KTM250SXF/XCF_350SXF/XCF_450SXF/XCF 17-18
HUSKY FC250_FC350_FC450 17-18

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.

Step 2: Remove any dirt around the standard ECU box and connector using high pressure air. **Give extra attention to any dirt near the connector housing as any dirt that enters the connector when it is unplugged can cause permanent damage to the wiring harness.**

TIP: DO NOT USE HIGH PRESSURE TO WASH ANY ELECTRICAL CONNECTORS!

Step 3: Remove the Standard ECU & rubber boot from the mounting tab. **CAREFULLY** unplug the 33Way connector on the ECU **Note: These connector has a locking tab that needs to be pressed before unplugging the connector**. **Do not pull on the wires.**
Step 4: Remove the VORTEX X10 ECU from its package and slide into the standard Rubber Mounting Boot.

Step 5:.Insert the VORTEX ECU and rubber mounting boot onto the mounting bracket as per the below picture and plug the 33Way connector onto the ECU until the locking tab clicks. Route the Programming (Black 4 Pin) & Options Port (Black 8 Pin) Cables as per below picture.

Step 6: Replace the bikes seat. Installation of the Vortex CDI is now **complete!**

TPS END-POINT SETTING

This 2017 Vortex X10 ECU can set the TPS (Throttle Position Sensor) endpoint voltages without the need for a PC or any other device. It may be necessary to set the TPS endpoints when you first install the ECU or after the ECU is re-programmed, the TPS is replaced, or the Idle Stop has been adjusted. To set follow the following steps:-

1/ With the THROTTLE CLOSED :- PRESS and HOLD the KILL SWITCH at the same time as pressing the STARTER BUTTON for 1 second. Release all and proceed to step 2.

2/ With the THROTTLE FULLY OPEN :- PRESS and HOLD the KILL SWITCH at the same time as pressing the STARTER BUTTON for 1 second.

3/ TPS endpoints are now set. This process can be repeated at any time as required.

VORTEX X10 MAP SELECTOR & FUEL TRIM Switch Operation:

The Vortex X10 ECU has 10 Pre-programmed Power settings from "Mild to Wild". By changing the position of the X10 Switch on the ECU the user can change the type of power delivery for different rider styles or track conditions. See Map listing chart for explanation of the power type expected from each setting. In addition there are three switches which will modify the fuel supplied to the motor through the EFI system. These switches are divided as follows:

LO: 2.5-25% Throttle …..(Like a Pilot Jet on a Carby)
MID: 33-66% Throttle ….(Like a Needle Jet on a Carby)
HI: 75-100% Throttle …..(Like a Main Jet on a Carby)

Each switch position is either + or – fuel in 2.5% increments. The base position is "5,5,5" means NO TRIM. Position 6 through 0 (0=10) adding fuel and position 4 through 1 is subtracting fuel from the selected X10 Map. For example if a fuel trim switch is on position 6 then 2.5% fuel is added to the selected map. If a fuel trim switch is in position 3 then 5% fuel is subtracted from the selected map.

NOTE: It is not advisable to go leaner on any setting unless you are an experienced engine tuner or are monitoring the Air/Fuel ratio with a wideband sensor / reader. Air / Fuel Ratios great than 14:1 can cause serious engine damage.

FUEL TRIM   MAP SELECT
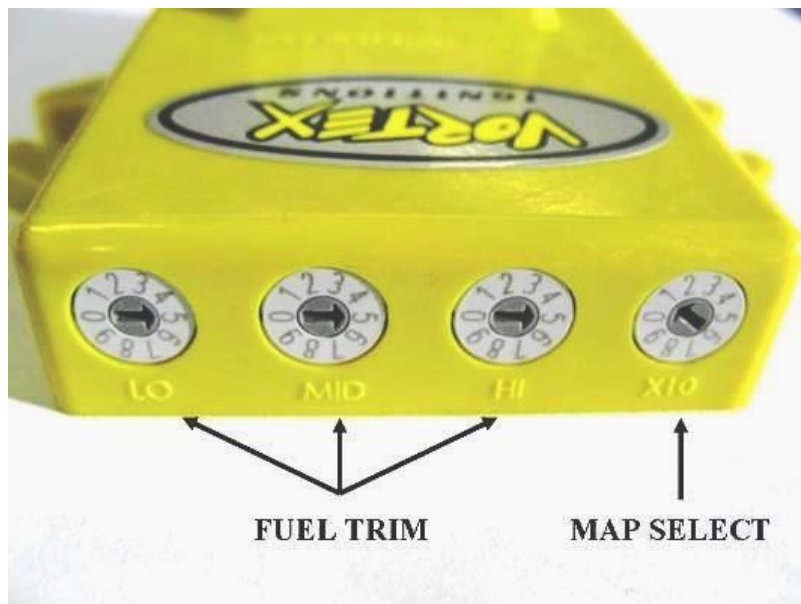
KTM / HUSKY MAP SWITCH OPERATION:

The Vortex X10 ECU will interact with the KTM/ HUSKY Standard Handlebar Switch in a similar way as used with the standard ECU. See below operation modes.

MAP SELECTION:-

MAP 1 = VORTEX MAP 1 (see map listing for details)
MAP 2 = MAP X10 – Map selected on the Vortex ECU X10 Switch

ENGAGING LAUNCH MODE:-
With the engine running and in gear, press and hold the MAP and TC switches for 1 second and the FI Light will flash rapidly. The Flashing FI Light indicates Launch Mode is active. When in Launch Mode the ECU will use parameters which alter Rev Limit, Ignition Timing and Fuel Map based on engine RPM, Throttle position and effective accelleration.

USING LUANCH MODE:-
The intended method for starting in Launch Mode is to have the bike in second gear and hold the throttle so that the engine is on the rev limiter. This can mean holding the throttle anywhere from 40% to 100% Throttle. We recommend holding the throttle at 100%.When the gate drops modulate the power with the clutch only as the bike leave the gate. When the ECU detects a launch condition a timer will be activated. When that time has expired the launch mode will de-activate and normal operation will then resumed as indicated by the FI Light not flashing. Starts can be made in any gear.

USING TRACTION CONTROL (TC) MODE:- This mode will limit power to the rear wheel by changing ignition timing and other paramters.

INDEMNITY
Note: This is a performance product and is designed for competition use only. The manufacturer or their distributor accepts no responsibility for damage or injury caused by this product. Because we cannot control the application or use of this product, the buyer assumes all risks of any and all damage that may occur to their self, their machinery or third party due to the use of this product. The product is guaranteed against manufacturing defects for 12 months from date of purchase and this warranty is not transferable.