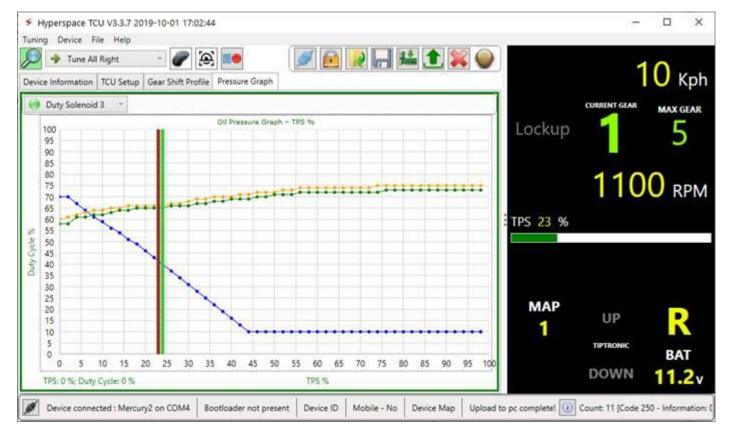
## **ZF 5HP19 Special Instructions**

This transmission use 3 pressure control PWM outputs.



- 1. Blue line is the line pressure EDS1. It works inverted which means a high setting will result in low line pressure in the transmission. When throttle opening is small in light throttle conditions, the line is high and the transmission will do soft shifting between gears. As the throttle increase the line drops gradually to increase the pressure and prevent the clutches from slipping.
- 2. Orange line EDS2 is the shift pressure used during shifting. It will apply a percentage from the line pressure onto the clutches and brakes during shifting. It is active in 2<sup>nd</sup> 3<sup>rd</sup> and 5<sup>th</sup>. The higher the line the more the pressure will be. We don't have a profile yet so a suggested line to start with should look like above.
- 3. Green line EDS3 is the shift pressure used during shifting. It will apply a percentage from the line pressure onto the clutches and brakes during shifting. It is active in Reverse, Neutral, 1<sup>st</sup> and 2<sup>nd</sup>. The higher the line the more the pressure will be. We don't have a profile yet so a suggested line to start with should look like above.