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EVO 2 TANK KIT FITTING MANUAL



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

***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 clamp 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

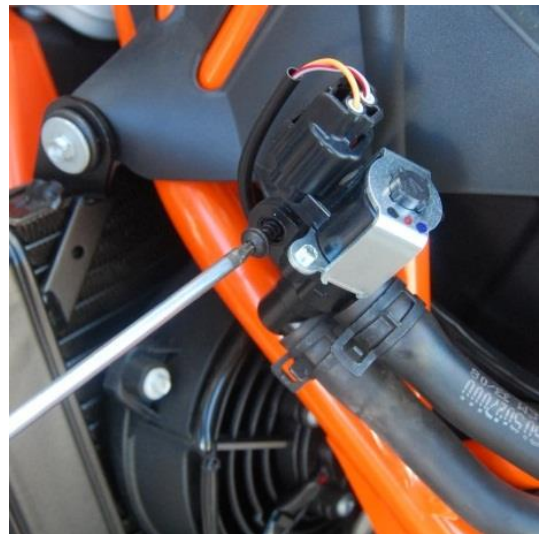


EVO 2 TANK KIT FITTING INSTRUCTIONS All Models up to 2013

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

Remove SAS valve from LH frame guard and disconnect at plug.

Remove top radiator bolt and both screws that hold plastic shroud to frame and discard.



2. Remove rectifier from RH frame guard and disconnect the breather pipe that connects to the air box from the plastic elbow on the frame guard. Disconnect the throttle cables from the handlebars and thread through the frame guard and reconnect.

It is also possible to cut the plastic guard with a fine hack saw. This saves disconnecting the throttle cables. Remove upper radiator bolt and both screws that fix plastic frame guard to frame, and then remove guard. Swing out frame guard and remove the two rubber pipes that connect to the re-breather system (triangular moulding) and remove frame guard



THIS STEP ONLY APPLIES TO PRE 2012 MODELS WITH COIL ON OUTSIDE OF FRAME- 2012 ONWARDS MODELS DO NOT NEED IGNITION COIL REMOVED

Remove coil from frame and then remove the spark plug cap. (Do not pull on the HT lead but grip plug cap with pliers or soft grips).



3. Undo the intake boot clip and remove the four M6 screws from air box.

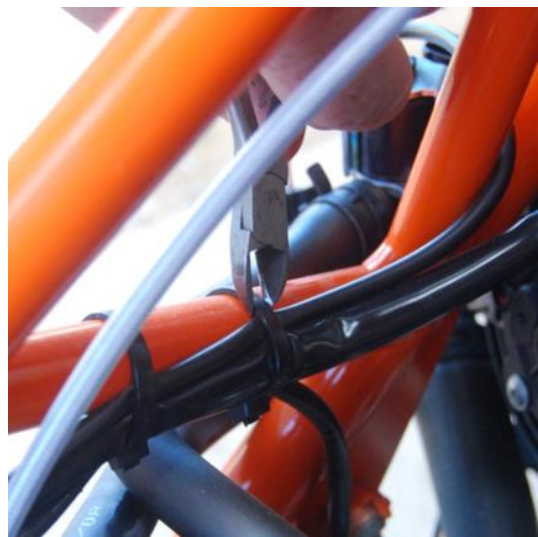
Lift up the rear of the air box and, before removing from frame, carefully disconnect wiring plug and rubber pipe from underside of air box. Once air box is removed put clean tissues or cloth into intake of injector assembly to prevent debris from entering the engine.



4. Re-fit radiator mounting bolts with replacement washers (as supplied), washers to go between radiator grommits and frame to replace thickness of plastic frame guards.



5. Cut cable ties that hold wiring for SAS valve and 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 remove rectifier and connected wiring loom from bike.


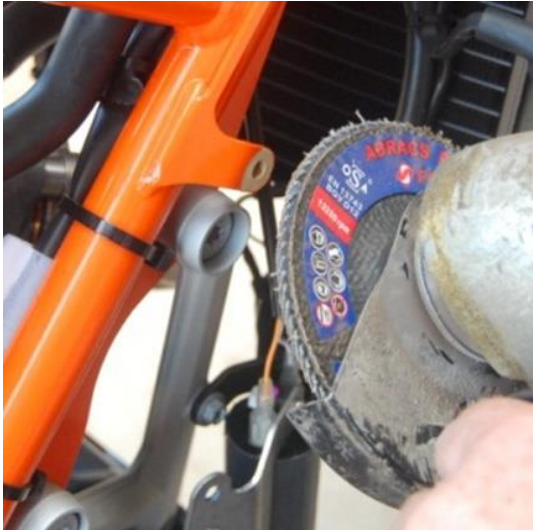



THIS STEP PRE 2012 MODELS ONLY

ON RIGHT HAND SIDE ONLY

Where there is no 6.5mm hole in the frame gusset for the new rectifier bracket, undo lower engine mount Torx bolt a couple of turns, and remove upper engine Torx bolt. Then pry away the Y piece a couple of millimetres from frame with a suitable lever, before sliding (between 'Y' piece and frame) the drill jig under the top hole and replace with adaptor bolt (as supplied). Before tightening, adjust edge of drill jig to line up with the edge of frame gusset. Tighten securely both M10 screws. Ensure



<p>flat edge of drill jig is against the outside edge of frame gusset. (as shown)</p>	
<p>6. Before drilling frame gusset make sure wiring harness on inside of frame is moved, to allow the drill to pass through with no obstruction as this can cause damage to wiring. Use the 6.5mm drill (supplied) to drill through the frame where shown, using the hole in jig as a guide. Remove adaptor bolt and drill jig, and de-burr hole edges. Replace adaptor bolt (supplied) and Loctite before tightening.</p>	
<p>7. Use a grinder to remove paint from coil fixing bolt hole lugs. Fit ignition coil to supplied bracket with original screws, using 2 M5 washers between plate and coil on each end. This will space the electrical connectors away from the coil plate. With HT outlet at lower, as per photo, and secure to frame with new screws (M5 x 12). Re-route and fit HT cap as shown.</p>	
<p>8. NOTE: If electrical connectors are removed they are 2 different sizes, ensure they are connected correctly to the terminals.</p>	

9. Remove L/Hand upper engine mount Torx bolt on 'Y' piece where it attaches to frame and replace with adaptor bolt, as supplied, and Loctite

2012 & ONWARDS MODELS ONLY

Remove right hand upper engine mount Torx bolt and replace with adaptor bolt as supplied, Loctite in position.



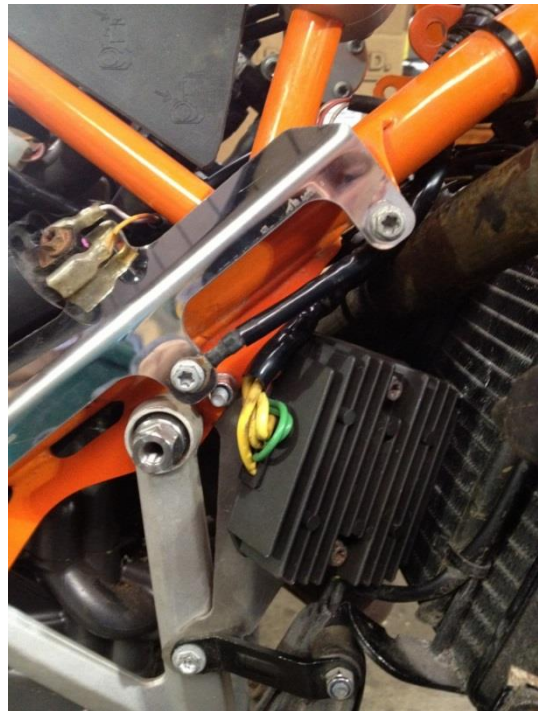
ALL MODELS

10. Fit rectifier to L shaped plate, as shown, using original m6x30 screws (2 off) with wires facing rear wards, as in picture. Remove m6 radiator stay screw and slide rectifier plate into position. Ensure top lug of plate is behind frame bracket and bottom of lug is on outside of Y shaped engine mount.

(a) Fit m6x25 upper screw from inside hole in frame, through plate, and then the frame and loosely fit m6 washer and nut onto the outside.

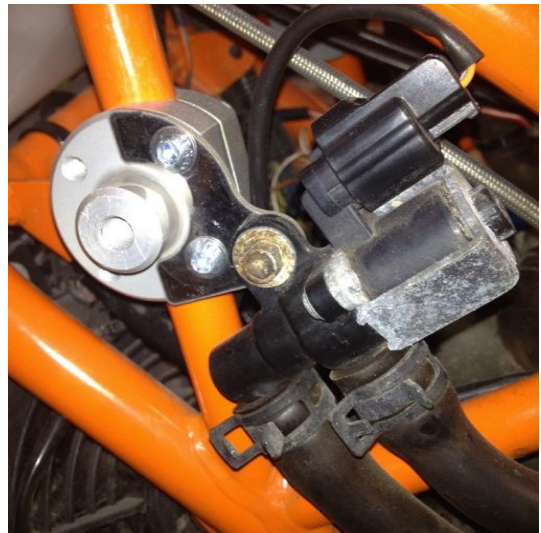
(b) Making sure bottom rectifier bracket lug is on outside of Y shaped engine mount, re-fit lower radiator stay and secure using m6x25 screw (supplied).

Fully tighten both screws, and if rectifier fins are too close to radiator, it is possible to bend bracket by pushing on it by hand to gain more clearance.



11. Fit tank mounts where show, but DO NOT tighten the screws.

(b) Fit left hand tank mount to frame as shown and re-fit SAS valve using stepped M6 screw as shown.



12. Fit right hand tank mount as shown

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



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

13. Fit tank using ONLY lower tank mount with M6x80 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 both tank are sitting correctly on frame, then fully tighten M8 x 60 screws. Then fully tighten all four screws on the inside of upper tank mount. (Make sure these are Loctited).



NOTE: The right 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.



14. Re-route rectifier wiring to LH connector, as shown. Cable tie to frame tube as shown and re-connect wiring plugs.

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 0 INJECTOR SCREW KIT RRP 237, GOLAN REMOTE FILTER RRP 393 OR GOLAN MINI FILTER RRP 421 THIS WORK IS COMPLETED BEFORE REFITTING AIRBOX



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



FUEL ADAPTOR FITTING AND FUEL LINES

1. Ensure as much fuel is removed from tank before starting work.
2. Remove rear wheel and mud flap. (both M6 screws)
3. Remove the four M5 screws that connect fuel pump housing to bottom of tank. (Fuel may come out as housing is lowered.)



4. Gently lower pump assembly and unclip large black tube from pump by pushing both clips on each side of pump.

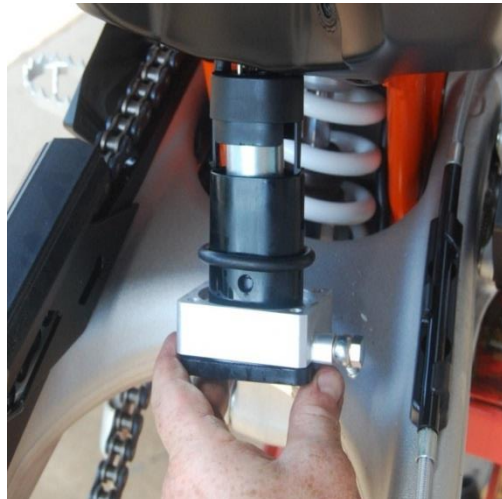


5. Remove banjo bolt and banjo from pump adaptor plate and slide pump adaptor plate over plastic tube, with 'O' ring recess in adaptor plate facing up, towards open end of plastic tube.

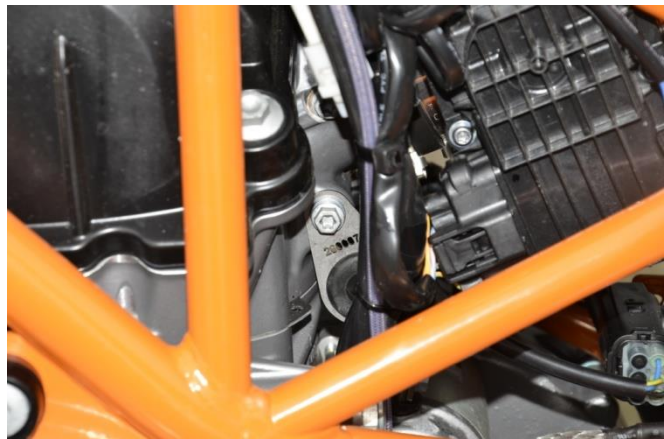
Clamp together if possible using the M5 screws supplied (with an m5 nut and washer to hold them together). Using a 4mm diameter drill insert into threaded hole of adaptor plate and drill through plastic tube. Then drill another hole 10 mm above the top of the adaptor plate and clean plastic tube from burrs and debris.

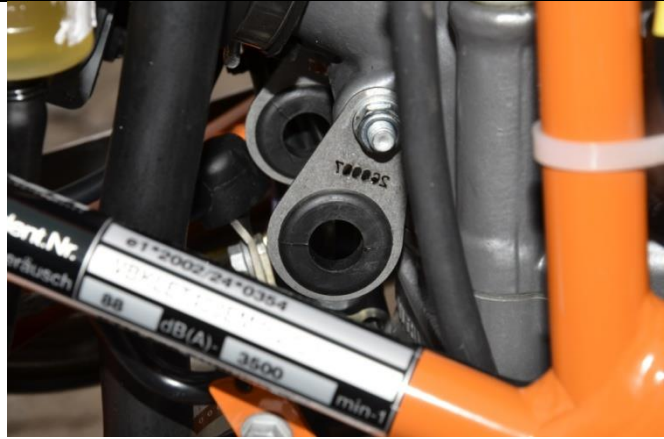


6. Slide pump adaptor, then 'O' ring over moulding and insert back into pump top; attaching with two clips. Push assembly back up into tank and secure with four M5 x 45 bolts and washers, as supplied. NOTE – Before re-inserting pump assembly into tank, check electrical connectors and corrugated fuel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



7. Fit pipe support plates to hole in rear of barrel as shown.
8. 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.
9. Note: It is advisable to bend tag on start motor away from pipe support tag to ensure no possibility of short circuit.





10. 8. 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.
11. *It may be required to rotate the radiator hose steel clip so that the tabs are in the vertical position to clear the tank.
12. 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.





13. Remove one of the cupped washer from original side panels as shown.
14. Unscrew pin from original side panel and re-fit into new side panel
15. Re-fit cupped washer into new in-fill panel.





16. 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.



17. 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.

18. 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

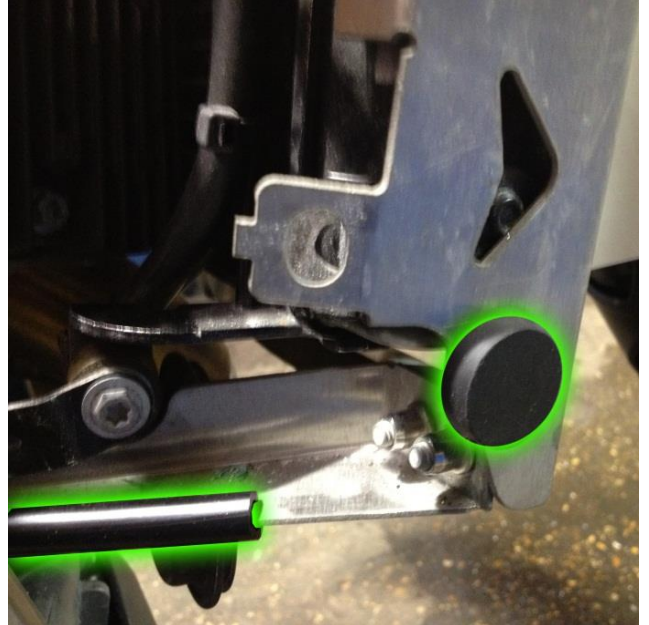
(it is advisable to remove guard before drilling)

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 is around 25km to 60km, depending on riding conditions.

QUICK DISCONNECTORS

Before removing front tanks, you must disconnect the quick connector by pushing in the stainless steel lever 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.

FITTING INSTRUCTIONS

TOOLS REQUIRED

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

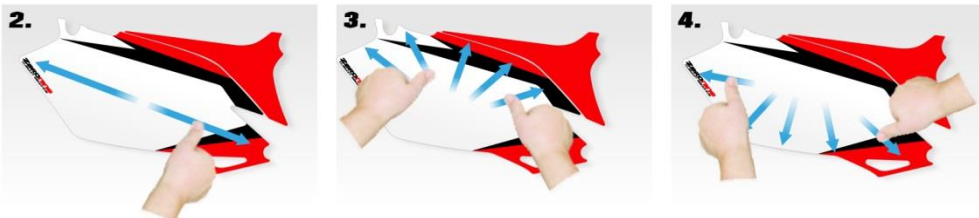
PREPARATION:

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.

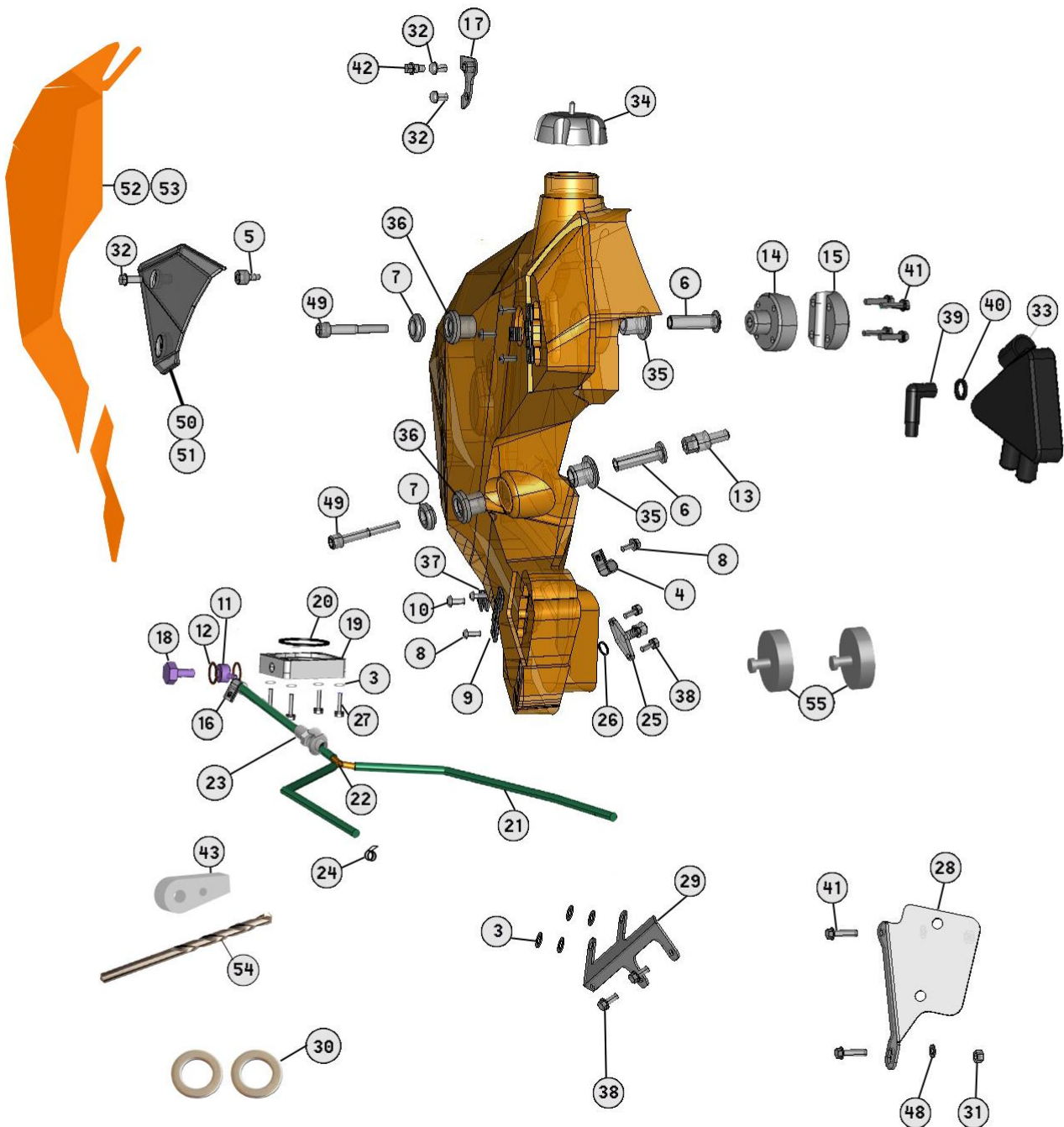
11. With a hair dryer on medium heat setting, warm up the entire decal that has now been applied. Once warm, aim the hair dryer directly at the edges of the decal, and at the same time, rub down firmly with your thumb, see image (5). This will help seal the edges and create an even greater bond. Continue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



**RALLY-RAID PRODUCTS LTD.
EVO 2 TANK KIT PARTS LIST -ISSUE 1**

Fig.	Part Description	Pt. No.	Qty
1	LH Moulded Tank		1
2	RH Moulded Tank		1
3	M5 Washer BZP		4
4	Plastic P Clip		2
5	Side Panel Pin		2
6	Tank Sleeve		4
7	Outer Tank Bush		4
8	M5x12 Button CHS BZP		10
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	SAS Mount Plate		1
18	M8x1.0 Banjo Bolt		1
19	Fuel Adaptor Plate		1
20	O Ring 6x45		1
21	6mm Fuel Pipe		1
22	6mm "Y" 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
29	Coil Bracket		1
30	7/16" Washer(Thick) BZP		2
31	M6 Nyloc Nut BZP		1
32	M6x8 Button CHS BZP		4
43	Template		1
48	M6 Plain Washer BZP		2
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	6,5mm Drill		1

		KTM Pt. No.	
33	Cover Frame Right Side	765 030 84 100	1
34	Filler Cap CPL. With Valve	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	M5 x 12	00.150.50.123	6
39	Angle Connector LC8 03	600.380.82.000	1
40	O Ring 8x2	07700 800 20	1
41	M6 x 25	00.150.60.253	10
42	Special Screw M6x12,5	590 010 92 050	1
55	Rubber Buffer	503 070 20 000	2