Chapter 8 The RD350 F II and N II models

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Specifications

The additional specifications shown below relate to the RD350 F II and N II models covered in this update Chapter. Where no specification information appears here, refer to the specifications given for the RD350 F and N models in Chapters 1 to 7. Unless stated, the following information applies to both models.

Model dimensions and weight

Overall length:	
RD350 F II	2126 mm (83.7 in)
RD350 N II	2120 mm (83.4 in)
Overal width	700 mm (27.5 in)
Overall height:	
RD350 F II	1190 mm (46.8 in)
RD350 N II	1070 mm (42.1 in)
Seat height	790 mm (31.1 in)
Wheelbase	1385 mm (54.5 in)
Ground clearance	165 mm (6.5 in)
Weight (with oil and full fuel tank):	
RD350 F II	159 kg (350 lb)
RD350 N II	155 kg (342 lb)

Specifications relating to Chapter 1

Torque wrench settings

Component	kgf m	lbf ft
Cylinder barrel	2.8	20.2
Gearchange pedal	1.0	7.2
Thermosenser (temperature gauge sender unit)	1.5	10.8
Gear selector cam stopper plate	0.8	5.7
Stopper lever	1.0	7.2
Crankcase bolts:		
Lower	0.8	5.7
Upper	1.0	7.2

Specifications relating to Chapter 3

Fuel tank capacity

Overall	17 litre (3.7 Imp gal)
Reserve	5 litre (1.1 Imp gal)

Carburettors

ID mark	1UA 00
Main jet	185
Air jet	0.8
Jet needle	5L20
Jet needle clip position (grooves from top)	2
Needle jet	N-8 (544)
Throttle valve cutaway	2.0
Pilot jet	27.5
Air screw setting (turns out)	1 1/2
Fuel valve seat size	2.8
Starter jet	80
Power jet:	
Right-hand carburettor	60
Left-hand carburettor	65
Idle speed	1150 – 1250 rpm

Specifications relating to Chapter 4

Ignition system

Pickup coil resistance	93.6 – 140.4 Ω @ 20°C (68°F), white/red to white/green leads
Source coil resistances:	
Source coil 1	3.6 – 4.5 Ω @ 20°C (68°F), brown to red lead
Source coil 2	128.8 – 193.2 Ω @ 20°C (68°F), brown to green lead

Ignition coil

Make	Nippon Denso
Type	J0137
Primary winding resistance	0.28 – 0.38 Ω @ 20°C (68°F)
Secondary winding resistance	4.72 – 7.08 KΩ @ 20°C (68°F)

CDI unit

Make	Nippon Denso
Type	QAB49

Spark plugs

Make	NGK
Type	BR9ES
Electrode gap	0.7 – 0.8 mm (0.027 – 0.031 in)

Specifications relating to Chapter 5

Front forks

Spring free length	416.6 mm (16.4 in)
Service limit	411.6 mm (16.2 in)
Oil capacity (per leg)	282 cc (9.9 Imp fl oz)
Oil level	128.7 mm (5.06 in)
Oil grade	SAE 10W fork oil
Air pressure:	
Standard	0.4 kg/cm² (5.7 psi)
Minimum	Atmospheric
Maximum	1.2 kg/cm² (17.0 psi)

Torque wrench settings

Swinging arm pivot	7.0 kgf m (50 lbf ft)

Specifications relating to Chapter 6

Brakes

Disc thickness	4.5 mm (0.18 in)
Service limit	4.0 mm (0.16 in)
Pad thickness	5.5 mm (0.22 in)
Service limit	0.5 mm (0.02 in)

Specifications relating to Chapter 7

Alternator

Make	Nippon Denso
Model	VCD88
Charging output	14 volt, 13A @ 5000 rpm
Charging coil resistance	0.44 – 0.66 Ω @ 20°C (68°F) (white lead to white lead)

Voltage regulator

Type	Short circuit, combined with rectifier
Make	Shindengen
Model	SH569
No-load regulated voltage	14.3 – 15.3 volts

Rectifier

Type	3-phase full wave, combined with voltage regulator
Make	Shindengen
Model	SH569
Capacity	25 amps
Withstand voltage	200 volts

Horn

Make	Nikko
Model	YF3-12
Maximum amperage	2.5 amps

Turn signal relay

Make	Nippon Denso
Model	FU249CD
Type	Condenser, with self-cancelling device
Frequency	75 – 95 cpm
Wattage	12 volt 21W x 2, plus 3.4W x 1

Thermo-unit

Make	Nihon Seiki
Model	11H

1 Introduction

The RD350 YPVS model range was continued in April 1986 with the introduction in the UK of the RD350 N II and the RD350 F II models. Generally similar to the preceding N and F models, the Mk II versions incorporated styling revisions and detail improvements. Many of these are of little significance when dealing with the procedures described in the earlier Chapters, but where differences do arise, these are described in this update Chapter. Where no mention is made in this Chapter the task will the same as described for the RD350 F and N models covered in Chapters 1 to 7.

As an aid to model identification, the RD350 F II was produced from frame number 1WT-000101 onwards, its model code being 1WT. The RD350 N II was produced from frame number 1WT-005101 onwards, and had a model code of 1UA.

2 Engine/gearbox unit: modifications

1 The engine/gearbox remained largely unchanged for the Mk II models covered in this Chapter, changes being confined to detail improvements to a well-proven design. Internally, there were alterations to the port timing and to the combustion chamber shape. These, together with the new carburettors and exhaust system, being responsible for the improvements in torque and power output.

2 There are also a number of minor detail changes to the engine and transmission components and assemblies. These have little effect on working procedure, but underline the need to quote in full the engine and frame numbers when ordering replacement parts.

3 Oil pump: modification and cable adjustment

1 The oil pump remains similar to that used on the previous models, with the exception of a small lock washer added at the end of the pump drive shaft and secured by the drive pinion circlip.

2 When checking the pump cable adjustment proceed as shown in Routine Maintenance, noting that in the case of both Mk II models, the check is made with the throttle fully open. Check that the alignment mark shown in the accompanying illustration coincides with the pin, and if necessary reset the cable adjuster at the top of the casing to achieve this. Open and close the throttle twistgrip a few times, then re-check the setting.

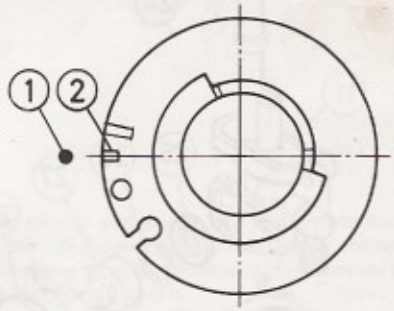

Fig. 8.1 Oil pump pulley alignment mark

1 Plunger pin 2 Pulley alignment mark

4 Fuel tank and tap: modifications

1 A redesigned fuel tank is fitted as part of the general cosmetic update. The arrangement of the mounting rubbers was altered to suit the new tank shape, but it is secured in a similar fashion. A new recessed filler cap is flush-fitted to the new tank. There are also detail changes to the fuel tap lever assembly and these are shown in the accompanying illustration.

2 When refitting the fuel tank ensure that the breather pipe is routed so that it is not trapped at any point. The correct routing is shown in Fig. 8.3.

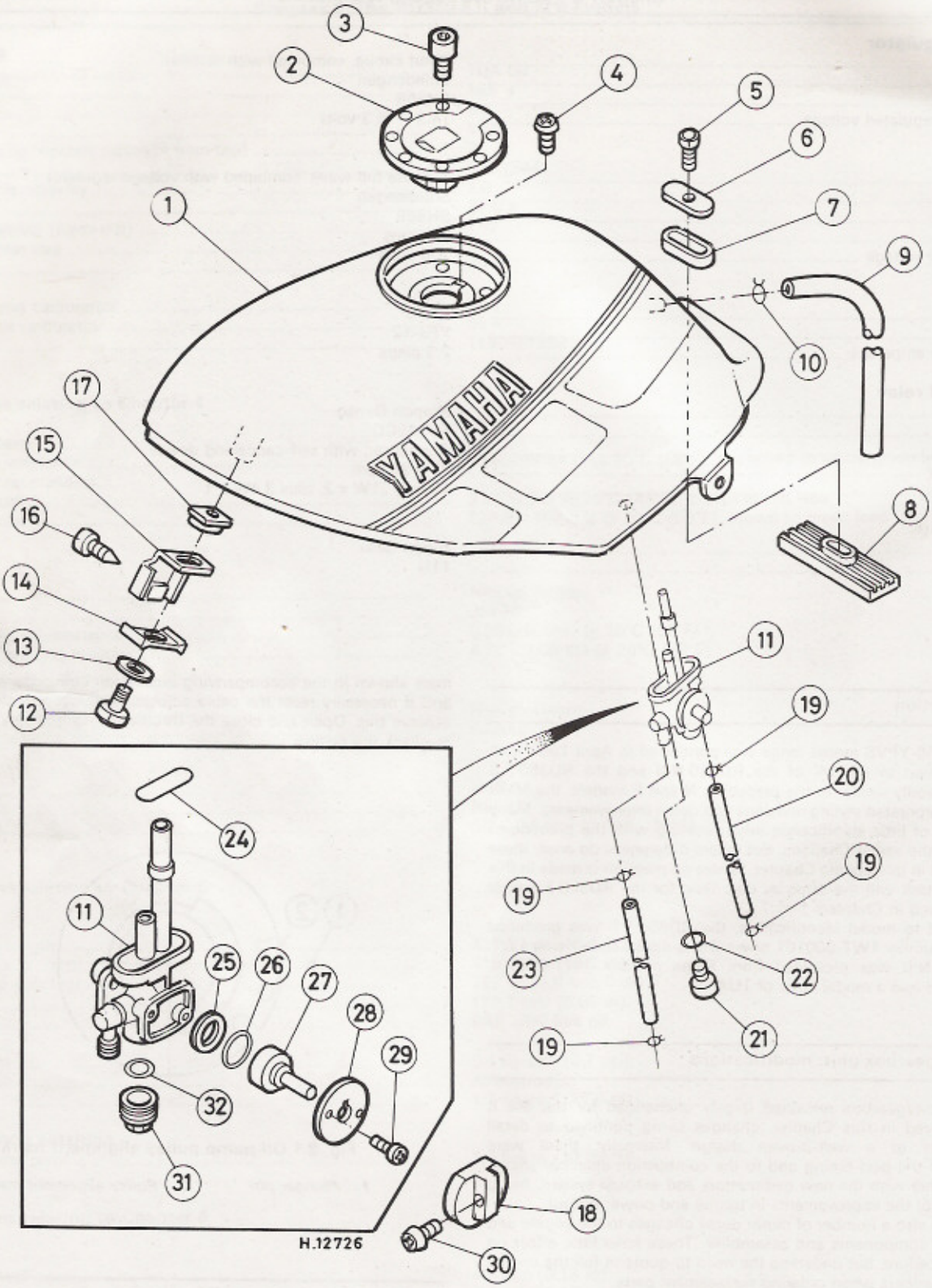

Fig. 8.2 Fuel tank and tap

1 *Fuel tank*
2 *Filler cap*
3 *Allen screw – 3 off*
4 *Screw*
5 *Bolt*
6 *Washer*
7 *Damping rubber*
8 *Damping rubber*
9 *Breather pipe*
10 *Clip*
11 *Fuel tap*
12 *Bolt – 2 off*
13 *Washer – 2 off*
14 *Plate – 2 off*
15 *Mounting bracket – 2 off*
16 *Screw – 2 off*
17 *Damping rubber – 2 off*
18 *Tap control lever*
19 *Clip – 4 off*
20 *Fuel pipe*
21 *Screw – 2 off*
22 *Washer*
23 *Vacuum pipe*
24 *O-ring*
25 *Seal*
26 *O-ring*
27 *Rotor*
28 *Tap position disc*
29 *Screw – 2 off*
30 *Screw*
31 *Filter bowl*
32 *O-ring*

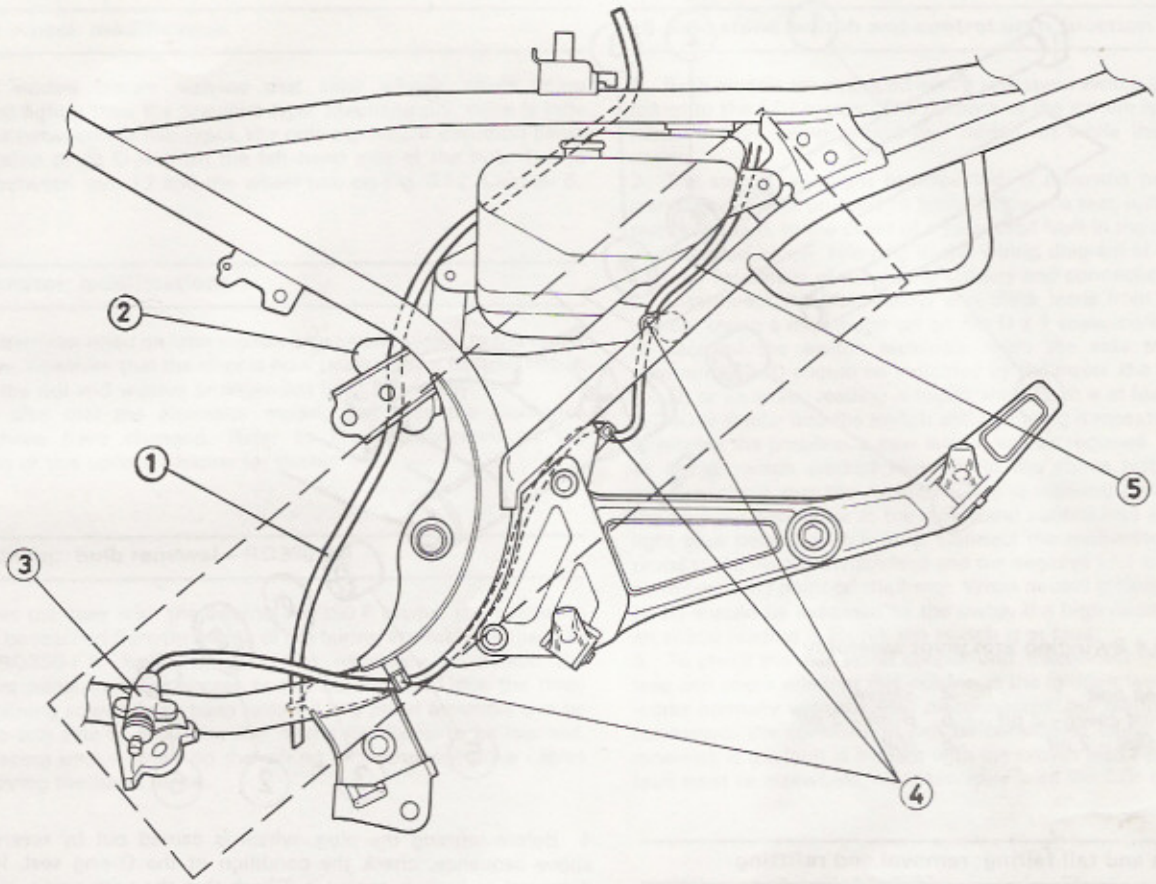

Fig. 8.3 Fuel tank breather pipe routing

1 *Breather pipe*
2 *Rear engine mounting bracket*
3 *Side stand switch*
4 *Cable ties*
5 *Side stand wiring*

5 Carburettors: modification

1 In line with the modified cylinder porting and revised exhaust system, both models are fitted with Mikuni power jet carburettors. This permits the use of a smaller main jet and as a result, improves the mixture strength at the midrange position.
2 Each jet is a press fit in its float chamber. It is located on the right-hand side of the chamber and is linked to the carburettor body by a short length of black tubing. In the event of a suspected blockage, cleaning can be accomplished by directing a jet of compressed air through the jet; on no account use a sharp metal object, such as a piece of wire, to clear a blocked jet.

6 Ignition system: modifications

1 Although remaining essentially similar in operation, many of the ignition system components have been revised. A new CDI unit provides a revised ignition advance curve, although this is of academic interest only and is not adjustable in any way.
2 The model of ignition coil has also been changed, and this will give different readings than those specified in Chapter 4. When testing the coil, refer to the specifications given at the beginning of this Chapter, using them in conjunction with Section 7 of Chapter 4.
3 Revised pickup and source coil resistances are specified for these models, although the test procedures remain unaltered. For details, use the specifications which accompany this Chapter in conjunction with Chapter 4, Sections 5 and 6.

7 Cycle parts: modifications

1 The frame remained largely unchanged from that used on the previous models, with the exception of modified location points and brackets for the various ancillary and bodywork parts.
2 The rear suspension arrangement is unchanged, apart from the thrust cover and washer arrangement at each end of the swinging arm pivot shaft. In the case of the Mk II models, a thrust cover was fitted at each side of the pivot, with a single plain washer positioned inboard of each thrust cover (see Fig. 8.4).
3 The rear suspension unit is similar to that used on the earlier models, but the remote adjustment system using a toothed belt and pulley was abandoned. In the case of the later models, adjustment is carried out conventionally, using a C-spanner on the adjustment collar at the top of the unit. Adjust the unit from the right-hand side of the machine, using the C-spanner supplied in the toolkit. Turn the adjuster clockwise to increase spring preload and anticlockwise to decrease.
4 Other changes include modifications to the front forks and to the bodywork, and these are discussed in the following Sections.

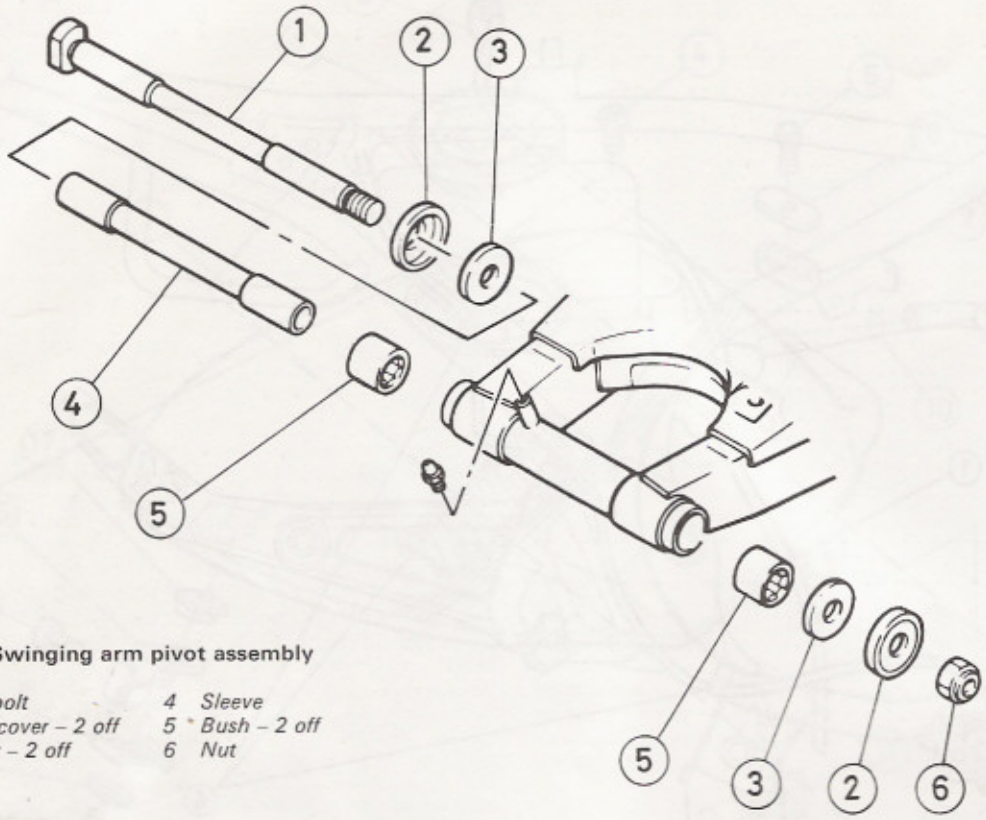

Fig. 8.4 Swinging arm pivot assembly

1 Pivolt bolt
2 Thrust cover – 2 off
3 Washer – 2 off
4 Sleeve
5 Bush – 2 off
6 Nut

8 Side panels and tail fairing: removal and refitting

1 The styling changes made include a revised side panel/tail fairing arrangement. To gain access to components mounted below the side panels, the following procedure should be adopted.
2 Start by removing the seat to gain access to the storage area below the tail fairing. Remove the two screws which retain the centre section of the tail fairing, and slide it forward until it can be lifted away. Remove any tools or other items stored inside the compartment.
3 Release the four bolts which secure the grab rail to the frame tubes and lift it away. Remove the single cross-head screw which retains the front edge of the right-hand side panel. The side panels can now be disengaged and removed to permit access to the area behind them, or to the tail lamp assembly.
4 The side panels and centre section are refitted by reversing the removal sequence. Check that the grab rail bolts are tightened to 1.5 kgf m (11.0 lbf ft). When refitting the centre section of the tail fairing, make sure that the locating pegs in the centre section locate correctly in the holes in each side panel.

9 Front forks: modifications

1 As will be noted from the accompanying line drawing, the later type forks have a modified top plug arrangement. The general procedure for removing and overhauling the forks however, remains as described in Chapter 5, Sections 3, 5 and 6, noting the following points.
2 The design of the fork top plug is changed from a threaded type to a sealed, plain plug retained by a wire circlip. To remove the plug, unscrew and remove the dust cap, then depress the valve core to release air pressure.
3 Using a socket or piece of tubing, press down on the plug so that it is pushed into the top of the stanchion. This will reveal the retaining clip, which can then be displaced and removed using a small screwdriver. Once the clip has been freed, gradually release pressure on the plug, allowing the pressure from the fork spring to push it out of the stanchion. This operation is easier if two people are involved, but can be carried out unaided.
4 Before refitting the plug, which is carried out by reversing the above sequence, check the condition of the O-ring seal. If this is damaged or broken, renew it. Check that the wire circlip is located correctly before allowing the plug to rest against it. Check that the fork air pressures are set correctly, and in particular, that the pressure is equal in each leg, before refitting the dust cap.

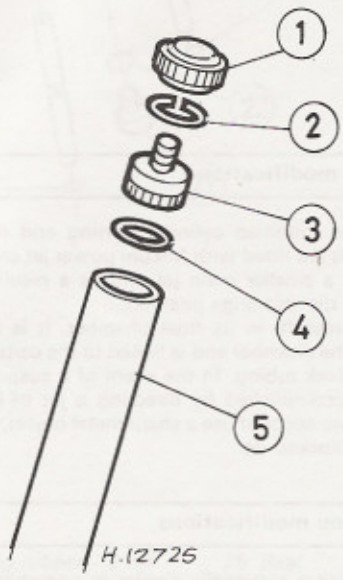

Fig. 8.5 Front fork top plug assembly

1 Dust cap
2 Circlip
3 Top plug (incorporating air valve)
4 O-ring
5 Stanchion

10 Rear wheel: modification

Both models feature restyled cast alloy wheels, these being somewhat lighter than the previous type. Mechanically, there is little difference between the two types, the only significant alteration being the inclusion of an O-ring on the left-hand side of the hub. This is located between item 12 and the wheel hub on Fig. 6.12, Chapter 6.

11 Alternator: modifications

1 The alternator fitted on later models is generally similar to the earlier type. Note, however, that the rotor is now retained by a flanged nut, in place of the nut and washer arrangement used previously.
2 Note also that the alternator model, and thus the resistance specifications have changed. Refer to the specifications at the beginning of this update Chapter for details.

12 Headlamp: bulb renewal – RD350 F II

As was the case with the original RD350 F model, the headlamp bulb can be reached from the inside of the fairing assembly. In the case of the RD350 F II, however, it is first necessary to detach the instrument panel to allow access to the bulbholder. Once the three panel retaining screws have been released, the panel assembly can be moved to one side to allow the rear of the headlamp to be reached. Avoid placing undue strain on the wiring or instrument drive cables when moving the panel aside.

13 Side stand switch and control unit: function and testing

1 Both models are equipped with a side stand switch and control unit linked to the CDI system. The purpose of the system is to prevent the machine from being started and ridden off while the side stand is down.
2 The switch, as might be expected, is mounted near to the side stand. The control unit will be found below the seat, just forward of the rear mudguard. In the event of a suspected fault in the circuit, proceed as described below, referring to the wiring diagram at the end of this Chapter for details of the wiring colours and connections.
3 Disconnect the blue/yellow and black leads from the side stand switch. Using a multimeter set on the Ω x 1 scale, connect one probe to each of the switch terminals. With the side stand retracted, continuity (0 Ω) should be indicated by the meter. If a high resistance (∞ Ω) or an erratic reading is found, the switch is at fault. Try spraying WD40 or similar into the switch and operating it repeatedly. If this fails to resolve the problem, a new switch will be required.
4 If the switch worked normally in the above test, but the fault persists, check that the neutral switch is working normally. Separate the four-pin connector at the side stand control unit and identify the light blue neutral switch lead. Connect the multimeter positive (+) probe to the neutral switch lead and the negative (−) probe to a sound earth (ground) point on the frame. When neutral is selected, continuity (0 Ω) should be indicated by the meter. If a high resistance (∞ Ω) or an erratic reading is found, the switch is at fault.
5 To check the side stand control unit, disconnect the single brown lead and check whether this eliminates the ignition fault. If the system works normally with the lead disconnected, but reappears when it is connected, the control unit can be considered faulty and should be renewed. If the fault is evident with the brown lead disconnected, the fault must lie elsewhere, most probably with the CDI unit itself.