RALLY RAID PRODUCTS.CO.UK

FITTING INSTRUCTIONS

EVO2 FUEL TANKS
KTM 690 2014
RRP 346,7,8,9
V1

www.rally-raidproducts.co.uk

NOTE : BEFORE COMMENCING WORK ON THE CONVERSION, TAKE TIME TO READ THE INSTRUCTIONS CAREFULLY. ALL WORK CAN BE CARRIED OUT BY A COMPETENT MECHANIC, BUT IF YOU ARE UNSURE PLEASE CONTACT US OR A MECHANICAL PROFESSIONAL.

KEEP ALL PARTS THAT ARE REMOVED, AS IT IS POSSIBLE TO REMOVE OUR KITS AND RETURN THE BIKE TO STANDARD, IF REQUIRED

TOOLS REQUIRED

5mm socket

8mm socket

10mm socket

13mm socket

T25 Torx

T20 Torx

T45 Torx

Small Screwdriver

Snips/Scissors

Loctite

Cable Ties

NOTE : WHEN FITTING THIS KIT TO A US/CANADA SPEC BIKE, YOU MUST REMOVE THE EMMISIONS CANISTER

FOR US/CANADA SPEC BIKES ONLY
REMOVE CANISTER AS PER INSTRUCTIONS BELOW

1. Purchase a pack of 1000 Ohm, ¼ Watt resistors
2. Purchase a 6mm Vacuum Port Plug/Cap.
3. Follow the hose from the canister to the left side of the throttle body. Disconnect and place the vacuum cap on the brass nipple, re-using the clap to secure.
4. Take the vent hose from the fuel cap and disconnect from canister and vent to atmosphere, trim as required. Make sure the open end is in place where it will not get blocked with mud. Cutting at an angle can help prevent blocking.
5. Remove canister from bike.
6. Remove solenoid from bike.
7. Jump the 2 pins on the plug that went into the solenoid with a 1000 Ohm, ¼ Watt resistor. If you have dielectric grease, place in terminals before installing resistor.
8. Tape up resistor/plug with electrical tape with seal from water/dirt and zip tie in a secure location.
9. Once secure cut the bracket as shown

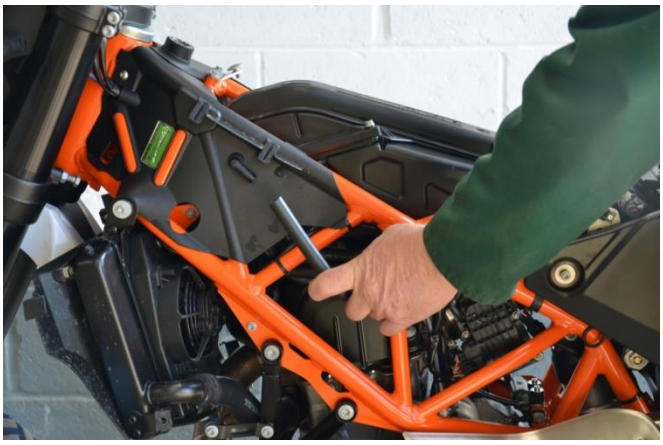
EVO 2 TANK KIT FITTING INSTRUCTIONS KTM690 2014-

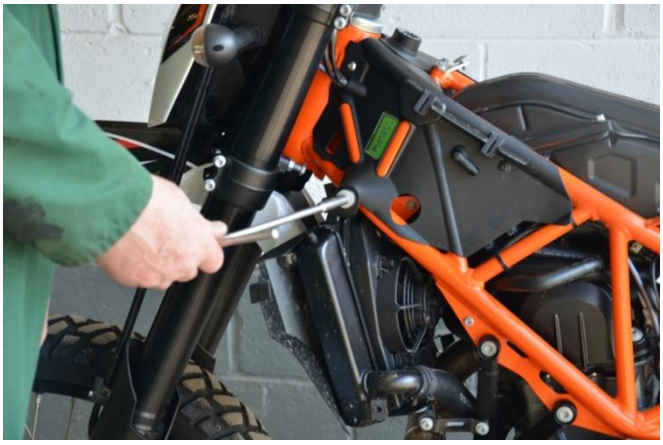
Remove side panels and seat, disconnect the battery at the positive terminal.

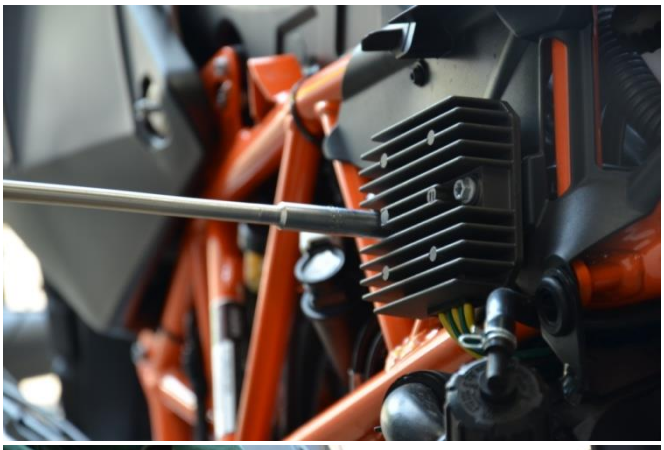
Remove rubber breather pipe from LH Guard

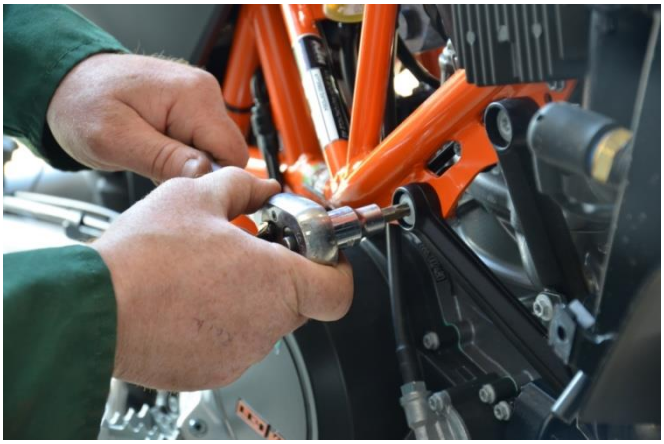
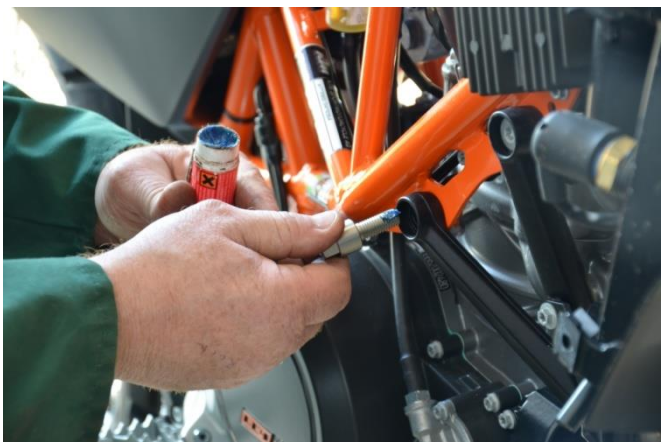
Remove top radiator bolt and both screws that hold plastic shroud to frame and mark one of the breather pipes and its corresponding outlet to aid re-fitting. (these must not be put on in reverse)

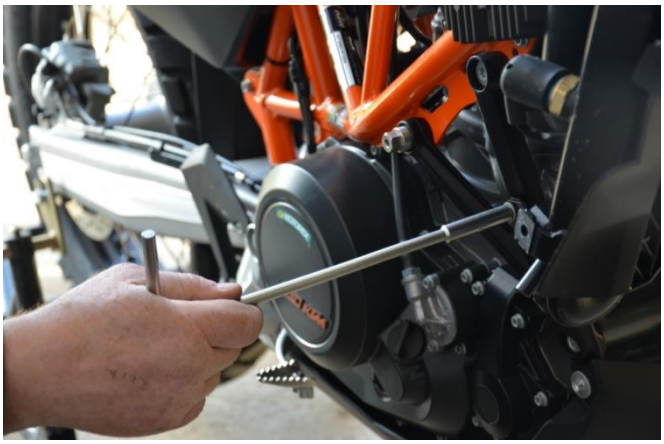
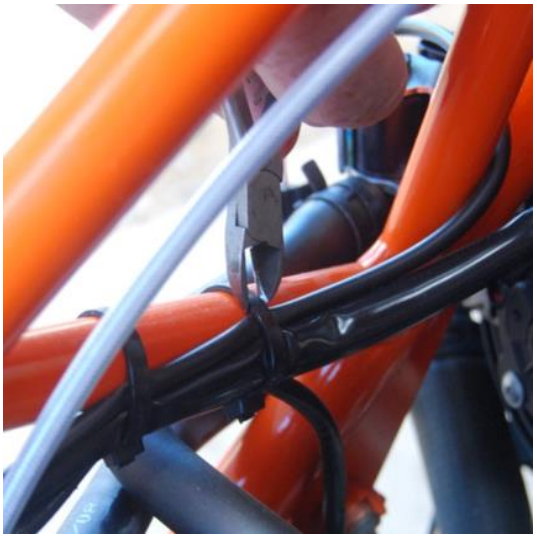
Discard LH Frame Guard and silver screw, retain radiator bolt and black screw for re-use.

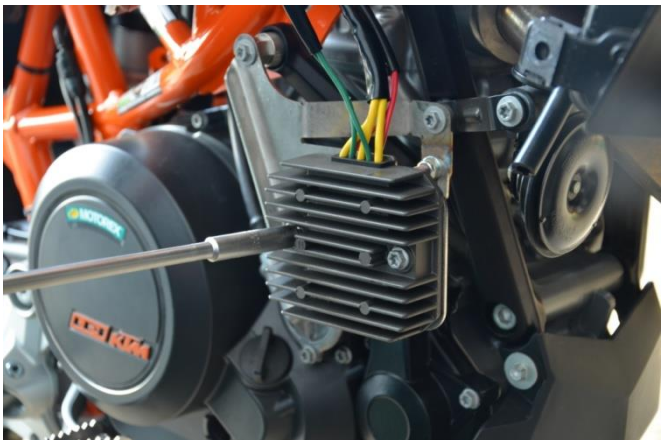
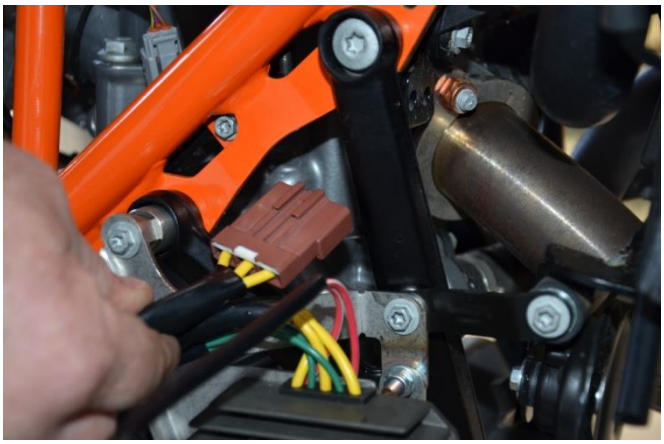




Undo both M6 screws and remove rectifier from RH frame guard. Remove top radiator bolt and both screws that hold plastic shroud to frame and discard plastic cover and both screws, retain radiator bolt for re-use	 
Remove electrical plug from rear of airbox. Undo the intake boot clip (the one nearest the throttle body) and remove the four M6 screws from air box. 2 front , 2 rear. Lift up the rear of the air box and slide out. Once air box is removed put clean tissues or cloth into intake of injector assembly to prevent debris from entering the engine.	 

	
Re-fit radiator mounting bolts with replacement washers (as supplied), washers to go between radiator grommets and frame to replace thickness of plastic frame guards.	
Remove RH rear engine hanger lower torx screw and fit rectifier bracket special bolt (supplied). Use Loctite when fitting back to frame. Remove rear horn bracket M6 screw then fit new rectifier bracket with both M6 screws and Loctite securely.	 

	 
Cut cable ties that hold rectifier wiring to frame. Disconnect large brown connector plug on LH side of frame (can be very tight). Disconnect other connector to rectifier on RH side of frame and earth connector and remove rectifier and connected wiring loom from bike. Refit rectifier to plate using both original screws then feed wiring through frame and reconnect both plugs as shown. Re-fit earth connector with screw on frame	

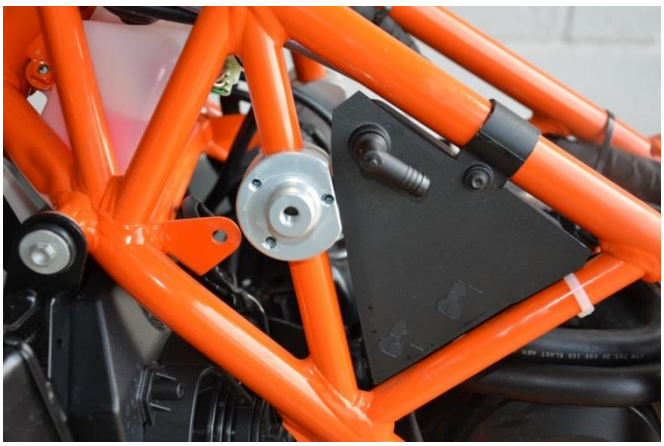
	 
Feed brown connector through gap between Y piece.	 

Fit tank mounts where show, but DO NOT tighten the screws.
RH Tank Mount may need to be fitted around top of frame tube, angled around then slid down next to the ABS Unit.

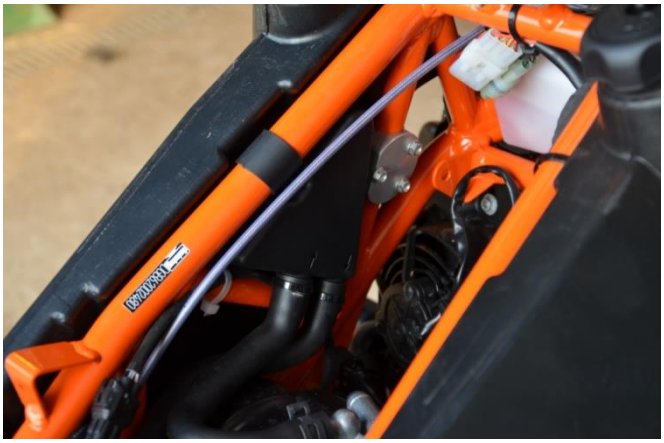
Flats on Tank Mounts must be facing the rear of the bike as shown.

Fit reduced crankcase breather tank, as supplied, to LH side of frame and reconnect pipes on inside of frame (in correct positions as shown on breather moulding diagram), secure with original screw.

Remove plastic Radiator Guard from radiator



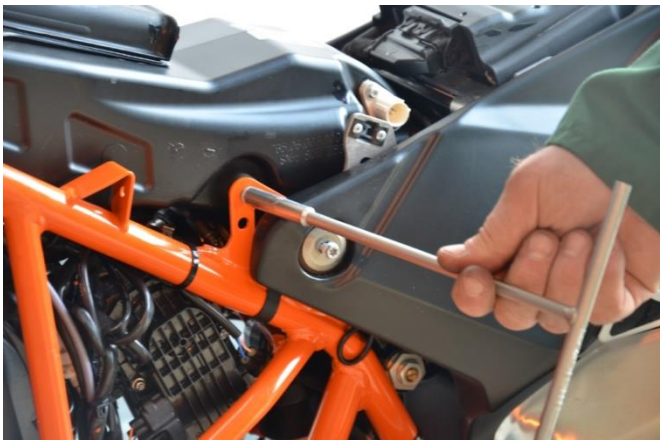
NOTE: BEFORE FITTING TANKS, RINSE OUT THOROUGHLY TO REMOVE DEBRIS.

Fit tank using **ONLY LOWER TANK MOUNT** with M8x60 screw, do not tighten screw fully. With one hand on the outside (holding the tank in correct position). Insert second M8 x 60 screw into upper tank mount, screw through tank and locate into mounting clamp that is loosely fixed to frame. It may be necessary to slide the mount up or down on the frame to achieve the correct fit to the frame. Before tightening both M8 x 60 screws ensure the tanks sitting correctly on frame, then fully tighten both M8 x 60 screws. Then fully tighten all three screws on the inside of upper tank mount. (Make sure these are Loctited).	
NOTE: The left hand tank has a cut out to clear the strap on the plastic crankcase breather. If the strap fouls the tank, slacken the screw holding the strap and slide it along the frame tube to the correct position and tighten. Remove both tanks.	
NOTE : IF FITTING THE FAIRING KIT, DO NOT REFIT THE AIRBOX UNTIL FAIRING FITMENT IS COMPLETE, AS IT MAKES FITTING THE COCKPIT SUPPORT EASIER. **IF ALSO FITTING EITHER SUBFRAME TANK BOLTS RRP 021, INJECTOR SCREW KIT RRP 237, GOLAN REMOTE FILTER KIT RRP 393 OR GOLAN MINI FILTER RRP 421 THIS WORK IS BEST COMPLETED BEFORE REFITTING AIRBOX**	

Remove debris cover from throttle body.

Refit air box, first reconnecting plug to air box. Take care not to foul any wiring or throttle cables. Lightly screw in front two M6 bolts then lower rear of airbox on to intake and tighten hose clip. Then screw in both M6 bolts into rubber mounts at rear of air box and tighten all 4 airbox screws fully. Reconnect breather pipe on LH side from airbox to crankcase breather moulding as shown below.

It may be helpful if a long, flat bladed screwdriver is used to help the lower lip of the intake rubber over the throttle body as the airbox is being pushed downwards.



FUEL ADAPTOR FITTING AND FUEL LINES

Ensure as much fuel is removed from tank before starting work. Remove rear wheel and mud flap. (both M6 screws) Remove the four M5 screws that connect fuel pump housing to bottom of tank. (Fuel may come out as housing is lowered.	
Gently lower pump assembly and unclip large black tube from pump by pushing both clips on each side of pump.	

Remove banjo bolt and banjo from the pump adaptor plate and slide the pump adaptor plate over the plastic tube, with 'O' ring recess in the adaptor plate facing up, and towards open end of plastic tube. Clamp together if possible using the M5 screws supplied (with an m5 nut and washer to hold them together). Using a 4mm diameter drill insert into threaded hole of adaptor plate and drill through plastic tube. Then drill another hole 10 mm above the top of the adaptor plate and clean plastic tube from burrs and debris.	

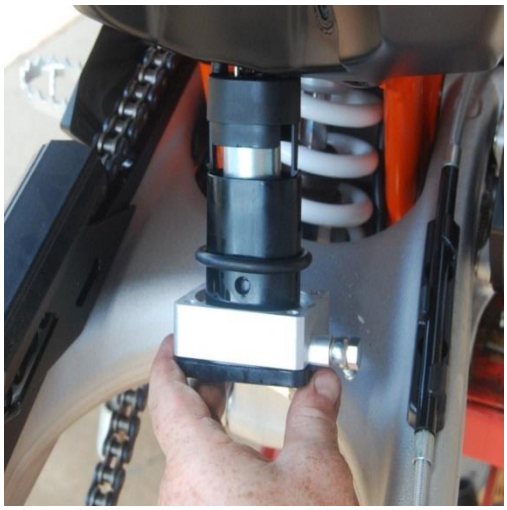
Slide pump adaptor, then 'O' ring over moulding and insert back into pump top; attaching with two clips on top moulding. Push assembly back up into tank and secure with four M5 x 45 bolts and washers, as supplied. NOTE – Before re-inserting pump assembly into tank, check electrical connectors and corrugated fuel pipes are not kinked or disconnected.

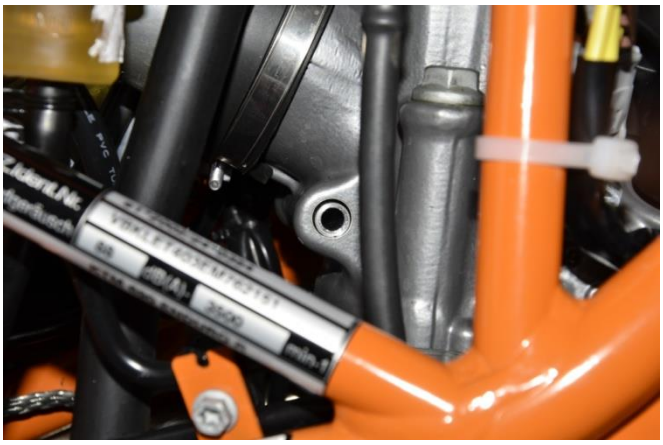
Align fuel pipe banjo as shown.

Fit pipe support plates to hole in rear of barrel as shown.

Slide tube through hole in barrel and fit each steel plate (with rubber grommets fitted) either side of lug on barrel then secure with M6 screw, nyloc nut and washers.

Note: It is advisable to bend tag on start motor away from pipe support tag to ensure no possibility of short circuit.





When re-fitting both tanks, pass fuel lines through plastic ‘P’ clips, on the inside of tank, then fit tanks onto mounts and secure with M8x60 screws. Push fuel clips over pipe ends then push pipe onto tap outlet and re-fit spring clip using pliers to ensure a good fit.

*It may be required to rotate the radiator hose steel clip so that the tabs are in the vertical position to clear the tank.

It may be necessary to trim the extra length from the fuel pipes before connecting to the taps in order to prevent pinching.

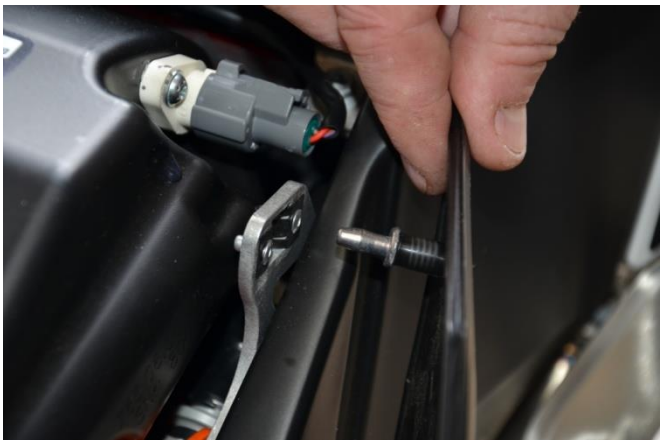
NOTE: IT IS VITALLY IMPORTANT THAT THE FUEL LINE TO THE LEFT TANK IS INSTALLED CORRECTLY. IMPROPER PLACEMENT COULD CAUSE CONTACT WITH HEADER PIPE AND A POTENTIAL FIRE RISK.

Remove one of the cupped washer from original side panels as shown.

Unscrew pin from original side panel and re-fit into new side panel

Re-fit cupped washer into new in-fill panel.

Hold plastic infill panel securely and gently push peg into spring clip in frame and secure with original M6 screw into frame using lower hole, through cupped washer.



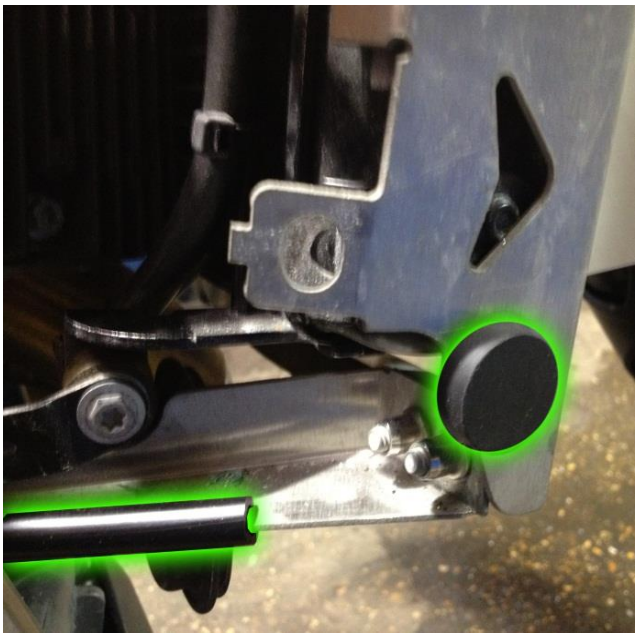
	
Where no radiator guard protector (RRP or TT) is fitted then the rubber buffers (supplied) are to be pushed into the M6 threaded clips on the outside of the radiator (where the side panels previously fixed to). Apply adhesive or silicone sealant to hold in place. These are to take up the gap, between the radiator and the inside of the tank when the radiator protectors are not used.	

If **EARLIER** versions of our radiator guards are fitted, (with no side holes) a 6.5mm hole must be drilled in position shown using the drill provided. Later versions already have this done.

TAKE CARE NOT TO DRILL THROUGH RADIATOR
(it is advisable to remove guard before drilling)

ON EARLIER RAD PROTECTORS WITH NO SIDE HOLES
Remove material from radiator bracket, as shown and attach supplied length of pipe by cutting lengthways with a sharp knife or blade and glue in position.

IT IS VITALLY IMPORTANT TO COMPLETE THIS STEP IF USING OUR RADIATOR GUARD AS IT GIVES THE REQUIRED CLEARANCE FOR THE FUEL PIPE WHEN CONNECTED.



INITIAL TANK FILLING

After ensuring that all fuel pipes and connectors are installed correctly, as per instructions, turn both front fuel taps to closed position.

Before commencing initial fuel filling, both front EVO2 tanks and the rear OEM tank should be empty of fuel

Fill both front fuel tanks about 2/3 full with fuel, then open the left hand tank fuel tap fully.

Once the fuel has drained through to the rear tank the levels should equalize.

Turn off left hand fuel tap and open the right-hand tank fuel tap, fuel should flow from the right front tank to the rear tank, and eventually the level will equalize as before, between front and rear tanks.

It is then preferable to close both front fuel taps and completely the front tanks with fuel, then open both taps, this will then allow the fuel to flow between all three tanks and equalize the level.

Fuel flow problem diagnosis

If the fuel level the of EVO2 tank does not drop within a couple of minutes, generally this means that there is an air lock within the new fuel pipe, between the front and rear OEM tank. To clear the airlock, open both front taps and blow gently in to the T Breather Pipe that you have fitted to the Acerbis Filler caps. The gentle air pressure from blowing should push any airlock through the fuel pipes into the rear tank, afterwards the fuel should flow.

If you find that the fuel is still not transferring between the front and rear tanks under gravity's pressure then it could be cause by one of the following.

A. Some of the new fuel pipework could be "kinked" or pinched during installation, so check all lines are routed correctly as per the installation instructions.
B. The dry break (quick connector) may not be fully snapped shut, and this will prevent fuel flow.
C. If the hole that you have drilled in the OEM plastic fuel pump housing is not correctly aligned with the inlet hole of the billet fuel adaptor, then this can cause a reduction in fuel flow. (see page 13 of fitting instructions)
D. A blocked breather on the rear fuel tank can stop fuel flowing from front to rear, to prove this it is possible to remove the rear cap temporarily to see if this allows fuel to flow front to rear. If this is corrects the fault, then it will prove that the breather to the rear tank is blocked. If the OEM filler cap is still fitted, then it is usually the rubber breather pipe from the filler cap that is either blocked or pinched. If our Billet Filler Adaptor is fitted, then remove the breather from the filler cap and check correct function of the breather by blowing gently into the pipe to ensure air can flow. If air does not flow, then it is usually the ball bearing in the breather that is stuck and may just need a sharp tap to dislodge it.

The EVO2 front tanks are designed so that when the rear tank runs out of fuel there will always remain about 0.5L of fuel in each tank, this is so that the fuel lines do not run completely dry and when they are refilled the fuel can flow as usual without having to prime the fuel pipes as in the initial fill.

PROCEDURE FOR FILLING TANKS (Following Initial fill)

It is advisable, when filling both front tanks and rear OEM tank to isolate the front tanks by turning both fuel taps to the off position. This helps prevent 'siphoning' between the tanks as they are being filled. Once filled the two front fuel taps can be opened.

LOW FUEL WARNING

Due to the extra fuel in the front tanks, the range increases when the low fuel warning light signals. With front tanks fitted the range from signal to empty is around 25km to 60km, depending on riding conditions.

QUICK DISCONNECTORS

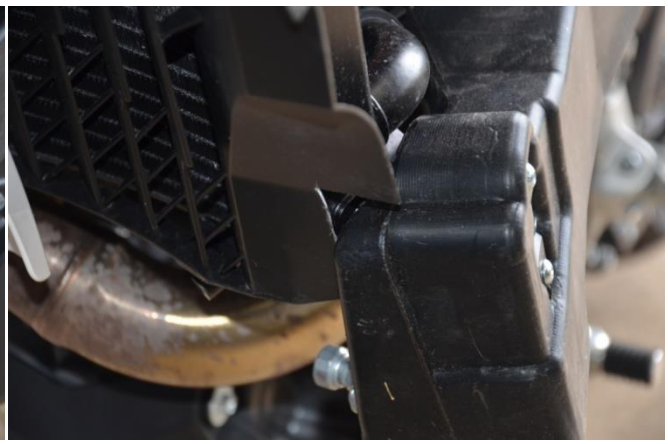
Before removing front tanks, you must disconnect the black quick connector by pushing in the stainless steel tag and gently pulling apart. This is to prevent fuel discharge from the rear tank through the fuel lines. **Whilst disconnected we strongly recommend to cover the ends of the quick connectors** with a clean plastic bag, latex glove or similar, this prevents debris from entering the connector.

Before reconnecting, push in the stainless steel lever and push both halves together taking care. Once connected check for leaks, if the connector is leaking, disconnect again and thoroughly clean 'O' ring and plunger then reconnect.

Refit OEM rad guard with both special stepped M6 screws into Radiator.

DO NOT USE LOCTITE OR OVERTIGHTEN

Trim plastic radiator guard as shown



Re-connect battery positive terminal and refit red insulating cover.

FITTING INSTRUCTIONS

TOOLS REQUIRED

Hair dryer - Contact Cleaner - Sharp Blade - Soapy Water - Clean Cloth - Isopropyl Alcohol Wipe

PREPARATION:

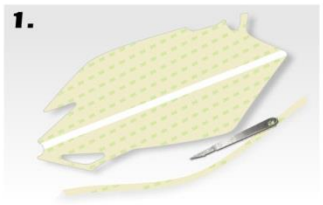
1. Always work with clean dry hands, decals must be applied at no less than room temperature

2. Thoroughly clean all plastics with a clean cloth and warm soapy water. Rinse off and ensure plastics are thoroughly dry.

3. For best results, clean the surface with contact cleaner or brake cleaner, use only on the areas where your decals will be applied.

4. With each Zeronine decal kit or backgrounds you will receive a free Isopropyl Alcohol wipe, this will remove any final dirt or grease marks from your plastics.

5. Turn your decal face down onto a flat surface. Using a sharp blade cut a 10mm wide strip from the backing paper, see image (1). Be extremely careful not to cut too deep as this may scar the face of your decal. We recommend a scalpel blade or similar for this procedure.



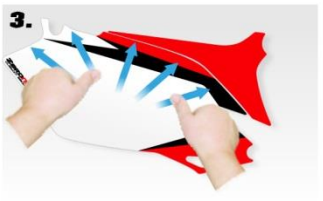
DECAL APPLICATION:

6. For ease of application, we always prefer to apply the decals with the plastics installed to your motorcycle. This allows you to have two hands to work with, rather than having to hold the plastics steady with one hand.

7. With the 10mm strip removed from the backing of your decals, offer them into position. When you are comfortable that everything lines up, including bolt holes, gently rub down where the strip is removed, see image (2). If at this point you feel that you have the position slightly wrong, gently and slowly remove the decal and start again.

8. Fold back the top half of your decal and remove the backing paper. Whilst holding the decal steady with one hand, firmly start to rub the decal upwards with you thumb see image (3). You will need to work evenly, from left to right and upwards at the same time to achieve the best results. Our materials are so soft and flexible, unsightly creases can be easily smoothed out for a perfectly flat finish.

9. For the remainder of the decal, repeat step 7, this time working downwards, and from left to right, see image (4).



FINISHING TOUCHES:

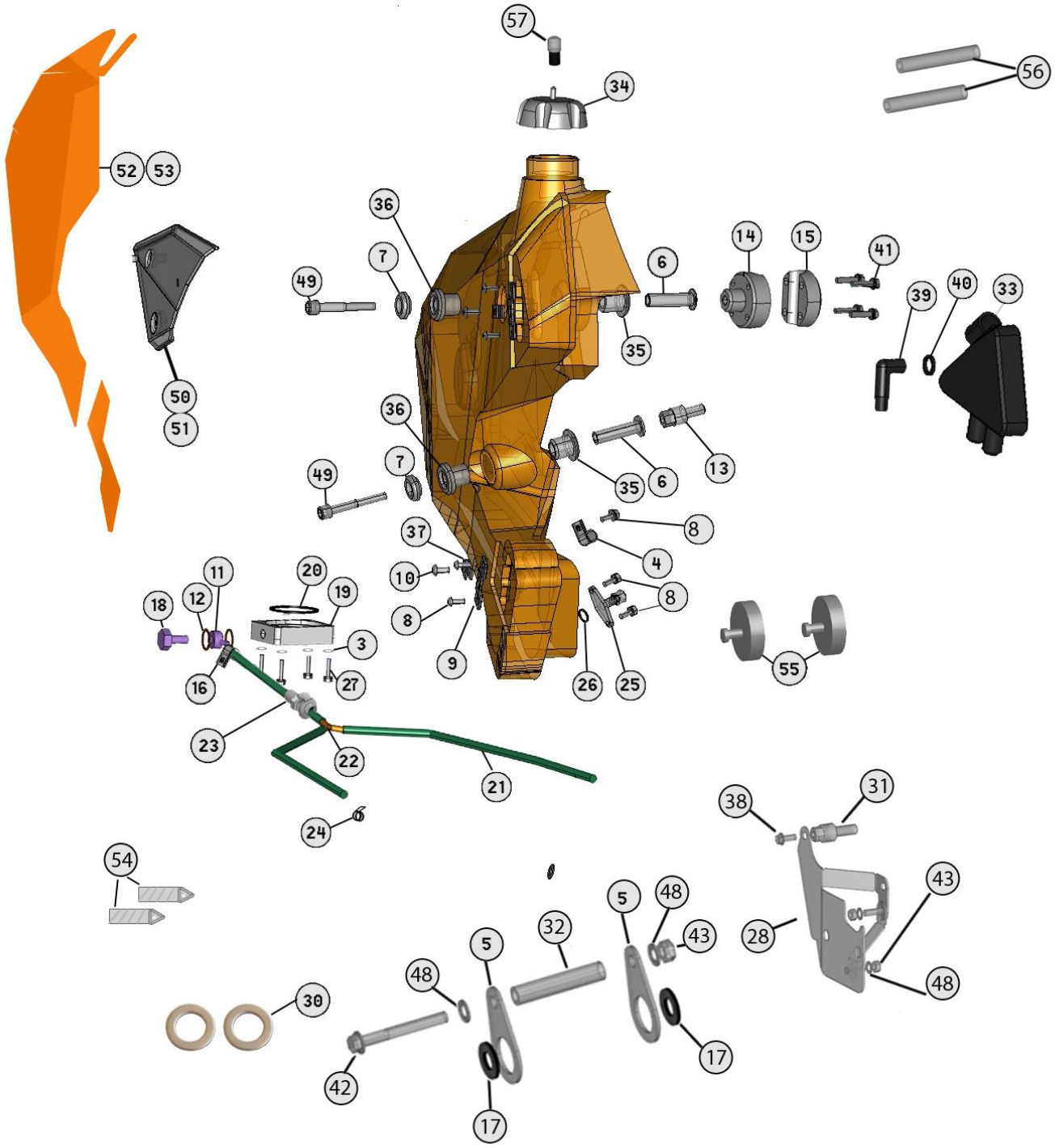
10. Now that your decals are firmly in place, a little care and attention will keep them that way. All after market plastics companies products will vary in shape or size, therefore a little trimming may be required. If your decals are slightly over hanging, or incorrectly fitted, they should be trimmed carefully with a sharp blade. Overhanging or incorrectly fitted decals may result in premature wear.

11. With a hair dryer on medium heat setting, warm up the entire decal that has now been applied. Once warm, aim the hair dryer directly at the edges of the decal, and at the same time, rub down firmly with your thumb, see image (5). This will help seal the edges and create an even greater bond. Continue this procedure around the entire edges of decal.

12. Extra attention is required around all bolt holes or any awkward fitting areas. Again, aim hair dryer directly at the edges, and rub down firmly with your thumb, see image (6).

13. Any additional decals such as air box, should be applied following the above procedures.

ALLOW 48 HOURS FOR ULTIMATE BOND TO TAKE PLACE BEFORE RIDING.
NEVER POINT PRESSURE WASHERS DIRECTLY AT EDGES OF DECALS.



Note 54, only needed if Adventure or Rally Fairings are being fitted

2014 EVO2 TANK KIT PARTS LIST V2			
Fig.	Part Description	Part No.	Qty.
1	LH Moulded Tank		1
2	RH Moulded Tank		1
3	M5 Washer BZP		4
4	Plastic P Clip		2
5	Fuel Pipe Bracket		2
6	Tank Sleeve		4
7	Outer Tank Bush		4
8	M5x12 Button CHS BZP		14
9	Plastic Fairing Clip		4
10	M6 Fairing Screw & Washer		4
11	Fuel Banjo		1
12	8mm Copper Washer		2
13	M8 Lower Tank Mount		2
14	Tank Mounting Outer		2
15	Tank Mounting Inner		2
16	Fuel Pipe Clamp		1
17	Grommet		2
18	M8x1.0 Banjo Bolt		1
19	Fuel Adaptor Plate		1
20	O Ring 6x45		1
21	6mm Fuel Pipe		1
22	6mm "T" Connector(Brass)		1
23	Double Shut-Off Connector		1
24	9-13mm Spring Clamp R6-922		7
25	Fuel Tap		2
26	O Ring 11x2		2
27	M5x45 BZP Hex Bolt		4
28	Rectifier Bracket		1
30	7/16" Washer(Thick) BZP		2
31	Rec Bolt		1
32	spacer		1
43	M6 Nyloc Nut		3
48	M6 Plain Washer BZP		4
49	M8x60 CHS BZP		4
50	Side Panel Left		1
51	Side panel Right		1
52	Left Tank Graphic		1
53	Right Tank Graphic		1
54	M6 x 12 grub screw		2
56	60mm Rubber Pipe		2
57	Tank breathers		2

KTM PARTS LIST			
33	Cover Frame Left Side	76503083200	1
34	Acerbis Cap	590.070.080.44	2
35	Tank Rubber Inner	564 010 4 00 00	4
36	Tank Rubber Outer	6000 706 5000	4
37	Range Change Metal Nut M6	546 030 48 100	4
38	M6 x 15	24060156	4
39	Angle Connector LC8 03	600.380.82.000	1
40	O Ring 8x2	07700 800 20	1
41	M5 x 25	25060256	6
55	Rubber Buffer	503 070 20 000	2