

## SCOTTOILER -E SYSTEM- V3.1

Fitting to new Royal Enfield Meteor 350 (2021on)

### Introduction;

The E-System Scottoiler is a very compact unit and has the advantage of simply needing an electrical connection to the battery to power a pumped oil supply to the chain from the oil reservoir. There is control unit mounted on the handlebar for adjusting the oil delivery. A sensor in the unit ensures oil delivery only occurs when the bike is moving.

### Fitting Scottoiler to the Meteor

The Royal Enfield Meteor has very little free space to mount the reservoir in a suitable location, with no room for under-seat and little clearance for any rear frame locations. The only really protected position for the reservoir is under the left side panel. Space here is very tight, and will need care when fitting. Access to the battery and power connections for the Scottoiler means removing the right side-panel. The Scottoiler control unit can be attached to the handlebars with support the bracket supplied but an additional 22mm handlebar clamp is required.

### Preparation

Check the Meteor Riders Handbook for procedures for correct removal of side panels, seats and grab rails.

- Remove the left side-panel (two hex bolts).
- Remove the right side-panel (one hex bolt and lock so ignition key required).
- Remove the Pillion seat and grab rails (undo 4 x hex M10 Cap head bolt )
- Remove the Front seat (undo 2 x M6 (use a 10mm spanner or socket)

### STEPS 1-3;

#### Mounting the oil Reservoir and Carrier under the left side panel

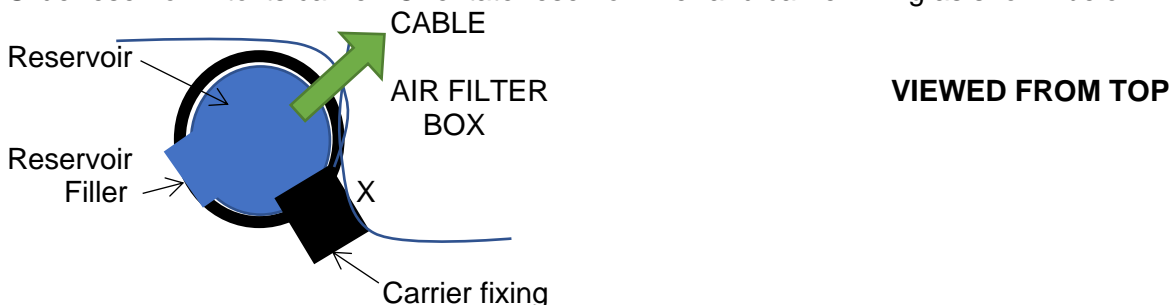
It is easier to determine the reservoir and carrier position under the left side panel as follows...

- Take off the left side panel; Undo 2 x M6 hex bolts. Pull out and forwards from the rubber fixings
- Then remove the painted panel from the left side-panel (4 x star drive self-tapping bolts inside side left panel).
- Then refit the left outer plastic side panel surround and secure with the two M6 hex bolts.

You can now see the space where reservoir will fit in its carrier between front of air box and wiring harness in

**Picture 01 – Reservoir position** (Note ; the outer side panel is not shown fitted in this picture)

Slide reservoir into its carrier. Orientate reservoir filler and carrier fixing as shown below.



**To establish the position of the reservoir on the air filter box;**

- Feed the power cable over top of air filter box. Place the reservoir / carrier in position.
- Carrier fixing right side(X) rests against the front side of the air filter box.

**Find the vertical position of the reservoir against the air filter box;**

Position the reservoir as low as possible with its base just above the base of the side panel surround, This ensures space for the oil feed tube to curve over at the top - Do Not attach oil pipe yet Temporarily tape reservoir and carrier in place with two strips of fabric adhesive tape (eg Gaffer tape) The side panel surround can now be removed carefully.

The oil reservoir carrier position is then marked with tape, or tippex /white paint (**See Picture 03**)

### Securing the oil reservoir

Remove the temporary adhesive tape and remove the oil reservoir carrier.

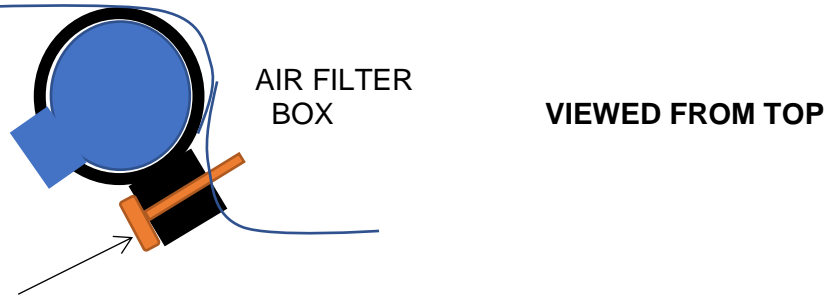
**Option 1;** Cut a 60mm length of 15mm double sided 3mm thick foam tape.

Apply to the side X on the Reservoir carrier fixing after degreasing the front of the air filter box.  
Refit the carrier between the marks on the air filter box.

**Option 2;** The reservoir can be better secured with self tap or set screws+ nyloc nuts

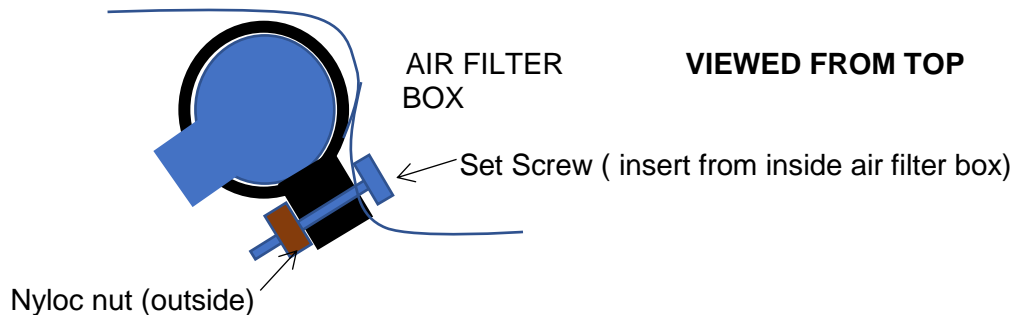
**Note; Self tapping screws/drilling for set screws into the air box may affect your bike warranty!**

#### 2A Self tap screws



2x long self- tapping screws 3mm x 35mm through the carrier fixing into the air filter box.

#### 2B Set screws



2 x M3 set screws about 40mm long and secured on the outside using 2 M3 nyloc nuts

### Important notes for Options 2A and 2B.

The air filter must be removed first if fixing using self tap or set screws + nuts  
Undo 3 Philips screws to remove the air filter cover and attached air filter.

**2A** 1.5 mm Pilot holes for the self-tapping screws must be drilled in the air filter box

**2B** 3mm holes will need to be drilled into the air filter box.

Fit the set screws from the INSIDE of the air filter box

Secure on the Carrier fixing with a NYLOC nut on the OUTSIDE

\*In both cases drill one hole, fit the self-tap screw /set screw and nut before drilling the second hole.

\*\* The air filter box must be cleaned of all plastic debris before refitting the air filter and cover.

Refit the reservoir in the carrier. Then carefully run the power cable over the air box and under the left top rail of the frame into the central space found under the front seat. **(See Picture 04)**

### STEP 4 ; Mounting the Scottailer control unit

**Note;** Record the serial number of the Control unit before mounting for your Scottailer warranty!

**The handlebar layout limits how and where you can mount the control unit**

**Option 1; Bar Mount** The Scottailer control unit can be attached to the handlebars but you need a suitable 22mm clamp to attach to the bracket supplied in the kit **(See Picture 05a)**

**Option 2; Instrument mount** .An alternative mounting place is in front of the Speedometer or the Tripper. It will be necessary to make a short bracket extension out of strip alloy or stainless with a M6 hole in each end. One end can be mounted onto the Tripper or Speedometer using one of their fixing bolts. The control unit bracket supplied is then attached to the other end with a bolt and secured with a nyloc nut. The Scottailer control unit is fastened to the bracket supplied using the double-sided tape pad.  
**(See Picture 05b)**

### **Cabling from the Control unit – preliminary routing.**

Carefully feed the cable from the control unit around the back of the headlamp shell and to the left side of the steering head. Take care with routing between electrical cables and control cables. Leave enough slack in the cable from the control unit for the bars to move freely from lock to lock.

There is a metal “U clip” on the left side of the steering head (M6 cap head screw) .You can route the Scottoil cable through this clamp if there is space**(See Picture 06)**

Run the cable along the left side under the petrol tank along the frame and then feed *under* the left top rail of the frame into the central space found under the front seat. Leave the cable here for the moment.

### **STEP 5 – Oil feed pipe.**

Loosely attach the oil feed pipe to the reservoir and route the pipe over the top of the air box and to emerge above the top of the chain guard. Route pipe along the top of the chain guard to the back of the bike going under the lower shock absorber mounting. **(Picture 07 and 08)**

### **STEP 5B – oil dispensing tube and bracket**

The oil pipe support bracket can be fitted to the rear chainguard mount. Prepare the end of the pipe and **dispensing tube and fix in the bracket (Picture 09)**

### **STEP 6**

Secure the oil feed pipe to the chainguard using the self-adhesive clips provided.

Route oil pipe safely up to the reservoir. Leave excess oil pipe for now.

### **STEP 7**

Route the control cable battery connection from under the front seat to the right side of the bike.

Find a route for the power supply and earth to the battery.

Attach fused power supply and earth to correct battery terminals (it is easier if you slacken battery clamp M6 bolts and slide battery out slightly to access the terminals on top of the battery)

### **STEP 8**

Connect electrical plug from the oil reservoir to the control unit plug between frame under the front seat. Tidy up and then secure wires to frame using cable ties provided. **(See Picture 10)**

### **STEP 9**

Fill the oil reservoir and prime using the control unit following set-up instructions.

### **STEP 10**

Space is limited under the left side panel due to the air box and wiring harness. The non- return valve needs about 10 -15 cm of oil pipe from the reservoir so it can be located beyond the air box on its route towards the top of the chain guard.

Follow “Initial Set-up” instructions to prime the oil pipe and to set the oil delivery rate. **(See picture 11)**

**Tip;** A 10ml plastic syringe can be used to prime the oil pipe from the reservoir with Scottoil saving time and a lot of work from the oil pump.