

Overall Information

Table1- Overall Information

Vehicle plate number	85423
CPK data logger number	LN: 001505, DN: 2001, Sim Number +989218469621
Bus line	Number 4 (south to north bus line)
Bus Terminals	South Bus Terminal - Park Way Bus Tehran Terminal
Total path distance	22.8 km
DPF producer company	HJS_02 (active system with FBC – electrical heater)
Installation date	19/Feb/2015
Report period	16/Jul/2016- 31/Jul/2016 (sixteen days)
K value - DPF upstream	1.85 [1/m]
K value – DPF downstream	0.02 [1/m]

Table 2- DPF Maintenance History

Filter maintenance date	DPF was cleaned on 2016-02-03 for the first time and on 2016-07-10 for the second time.
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)	89804 km
Bus mileage over the period	1670 km
Working days over the period	13 days
Stop days	3 days
Data logger working days	13 days
Working hours over the period	118 hours 25 minutes
Average working hours per day (including stop days)	7 hours 24 minutes
Bus average speed	14.1 km/hr
idle speed time to all working time ration	66.8 %
Total Bus fuel consumption over the period	1052 lit
Fuel consumption per hour	8.87 lit/hr
Average fuel consumption	0.63 lit/km
Total Bus additive consumption over the period	0.502 lit
Average additive consumption	301.1 cc/km
Additive consumption to fuel ration	478 cc/1000lit

Temperature, Pressure and Engine Speed Overview

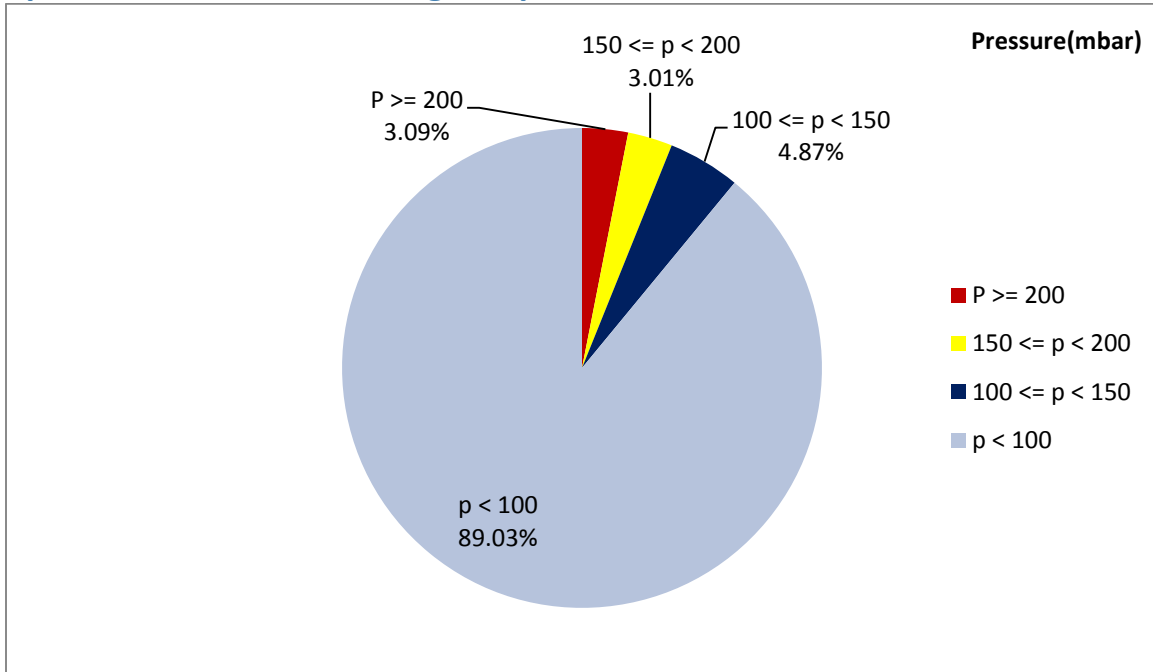


Figure 1- Pressure distribution over the working hours

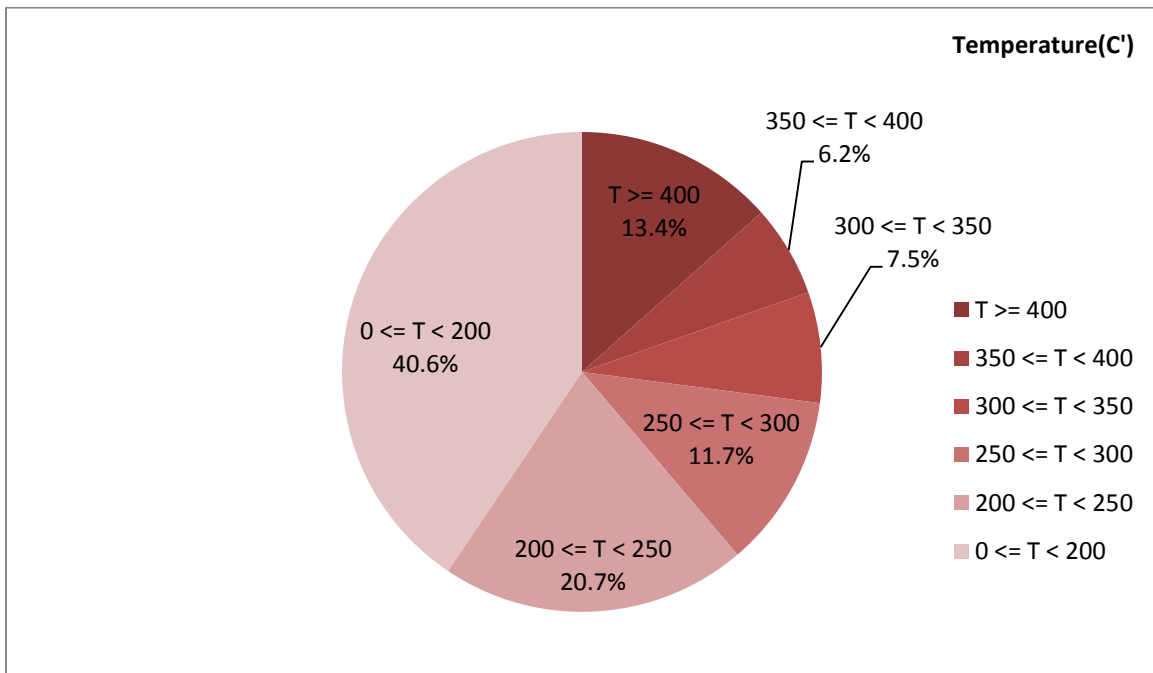


Figure 2-Temperature distribution over the working hours

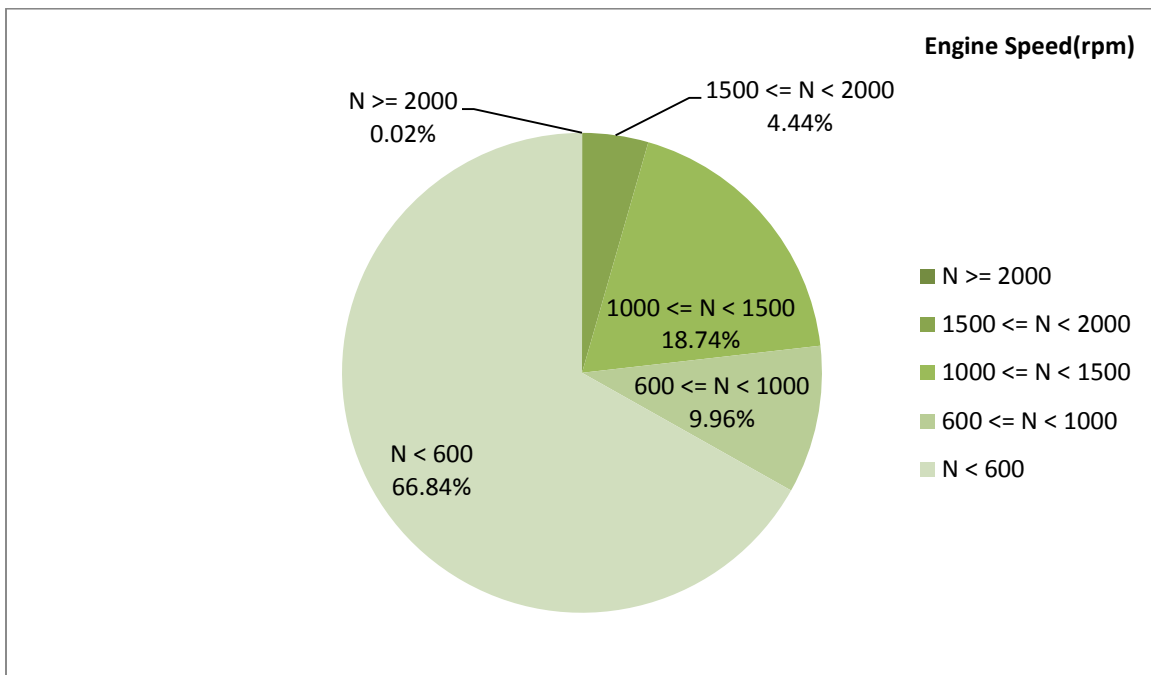


Figure 3- Engine speed distribution over the working hours

Table 4- Mean values

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
256.1	40.59	737

Table 5- Mean values without idling

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
363.2	91.78	1156

Table 6- Max-min values

Max-min temperature(C)	Max-min pressure(mbar)	Max-min engine speed(rpm)
742-50	450-0	2096-256

Detailed Pressure Analysis

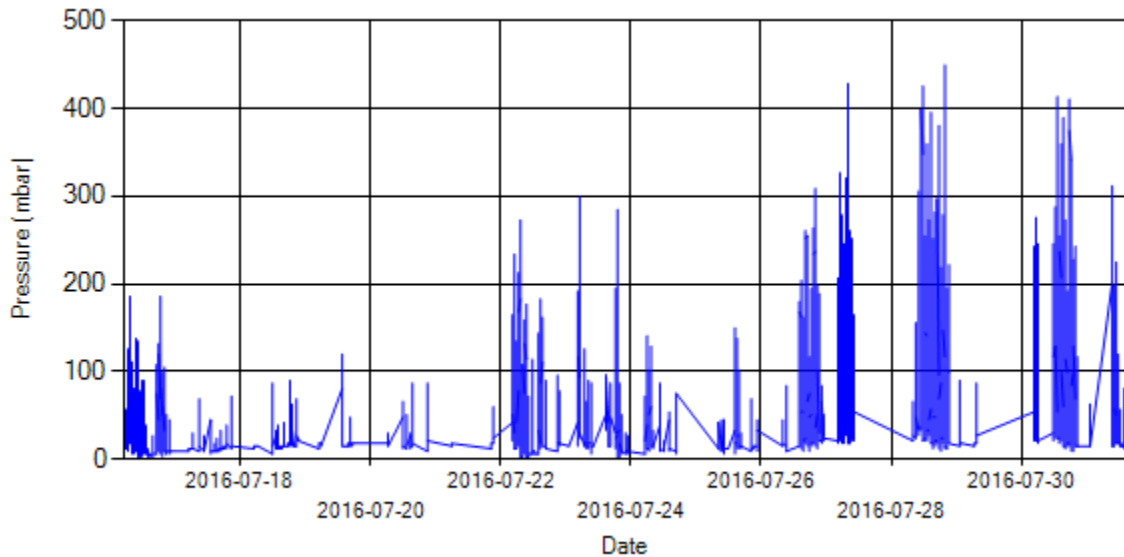


Figure 4- Pressure distribution over the period

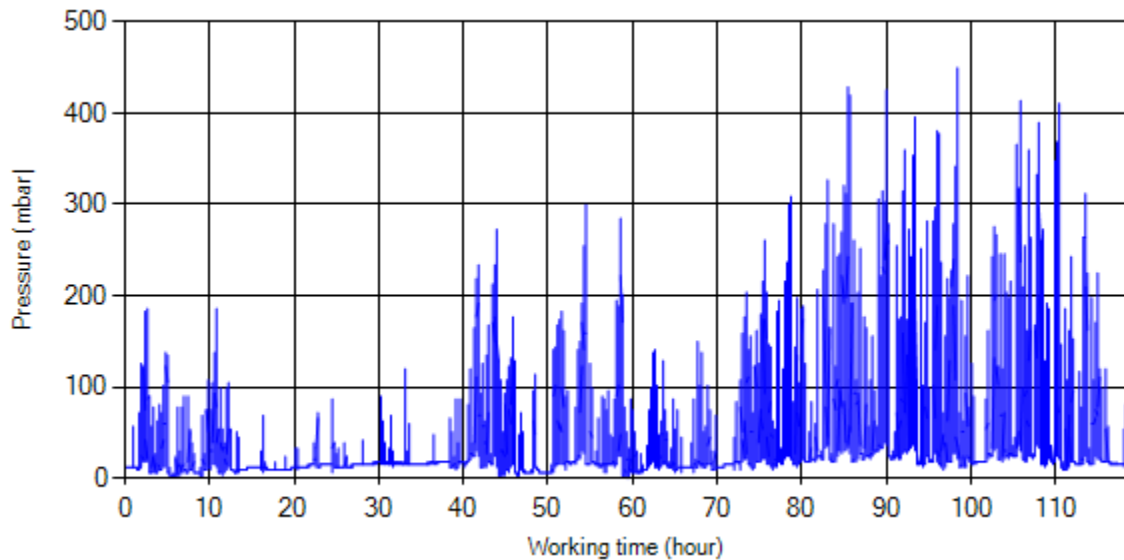


Figure 5- Pressure vs. working hours

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

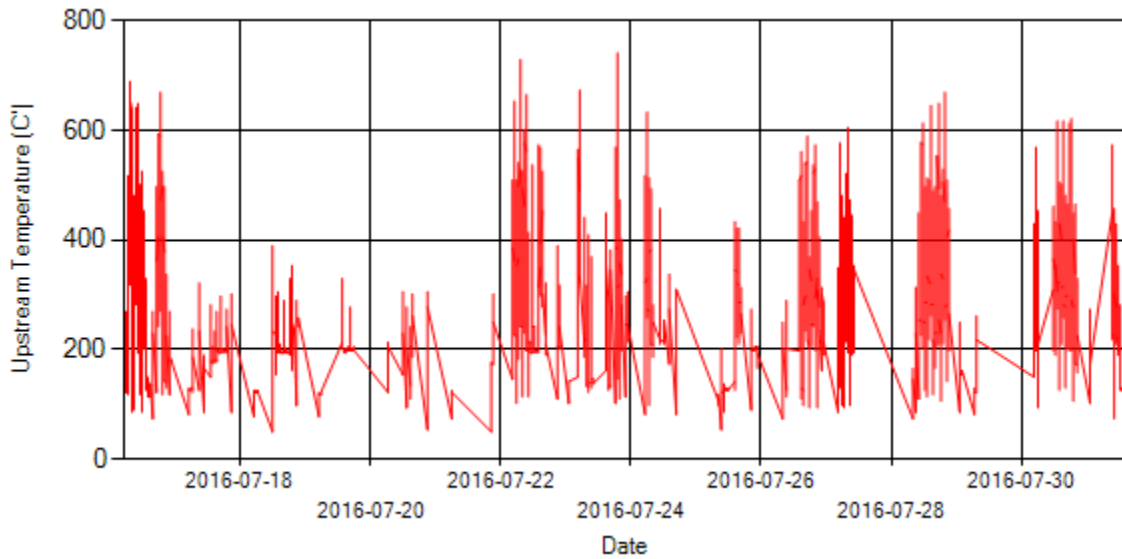


Figure 6- Temperature distribution over the period

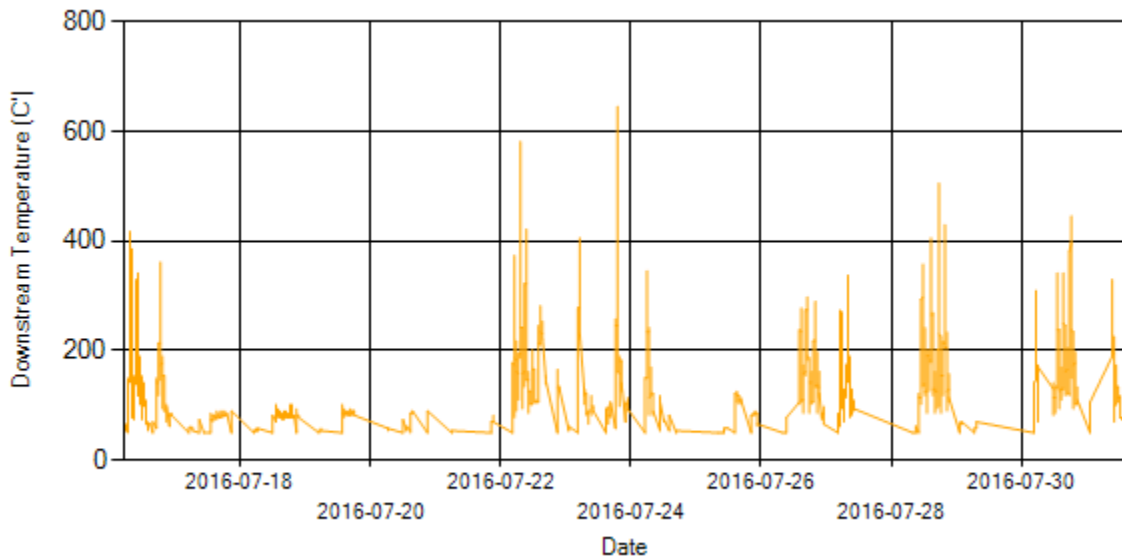


Figure 7- Temperature distribution over the period

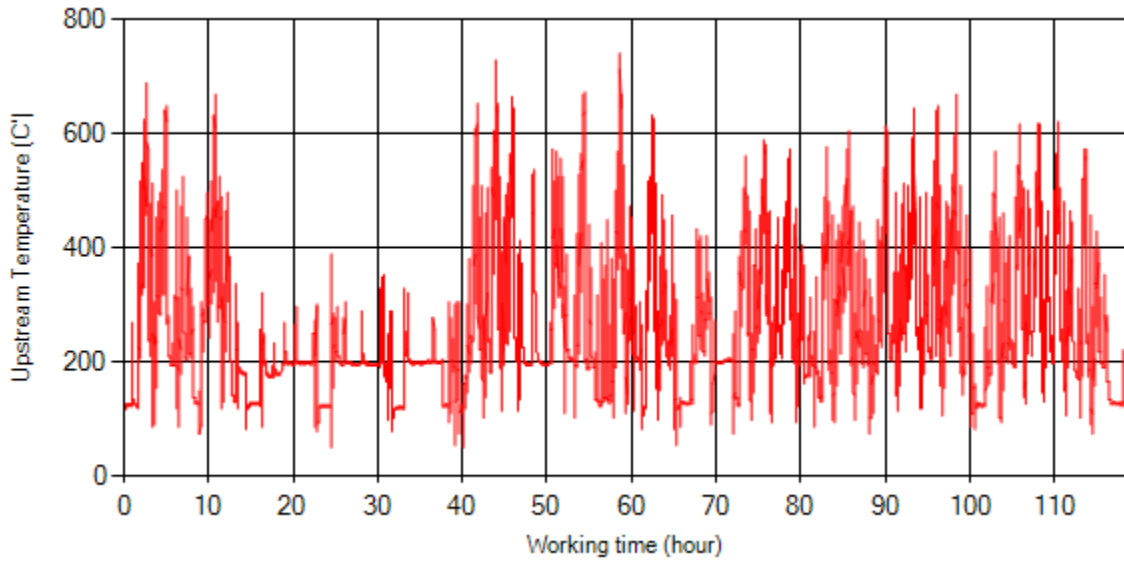


Figure 8- Temperature vs. working hours

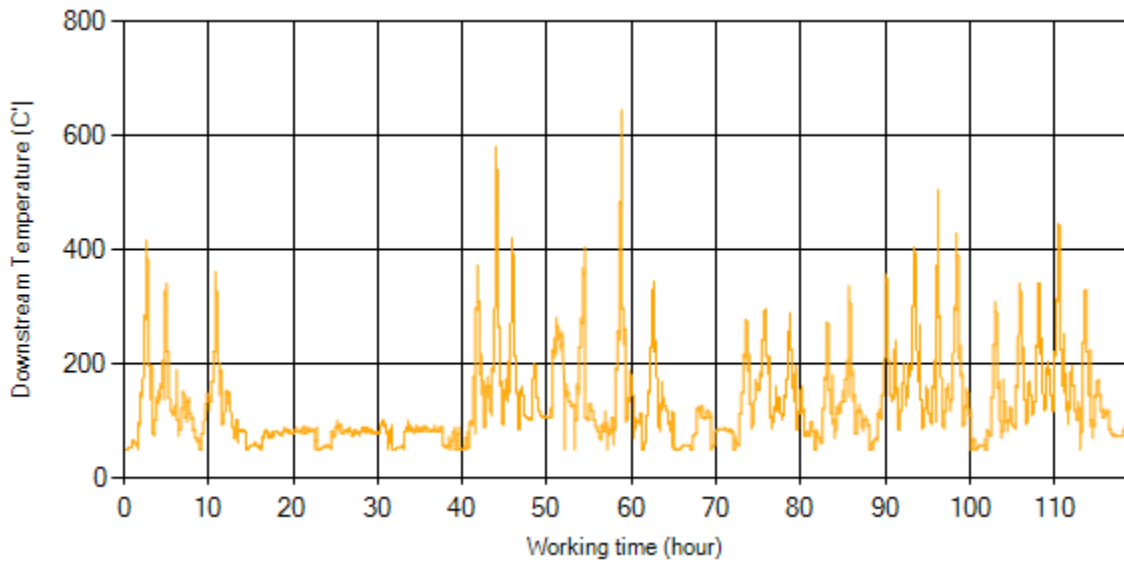


Figure 9- Temperature vs. working hours

Engine Speed Diagrams

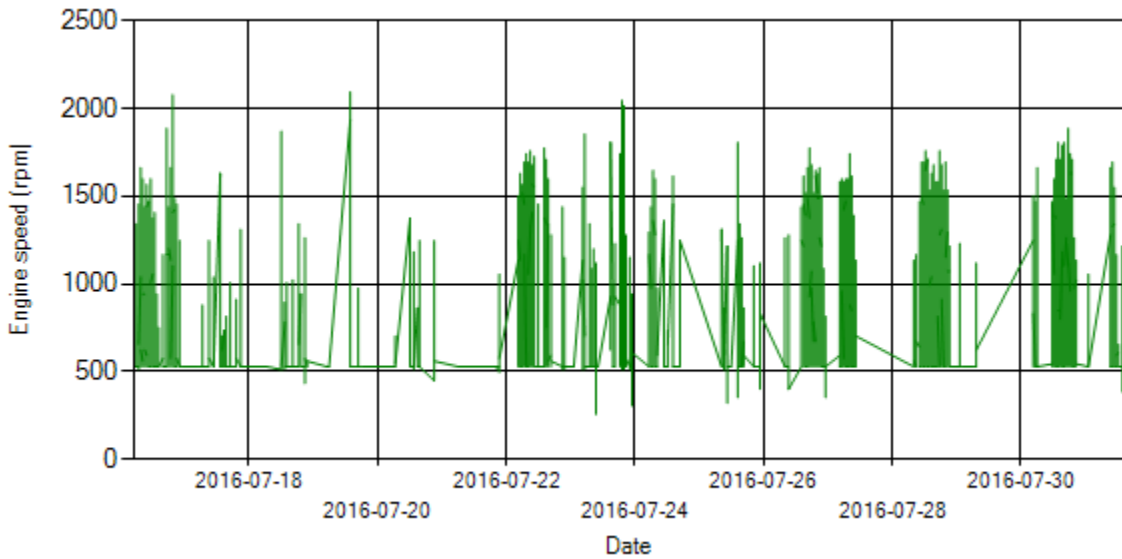


Figure 10- Engine speed distribution over the period

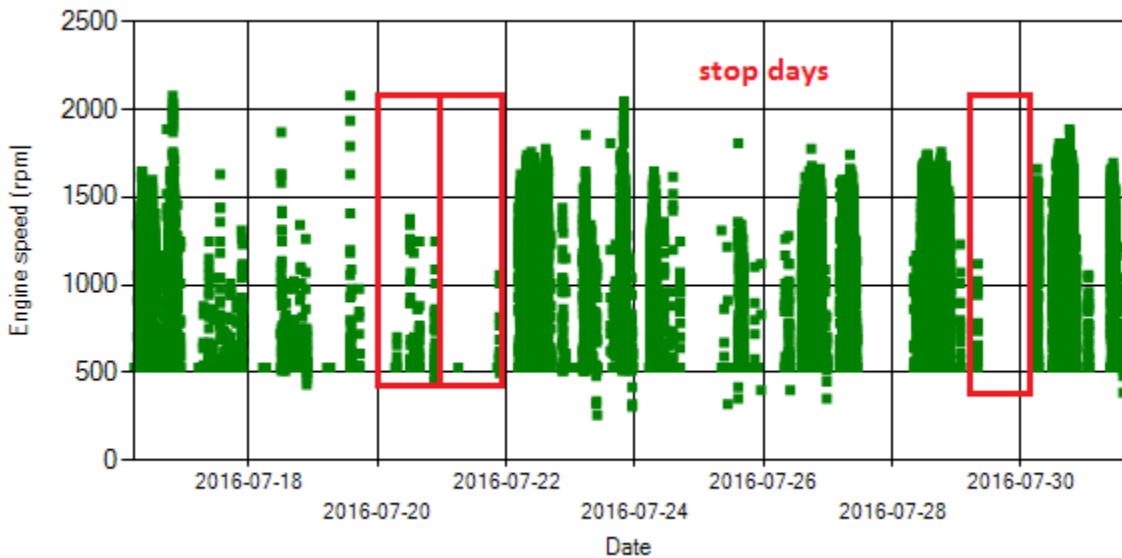


Figure 11- Engine speed diagram for calculating CPK's working days

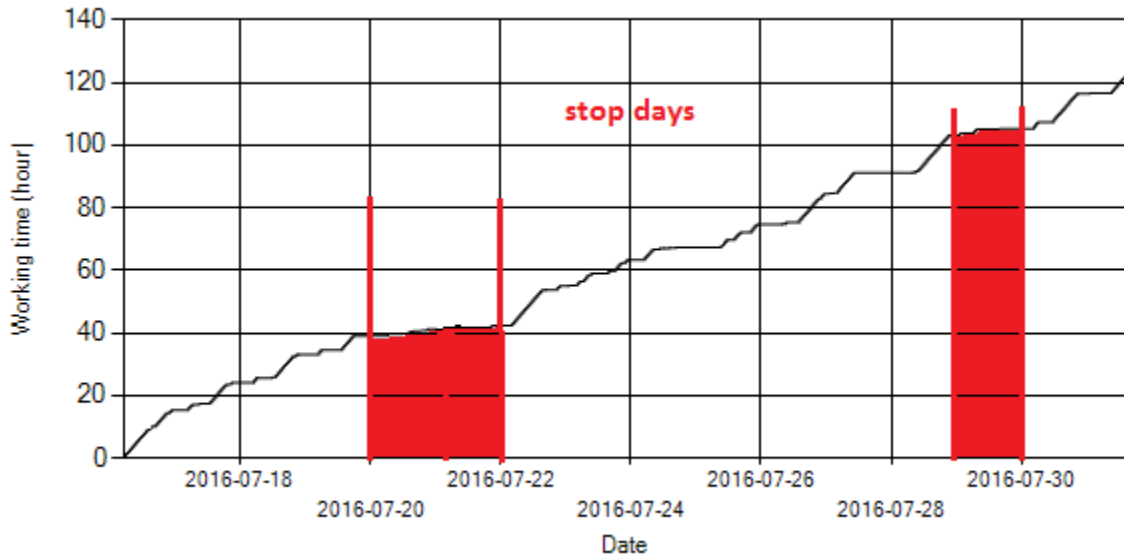


Figure 12- Time diagram for calculating CPK's working days

Notice: Data logger sampling time can be calculated from Figure 12. The lines parallel with Date axis show days without data logger data. As depicted in Figure 12 system was stationary for 3 days.

Pressure-Engine Speed diagrams

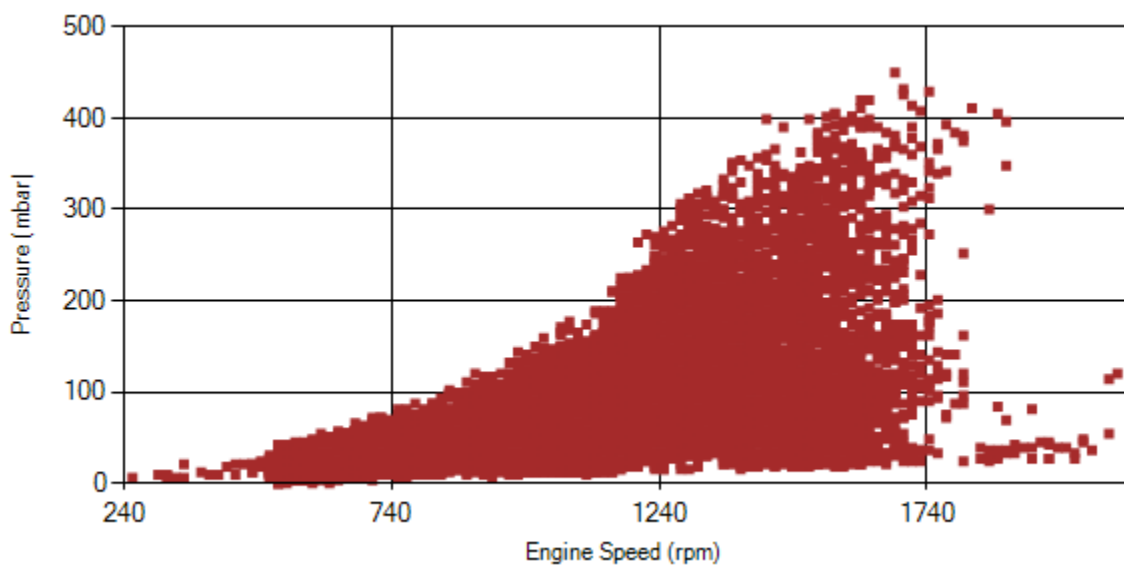


Figure 13- Pressure against engine speed

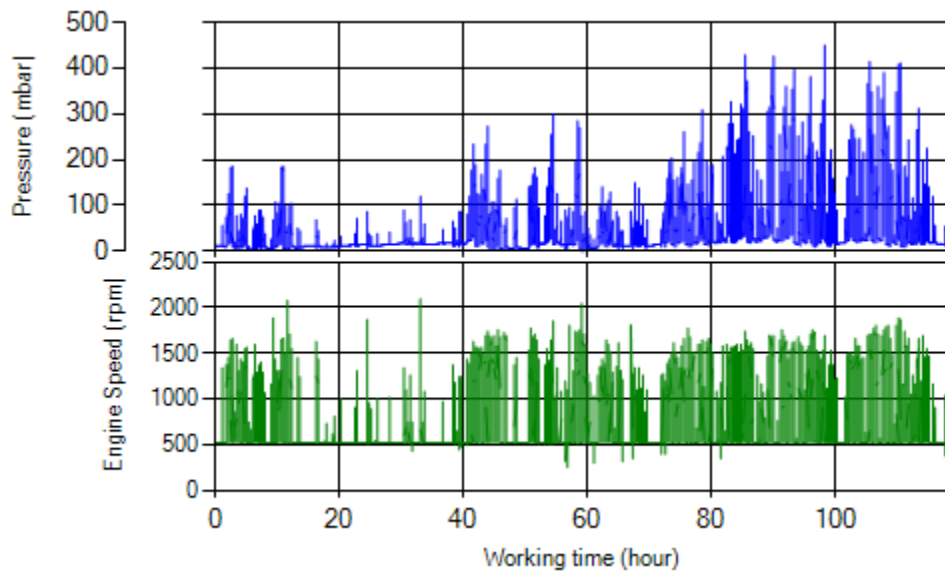


Figure 14- P, N distribution vs. working hours

Temperature-Engine Speed diagrams

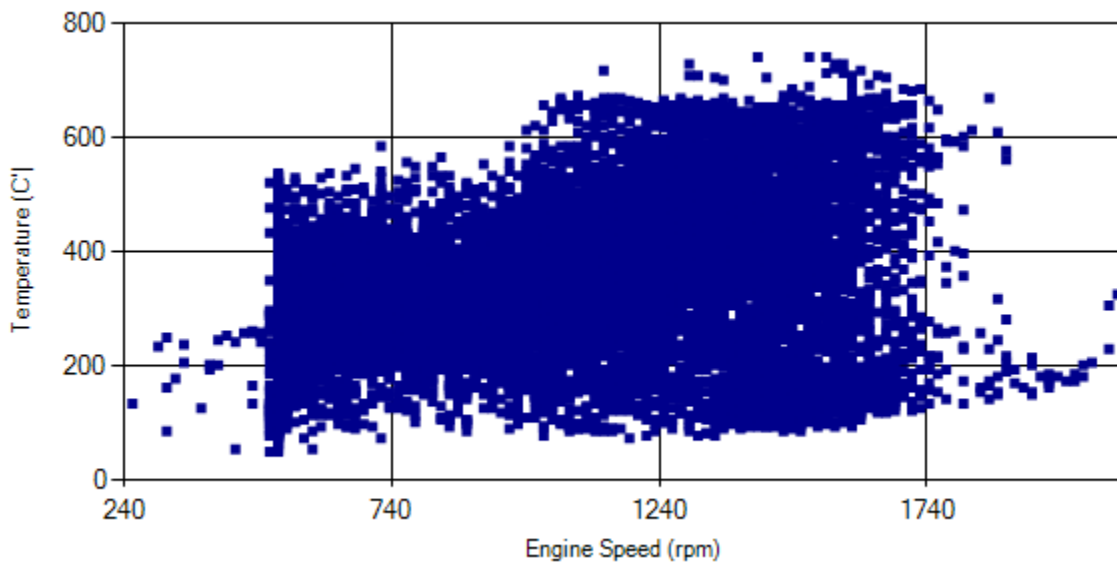


Figure 15- Temperature against engine speed

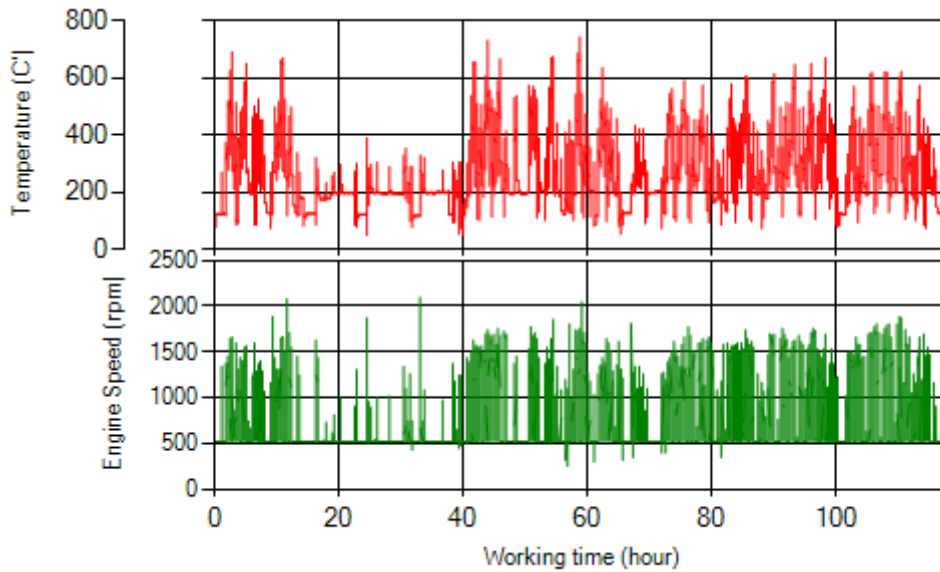


Figure 16- T, N distribution vs. working hours

Filter Operation Analysis

- As depicted in Figure 1, 3.09% of working time, pressure was above 200 mbar and 6.1% above 150 mbar.
- Figure 2 displays flow temperature before the DPF. It can be obviously observed that 13.4% of total working time temperature is above 400 °C and 19.6% above 350°C.

Filter operation status	Excellent <input type="checkbox"/>	Good <input type="checkbox"/>
	Maintenance required <input checked="" type="checkbox"/>	Failed <input type="checkbox"/>