5.11a . . . then unscrew the bolt (arrowed) . . .

5.11b . . . and remove the fairing, noting how the trim panels locate at the front (arrowed) . . .

5.11c . . . and in the middle

bike, noting how the front trim panels locate **(see illustrations)**.

Installation

12 Installation is the reverse of removal. Make sure the wiring connectors are correctly and securely connected. Make sure the tabs on the front and in the middle of the front trim panels locate into the slots in the fairing **(see illustrations 5.11b and c)**.

Fairing side panels – all models

Removal

13 On J and K models, turn the three quick-release fasteners along the bottom edge of the panel 1/4 turn anti-clockwise, then carefully draw the bottom edge out and down to release the tabs along the top edge from the slots in the fairing **(see illustration)**.

14 On L, N and R models, release the two trim clips securing the top of the panel and turn the three quick-release fasteners 1/4 turn anti-clockwise **(see illustration)**. Lift the top section off the locating pin in the middle **(see illustration)**, then carefully draw the panel away to release the tabs along the front and top from the slots in the fairing.

Installation

15 Installation is the reverse of removal. Make sure the tabs locate correctly into the slots in the fairing.

Lower fairing – all models

Removal

16 Remove the fairing side panels (see above).

17 Remove the three screws securing each side, then carefully lower the fairing and manoeuvre it from under the bike **(see illustrations)**.

Installation

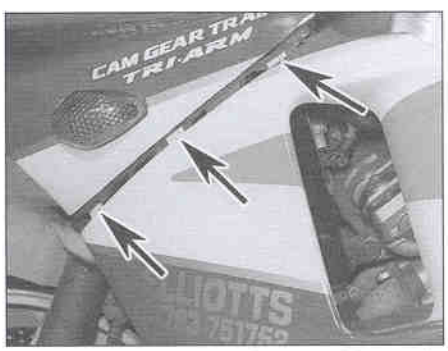
18 Installation is the reverse of removal.

Air ducts (J and K models) and trim panels (L, N and R models)

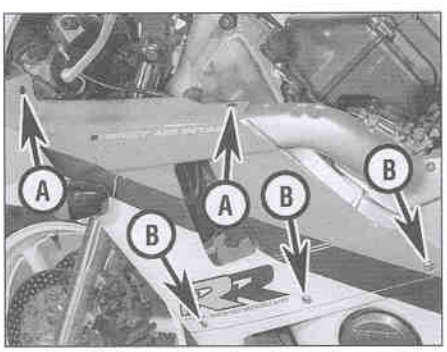
Removal

19 On J and K models, an air duct runs between the front of the fairing and the frame on each side. Remove the screw securing the duct to the frame and remove the duct, noting how it locates onto the fairing at the front **(see illustration 5.2a)**. When removing the left-hand duct, lift it to access the wiring clip underneath, then press the ends of the clip together and withdraw it from the duct **(see illustration 5.2b)**.

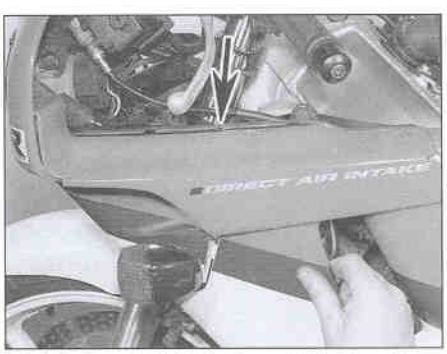
20 On L, N and R models, to access the front trim panels, remove the fairing (see above), then remove the trim clip securing the back of the panel and remove the panel, noting how it



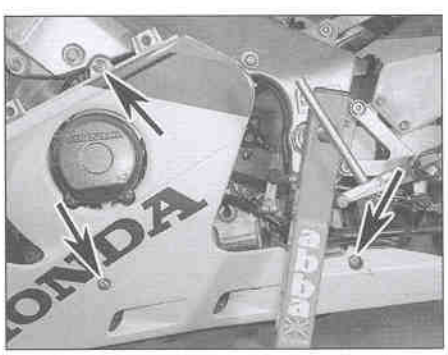
5.13 Note how the tabs (arrowed) locate in the fairing



5.14a Release the trim clips (A) and the fasteners (B) . . .



5.14b . . . and lift the top off the locating pin (arrowed)



5.17a Remove the screws (arrowed) on each side . . .

5.17b . . . and remove the lower fairing

fits **(see illustration)**. To remove the rear trim panels, remove the two bolts at the back and remove the panel, noting how it fits **(see illustration)**.

Installation

21 Installation is the reverse of removal.

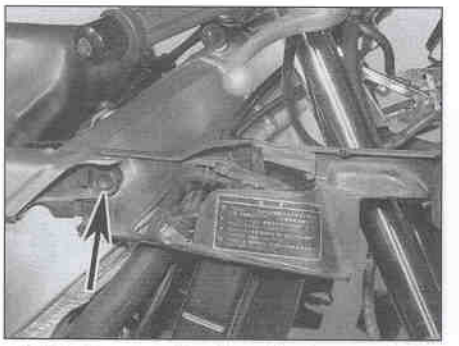
6 Front mudguard – removal and installation

Removal

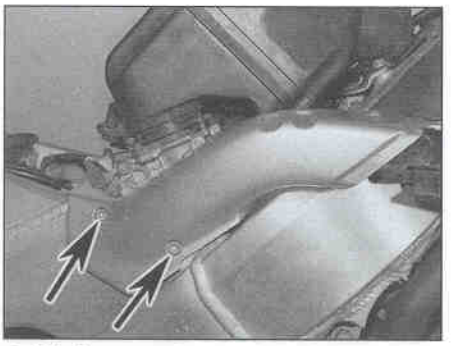
1 Unscrew the four bolts securing the mudguard to the holder on each fork slider and remove the mudguard, noting how it fits **(see illustrations)**.

Installation

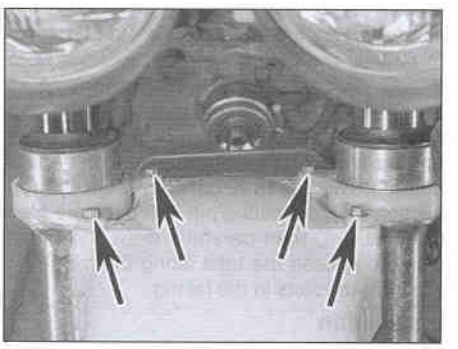
2 Installation is the reverse of removal.



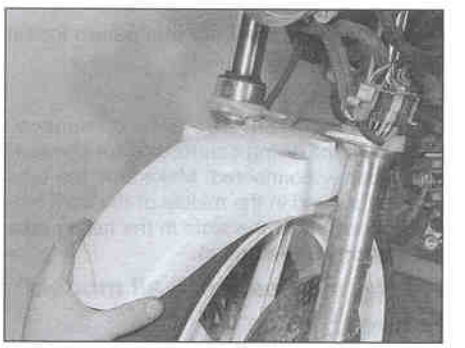
5.20a Remove the trim clip (arrowed) to release the front trim panel



5.20b Unscrew the two bolts (arrowed) to release the rear trim panel



6.1a Unscrew the four bolts (arrowed) . . .



6.1b . . . and remove the mudguard

Chapter 9
Electrical system

Contents

Degrees of difficulty

Easy, suitable for novice with little experience 

Fairly easy, suitable for beginner with some experience 

Fairly difficult, suitable for competent DIY mechanic 

Difficult, suitable for experienced DIY mechanic 

Very difficult, suitable for expert DIY or professional 

Specifications

Note: *Models are identified by their production code letter – refer to 'Identification numbers' at the front of this manual for details.*

Battery

Capacity	
J and K models	12V, 8Ah
L, N and R models	12V, 6Ah
Voltage	
Fully charged	12.8 to 13.0V
Discharged	below 12.3V
Charging rate	
Normal	
J and K models	0.9A for 5 to 10 hrs
L, N and R models	0.7A for 5 to 10 hrs
Quick	3.0A for 1 hr

Charging system

Current leakage	1mA (max)
Regulated voltage output	
J and K models	14.0 to 15.0V @ 3000 rpm
L, N and R models	14.0 to 16.0V @ 3000 rpm
Regulated current output	0.5A @ 3000 rpm
Stator coil resistance	0.1 to 0.5 ohms

Starter motor

Brush length	
Standard	12.0 to 13.0 mm
Service limit (min)	6.5 mm

Fuses

Main	30A
Headlight	15A
Tail light, signal	10A
Ignition	10A
Fan	10A

Bulbs

Headlights	
UK spec	60/55W H4 halogen
Japan spec	60/35W halogen
Sidelights (J, K, L and N models)	
UK spec	5.0W
Japan spec	1.7W
Brake/tail lights	
UK spec	21/5W
Japan spec	18/5W
Turn signal lights	
UK spec	21W
Japan spec	
J and K models	18W (front), 15W (rear)
L and N models	15W (front), 15W (rear)
R models	18/5W (front), 15W (rear)
Instrument and warning lights	3.4W or 1.7W

Torque settings

Note: *Where a specified setting is not given for a particular bolt, the general settings listed at the beginning apply. The dimension given applies to the diameter of the thread, not the head.*

5 mm bolt/nut	5 Nm
6 mm bolt/nut	10 Nm
8 mm bolt/nut	22 Nm
10 mm bolt/nut	35 Nm
12 mm bolt/nut	55 Nm
6 mm flange bolt with 8 mm head	9 Nm
6 mm flange bolt/nut with 10 mm head	12 Nm
8 mm flange bolt/nut	27 Nm
10 mm flange bolt/nut	40 Nm
Footrest bracket bolts	27 Nm
Oil pressure switch	12 Nm
Ignition (main) switch bolts	25 Nm
Neutral switch	12 Nm
Sidestand switch bolt (L, N and R models)	10 Nm
Alternator stator bolts	10 Nm
Alternator rotor bolt	
J and K models	85 Nm
L, N and R models	95 Nm
Alternator/clutch cover bolts	12 Nm

1 General information

All models have a 12-volt electrical system charged by a three-phase alternator with a separate regulator/rectifier.

The regulator maintains the charging system output within the specified range to prevent overcharging, and the rectifier converts the ac (alternating current) output of the alternator to dc (direct current) to power the lights and other components and to charge the battery. The alternator rotor is mounted on the right-hand end of the crankshaft.

The starter motor is mounted behind the cylinders. The starting system includes the motor, the battery, the relay and the various wires and switches. If the engine kill switch in the RUN position and the ignition (main) switch is ON, the starter relay allows the starter motor to operate only if the transmission is in neutral (neutral switch on) or, if the transmission is in gear, if the clutch lever is pulled into the handlebar and, on L, N and R models, the sidestand is up.

Note: *Keep in mind that electrical parts, once purchased, cannot be returned. To avoid unnecessary expense, make very sure the faulty component has been positively identified before buying a new part.*

HAYNES HiNT

Models are identified by their production code letter – refer to 'Identification numbers' at the front of this manual for details.

2 Electrical system – fault finding

Warning: To prevent the risk of short circuits, the ignition (main) switch must always be OFF and the battery negative (-ve) terminal should be disconnected before any of the bike's other electrical components are disturbed. Don't forget to reconnect the terminal securely once work is finished or if battery power is needed for circuit testing.

1 A typical electrical circuit consists of an electrical component, the switches, relays, etc. related to that component and the wiring and connectors that hook the component to both the battery and the frame. To aid in locating a problem in any electrical circuit, refer to the wiring diagrams at the end of this Chapter.

2 Before tackling any troublesome electrical circuit, first study the wiring diagram (see end of Chapter) thoroughly to get a complete picture of what makes up that individual circuit. Trouble spots, for instance, can often be narrowed down by noting if other components related to that circuit are operating properly or not. If several components or circuits fail at one time, chances are the fault lies in the fuse or earth (ground) connection, as several circuits often are routed through the same fuse and earth (ground) connections.

3 Electrical problems often stem from simple causes, such as loose or corroded connections or a blown fuse. Prior to any electrical fault finding, always visually check the condition of the fuse, wires and connections in the problem circuit. Intermittent failures can be especially frustrating, since you can't always duplicate the failure when it's convenient to test. In such situations, a good practice is to clean all connections in the affected circuit, whether or not they appear to be good. All of the connections and wires should also be wiggled to check for looseness which can cause intermittent failure.

4 If testing instruments are going to be utilised, use the wiring diagram to plan where you will make the necessary connections in order to accurately pinpoint the trouble spot.

5 The basic tools needed for electrical fault finding include a battery and bulb test circuit, a continuity tester, a test light, and a jumper wire. A multimeter capable of reading volts, ohms and amps is also very useful as an alternative to the above, and is necessary for performing more extensive tests and checks.

HAYNES HiNT ***Refer to Fault Finding Equipment in the Reference section for details of how to use electrical test equipment.***

3.2a On J and K models, release the strap . . .

3.2b . . . and remove the cover

3.2c On L, N and R models, release the strap

3 Battery – removal, installation, inspection and maintenance

Caution: Be extremely careful when handling or working around the battery. The electrolyte is very caustic and an explosive gas (hydrogen) is given off when the battery is charging.

Removal and installation

1 Remove the rider's seat (see Chapter 8).

2 Release the battery strap, and on J and K models remove the battery cover **(see illustrations)**.

3 Unscrew the negative (-ve) terminal bolt first and disconnect the lead from the battery **(see illustration)**. Lift up the red insulating cover to access the positive (+ve) terminal, then unscrew the bolt and disconnect the lead. Lift the battery from the bike **(see illustration)**.

4 On installation, clean the battery terminals and lead ends with a wire brush or knife and emery paper. Reconnect the leads, connecting the positive (+ve) terminal first.

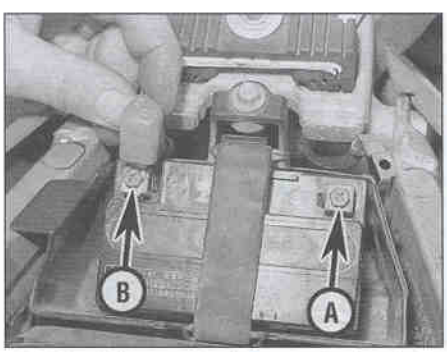
HAYNES HiNT ***Battery corrosion can be kept to a minimum by applying a layer of petroleum jelly to the terminals after the cables have been connected.***

5 Install the seat (see Chapter 8).

Inspection and maintenance

6 The battery fitted to the models covered in this manual is of the maintenance free (sealed) type, it therefore does not require topping up. However, the following checks should still be regularly performed.

7 Check the battery terminals and leads for tightness and corrosion. If corrosion is evident, unscrew the terminal screws and disconnect the leads from the battery, disconnecting the negative (-ve) terminal first, and clean the terminals and lead ends with a wire brush or knife and emery paper.



3.3a Disconnect the negative (-ve) terminal (A) first, then the positive (+ve) terminal (B) . . .

3.3b . . . and remove the battery