

Overall Information

Table1- Overall Information

Vehicle plate number	78514
CPK data logger number	LN: 001496, DN: 1914, Sim +989218355923
Bus line	Number 4 (south to north bus line)
Bus Terminals	Tehran South Bus Terminal - Park Way Bus Terminal
Total path distance	22.8 km
DPF producer company	HJS_01 (Passive system with FBC)
Installation date	10/Sep/2014
Report period	16/Jul/2016 – 31/Jul/2016 (sixteen days)
K value - DPF upstream	- [1/m]
K value – DPF downstream	- [1/m]

Table 2- DPF Maintenance History

Filter maintenance date	DPF core was cleaned on 2015/Jun/13 for the first time. The second cleaning was done on 2016/Jul/11. Due to some wiring problems, the DPF core was replaced with muffler on Jul 13 th .
Dosing status	Dosing value has been kept constant from installation date until now.

Table 3- Fuel and Additive Consumption Information

Bus mileage (from DPF installation date)	84551 km
Bus mileage over the period	2021 km
Working days over the period	9 days
Stop days	7 days
Data logger working days	9 days
Working hours over the period	122 hours 27 minutes
Average working hours per day (including stop days)	11 hours 7 minutes
Bus average speed	16.5 km/hr
idle speed time to all working time ration	20.95 %
Total Bus fuel consumption over the period	1152 lit
Fuel consumption per hour	9.4 lit/hr
Average fuel consumption	0.57 lit/km

Temperature, Pressure and Engine Speed Overview

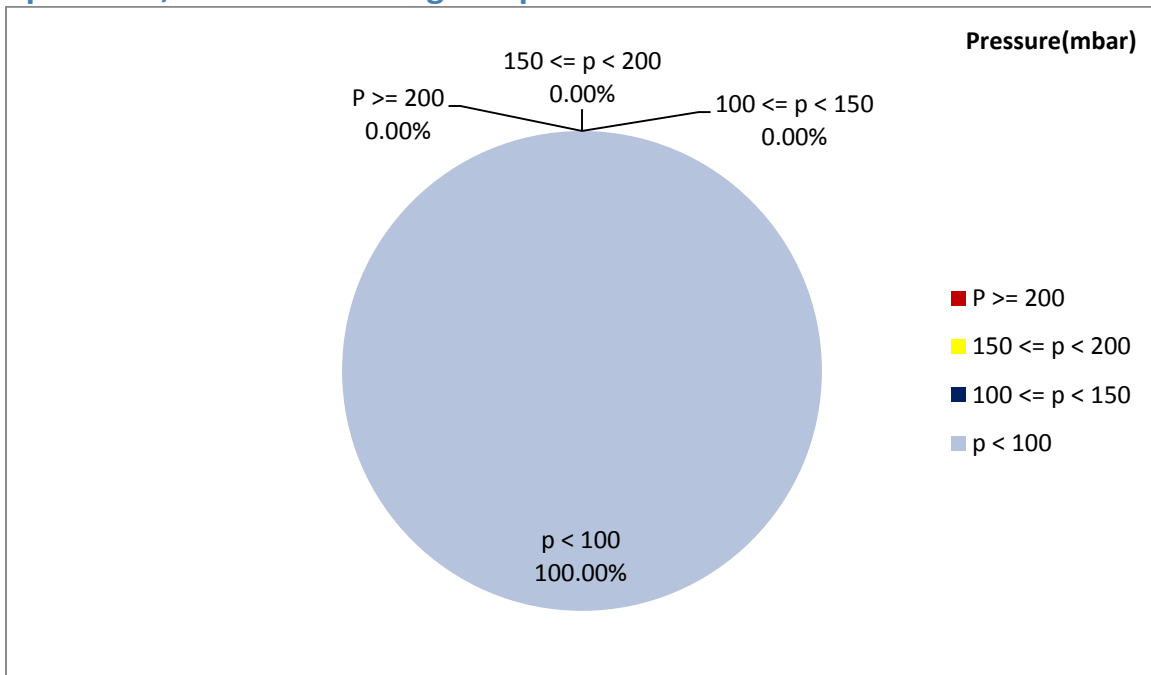


Figure 1- Pressure distribution over the working hours

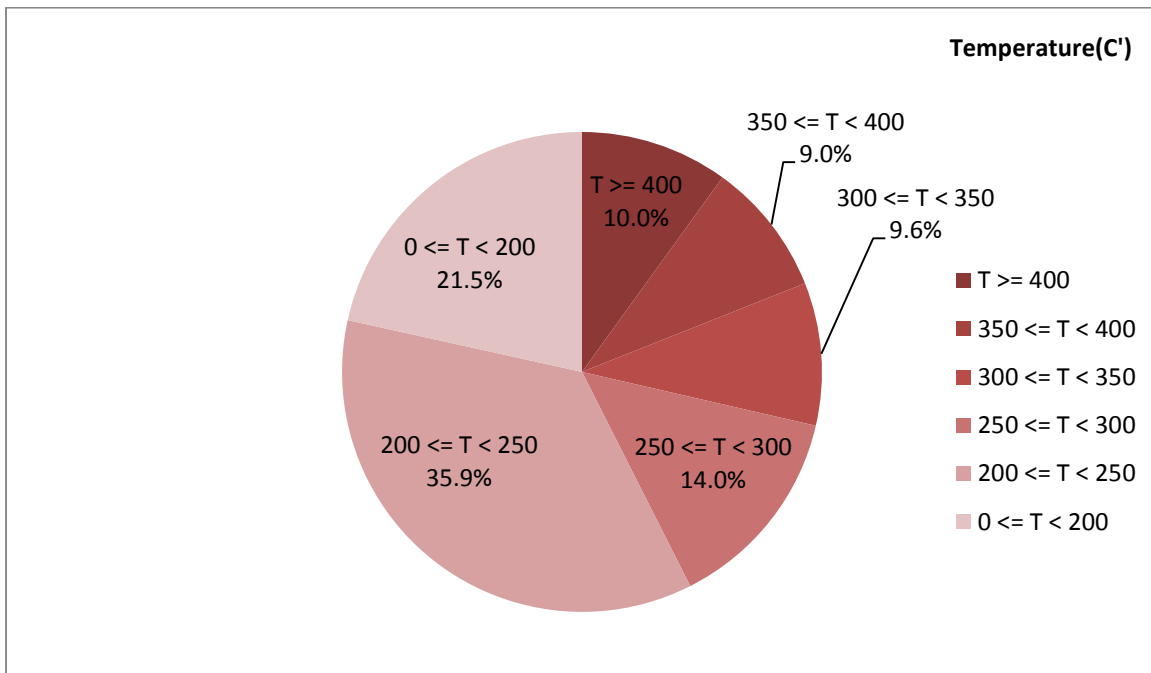


Figure 2-Temperature distribution over the working hours

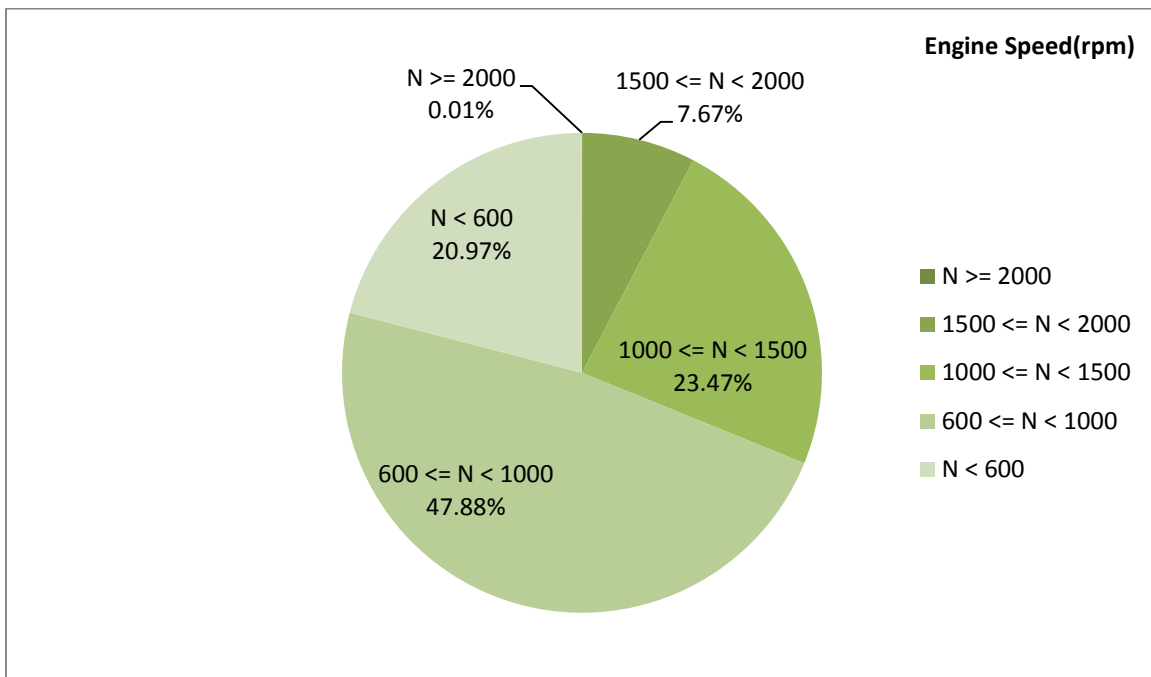


Figure 3- Engine speed distribution over the working hours

Table 4- Mean values

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
259.64	2.9	911

Table 5- Mean values without idling

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
274.69	3.66	1007

Table 6- Max-min values

Max-min temperature(C)	Max-min pressure(mbar)	Max-min engine speed(rpm)
550-54	66-0	2096-272

Detailed Pressure Analysis

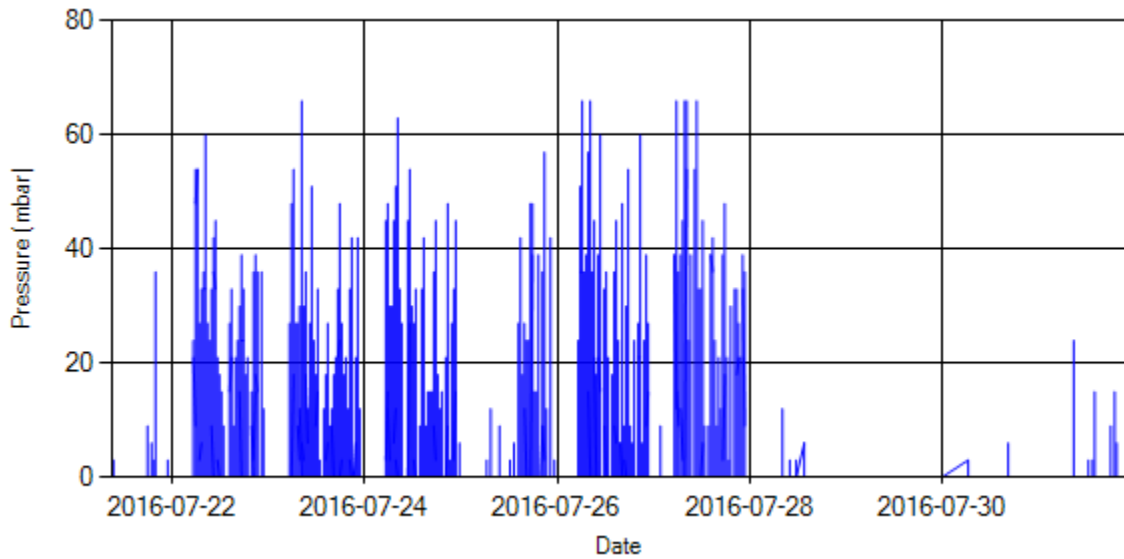


Figure 4- Pressure distribution over the period

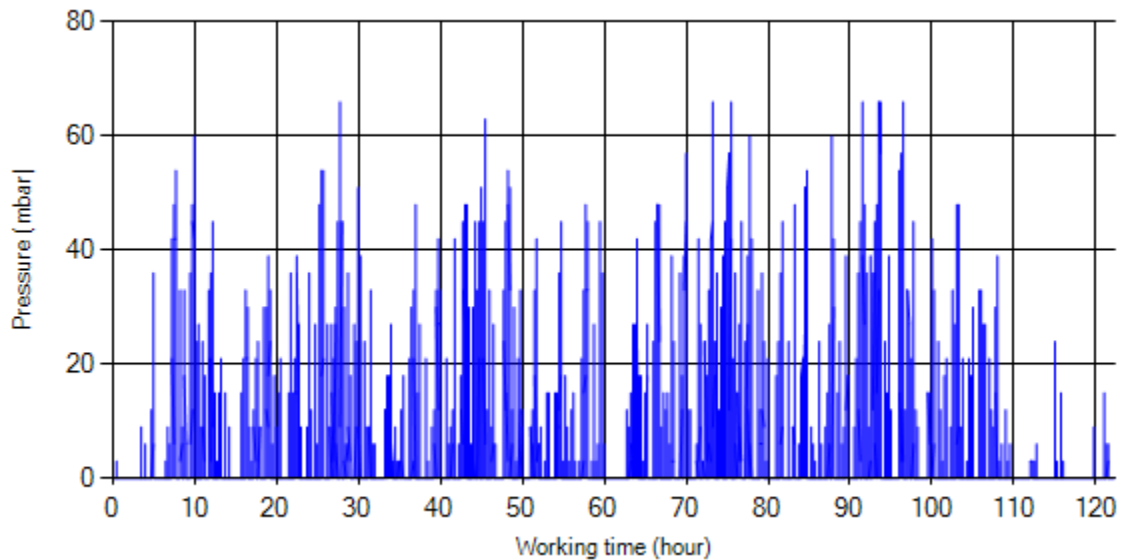


Figure 5- Pressure vs. working hours

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

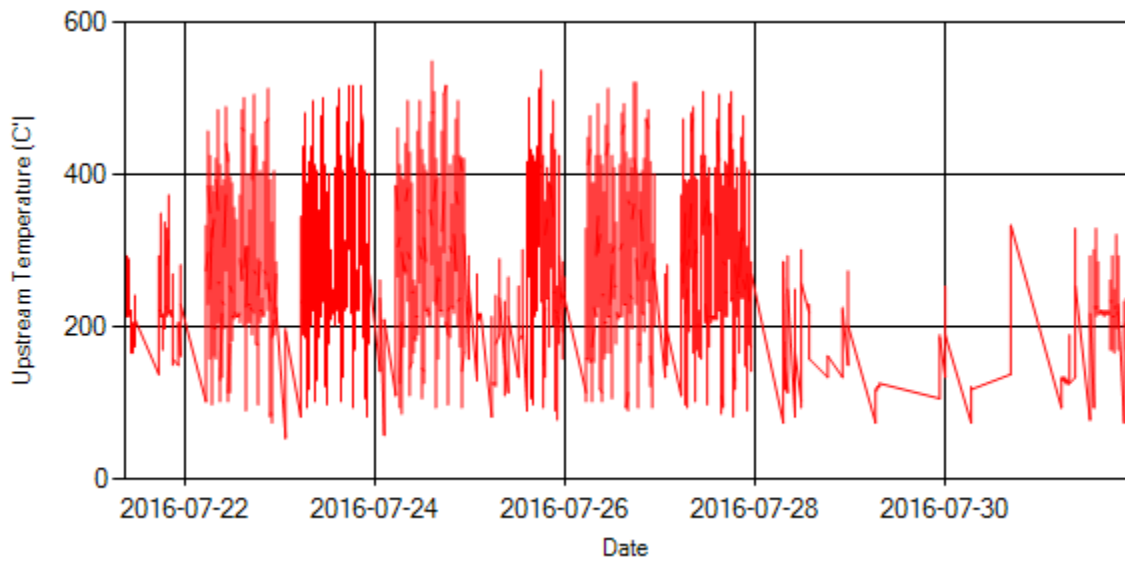


Figure 6- Temperature distribution over the period

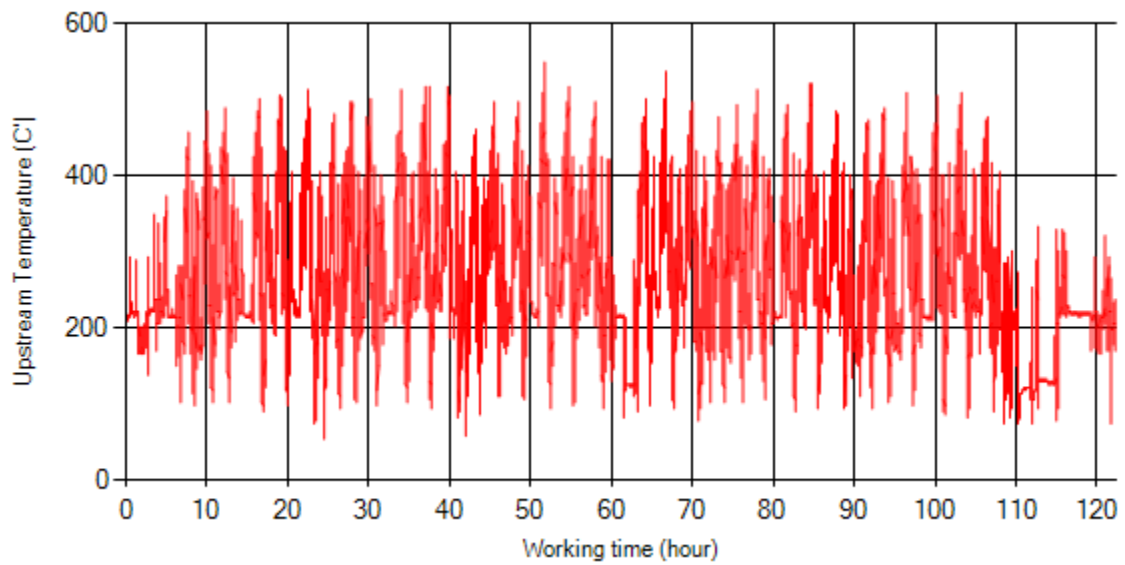


Figure 7- Temperature vs. working hours

Engine Speed Diagrams

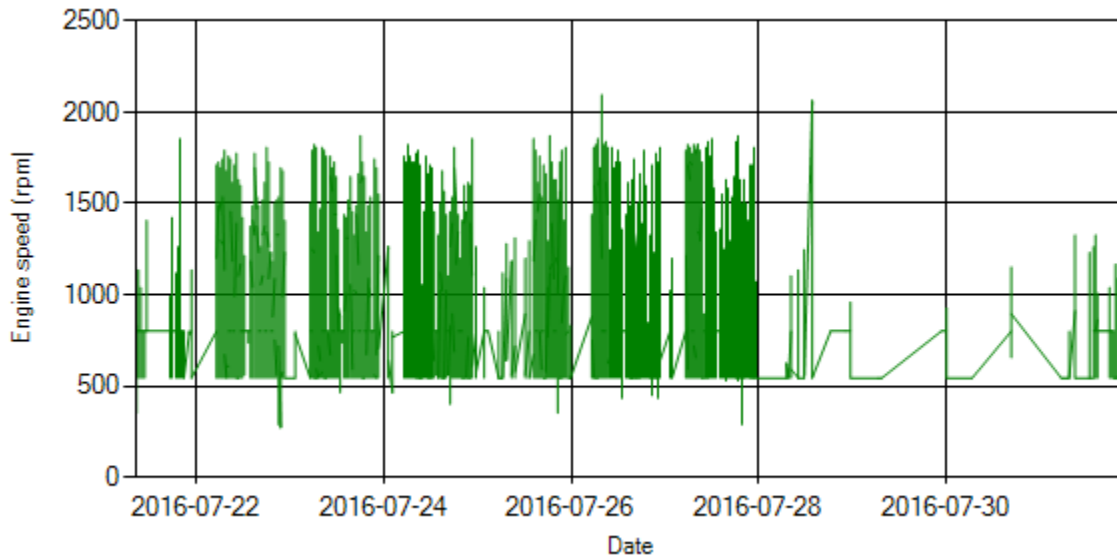


Figure 8- Engine speed distribution over the period

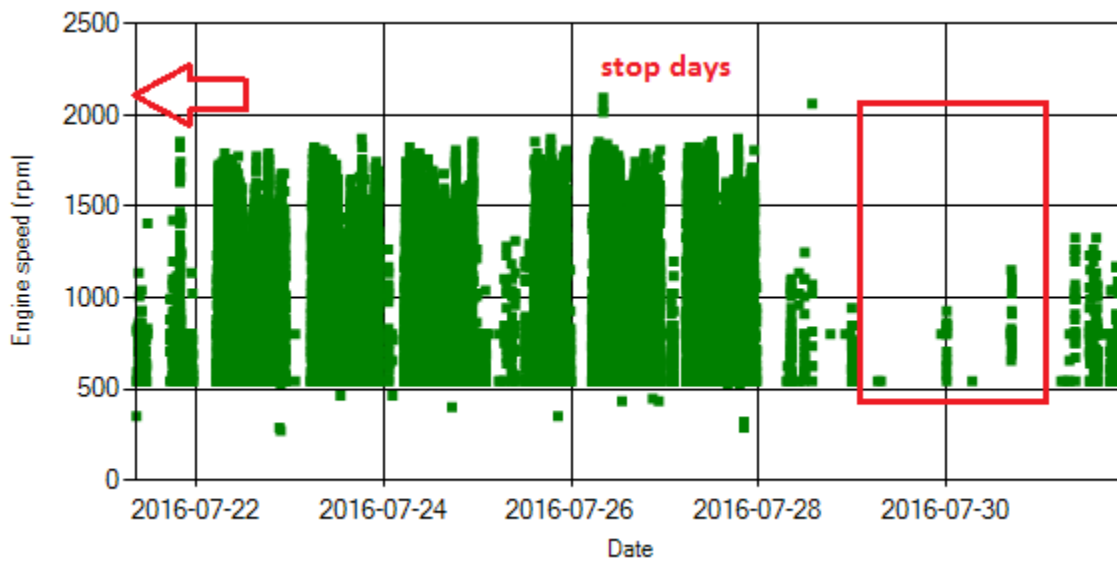


Figure 9- Engine speed diagram for calculating CPK's working days

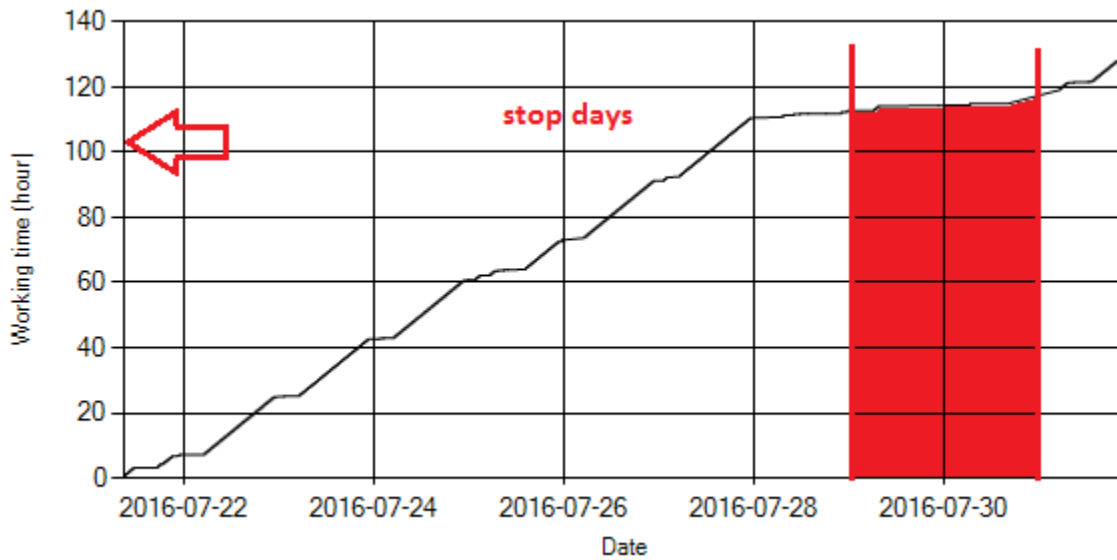


Figure 10- Time diagram for calculating CPK's working days

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 system was stationary for 7 days.

Pressure-Engine Speed diagrams

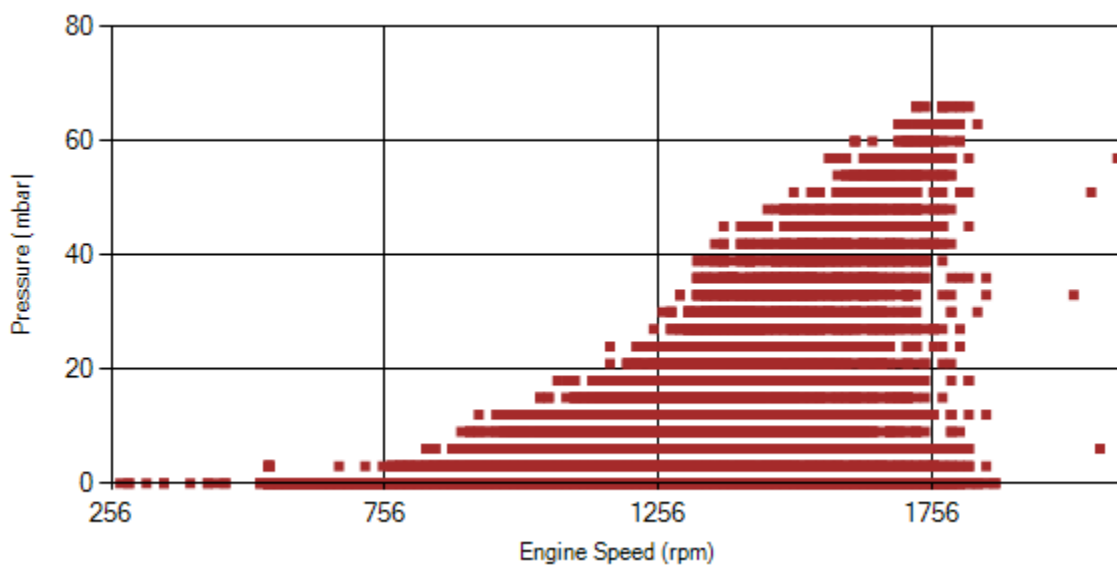


Figure 11- Pressure against engine speed

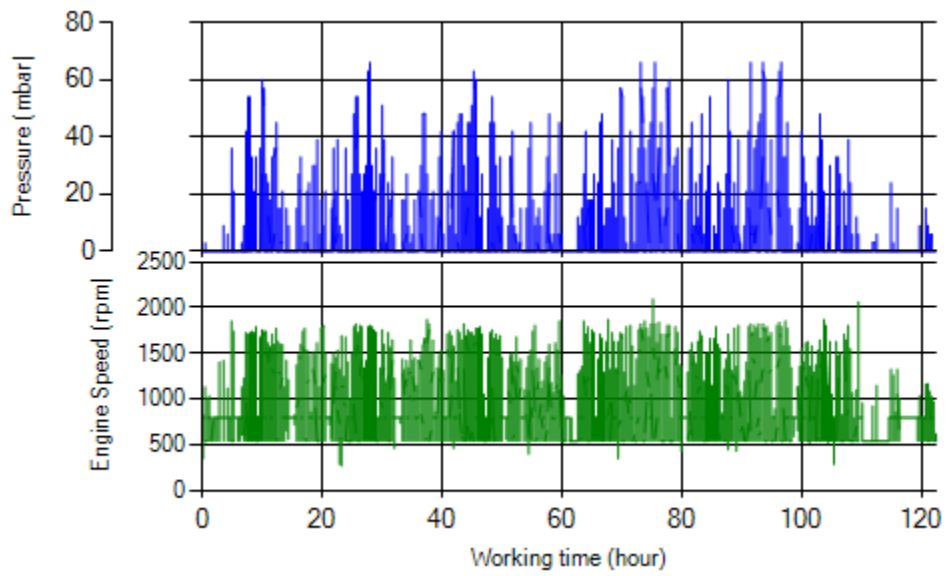


Figure 12- P, N distribution vs. working hours

Temperature-Engine Speed diagrams

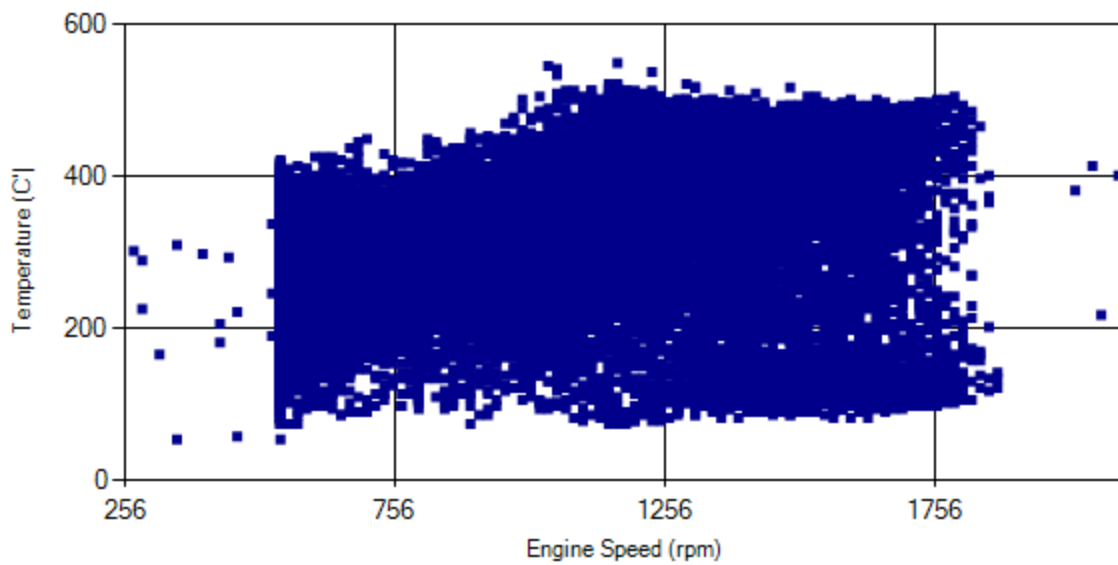


Figure 13- Temperature against engine speed

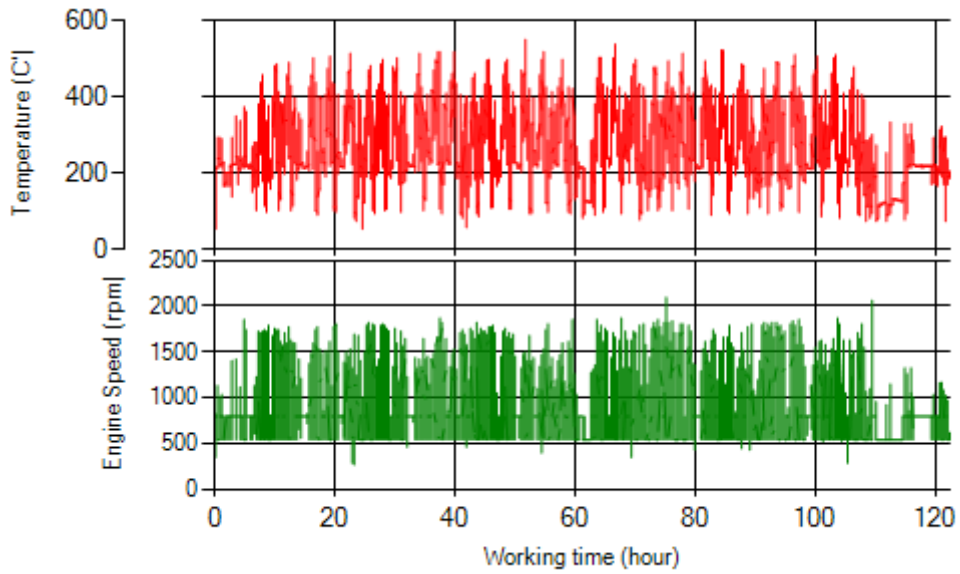


Figure 14- T, N distribution vs. working hours

Filter Operation Analysis

NOTE: System was working without DPF core in this period.