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	01/Apr/2016 – 15/Apr/2016 (fifteen days)
K value - DPF upstream	1.9 [1/m]
K value – DPF downstream	0.02 [1/m]

Table 2- DPF Maintenance History

Filter maintenance date	DPF core was cleaned on Jun 13th.
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)	79809 km
Bus mileage over the period	739 km
Working days over the period	12 days
Stop days	3 days
Data logger working days	8 days
Working hours over the period	-
Average working hours per day (including stop days)	-
Bus average speed	-
idle speed time to all working time ration	54.99 %
Total Bus fuel consumption over the period	436 lit
Fuel consumption per hour	-
Average fuel consumption	0.59 lit/km
Total Bus additive consumption over the period	0.2 lit
Average additive consumption	270 cc/km
Additive consumption to fuel ration	470 cc/1000lit

Notice: Due to data logger problem working hours and some related information was missed.

Temperature, Pressure and Engine Speed Overview

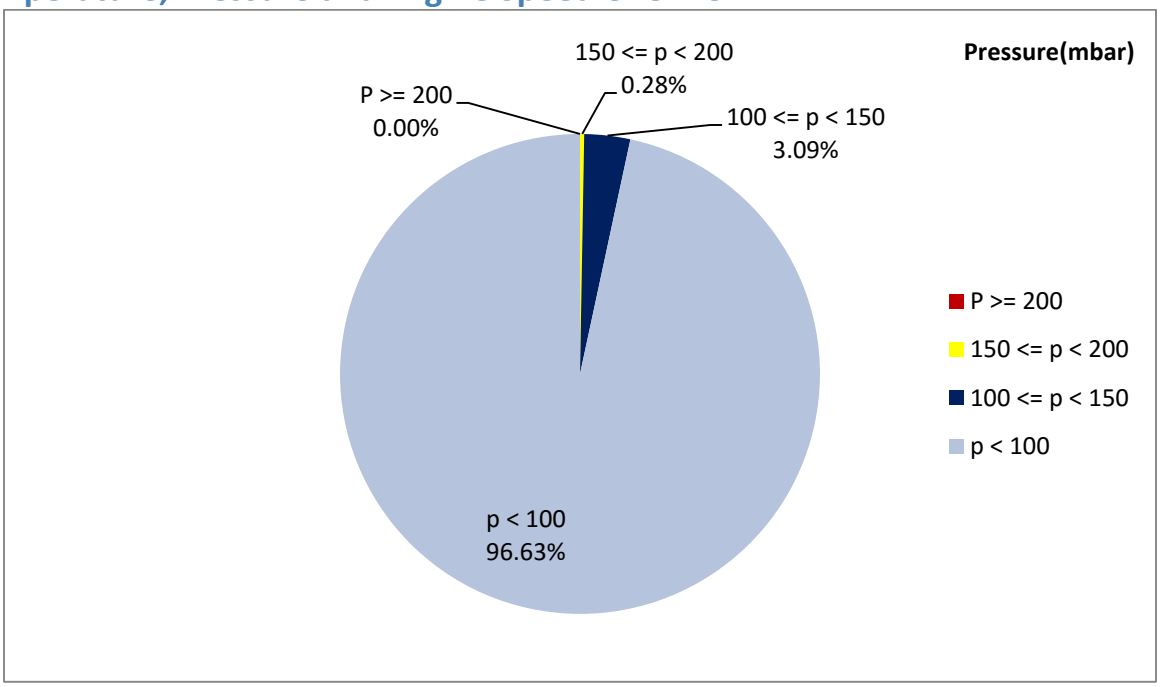

Figure 1- Pressure distribution over the working hours

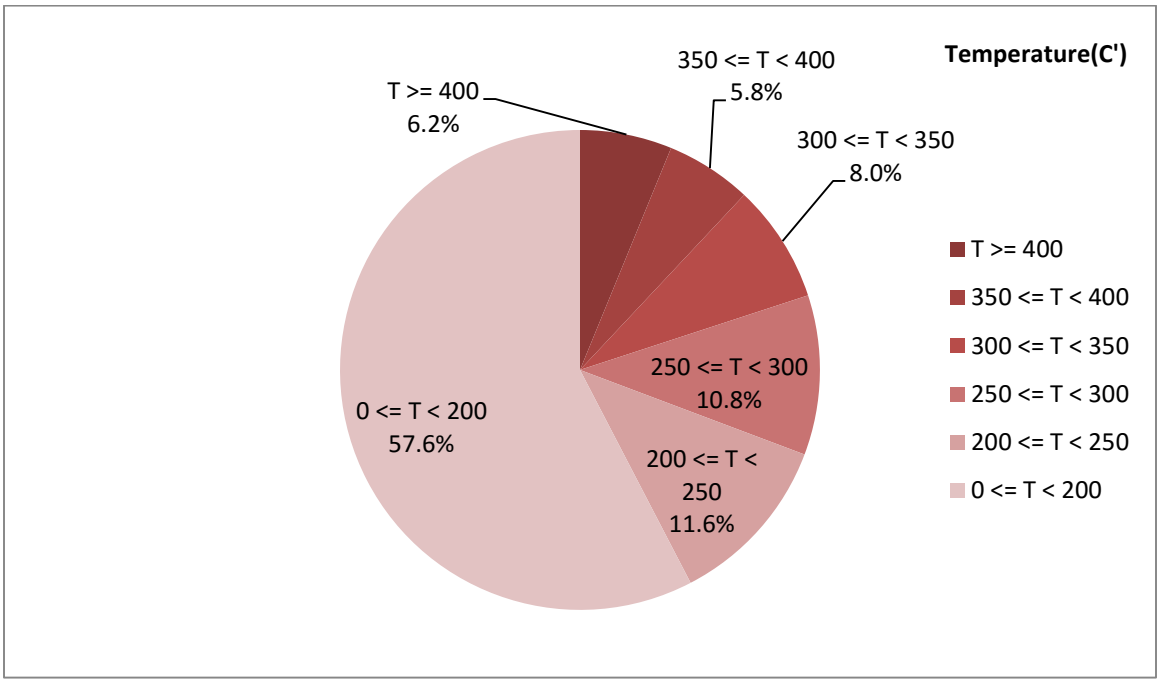

Figure 2-Temperature distribution over the working hours

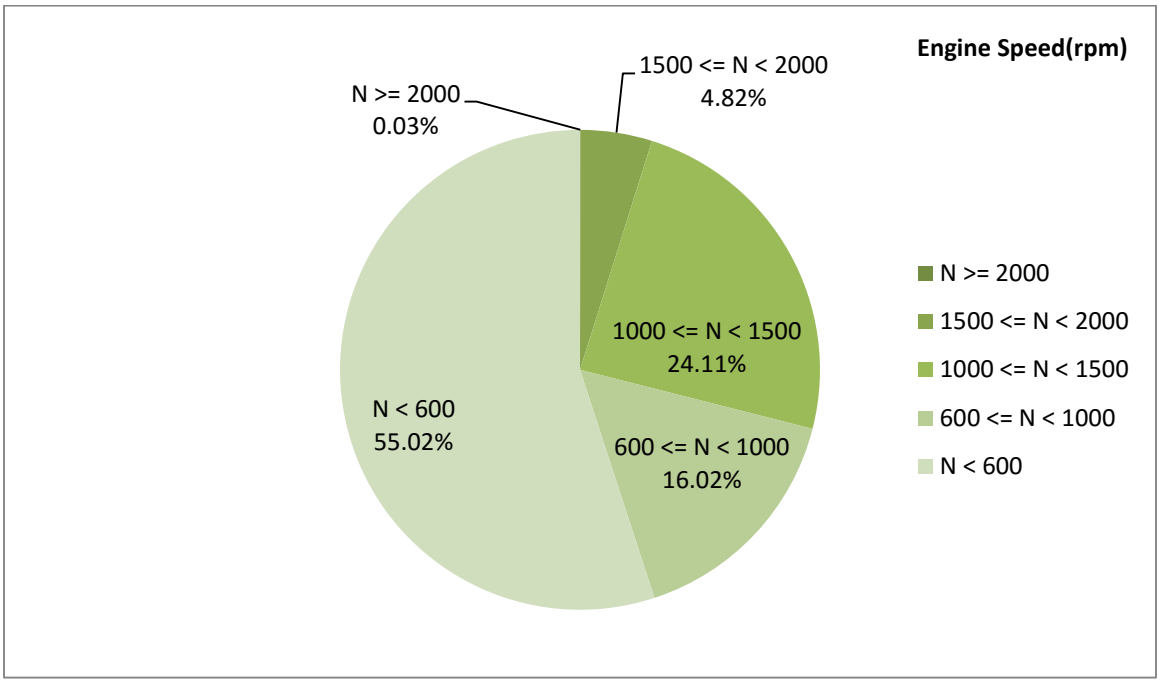

Figure 3- Engine speed distribution over the working hours

Table 4- Mean values

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
212.94	20.26	799

Table 5- Mean values without idling

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
280.46	38.38	1108

Table 6- Max-min values

Max-min temperature(C)	Max-min pressure(mbar)	Max-min engine speed(rpm)
490-50	180-0	2128-320

Detailed Pressure Analysis

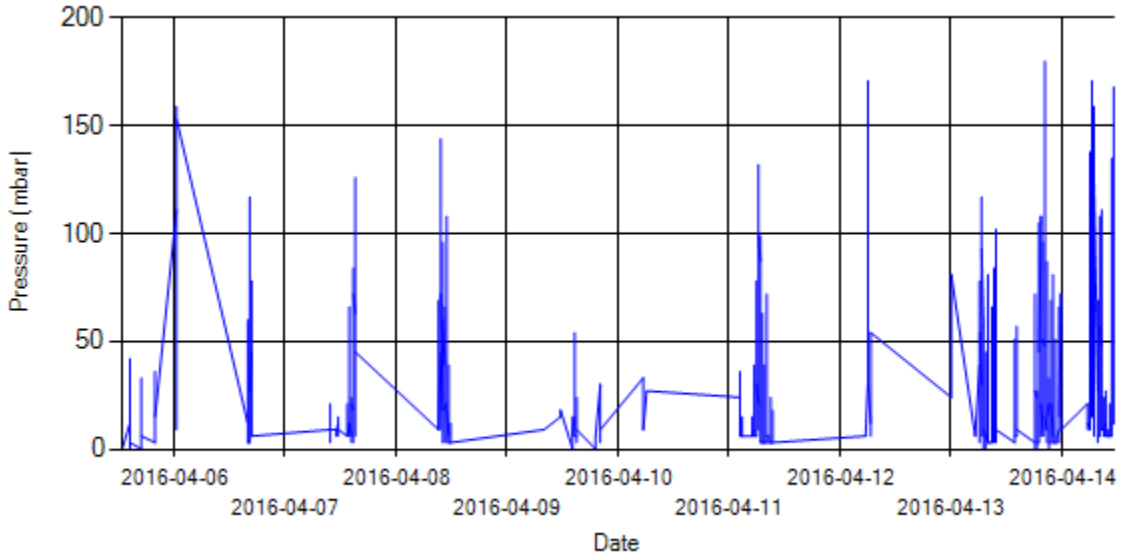

Figure 4- Pressure distribution over the period

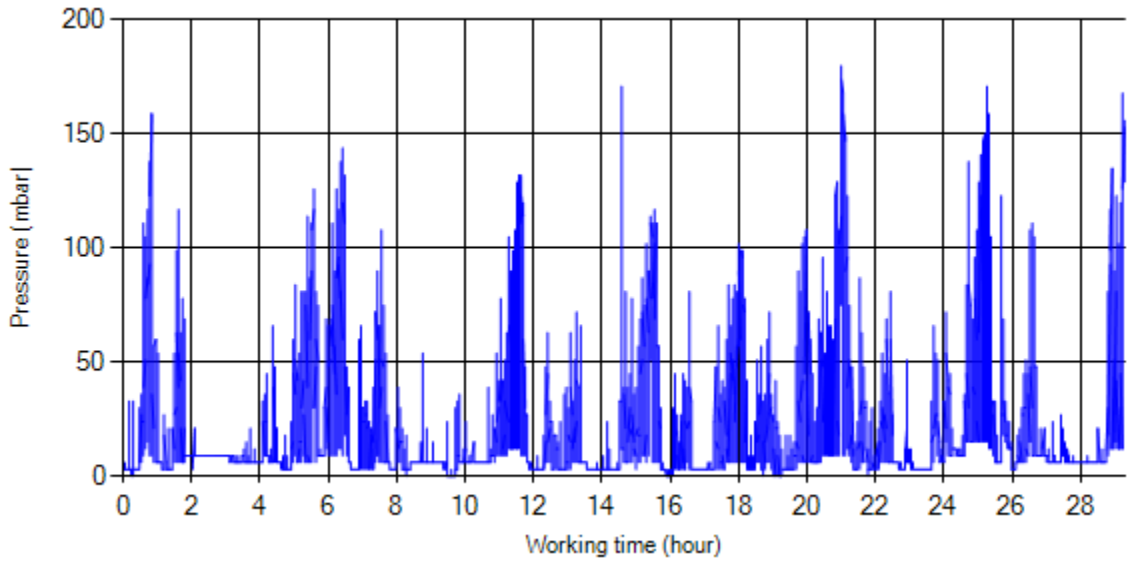

Figure 5- Pressure vs. working hours

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

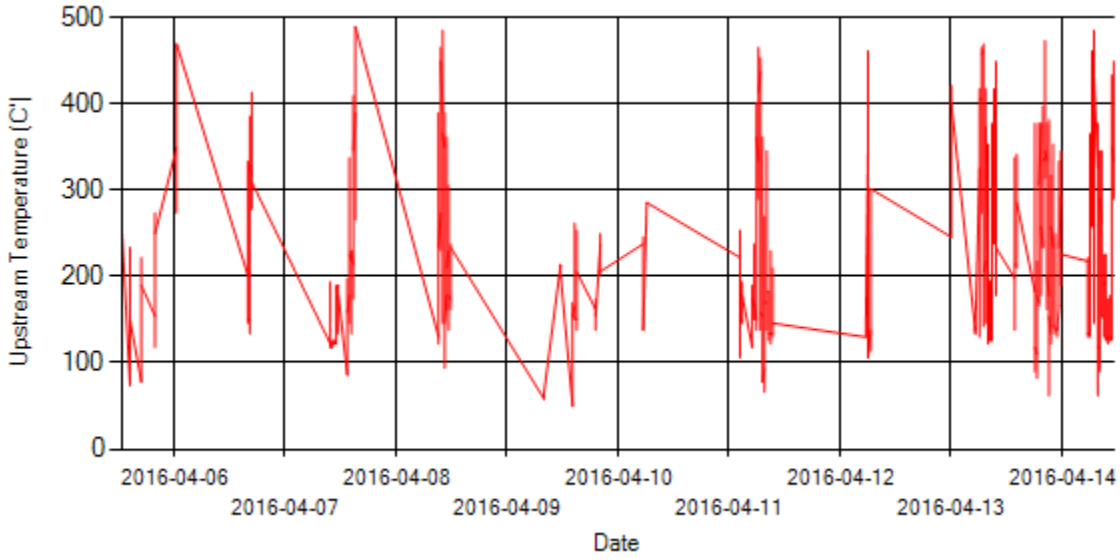

Figure 6- Temperature distribution over the period

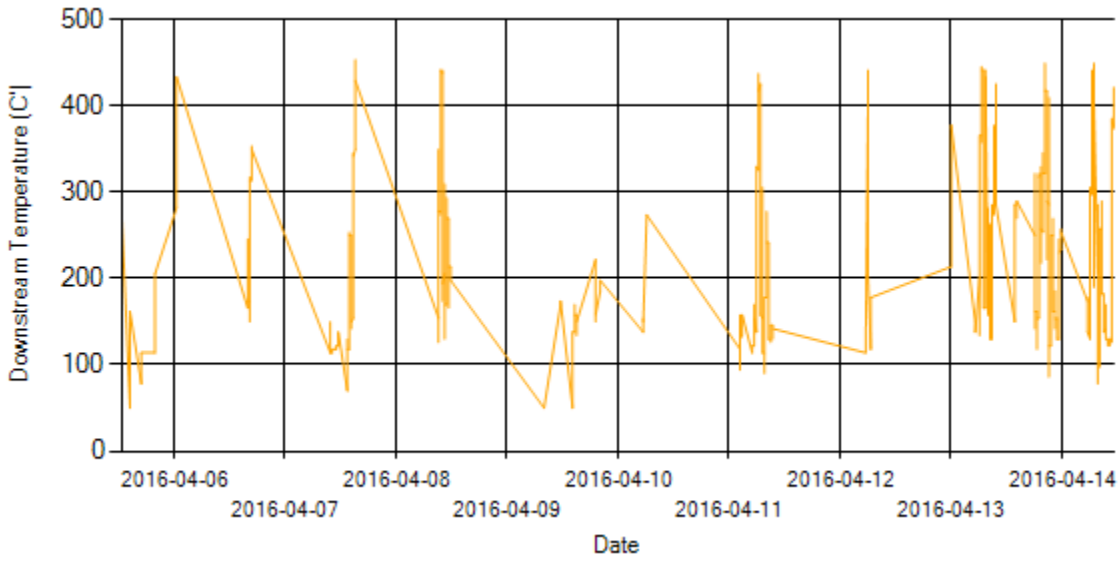

Figure 7- Temperature distribution over the period

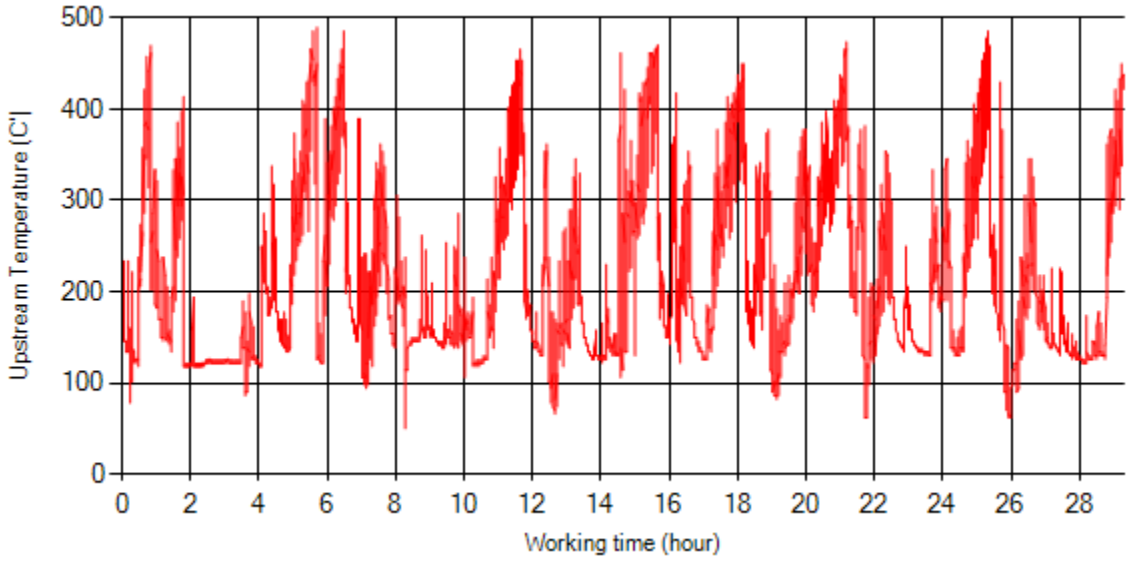

Figure 8- Temperature vs. working hours

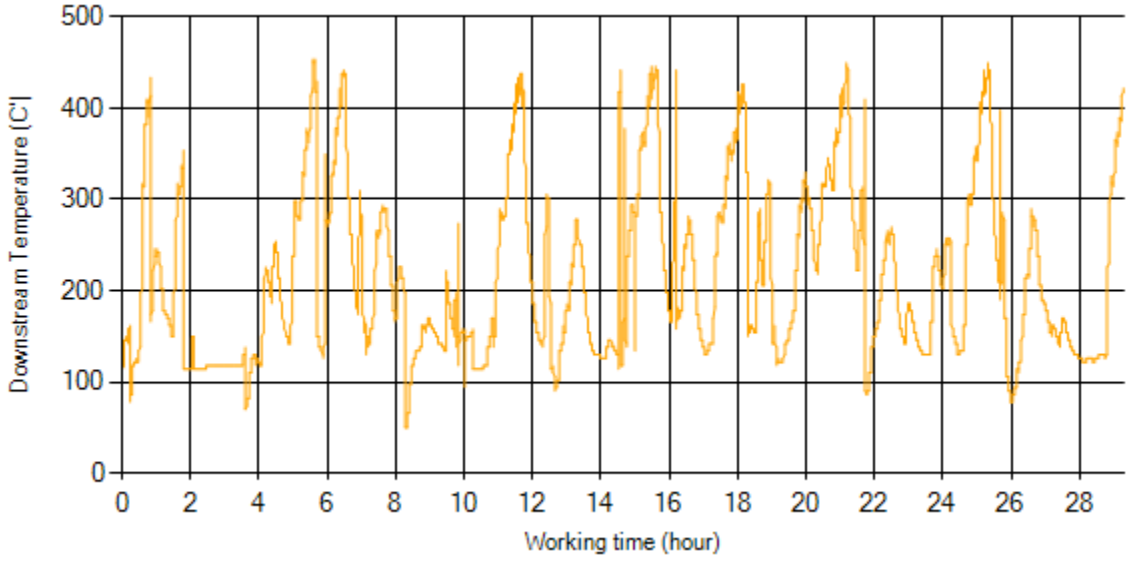

Figure 9- Temperature vs. working hours

Engine Speed Diagrams

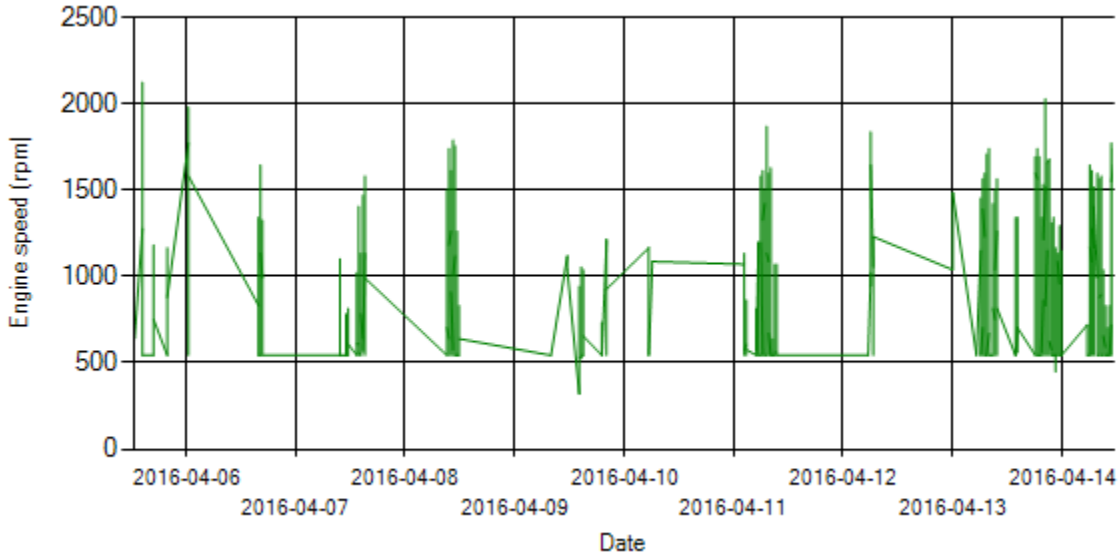

Figure 10- Engine speed distribution over the period

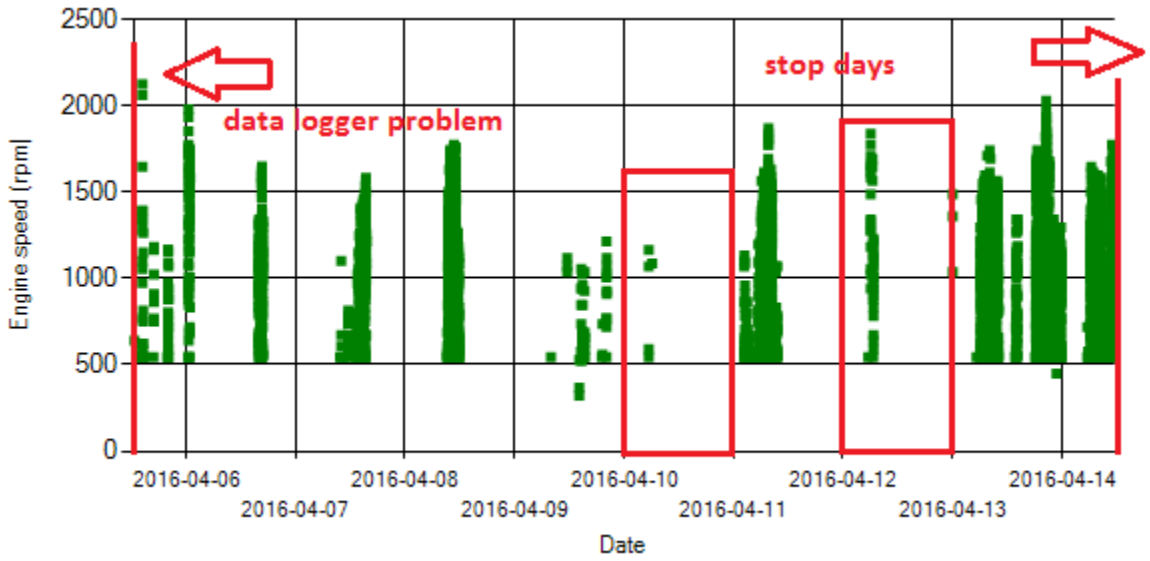

Figure 11- Engine speed diagram for calculating CPK's working days

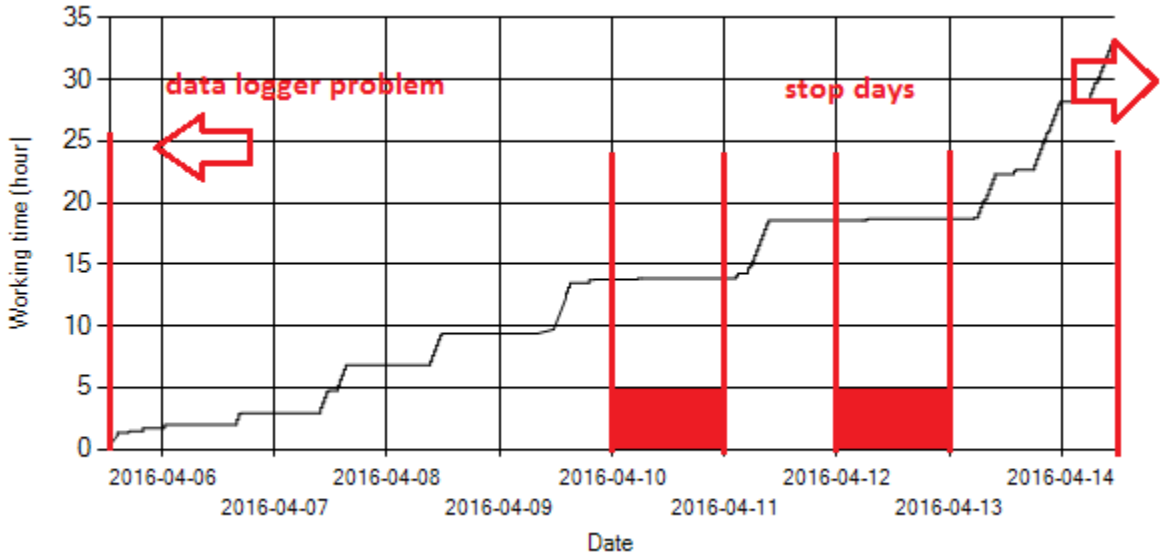

Figure 12- Time diagram for calculating CPK's working days

Notice: Data logger sampling time can be calculated from Figure 12. The lines parallel with Date axis show days without data logger data or stationary days.

Pressure-Engine Speed diagrams

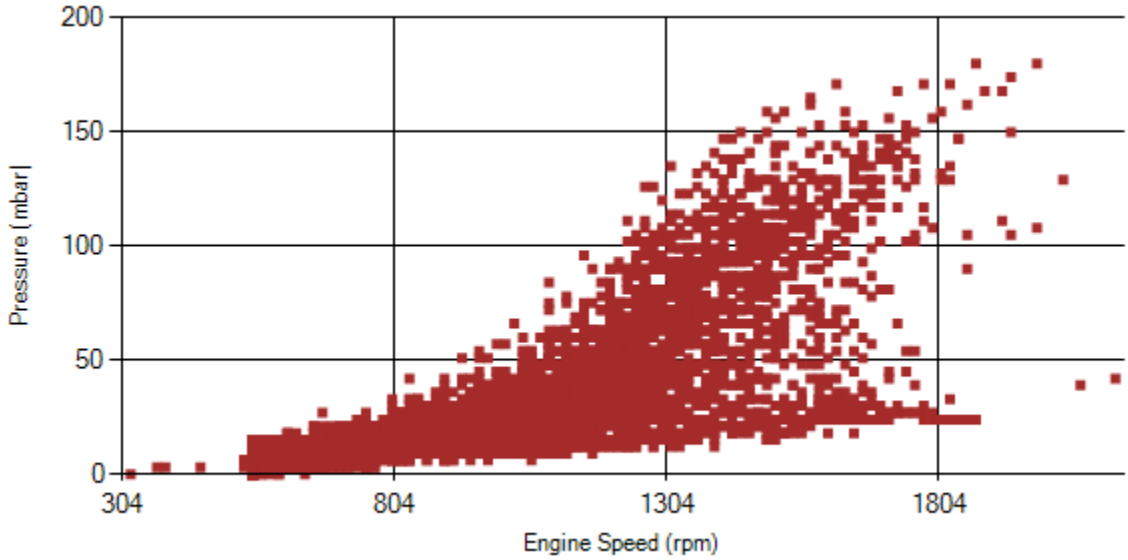

Figure 13- Pressure against engine speed

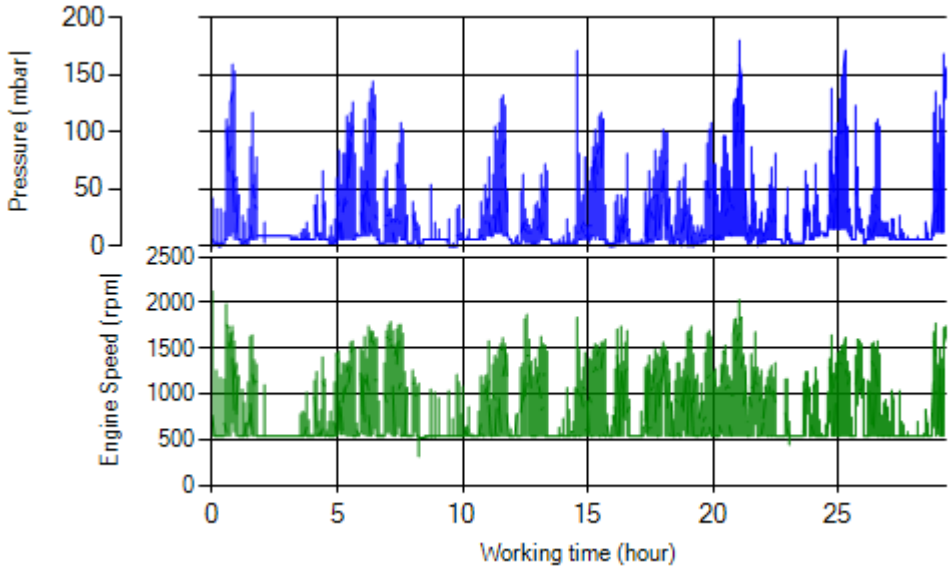

Figure 14- P, N distribution vs. working hours

Temperature-Engine Speed diagrams

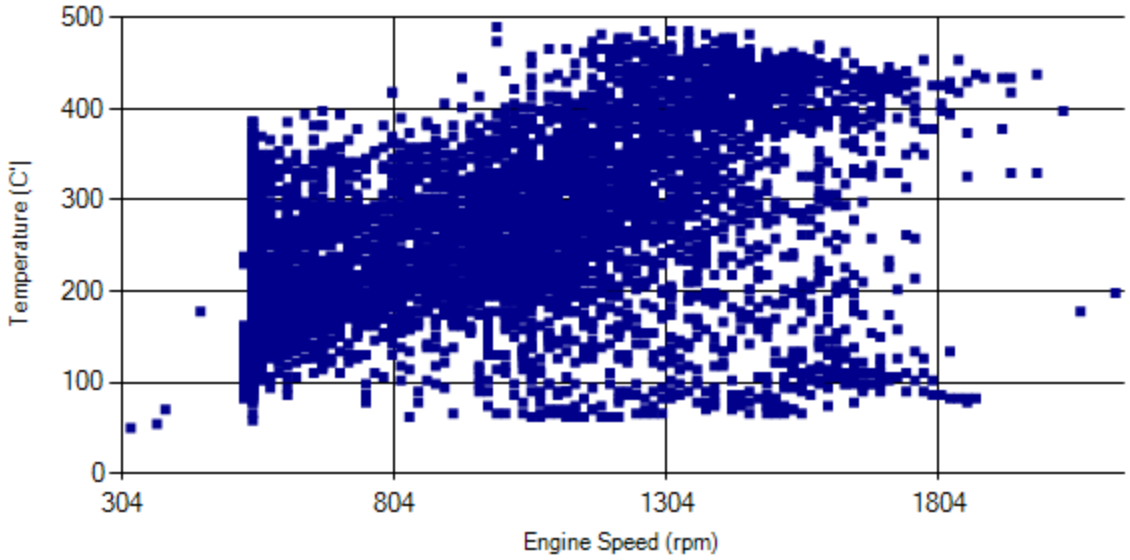

Figure 15- Temperature against engine speed

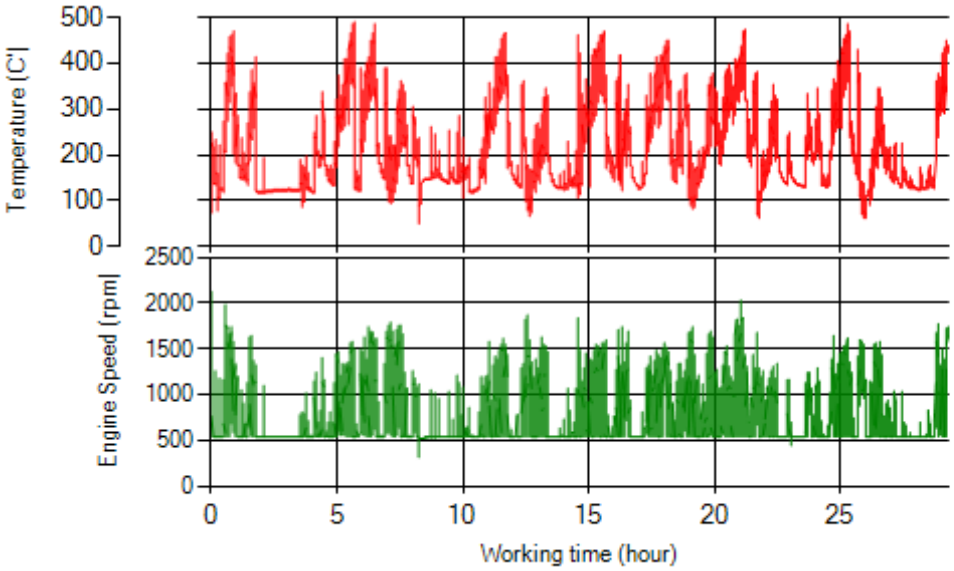

Figure 16- T, N distribution vs. working hours

Filter Operation Analysis

- As depicted in Figure 1, only 0.28% of working time, pressure was above 150 mbar.
- Figure 2 displays flow temperature before the DPF. It can be obviously observed that 6.2% of total working time temperature is above 400 ℃ and 12% above 350℃.
- Considering available data DPF operation was excellent during the period.

Filter operation status	Excellent ■ Good ☐ Maintenance required ☐ Failed☐