



Scottoil®

Fitting Instructions & WARRANTY

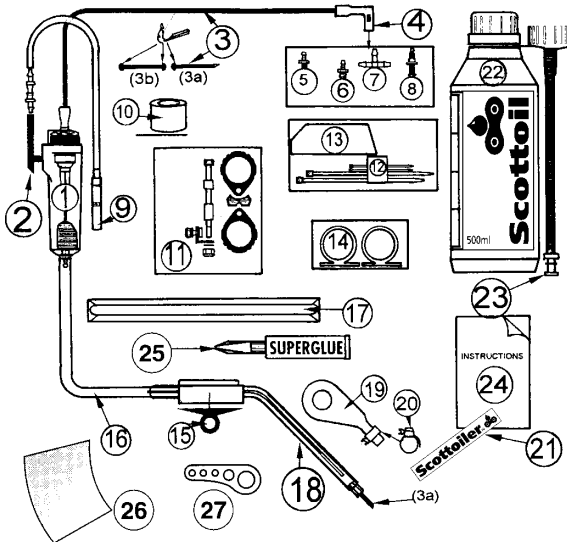
This leaflet explains how to fit both the Universal Kit and the HCR, and how to get the best from the system.

The Scottoil is guaranteed for 1 year.

Mk7 Universal Kit

Contents

Scottoiler Number



- | | |
|---|---|
| 1) Reservoir Metering Valve unit (RMV) | 14) RMV Mounting Sleeves (2 glue-on) |
| 2) Filler Plug (rubber) including female Luer | 15) Dispenser Mounting Sleeve (2 glue-on) |
| 3) Vacuum tubing (black 1.5m x 4mm o.d.) | 16) Delivery tubing |
| 4) Vacuum Damper Assembly | 17) Delivery tube Conduit (black 30cm glue-on) |
| 5) M5 brass screw-in Spigot | 18) Dispenser Assembly (with injector) |
| 6) M6 brass screw-in Spigot | 19) Dispenser Plate (stainless steel) |
| 7) Tee connector (natural nylon) | 20) Dispenser Plate Clip |
| 8) Universal Spigot assembly (incl. M5 nut & washers) | 21) Stickers (3) |
| 9) Breather including male Luer | 22) 500ml Scottoil |
| 10) Adhesive Tape | 23) Filling/Priming tube |
| 11) RMV Bolt On Clamp set (assembled) | 24) Fitting/Operating Instructions & Parts List |
| 12) Tie-wraps (2 releasable for RMV cradle & 2 short) | 25) Loctite Superglue |
| 13) RMV Mounting Cradle (tie-on) | 26) Sandpaper |
| | 27) Stainless Steel Mounting Plate |

Scottoiler (Scotland) Ltd, 2 Riverside, Milngavie, Glasgow G62 6PL

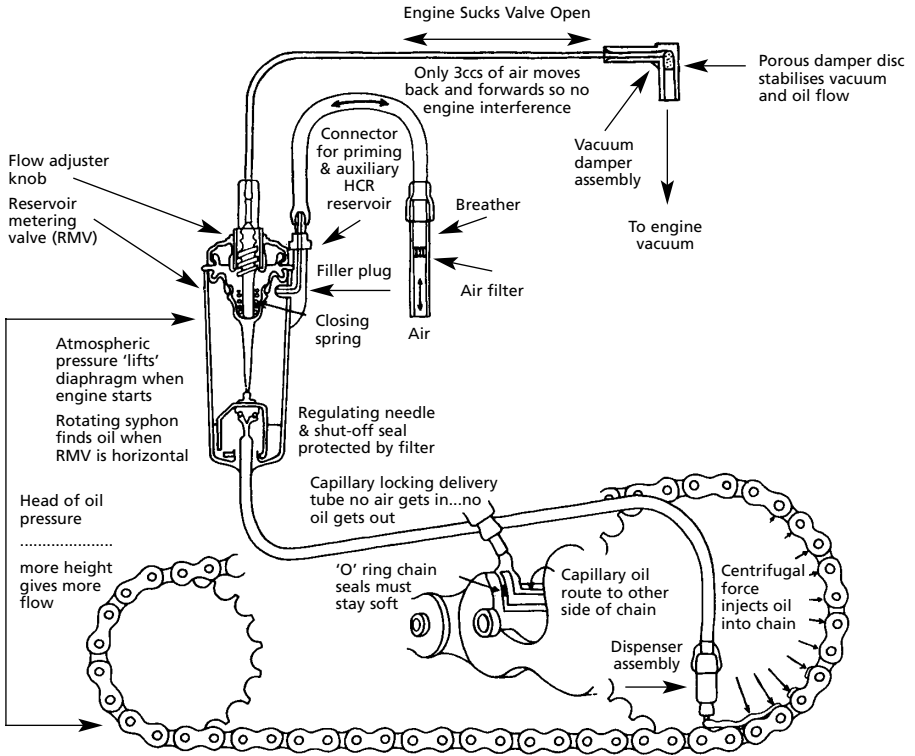
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Scottoiler operate a policy of continual design improvement.

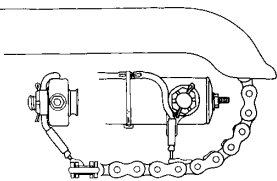
As a result the specifications or contents may vary.

Mk7 How It Works

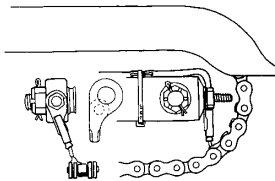


Centrifugal Injectors

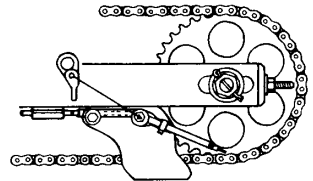
Wheel Spindle



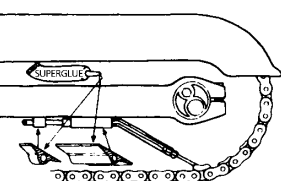
Adjuster Bolt



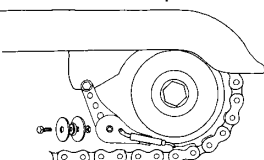
Chain Guide



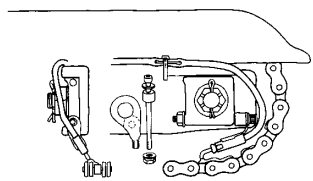
Mounting Sleeve



Single-sided swing arm i.e. VFR750/800, Triumph, Ducati



Deltabox



*The washer kit that joins the mounting plate to the dispenser plate is available free of charge from Scottoiler or approved stockists.

Mk7 Fitting Instructions

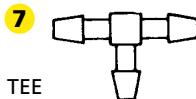
1 Reservoir Metering Valve (RMV)

Bolt, tie or glue the RMV #1 to the frame or bodywork using any of the parts #10, #11, #12, #13 or #14 at any angle between vertical and horizontal.

- Ensure that filler plug #2 is uppermost to allow the unit to breathe and is accessible for filling.
- Point the breather #9 downwards into clean air.
- The adjuster knob should be accessible so that the flow rate can be turned up to clean the chain in wet/dirty conditions, and turned down in dry/warm weather (see section 7).
- Mount the RMV away from excessive heat, i.e. engine, exhaust or radiator, and clear of the rear suspension on full bump.

2 Vacuum Connection

Four alternative connections are supplied for the engine vacuum:-



- 1 Use the 'Tee' connector #7 where a vacuum operated fuel tap (identified by 'PRIME' setting on tap), or where carb balance pipes are fitted. Cut the rubber vacuum tube fitted to the bike and rejoin.
- 2 Where carb balancing holes are fitted to the carb mounts, use an M5 #5 or M6 #6 brass spigot. The balancing holes are located on the inlets that mount the carbs to the cylinder head or on the cylinder head itself and are blanked off with either a cross head screw or small bolt. Remove one and screw the spigot into the balancing hole.
- 3 On some models of Kawasakis, Triumphs and Yamahas plus VFR Hondas, a slightly larger rubber capped spigot-tube protrudes from the engine side of the carb. Remove the cap and fit the vacuum damper assembly #4 directly over the tube. If necessary, warm the larger end of

the damper with a hair dryer or put the assembly in hot water to make the damper more pliable.

- 4 The Universal brass spigot #8 can be used where none of the above exist, ie some single cylinder engines. Remove the carb and drill a 5mm diameter clearance hole in the carb mount. Insert the spigot from the inside applying a sealant (Silicon RTV or similar) to the brass threads. For a rubber carb mount, drill a 3mm diameter hole and use the brass washers to seal. Regardless of carb mount type, apply sealant between the threads at the end of the spigot and the angled vacuum damper assembly #4.

Attach the vacuum damper assembly to the appropriate vacuum connector, #5, 6, 7 or 8 and the vacuum tubing #3.

3 Dispenser Assembly #18

There are alternative ways to fit the dispenser assembly to the swing arm:-

- 1 By gluing the black mounting sleeve #15 forward of the spindle.
 - Thoroughly clean the underside of the swing-arm with sandpaper and/or petrol.
 - Lightly coat the sleeve with Loctite Superglue and breathe on the surface. Press onto the sterilised area and hold for about 30 seconds.
 - Loctite Superglue achieves full strength in 3 hours.
 - Lightly oil and insert the dispenser assembly #18 into the sleeve.
- 2 By bolting the metal plate #19 as shown in the centrifugal injector diagrams on page 1:-
 - The plate can be drilled and/or trimmed (see dotted lines) to suit. (For Honda single-sided swing arm models not fitted with the 2 hole 'safety plate' in front of the sprocket, use a VFR Washer Kit available f.o.c. from Stockists).

Bend the sleeve #18 to drop oil approx 2mm above the inner side-plates of the chain at the

4 Delivery Tubing #16

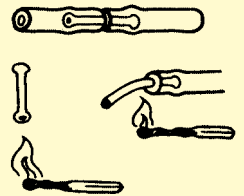
Route the clear tubing from the dispenser #18 back to the bottom of the RMV and trim to length allowing a little slack at the swing arm pivot for suspension movement. Secure with tape #10, tie-wraps #12, black conduit #17 or pieces of dispenser mounting sleeve #15. The conduit #17 is best fixed by gluing down one end before stretching and gluing down the other end. Glue the delivery tubing #16 into the conduit channel.

The delivery tubing can be joined using a connector #3b. Additional connectors and

spare oil injectors #3a are easily made from 'mushroomed' vacuum tube #3 by applying heat (see diagram).

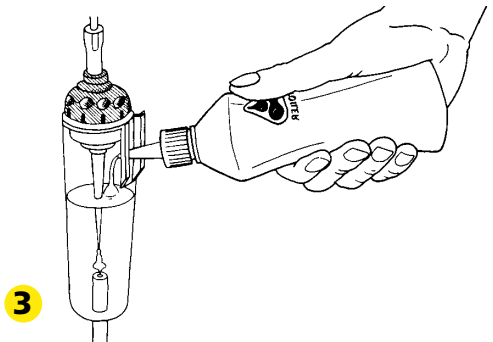
To make an oil injector (3a) or delivery tube joiner (3b)

Heat the end(s) of a length of vacuum tubing to form a 'mushroom'



5 Filling

Pull off the rubber filler plug #2 from the side of the RMV. Invert the Scottoil bottle and squeeze. Do not overfill as oil will block the breather tube and slow the flow. Make certain that the nose of the filler plug is correctly located when refitting.

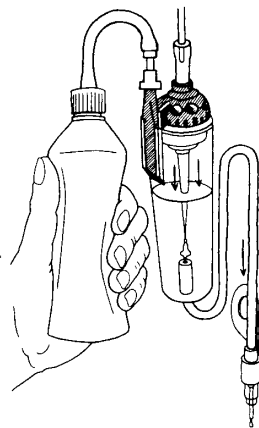


Mk7 Fitting Instructions

6 Priming

To provide the gravity head of pressure required for flow, the delivery tubing must be full of oil.

- Set the adjuster knob to PRIME (fully clockwise).
- Disconnect the breather at the tapered joint on the filler plug.
- Pressurise the RMV with air using the Scottoil bottle as shown, until the delivery tubing is completely full of oil. Approx 2 mins.
- Reconnect the breather assembly.
- Adjust flow as detailed below.



7 Flow Adjustment

- Clockwise - Flow Up
- Anti-clockwise - Flow Down

The weather and conditions of operation determine the flow rate. In good weather a flow rate of between 1 to 2 drops per minute is normally adequate. This flow will not pollute the running surface of the tyre and is sufficient to improve chain life.

However, in conditions where cleaning as well as lubrication is required, ie where high levels of dust, sand, salt or heavy rain are present - more oil flow will be necessary to extend chain life.

With the engine at tick-over turn adjuster knob to obtain the required flow at the sprocket.

With the RMV mounted near the engine, flow may increase as the oil warms.

Safety Notice: As more oil flow will increase the risk of oil on the running surface of the tyre, it is important that the tyre is monitored for oil contamination when the system is set to deliver more than 2 drops per minute.

NB: Regularly check that the chain is receiving the correct amount of oil for the prevailing conditions. Failure to do so will reduce chain life.

8 Maintenance/Troubleshooting

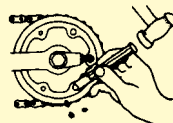
Refer to Scottoil, technical department.
(+44) 0 141 955 1100
Email: technical@scottoiler.com

Honda derailment plate

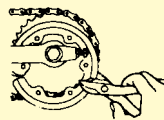
Provided for owners who fail to maintain, or even adjust their chains.

The idea is that the plate will prevent the worn out chain from jumping off the worn out rear sprocket.

It can be removed without taking out the rear wheel.



Chisel off rivet heads



Cut away the plate

HCR Fitting Instructions

The High Capacity Reservoir (HCR) increases the capacity of the Scottoiler system from 50ml to 400ml. The HCR automatically refills the Scottoiler Reservoir Metering Valve (RMV) and provides a more accessible mounting for the RMV unit.

The HCR and RMV fit between the number plate and rear mudguard with the RMV mounted on the side. The HCR can also be used with the RMV mounted elsewhere on the bike. The RMV unit will work above, or on the same level as the HCR.

N.B. Do not mount the RMV more than 10cm below the HCR as the resulting 'head of pressure' will open the valve inside the RMV causing the system to leak when engine is off.

Important Note

The mudguard must be strong and in good condition. The weight of the oil filled HCR/RMV system must not cause the mudguard to wobble.

Most, but not all, Japanese sports/touring bikes have adequately strong mudguards. Some Italian machines have mudguards which are wobbly, i.e. insecurely fixed to the dual-seat sub-frame, either that or the mudguard moulding itself is too flimsy.

Care must be taken that the number plate light is not obstructed by the thickness of the HCR unit. Therefore the HCR may need to be placed slightly lower and using the spacer as described in section 2 overleaf.

HCR Parts List

- HCR High Capacity Reservoir
- 3 Socket-cap Screw Bolts M6 x 30
- 1 Socket-cap Screw Bolt M6 x 40
- 3 Plated Steel Washers 20 x 6 x 1mm
- 3 Plated Steel Washers 25 x 6 x 1mm
- 3 M6 Nyloc Nuts
- 2 Connectors for Joining Delivery Tubes
- 3 Plastic Protective Slide-on Nut-Covers*
- 1 Nylon Spacer Black 15 x 6 x 10mm
- 1 Clear Oil Delivery-tubing (3 metres)
- 2 Metres Vacuum Tubing
- Stickers & Instructions
- 4 M5 10mm Stainless Screws to secure number plate (with thread seal)

* Cover the bolt threads with grease before fitting the nut-covers.

HCR Fitting Instructions

1 Number Plate to HCR Fitment

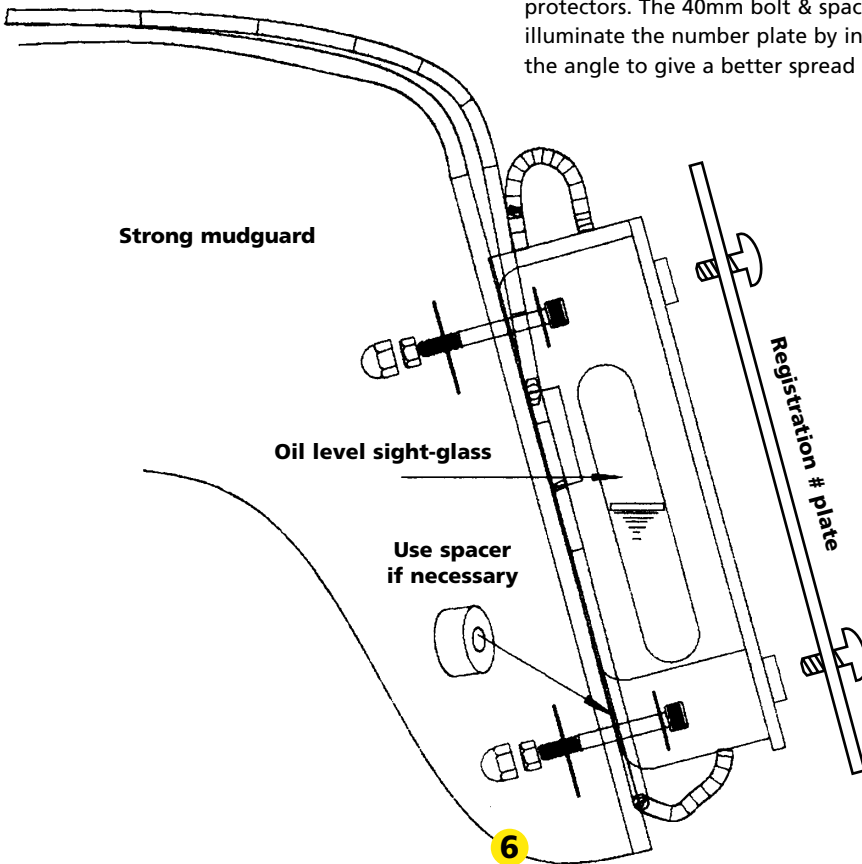
Line up the number plate with the HCR and mark the position of the 4 corner holes. Drill 4 x 6mm holes, 2 at the top and 2 at the bottom of the number plate, or use the template supplied on the bottom of the

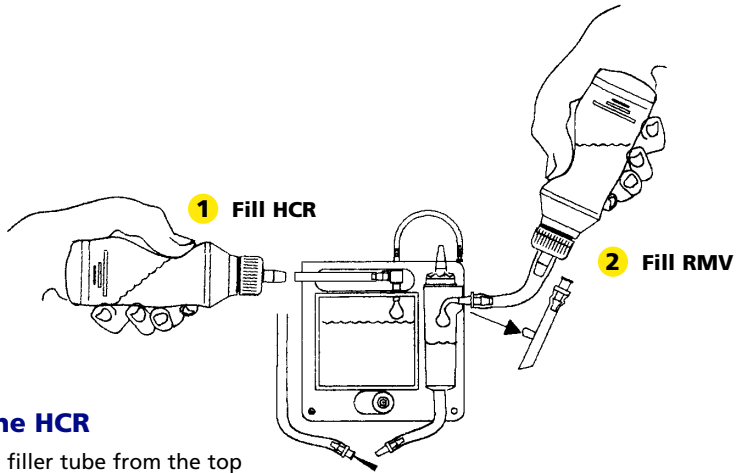
box. Attach number plate with 4 x 10mm stainless steel anti-vibration screws supplied. Oil level can now be checked from the side window without taking off the number plate.

2 Mounting the HCR

Centre the HCR on the rear mudguard or on the existing number plate mount. Attach with 3 bolts (2 top and 1 bottom) in the recess channels with the 25mm washers on the mudguard

side and the 20mm washers at the bolt heads. Use the spacer and longer 40mm bolt at the bottom mount if required. Trim the bolts as necessary to ensure that the ends do not foul the tyre, grease and cover with nut protectors. The 40mm bolt & spacer will help illuminate the number plate by increasing the angle to give a better spread of light.





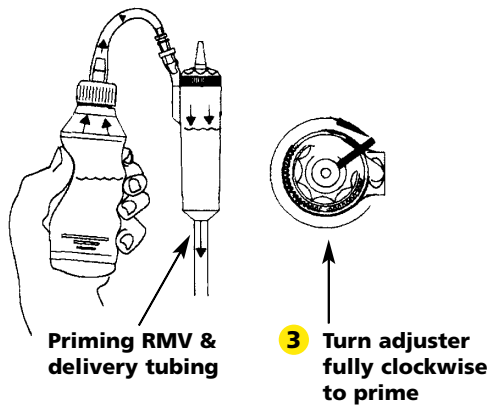
3 Filling the HCR

Swing out the filler tube from the top recess, remove the black plug, pull spout off the Scottoil bottle and connect to HCR filler tube. Pump bottle to fill HCR. Pumping will let air out as oil goes in. It will fill much quicker than trying to fill it in one go. Do not prime the system with compressed air through HCR. This will blow the back window out. Prime tubing through RMV only, using the filler plug and oil bottle, follow instructions for RMV priming.

**Alternative faster prime
(rejoin quickly to avoid bubbles)**

4 Priming the RMV

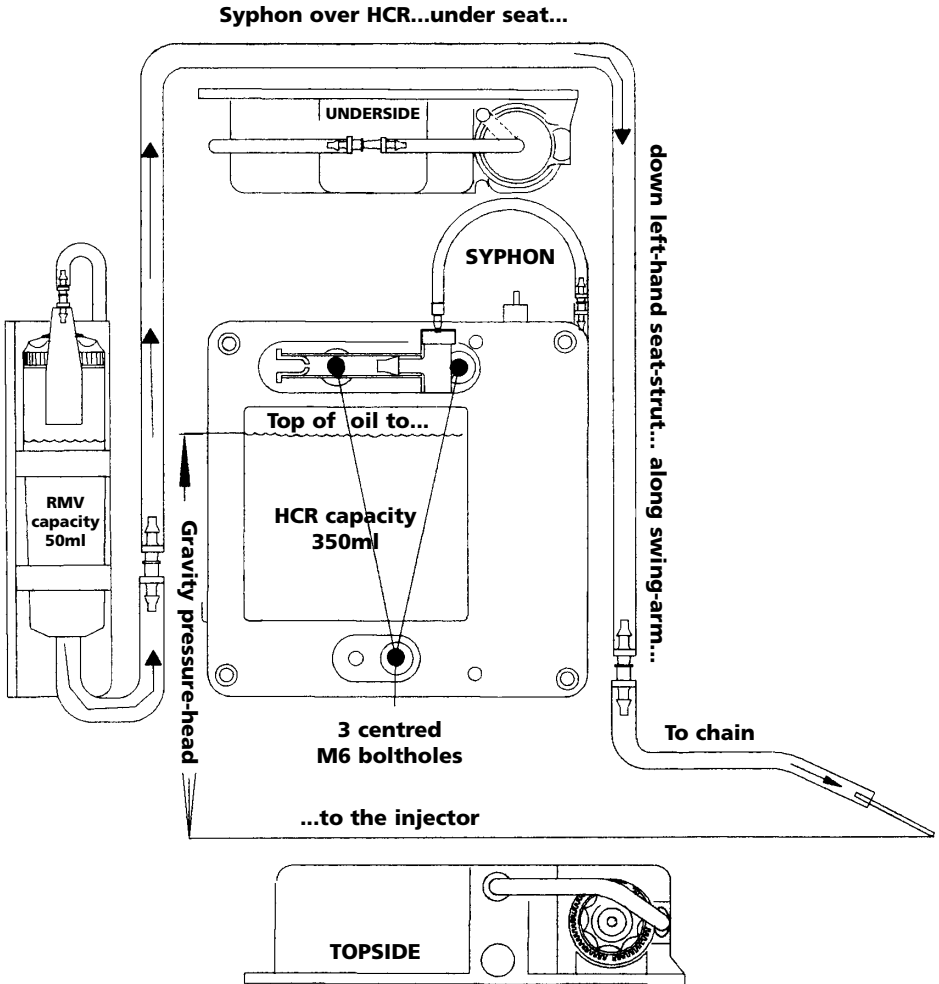
Necessary only if the delivery tube is empty. Insert the tapered male luer fitting into the top of the Filler-Plug (2) and prime the delivery tubing as in instructions, i.e. by pressurising the RMV with a filling bottle. The HCR will automatically refill the RMV in use. Fully clockwise to prime. Remember to reset the knob to the original flow rate after priming.



HCR Fitting Instructions

5 Connecting the RMV to the HCR

For Touring Kit: If mounting the RMV directly onto the HCR, join the outlet tube directly to RMV Filler-Plug. **For HCR:** If you are using the HCR add on and you wish to leave the RMV in a previously fitted position, the black mushroom connectors and tubing supplied will join up the two units satisfactorily, providing the RMV is level with or higher than the HCR.



**RMV will automatically syphon oil from the HCR...
System refilling intervals increased to 80-100 hours**

6 Flow Adjustment

With the engine at tick-over, turn the RMV adjuster knob to the required oil flow - normally between 1 to 2 drops per minute (see Fitting and Operating Instructions for Standard Scottoiler system).

N.B. A slightly higher knob setting will be required when the HCR is connected to the RMV.

Operation:- Top up the RMV if necessary.

Note:- A faulty connection between the HCR and the RMV will result in a falling

RMV oil level - check joints and examine for dirt or a defective seal around the Filler-Plug/Mushroom Connection.

1998 Note:- HCR with side oil-level windows. The registration plate only requires lifting after 80-100 hours of riding. It can therefore be bolted in place to conform to German regulations.

A drilling template can be found on the underside of the outer packaging.

'Chain life with the Scottoiler proved 6.6 times longer in the harshest of world journey conditions.'



Nick Sanders

Fastest man around the world on two wheels (31 days)



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