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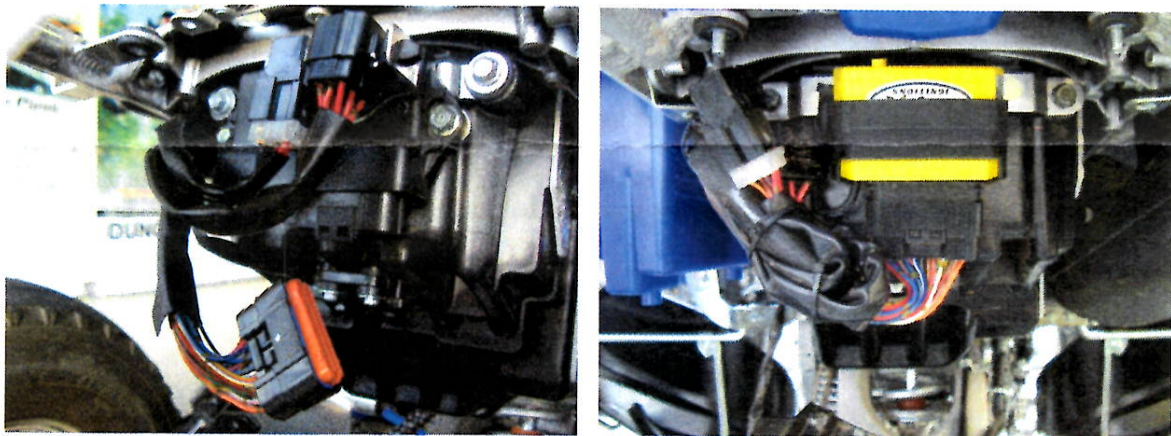
## YFZ450R 09-19 VORTEX X10 ECU INSTALLATION INSTRUCTIONS

Thankyou for purchasing your Vortex X10 ECU (Engine Control Unit). We hope you will enjoy the benefits of our product. Please read and follow the below mounting and operation instructions carefully.

**Step 1:** Remove the bikes Seat and ECU plastic cover plate at the rear of the ATV.

**Step 2:** Remove the Standard ECU from the rear of the airbox by undoing the two mounting bolts. **CAREFULLY** unplug the 34 Way connector on the ECU. **Note: These connectors have a locking tab that needs to be pressed before carefully unplugging the connector. BE CAREFUL NOT TO PULL ON THE WIRING HARNESS WHEN UNPLUGGING THIS CONNECTOR.**

**Step 2:** Remove the mounting frame and two modules mounted to it. These modules will be zip tied back along the main harness as per the below picture.



**Step 4:** Remove the Vortex ECU from its package and slide into the Vortex rubber mounting boot. Slot the ECU and Mounting boot onto the stainless mounting bracket provided and bolt onto the back of the airbox. See above picture.

**Step 5:** Carefully plug the main connector onto the VORTEX ECU and push firmly until the locking tab clicks. Be careful not to get dirt in connectors!

**Step 6:** Bunch up the additional wiring and use zip ties to secure together. Replace the plastic cover removed in Step 1. Note: Do not over tighten zip ties on any wiring

**NOTE:** There are additional cables coming out of the ECU. One is for programming the ECU and the other introduced in Version B of the ECU-6 is used for additional programmable features such as Launch control, Dual Map, Dual Injector operation etc.

**Step 7:** **Replace the plastic cover removed in Step 1** and seat. The trim switches of the ECU should be visible through the seat catch for easy adjustment. Installation is now complete. Enjoy!

**See next page for additional information on trim switches.**



**DATE:** 27/08/2010

See below the VORTEX X10 ECU Fault Flash Codes. The Vortex ECU will flash the Handlebar LED or the FI light (on applicable models) when there is a fault condition in one of the sensors.

This Code will flash until the ECU is reset by being powered down and restarted.

**NOTE:** These are a tool for fault finding a problem only and cannot be considered absolute.

Fault Code	Fault Condition	Troubleshooting Suggestions
1	Tip over sensor activated - High	Vehicle is not upright - Engine won't start
		Tip Over Sensor is faulty - Engine will not start
2	Tip over sensor activated - Low	Vehicle is not upright - Engine won't start
		Tip Over Sensor is faulty - Engine will not start
3	TPS sensor input voltage low	TPS connector unplugged.
		TPS wiring short or open circuit.
		TPS sensor wrong position adjustment.
		TPS sensor faulty.
4	TPS sensor input voltage high	TPS connector unplugged.
		TPS wiring short or open circuit.
		TPS sensor wrong position adjustment.
		TPS sensor faulty.
5	MAP sensor input voltage low	MAP connector unplugged.
		MAP wiring short or open circuit.
		MAP sensor faulty.
6	MAP sensor input voltage high	MAP connector unplugged.
		MAP wiring short or open circuit.
		MAP sensor faulty.
7	IAT sensor input voltage low	IAT wiring short or open circuit.
		IAT sensor faulty.
8	IAT sensor input voltage high	IAT connector unplugged.
		IAT wiring short or open circuit.
		IAT sensor faulty.
9	ECT sensor input voltage low	ECT wiring short or open circuit.
		ECT sensor faulty.
10	ECT sensor input voltage high	ECT connector unplugged.
		ECT wiring short or open circuit.
		ECT sensor faulty.
11	BARO sensor input voltage low	BARO connector unplugged.
		BARO wiring short or open circuit.
		BARO sensor faulty.
12	BARO sensor input voltage high	BARO connector unplugged.
		BARO wiring short or open circuit.
		BARO sensor faulty.

IMPLEMENTED FOR ECU WITH DATE CODE ON OR LATER THAN 100820  
DATE CODE 100820 is date 20th AUG 2010



**X10 ECU SETTINGS**  
**YFZ450R 09-19**  
**ATV**

X10 Map File Name: YFZ450R\_09-19 RELEASE-14 (FWe006.4.07) 7-5-18\_BASE MAP.Vecu1

X10 Switch Position	IGNITION MAP DESCRIPTION	FUEL MAP DESCRIPTION	Rev Limit RPM	Rev Limit Style
1	POWER MAP 1 (STD ENGINE)	FUEL MAP 1: STD MOTOR (PIPE & FILTER) NEW 14-4-15	11,200	SPARK CUT / 100
2	TRACTION MAP 1	FUEL MAP 1: STD MOTOR (PIPE & FILTER) NEW 14-4-15	11,200	SPARK CUT / 100
3	TORQUE MAP 1	FUEL MAP 1: STD MOTOR (PIPE & FILTER) NEW 14-4-15	11,200	SPARK CUT / 100
4	POWER MAP 2 (WAS RELEASE-10 MAP 1)	FUEL MAP 2: STD MOTOR (PIPE & FILTER)	11,200	SPARK CUT / 100
5	POWER MAP 2 (WAS RELEASE-10 MAP 1)	FUEL MAP 3: GYTR MOTOR (PIPE & FILTER)	11,200	SPARK CUT / 100
6	POWER MAP 5 - Hi COMP (18-5-11)	FUEL MAP 4 : SAME FUEL MAP 5 + RICHER by 12.5%	11,500	SPARK CUT / 100
7	POWER MAP 5 - Hi COMP (18-5-11)	FUEL MAP 5 : DRI MOTOR & PIPE (18-5-11)	11,200	SPARK CUT / 100
8	POWER MAP 4 HI COMP (1-5-12)	FUEL MAP-6 : DRI MOTOR & PIPE & FILTER (1-5-12)	11,500	SPARK CUT / 100
9	POWER MAP 5 - Hi COMP (18-5-11)	FUEL MAP 5 : DRI MOTOR & PIPE (18-5-11)	11,500	SPARK CUT / 100
0	BASED ON STANDARD MAP	FUEL MAP 3: GYTR MOTOR (PIPE & FILTER)	11,200	SPARK CUT / 100

Date	Revision Record	Standard Rev Limit:
20/12/2010	Release Date	10,450
14/04/2011	Change Start / Run settings	
18/05/2011	NEW POWER MAPS 7,8,9 Modified Motor - Hi Comp+ Starting Trim Changed, New Fuel Timing	
5/04/2012	CHANGE COLD STARTING TRIM	
23/08/2012	NEW MAP 8 and REVISED IDLE IGN & FUEL ALL	
11/12/2012	UPDATE TO FW 0-3-10	
18/12/2013	UPDATE TO FW 0-3-18 ADD DRIVER FOR EMISSIONS CONTROL VALVE	
7/07/2014	UPDATE TO FW 0-3-23 FOR HARDWARE CHANGE ECU-6B - NEW PROGRAM AND OPTIONS CABLES	
14/04/2015	RELEASE-11 NEW MAPS 1,2,3,4,5 & 7 (MAP 7 SAME AS MAP 9 WITH LOWER REV LIMIT	
27/04/2015	RELEASE-12 NEW MAP 6 (SAME AS MAP 9 WITH RICHER FUEL +12.5%) & NEW MAP 10 NEW FUEL	
23/02/2017	RELEASE-13 FW UPDATE (FW e006.4.07)	
7/05/2018	RELEASE-14 (FW e006.4.07) CHANGES TO START TRIM	

**WARNING: HIGH REV LIMITS ARE FOR SPECIALLY MODIFIED ENGINES AND MAY REDUCE ENGINE SERVICE LIFE**  
**WARNING: ALL MAPS HAVE BEEN TESTED WITH AND WE RECOMMEND USING 98 RON OR HIGHER FUEL**  
**IF FUEL LESS THAN 95 RON FUEL IS USED WITH THIS PRODUCT MAY CAUSE DETONATION AND ENGINE DAMAGE**

USA AKI = (R+M)/2 = 92  
 AUSTRALIA & NZ RON = 98  
 EUROPE RON = 98