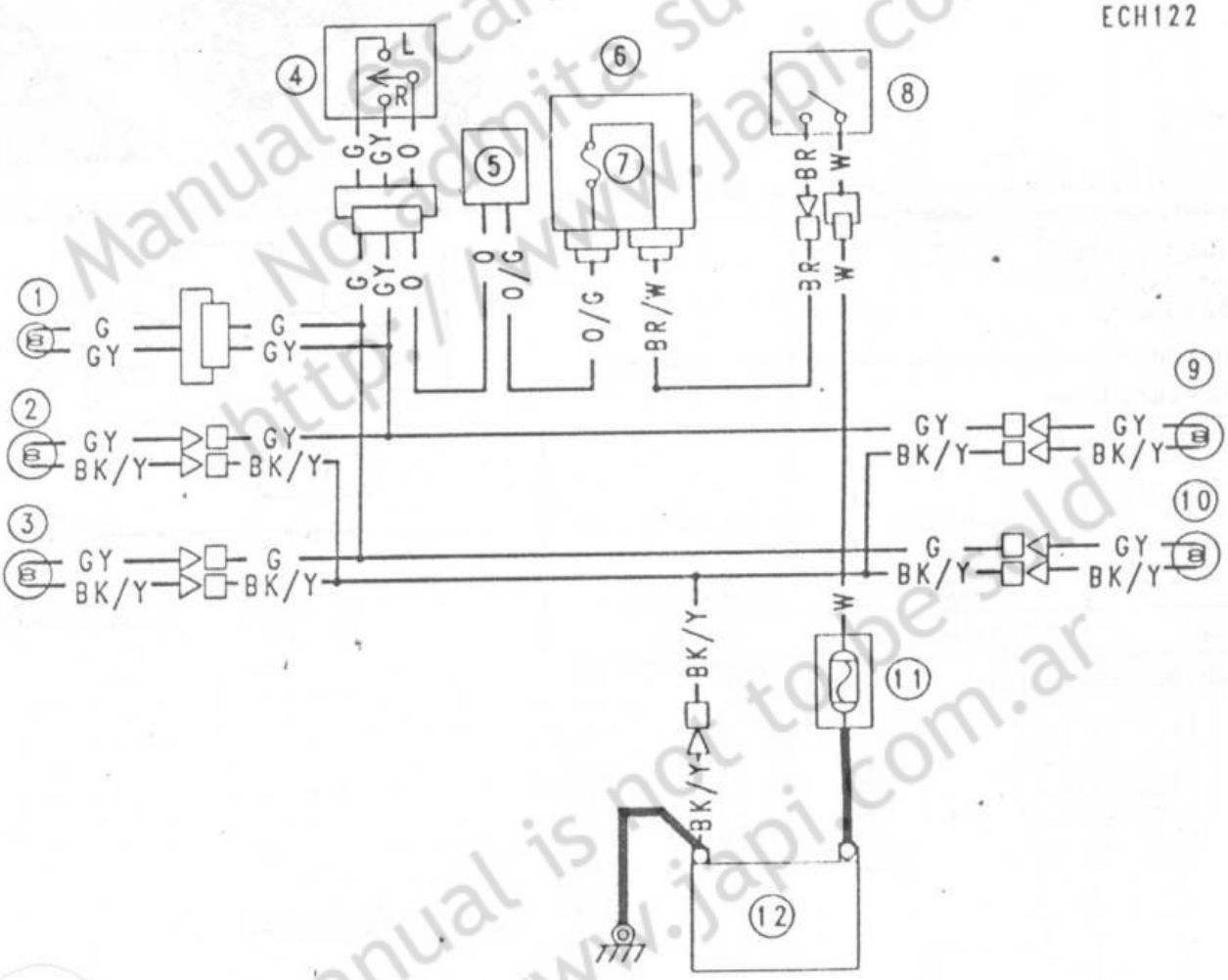
Testing Turn Signal Relay

Load		
The Number of Turn Signal Lights	Wattage(W)	Flashing times (c/m*)
1	21 or 23	Light stays on
2	42 or 46	75 – 95

(*): Cycle(s) per minute

Manual escaneado de onda
No admita su vida
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

Turn Signal Light Circuit



1. Turn Signal Indicator Light
2. Front Right Turn Signal Light
3. Front Left Turn Signal Light
4. Turn Signal Switch
5. Turn Signal Relay
6. Junction Box
7. Turn Signal Fuse 10A
8. Ignition Switch
9. Rear Right Turn Signal Light
10. Rear Left Turn Signal Light
11. Main Fuse 30A
12. Battery

Manual escaneado de onda
No admite su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

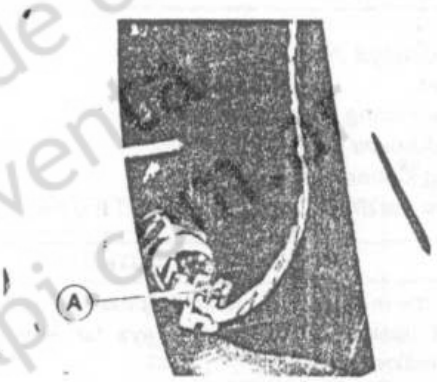
Radiator Fan System

Fan System Circuit Inspection

- Disconnect the lead connector [A] from the radiator fan switch.
- Turn the ignition switch ON.
- Using an auxiliary wire, connect the radiator fan switch leads.

★If the fan rotates, inspect the fan switch.

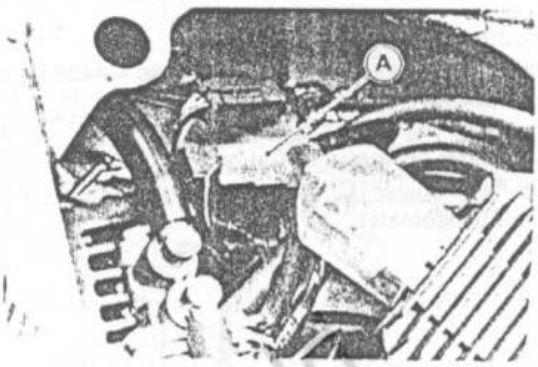
★If the fan does not rotate, inspect the following.
- Leads and Connectors
- Main Fuse and Fan Fuse
- Fan Motor



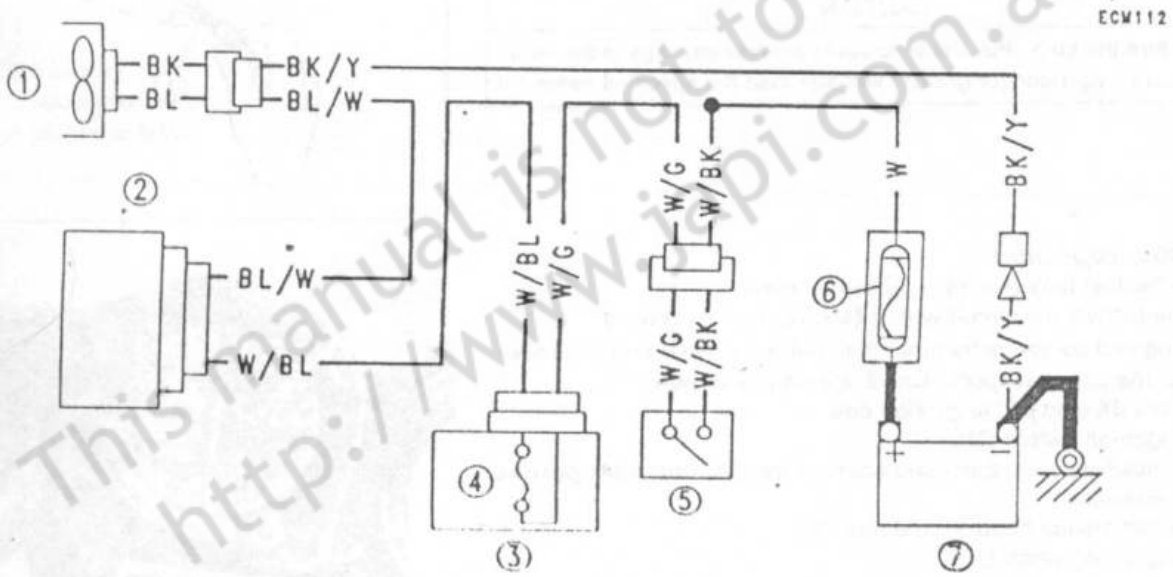
Fan Motor Inspection

- Remove the fuel tank (see Fuel System chapter).
- Disconnect the 2 pin connector [A] in the fan motor leads.
- Using two auxiliary wires, supply battery [B] power to the fan motor.

★If the fan does not rotate, the fan motor is defective and must be replaced.



Radiator Fan Circuit



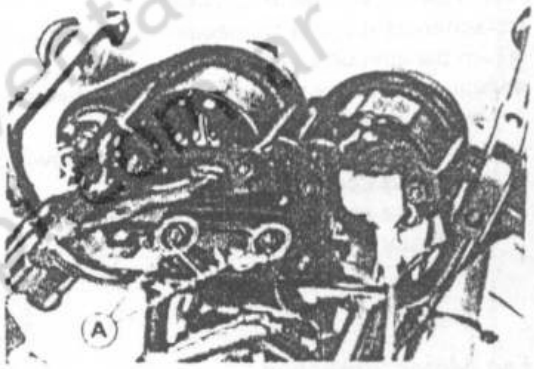
1. Radiator Fan
2. Radiator Fan Switch
3. Junction Box
4. Fan Fuse 10A
5. Ignition Switch
6. Main Fuse 30A
7. Battery

Manual escaneado de onda
Tu manual es admita su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

Meters, Gauge

Meter, Gauge Removal

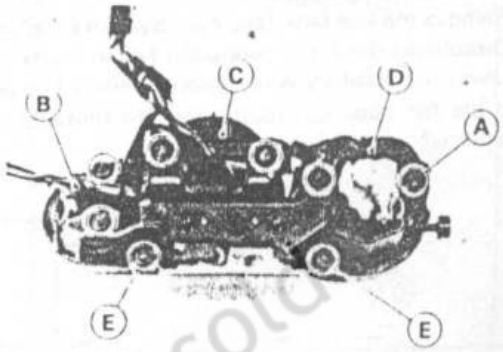
- Remove:
  - Upper Fairing (see Frame chapter)
  - Speedometer Cable Upper End
  - Wiring Connectors
- Remove the meter unit by taking off the mounting nuts [A].



CAUTION
Place the meter or gauge so that the face is up. If a meter or gauge is left upside down or sideways for any length of time, it will malfunction.

Meter, Gauge Disassembly

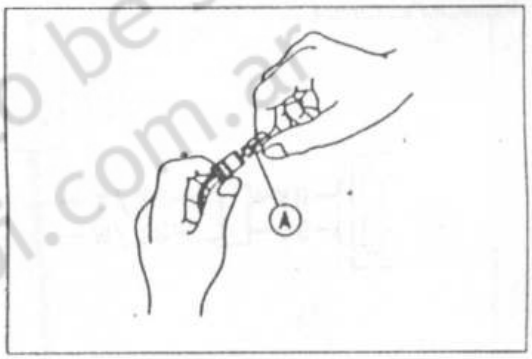
- Remove the meter unit (see Meter, Gauge Removal).
- Remove:
  - Nuts [A] and Screws [E]
  - Water Temperature Gauge [B]
  - Tachometer [C]
  - Speedometer [D]



Bulb Replacement

- To remove the wedge-base type bulb [A], pull the bulb out of the socket.

CAUTION
Do not turn the bulb. Pull the bulb out to prevent damage to the bulb. Do not use bulb rated for greater wattage than the specified value.



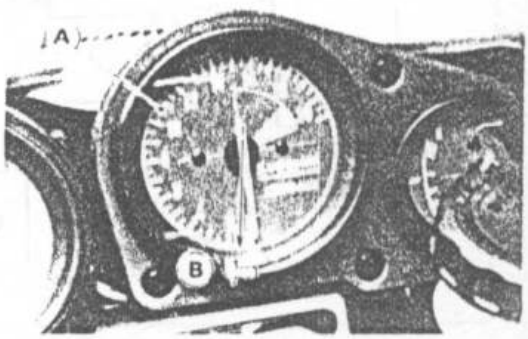
Tachometer Inspection

- Remove the fuel tank (see Fuel System chapter).
- Check the tachometer circuit wiring (see Wiring Inspection)

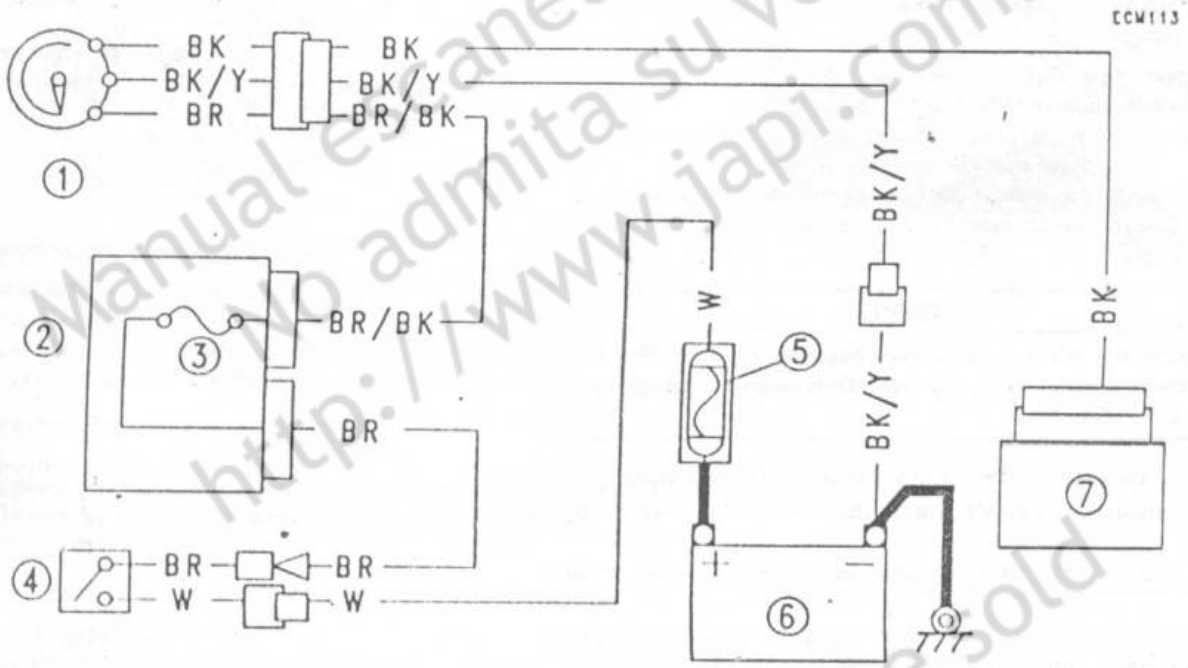
★If all wiring and components other than the tachometer unit [A] check out good, the unit is suspect. Check the unit as shown.

○Remove the BK lead of the ignition coil.
○Turn the ignition switch ON.
○Using an auxiliary wire, open and connect the BK lead to the positive terminal repeatedly.
○Then the tachometer hand should flick [B].
○Turn the ignition switch OFF.

★If the hand does not flick, replace the tachometer unit.



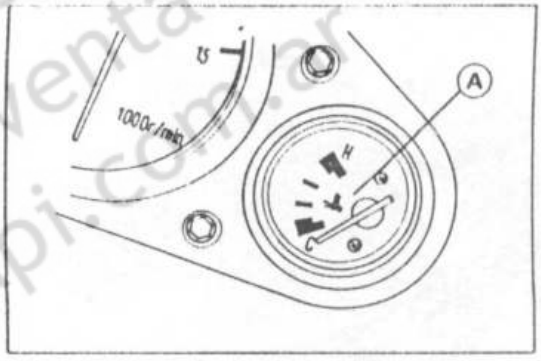
Tachometer Circuit



1. Tachometer
2. Junction Box
3. Ignition Fuse 10A
4. Ignition Switch
5. Main Fuse 30A
6. Battery
7. IC Igniter

Manual escaneado de onda
No admita su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

Water Temperature Gauge Inspection



- Remove:
  Left Lower Fairing
- Prepare an auxiliary wire, and check the operation of the water temperature gauge [A].

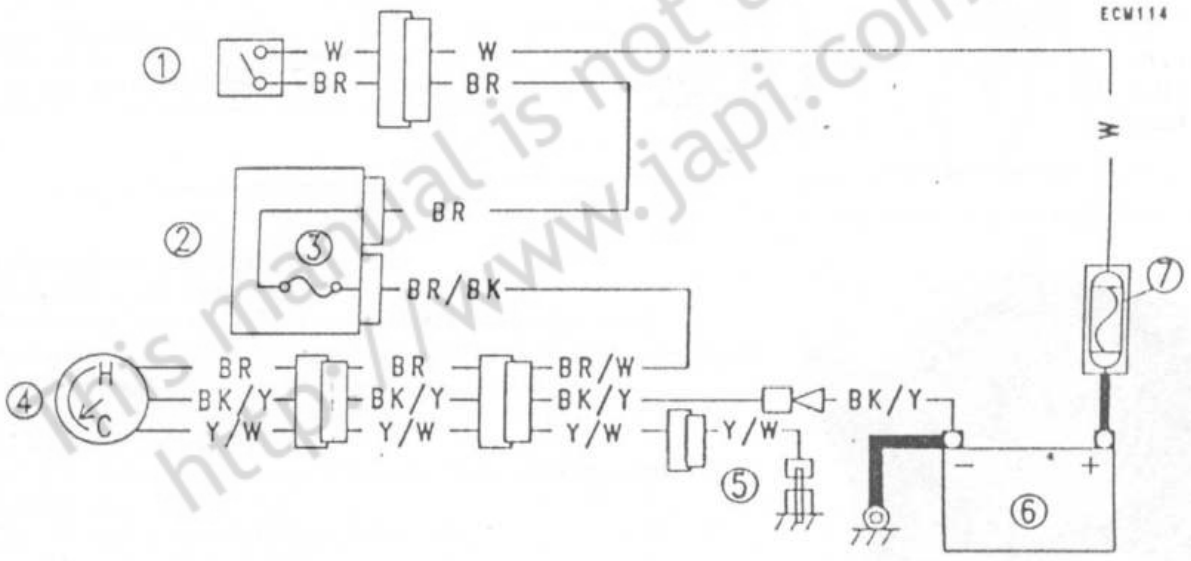
Gauge Operation Test
Ignition Switch Position: ON
Wire Location: Water temperature sensor female connector (disconnected)
Results: Gauge should read C when sensor lead is opened.
Gauge should read H when sensor lead is grounded to engine.

CAUTION
Do not ground the wiring longer than necessary. After the hand swings to the H position, stop the test. Otherwise the gauge could be damaged.

☆If the gauge readings are correct, the water temperature sensor is bad
★If these readings are not correct, the trouble is with the gauge and/or wiring.
- Check the water temperature gauge circuit wiring (see Wiring Inspection).

★If all wiring and components other than the water temperature gauge unit check out good, the gauge is defective.

Water Temperature Gauge Circuit



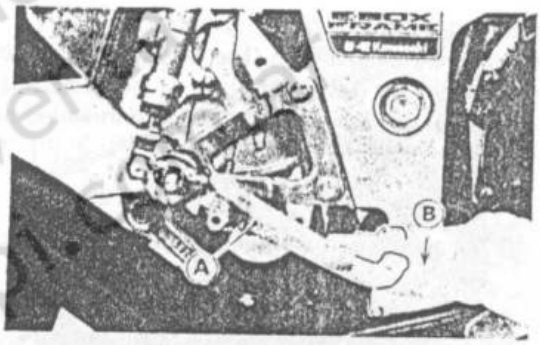
1. Ignition Switch
2. Junction Box
3. Ignition Fuse 10A
4. Water Temperature Gauge
5. Water Temperature Sensor
6. Battery
7. Main Fuse 30A

Manual escaneado de onta
No admita su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

Brake Light Timing Inspection

- Turn on the ignition switch.
- Check the operation of the rear brake light switch by depressing the brake pedal [A].
- If it does not as specified, adjust the brake light timing.

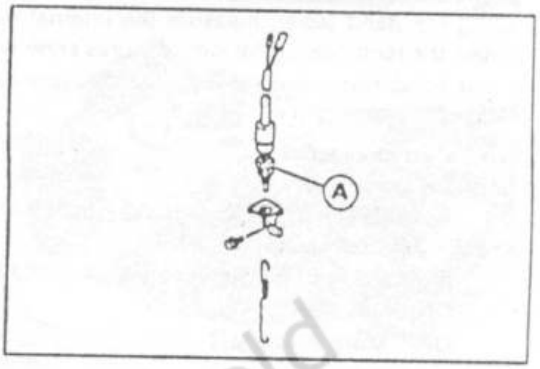
Brake Light Timing
Standard: **On after about 10 mm of pedal travel [B]**



Brake Light Timing Adjustment

Brake light timing is adjusted by changing the position of the rear brake light switch.

- Adjust the position of the switch so that the brake light goes on after the specified pedal travel by turning the adjusting nut [A].



CAUTION
To avoid damaging the electrical connections inside the switch, be sure that the switch body does not turn during adjustment.

Switch Inspection

- Using a hand tester, check to see that only the connections shown in the table have continuity (about zero ohms).
- For the handlebar switches and the ignition switch, refer to the tables in the Wiring Diagram.
- ★If the switch has an open or short, repair it to or replace it with a new one.

Special Tool – Hand Tester: 57001-1394

Rear Brake Light Switch Connections

	BR	BL
When brake pedal is pushed down	○	○
When brake pedal is released		

Side Stand Switch Connections

	G/W	BK/Y
When side stand is up	○	○
When side stand is down		

Neutral Switch Connections

	SW. Terminal	
When transmission is in neutral *	○	○
When transmission is not in neutral		

Oil Pressure Switch Connections*

	SW. Terminal	
When engine is stopped	○	○
When engine is running		

*: Engine lubrication system is in good condition

Manual escaneado de onda
http://www.japi.com.ar
No admita su venta
Este manual is not to be sold
http://www.japi.com.ar

Radiator Fan Switch Inspection

- Remove the fan switch (see Cooling System chapter).
- Suspend the switch [A] in a container of coolant so that the temperature-sensing projection and threaded portion are submerged.
- Suspend an accurate thermometer [B] in the coolant.

NOTE

○ *The switch and thermometer must not touch the container sides or bottom.*

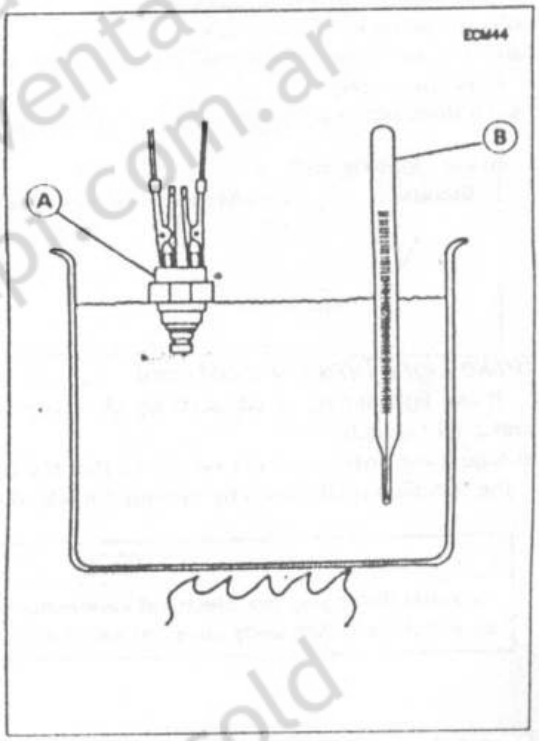
- Place the container over a source of heat and gradually raise the temperature of the coolant while stirring the coolant gently.
- Using the hand tester, measure the internal resistance of the switch across the terminals at the temperatures shown in the table.

★If the hand tester does not show the specified values, replace the switch.

Fan Switch Resistance

○ Rising temperature:
From OFF to ON at 93 ~ 103°C (199 ~ 217°F)

○ Falling temperature:
From ON to OFF at 91 ~ 95°C (196 ~ 203°F)
ON: Less than 0.5 Ω
OFF: More than 1 MΩ



Water Temperature Sensor Inspection

- Remove the water temperature sensor (see Cooling System chapter).
- Suspend the sensor [A] in a container of coolant so that the temperature-sensing projection and threaded portion are submerged.
- Suspend an accurate thermometer [B] in the coolant.

NOTE

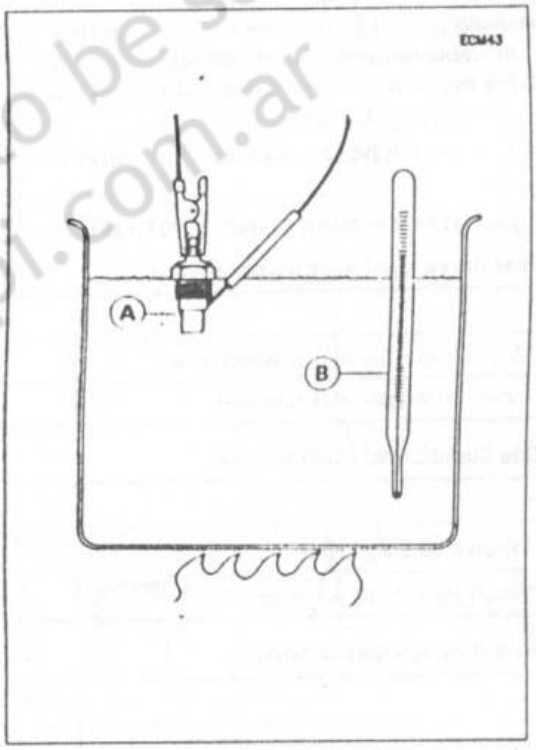
○ *The sensor and thermometer must not touch the container side or bottom.*

- Place the container over a source of heat and gradually raise the temperature of the coolant while stirring the coolant gently.
- Using the hand tester, measure the internal resistance of the sensor across the terminal and the body at the temperatures shown in the table.

★If the hand tester does not show the specified values, replace the sensor.

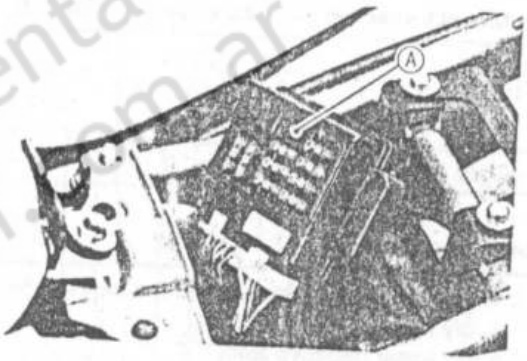
Water Temperature Sensor

80°C (176°F): 47 ~ 57 Ω
100°C (212°F): 25 ~ 30 Ω



Manual escaneado de onda
http://www.japi.com.ar
This manual is not to be sold

The junction box [A] has fuses, relays, and diodes. The relays and diodes can not be removed.



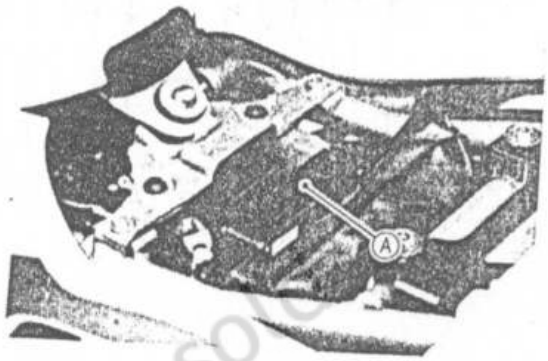
Junction Box Fuse Circuit Inspection

- Remove the seats (see Frame chapter).
- Remove the junction box [A].
- Pull off the connectors from the junction box.
- Make sure all connector terminals are clean and tight, and none of them have been bent.

★Clean the dirty terminals, and straighten slightly-bent terminals.

- Check conductivity of the numbered terminals with the hand tester.

★If the tester does not read as specified, replace the junction box.



Fuse Circuit Inspection

Tester Connection	Tester Reading (Ω)
1 - 1A	0
1 - 2	0
3A - 4	0
6 - 5	0
6 - 10	0
6 - 7	0
6 - 17	0

Tester Connection	Tester Reading (Ω)
1A - 8	∞
2 - 8	∞
3A - 8	∞
6 - 2	∞
6 - 3A	∞
17 - 3A	∞

Starter Circuit/Headlight Relay Inspection

- Remove the junction box.
- Check conductivity of the following numbered terminals by connecting the hand tester and one 12 V battery to the junction box as shown.

★If the tester does not read as specified, replace the junction box.

Relay Circuit Inspection (with the battery disconnected)

	Tester Connection	Tester Reading (Ω)
Headlight Relay	7 - 8	∞
	7 - 13	∞
	(+) (-) 13 9	Not ∞ **

	Tester Connection	Tester Reading (Ω)
Starter Circuit Relay	9 - 11	∞
	12 - 13	∞
	(+) (-) 13 - 11	∞
	(+) (-) 12 - 11	Not ∞ **

(**): The actual reading varies with the hand tester used.
(+): Apply tester positive lead.
(-): Apply tester negative lead.

Manual escaneado de onda
No admita su venta
http://www.japi.com.ar
The manual is not to be sold
http://www.japi.com.ar

Relay Circuit Inspection (with the battery connected)

	Battery Connection (+) (−)	Tester Connection	Tester Reading (Ω)
Headlight Relay	9 − 13	7 − 8	0
Starter Circuit Relay	11 − 12	(+) (−) 13 − 11	Not ∞ **

(**): The actual reading varies with the hand tester used.
(+): Apply tester positive lead.
(−): Apply tester negative lead.

Diode Circuit Inspection

- Remove the junction box.
- Check conductivity of the following pairs of terminals.

Diode Circuit Inspection

Tester Connection	13-8, 13-9, 12-11, 12-14, 16-14, 16-14

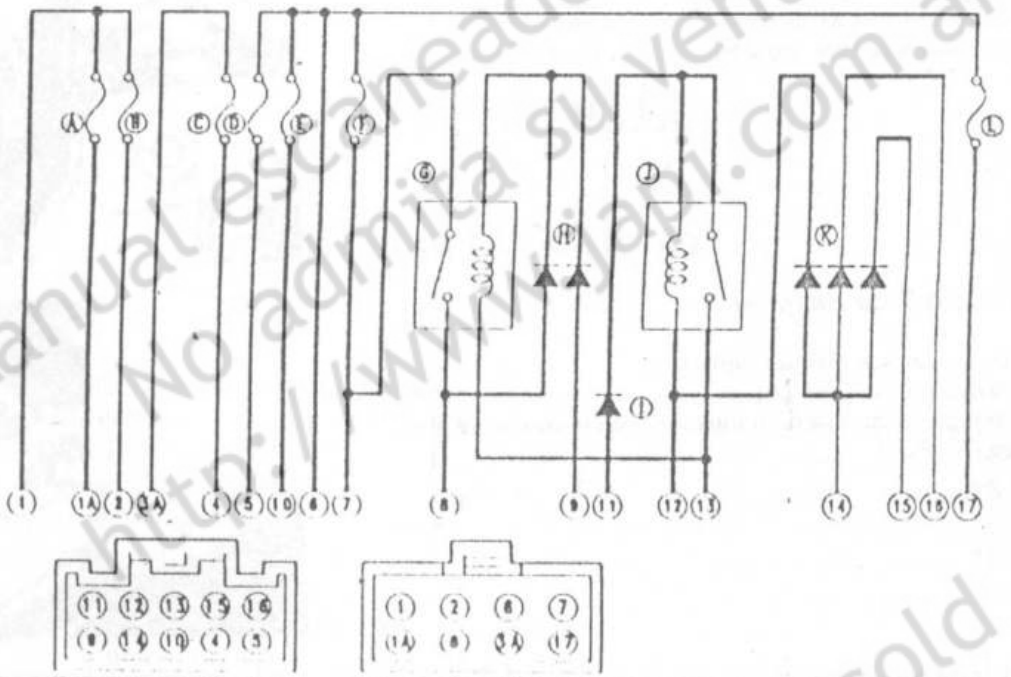
★The resistance should be low in one direction and more than ten times as much in the other direction. If any diode shows low or high in both directions, the diode is defective and the junction box must be replaced.

NOTE

○ *The actual meter reading varies with the meter used and the individual diodes, but, generally speaking, the lower reading should be from zero to one half the scale.*

Manual escaneado de onda
No admite suventa
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

Junction Box Internal Circuit



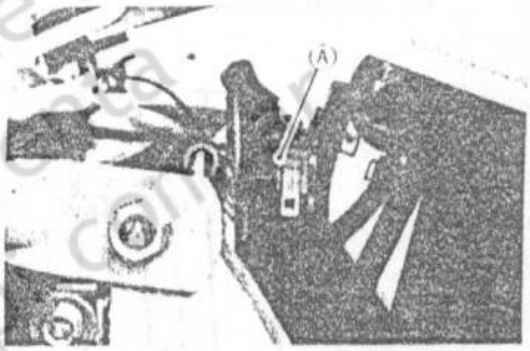
A. Accessory Fuse 10A
B. Fan Fuse 10A
C. Turn Signal Fuse 10A
D. Horn Fuse 10A
E. Ignition Fuse 10A
F. Headlight Fuse 10A
G. Headlight Relay
H. Headlight Diodes
I. Starter Diode
J. Starter Circuit Relay
K. Interlock Diodes
L. Taillight Fuse 10A

Manual escaneado de onda
No admita suventa
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar

Fuse

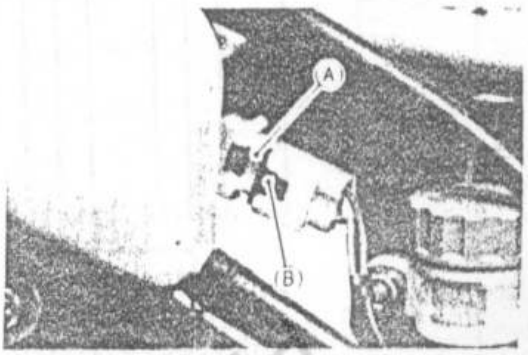
30A Main Fuse Removal

- Remove:
  Fuel Tank (see Fuel System chapter)
  Starter Relay and 30A Main Fuse Connector [A]
- Pull out the main fuse from the starter relay with needle nose pliers



15A High Beam Fuse Removal

- Remove:
  Right Side Cover (see Frame chapter)
  15A High Beam Fuse Case [A]
- Pull out the high beam fuse from the case with needle nose pliers
  [B] Spare 15A Fuse

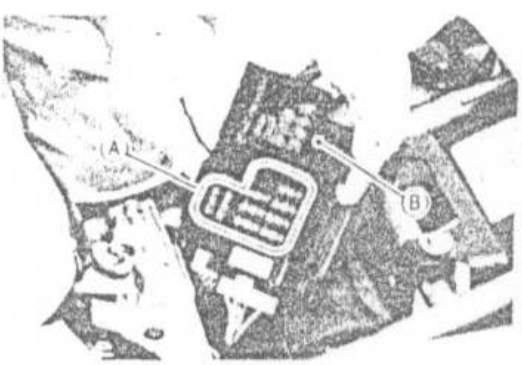


Junction Box Fuse Removal

- Remove the seats (see Frame chapter).
- Remove the junction box.
- Unlock the hook to lift up the lid.
- Pull the fuses straight out of the junction box with needle nose pliers.

Fuse Installation

- If a fuse fails during operation, inspect the electrical system to determine the cause, and then replace it with a new fuse of proper amperage.
- Install the junction box fuses [A] on the original position as specified on the lid [B].

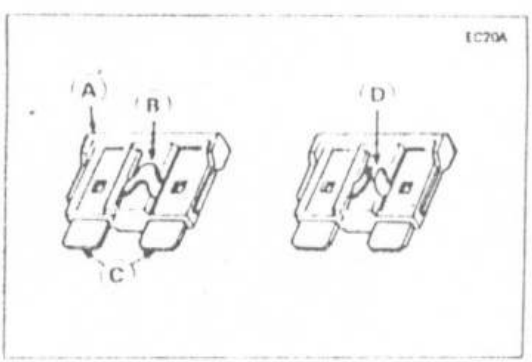


Fuse Inspection

- Remove the fuse (see Fuse Removal).
- Inspect the fuse element.

★If it is blown out, replace the fuse. Before replacing a blown fuse, always check the amperage in the affected circuit. If the amperage is equal to or greater than the fuse rating, check the wiring and related components for a short circuit.

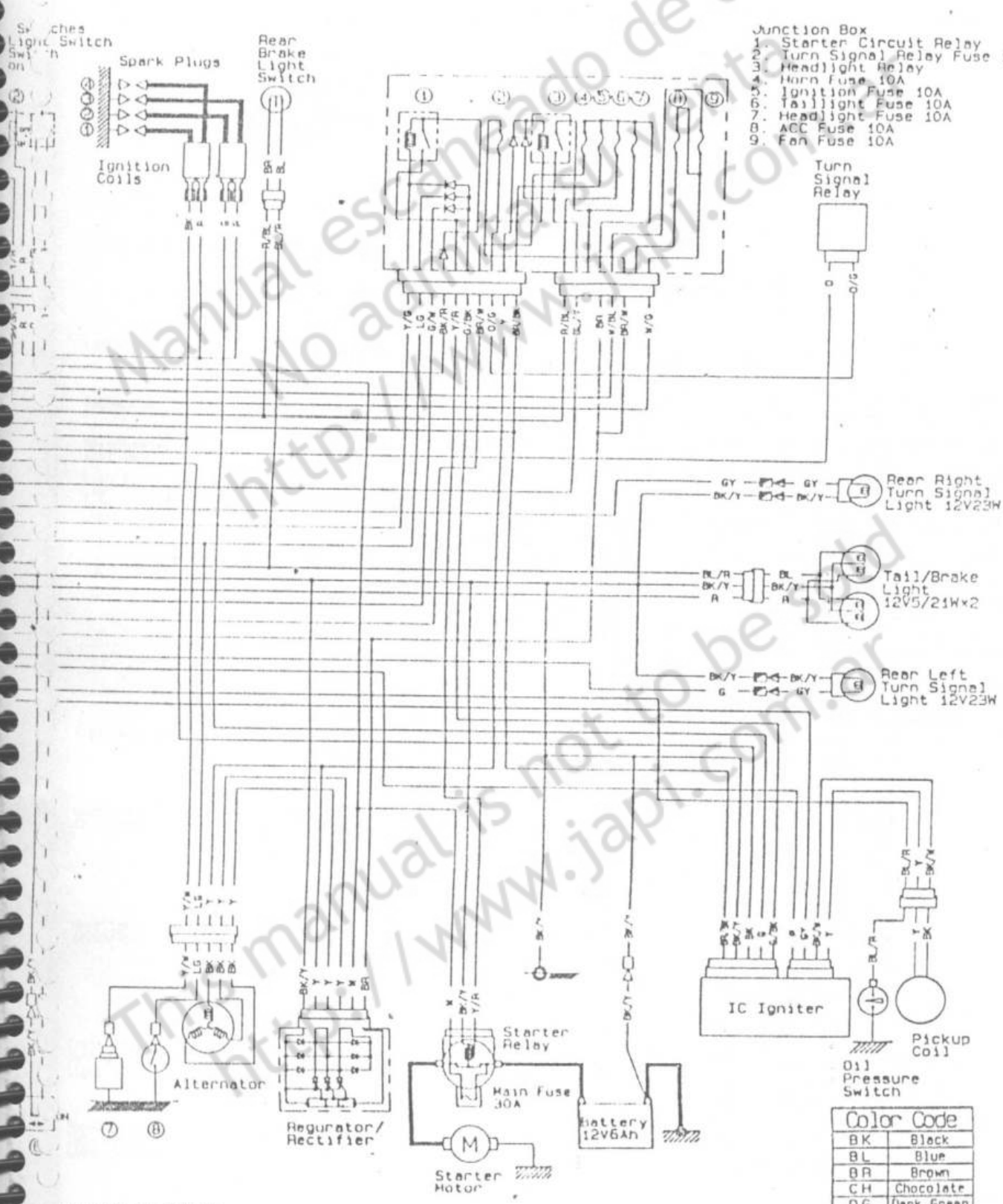
Housing [A]
Fuse Element [B]
Terminals [C]
Blown Element [D]



CAUTION

When replacing a fuse, be sure the new fuse matches the specified fuse rating for that circuit. Installation of a fuse with a higher rating may cause damage to wiring and components.

Manual escaneado de onda
http://www.japi.com.ar
This manual is not to be sold



Color Code	
BK	Black
BL	Blue
BR	Brown
CH	Chocolate
DG	Dark Green
G	Green
GY	Gray
LB	Light Blue
LG	Light Green
O	Orange
P	Pink
PU	Purple
R	Red
W	White
Y	Yellow

IGNITION SWITCH CONNECTIONS

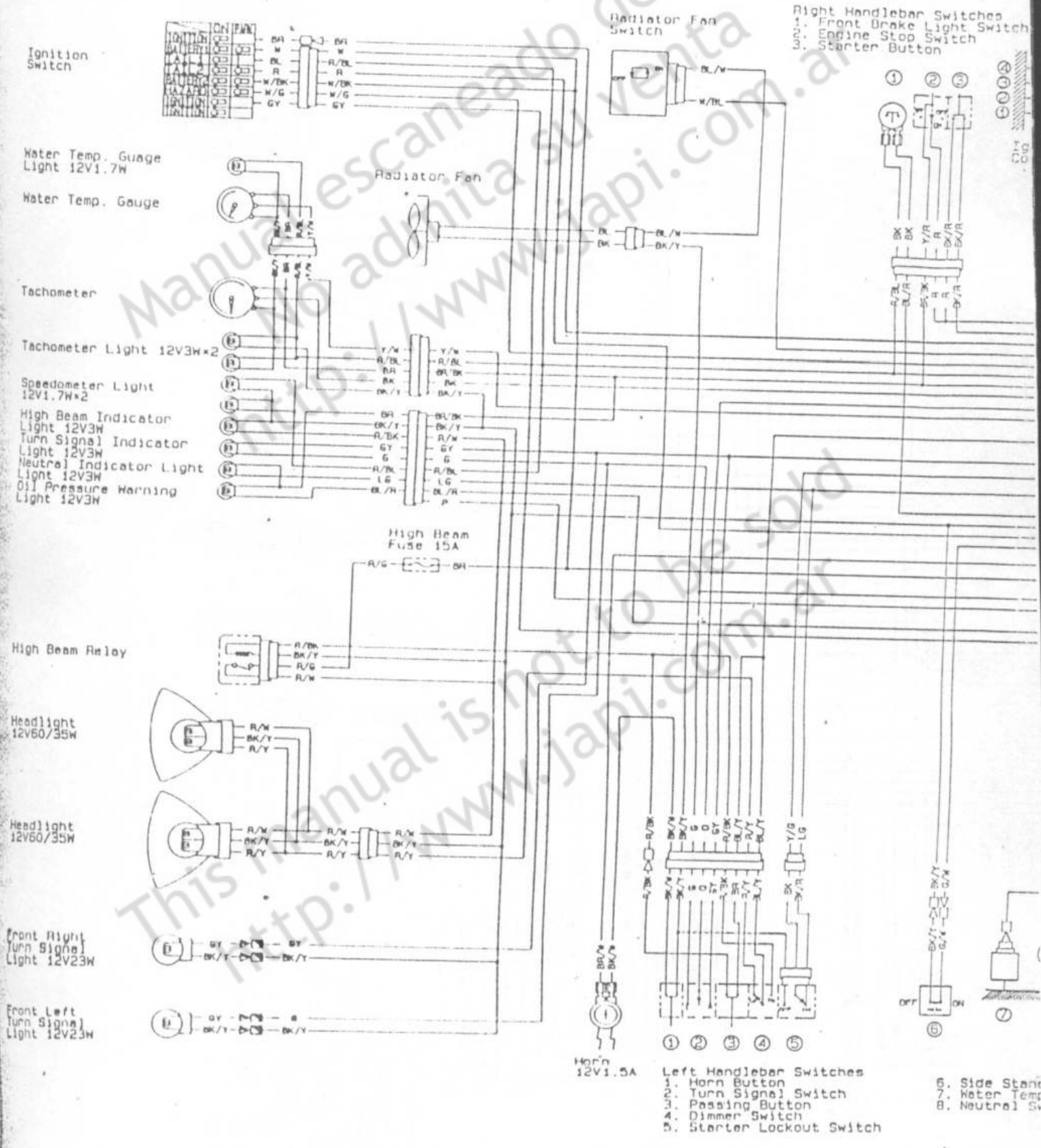
Ignition	Battery1	Tail1	Tail2	Battery2	Hazard	Ignition	Ignition
BR	W	BL	R	W/BK	W/G	GY	-
○		○		○		○	
	○		○		○		

RIGHT HANDLEBAR SWITCH CONNECTIONS

Front Brake Light Switch			Engine Stop Switch			Starter Button		
Color	BK	BK	Color	Y/R	R	Color	BK/R	BK/R
Brake Lever			OFF					
Pulled In	○		RUN	○		Push	○	

(98051-1691A) C

Wiring Diagram



LEFT HANDLEBAR SWITCH CONNECTIONS

Horn Button			Turn Signal Switch				Passing Button			Dimmer Switch				Starter Lockout Switch			
Color	BK/W	BK/Y	Color	G	O	GY	Color	BA	BA/BK	Color	A/Y	BL/Y	R/BK	Color	BK/Y	BK	BK/R
			L	○			Push	○		HI		○		Clutch Lever			
Push	○		OFF				Release							Released		○	
			R		○					LO	○			Pulled in	○		

IGNITION			
	Ignition	Battery1	Te
Color	BR	W	
OFF, LOCK			
ON	○	○	
P		○	

Manual escaneado de onda
No admite su venta
http://www.japi.com.ar
This manual is not to be sold
http://www.japi.com.ar