

**Notice: System was working over this period without DPF.**

## Overall Information

*Table1- Overall Information*

Vehicle plate number	33637 (34119)
CPK data logger number	LN: 001492, DN: 1933, Sim +989210000000
Bus line	Number 2 (west to east bus line)
Bus Terminals	Khavaran Bus Terminal - Western Bus Terminal
Total path distance	19 km
DPF company producer	Dinex_02 (Passive system with FBC)
Installation date	02/Jun/2015
Report period	16/Apr/2016 – 30/Apr/2016 (fifteen days)
K value - DPF upstream	- [1/m]
K value – DPF downstream	- [1/m]

*Table 2- DPF Maintenance History*

Filter maintenance date	DPF has been removed after two weeks working on Jun 17 <sup>th</sup> . After receiving cleaning machine DPF was cleaned on Aug 10 <sup>th</sup> and was installed on Aug 22 <sup>nd</sup> but worked only for ten days. The last cleaning was done on Sep 24 <sup>th</sup> but cleaning issue was unavoidable after only three days working. Finally DPF was replaced by muffler on Sep 8 <sup>th</sup> and system have been working from that date without DPF.
Dosing status	Additive dosing was increased 60% of its initial value for tests two and three.

*Table 3- Fuel and Additive Consumption Information*

Bus mileage over the period	3094 km
Working days over the period	14 days
Stop days	1 day
Data logger working days	14 days
Working hours over the period	238 hours 4 minutes
Average working hours per day (including stop days)	15 hours 52 minutes
Bus average speed	13 km/hr
idle speed time to all working time ration	47.95 %
Total Bus fuel consumption over the period	1918 lit
Fuel consumption per hour	8 lit/hr
Average fuel consumption	0.62 lit/km

## Temperature, Pressure and Engine Speed Overview

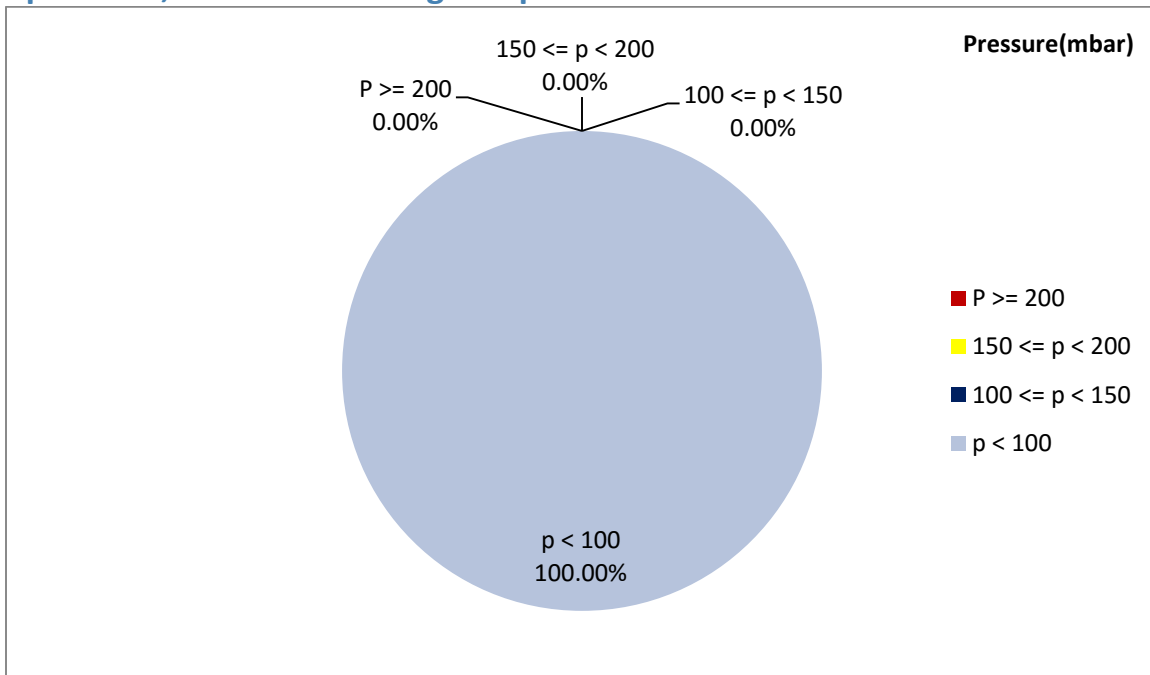


Figure 1- Pressure distribution over the working hours

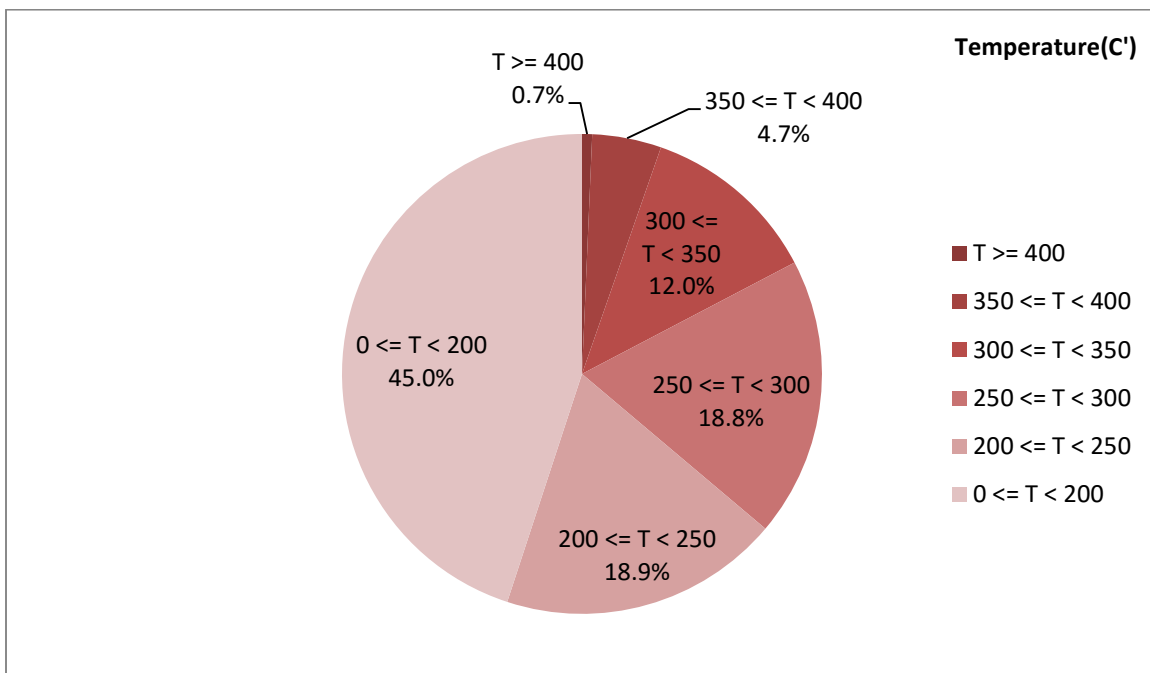


Figure 2-Temperature distribution over the working hours

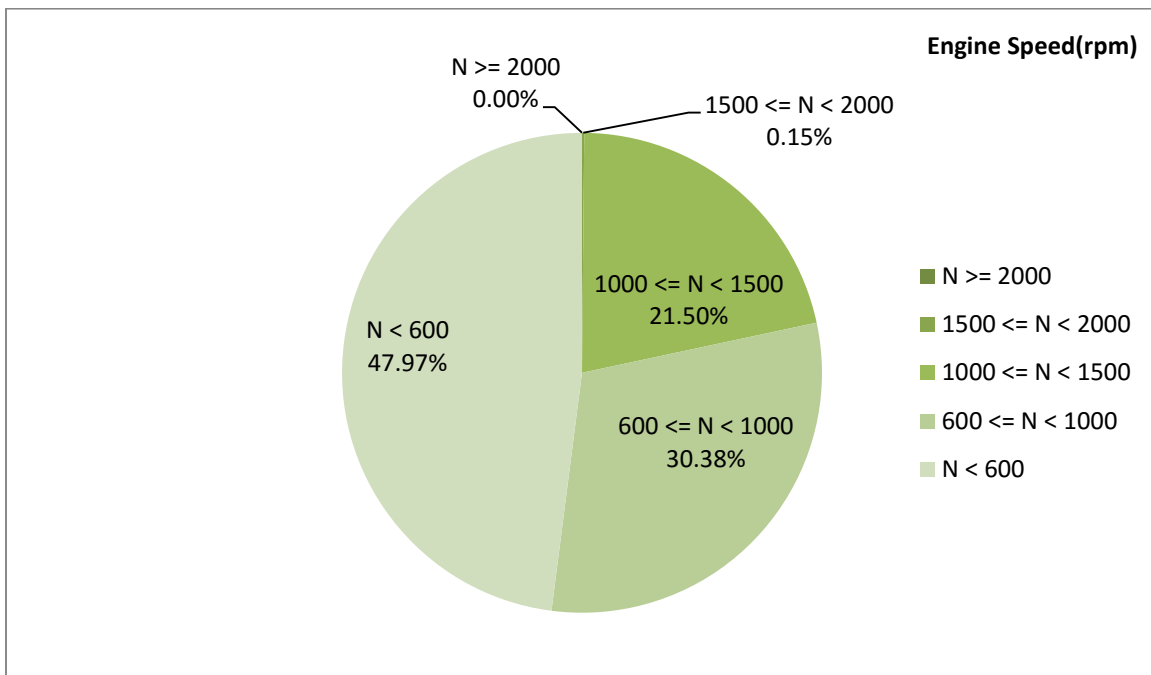


Figure 3- Engine speed distribution over the working hours

Table 4- Mean values

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
221.27	1.03	752

Table 5- Mean values without idling

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
269.14	1.98	942

Table 6- Max-min values

Max-min temperature(C)	Max-min pressure(mbar)	Max-min engine speed(rpm)
478-50	69-0	2080-256

## Detailed Pressure Analysis

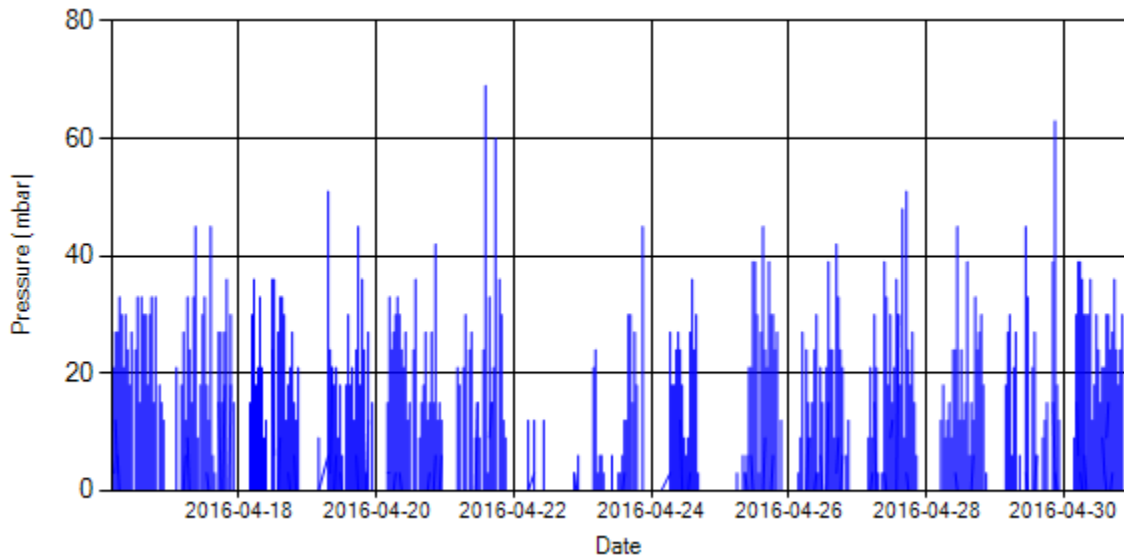


Figure 4- Pressure distribution over the period

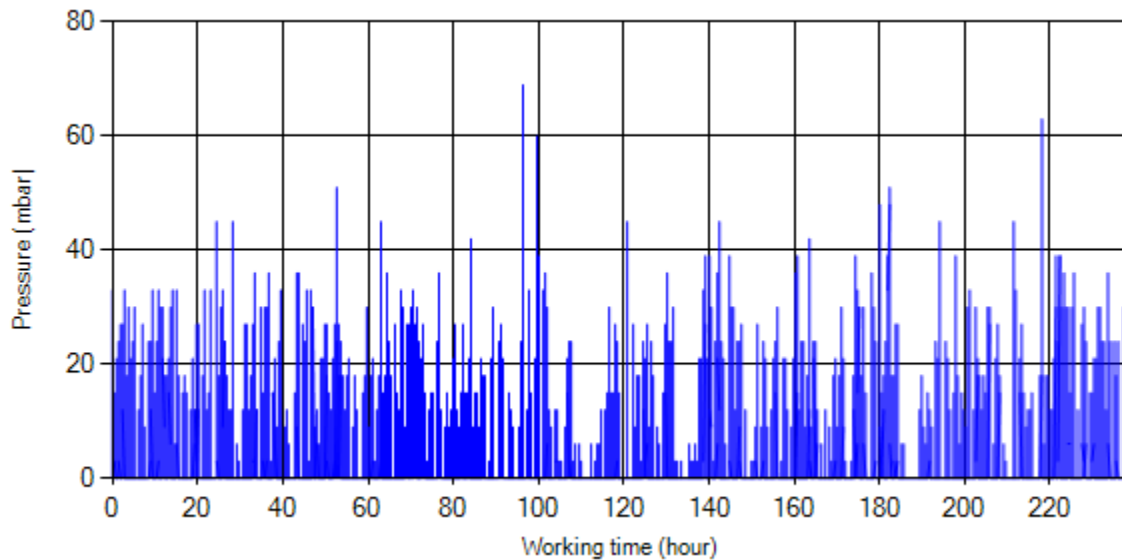


Figure 5- Pressure vs. working hours

Notice: backpressure distribution was shown into two diagrams. As obvious in figure 5, stop-working periods were eliminated and pressure was displayed along working hours.

## Detailed Temperature Analysis

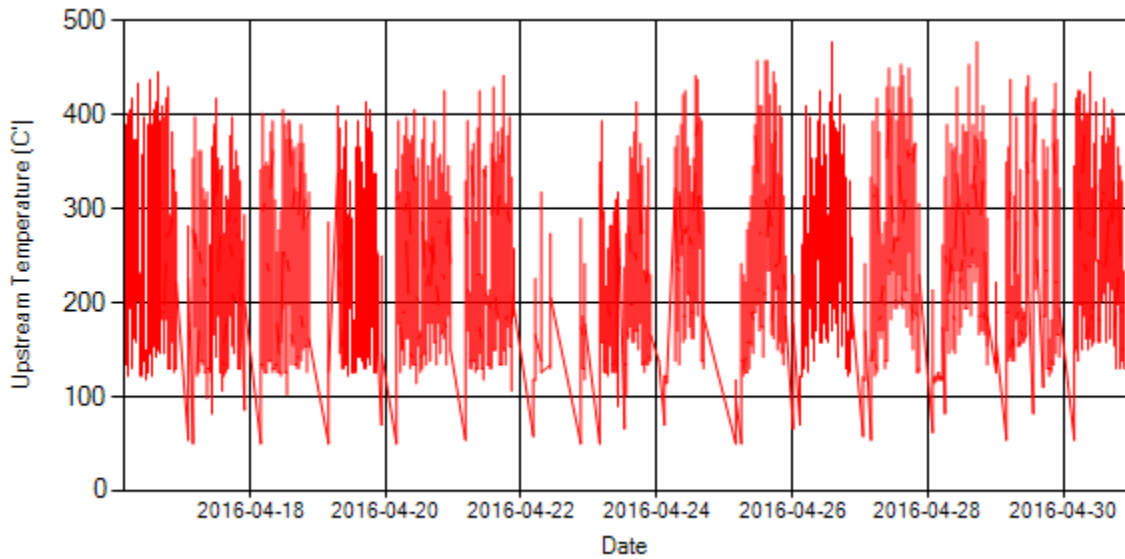


Figure 6- Temperature distribution over the period

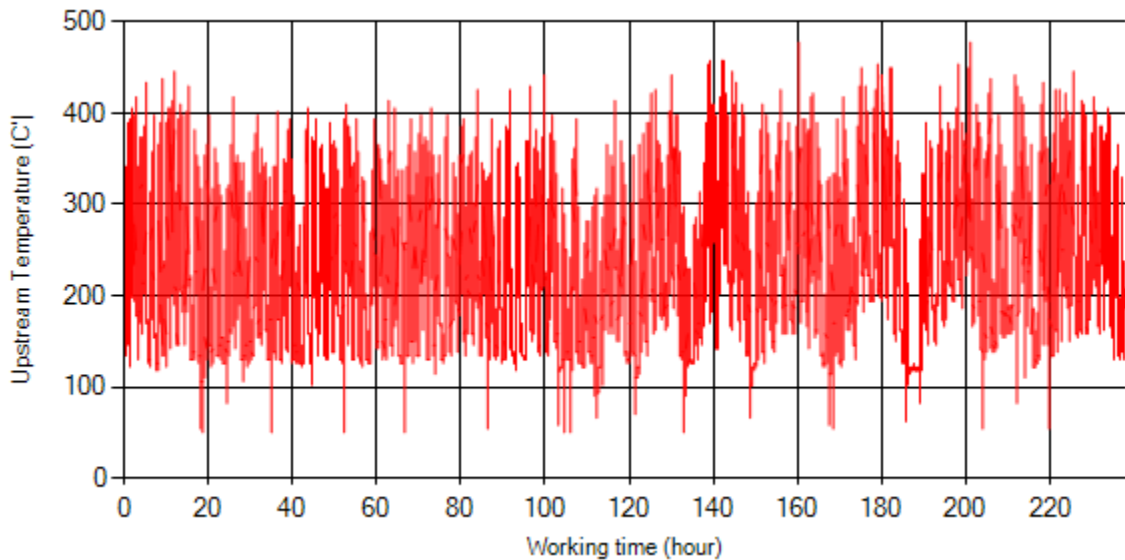


Figure 7- Temperature vs. working hours

## Engine Speed Diagrams

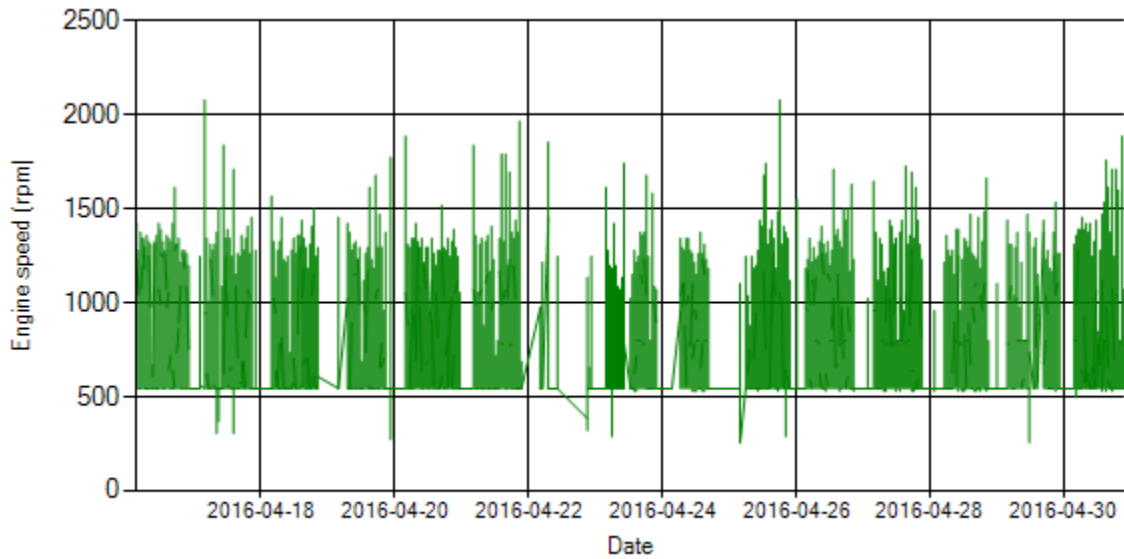


Figure 8- Engine speed distribution over the period

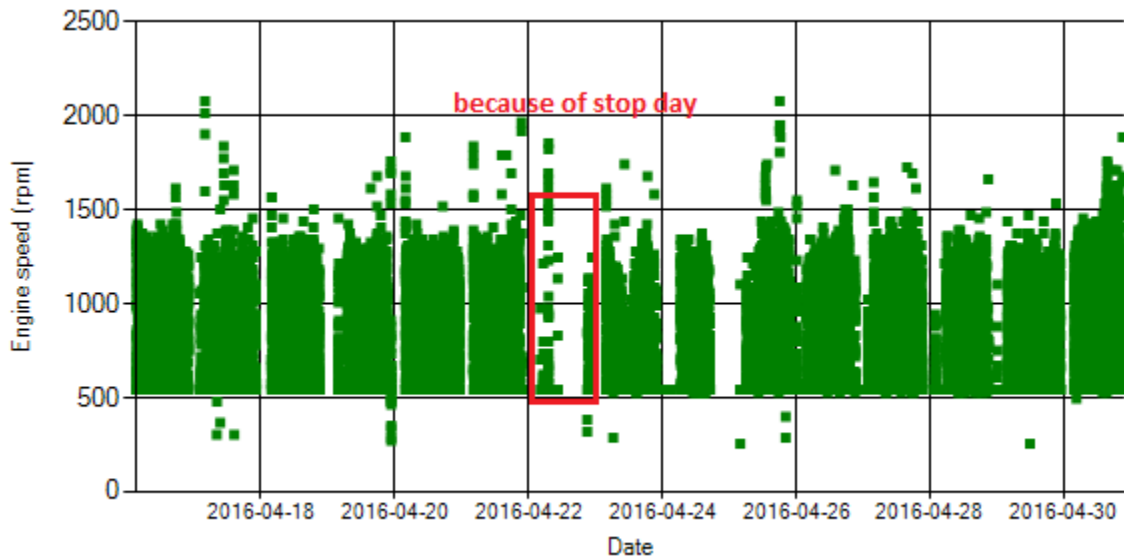


Figure 9- Engine speed diagram for calculating CPK's working days

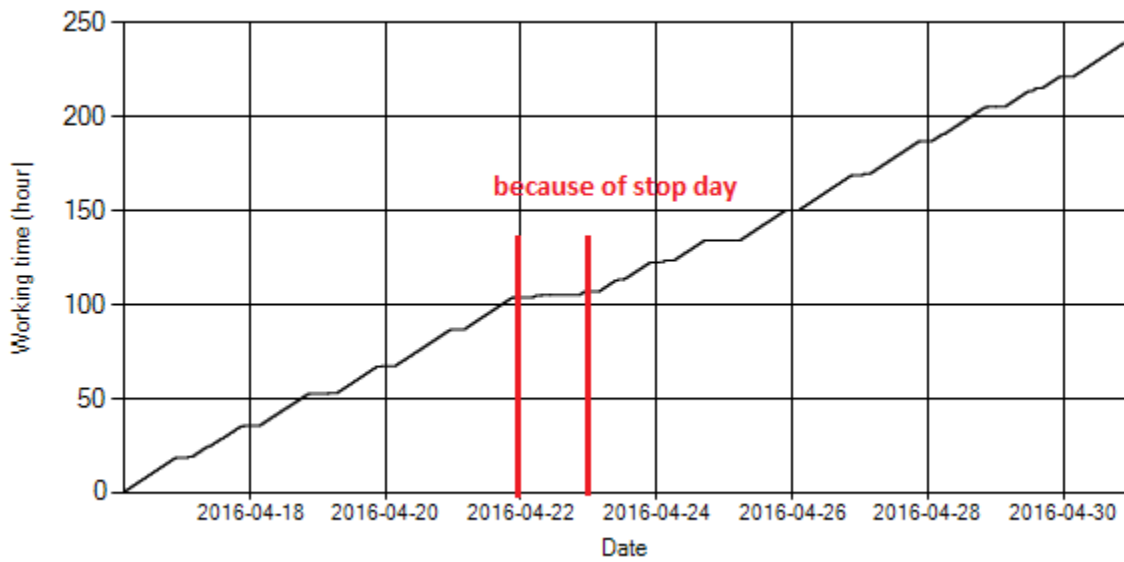


Figure 10- Time diagram for calculating CPK's working days

Notice: Data logger sampling time can be calculated from Figure 10. The lines parallel with Date axis show days without data logger data. As depicted in Figure 10 vehicle was stationary for 1 day.

### Pressure-Engine Speed diagrams

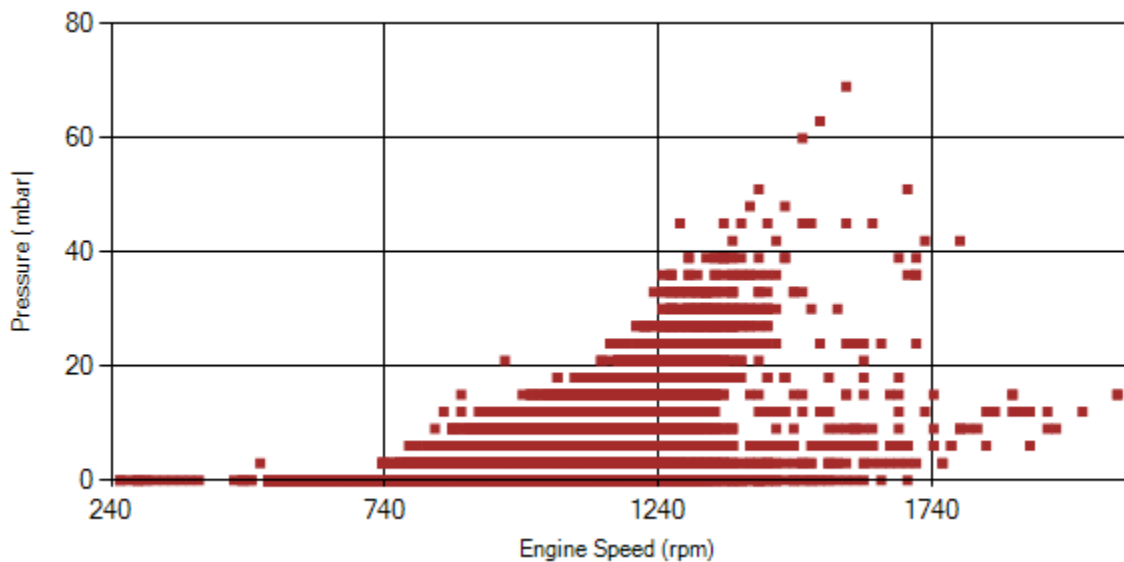


Figure 11- Pressure against engine speed



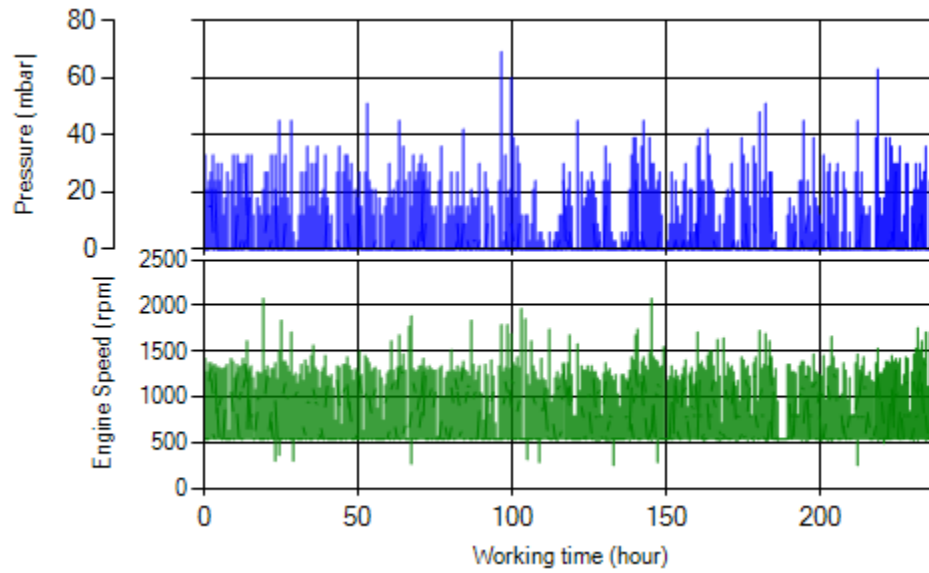


Figure 12- P, N distribution vs. working hours

### Temperature-Engine Speed diagrams

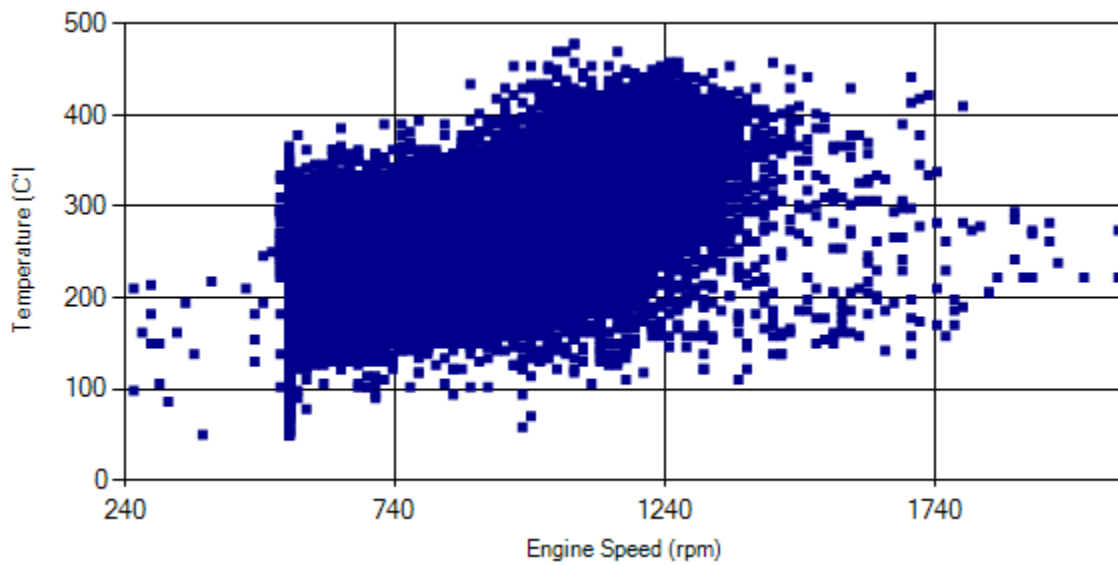
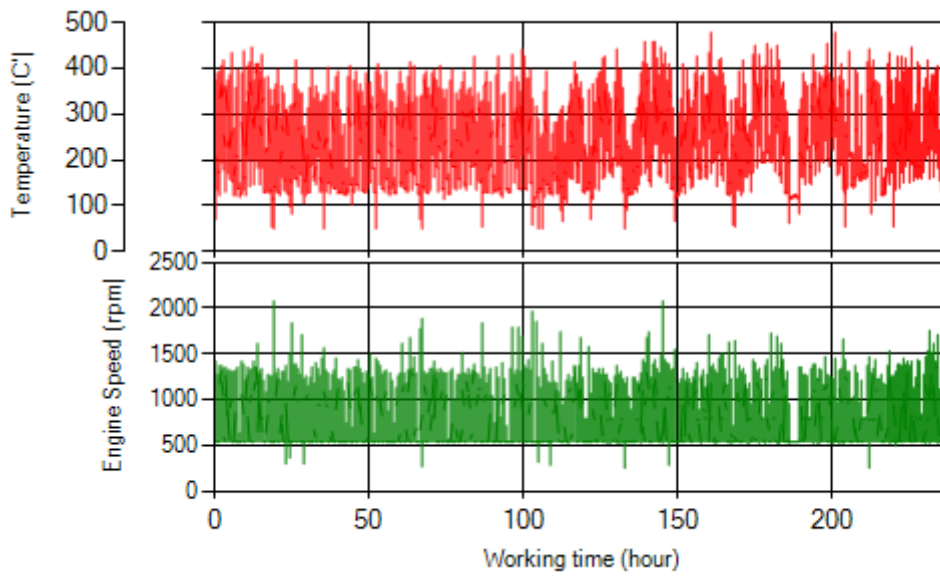


Figure 13- Temperature against engine speed



*Figure 14- T, N distribution vs. working hours*

## Filter Operation Analysis

**Notice:** System was working over this period without DPF.