

Engine Speed Management

- Progressive Shifting – This means shifting at the lowest possible RPM in order to get into the next gear. This will vary depending on if you are loaded or empty and the grade. When you are empty you can up shift at a lower RPM than when you are loaded due to not needing as much torque to increase your speed and get into the next gear. So the main rule of thumb is always up shift at as low of an RPM as possible to get into the next gear. Additionally, there is no reason to go over 1400 RPM when on the low side of the transmission, and no more than 1500 RPM on the high side of the transmission. Any time you are turning the engine more than 1500 RPM you are just throwing money out the window. 1500 is the top side of the power curve and the torque actually drops off rapidly past 1500 RPM.
- Down Shifting – This is a huge MPG killer if not done correctly which will not allow the engine to perform at its maximum potential. The less RPM's used the better your fuel economy will be. The goal is to stay in top gear as much as possible. The bottom end of the power curve is slightly different between the Detroit DD15 and the current ISX engine, they are both listed below:
- Detroit DD15 – The DD15 engine's sweet spot is slightly larger than that of the Cummins engine. The power curve or sweet spot on the DD15 is from 1,000 to 1,500 RPM. This means you should let the DD15 engine pull all the way down to 1,000