

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/Jan/2016 – 15/Jan/2016 (fifteen days)
K value - DPF upstream	1.7 [1/m]
K value – DPF downstream	0.02 [1/m]

Table 2- DPF Maintenance History

Filter maintenance date	DPF core was cleaned on Jun 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)	77982 km
Bus mileage over the period	1865 km
Working days over the period	11 days
Stop days	4 days
Data logger working days	11 days
Working hours over the period	103 hours 58 minutes
Average working hours per day (including stop days)	7 hours 25 minutes
Bus average speed	17.93 km/hr
idle speed time to all working time ration	54.17 %
Total Bus fuel consumption over the period	1120 lit
Fuel consumption per hour	10.75 lit/hr
Average fuel consumption	0.6 lit/km
Total Bus additive consumption over the period	0.50 lit
Average additive consumption	268 cc/km
Additive consumption to fuel ration	446 cc/1000lit

Temperature, Pressure and Engine Speed Overview

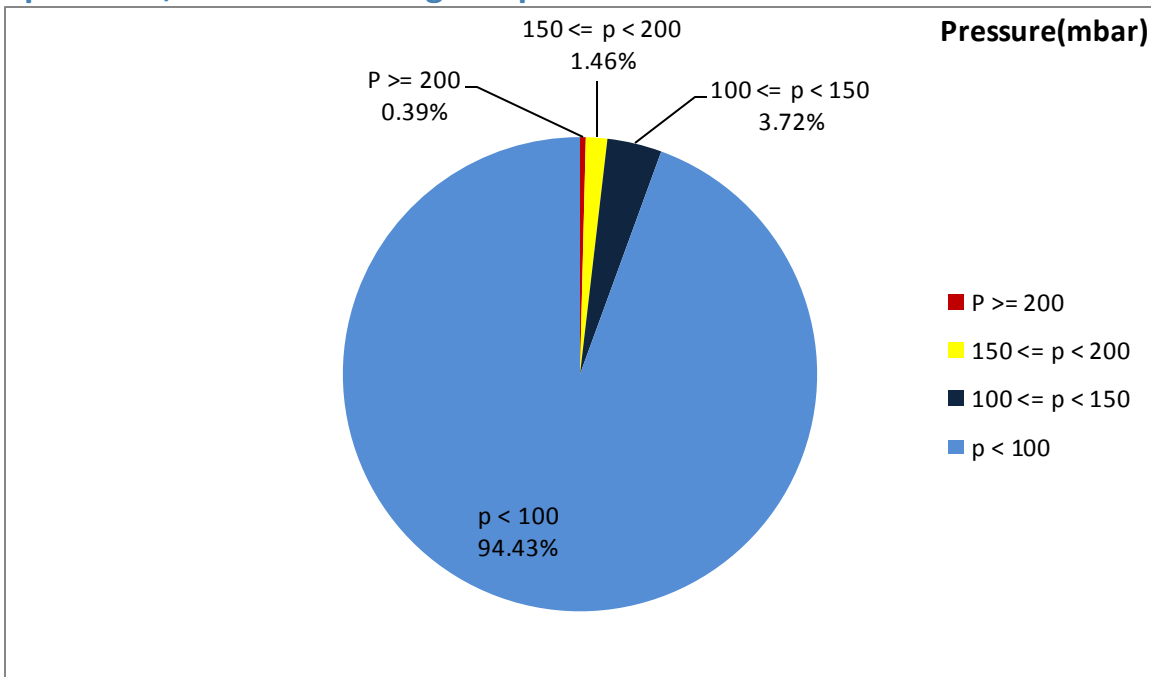


Figure 1- Pressure distribution over the working hours

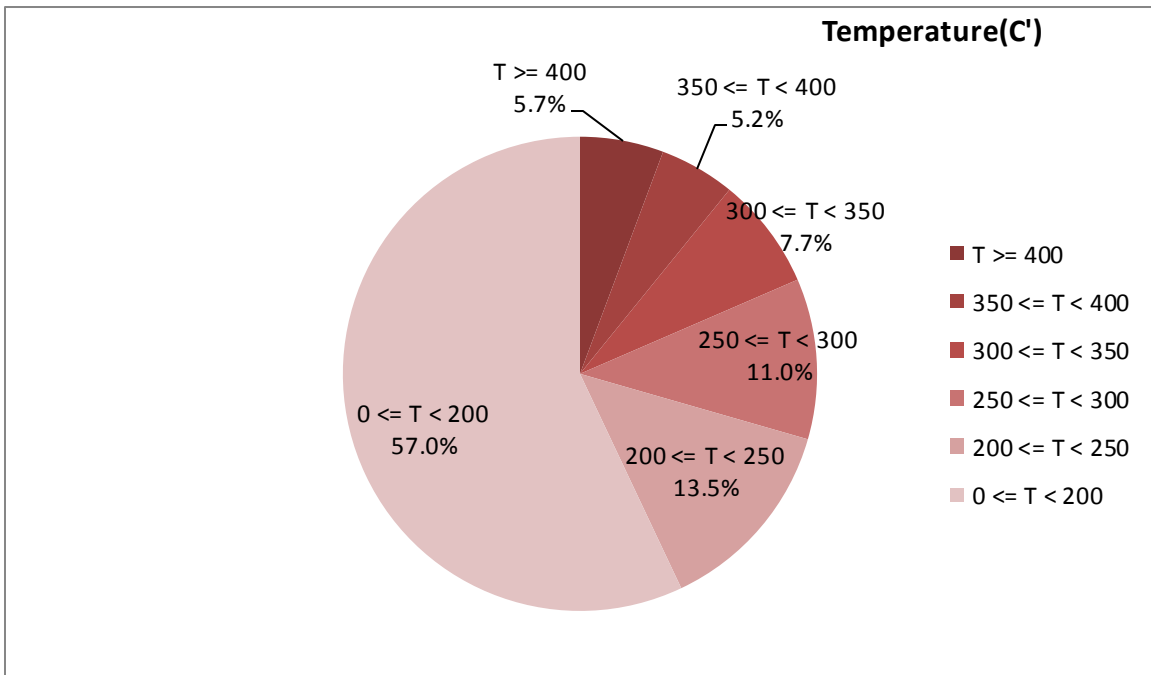


Figure 2-Temperature distribution over the working hours

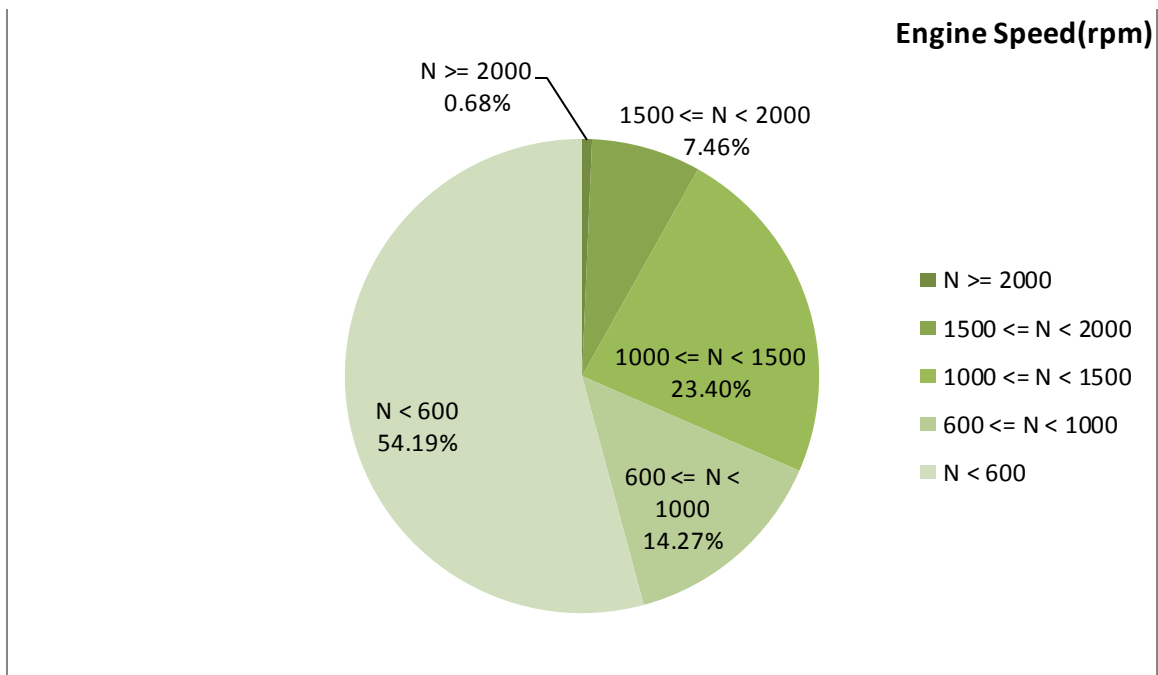


Figure 3- Engine speed distribution over the working hours

Table 4- Mean values

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
211.49	27.59	834

Table 5- Mean values without idling

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
269.54	49.97	1175

Table 6- Max-min values

Max-min temperature(C)	Max-min pressure(mbar)	Max-min engine speed(rpm)
506-50	261-0	2496-256

Detailed Pressure Analysis

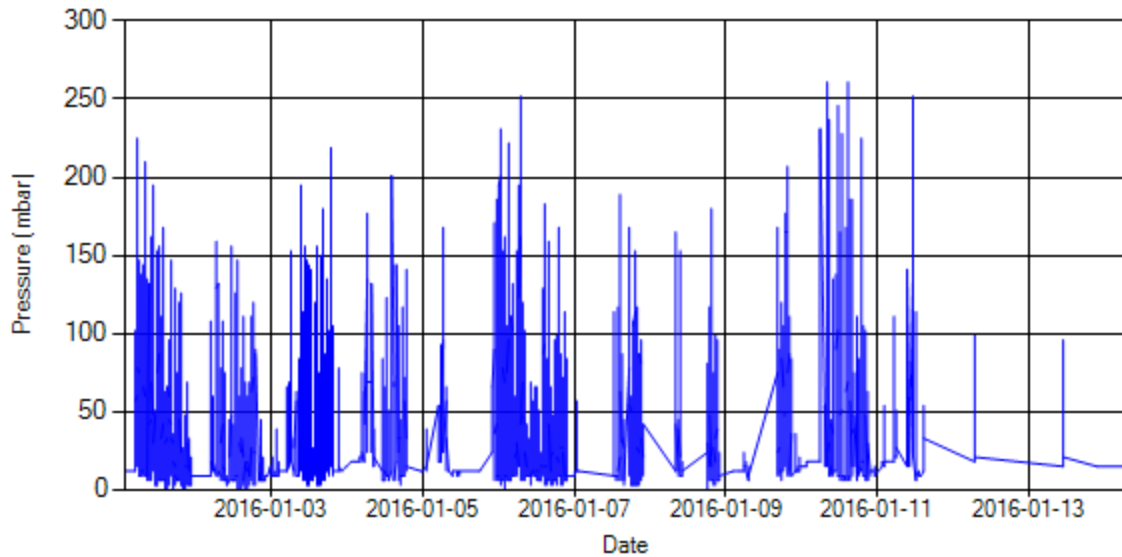


Figure 4- Pressure distribution over the period

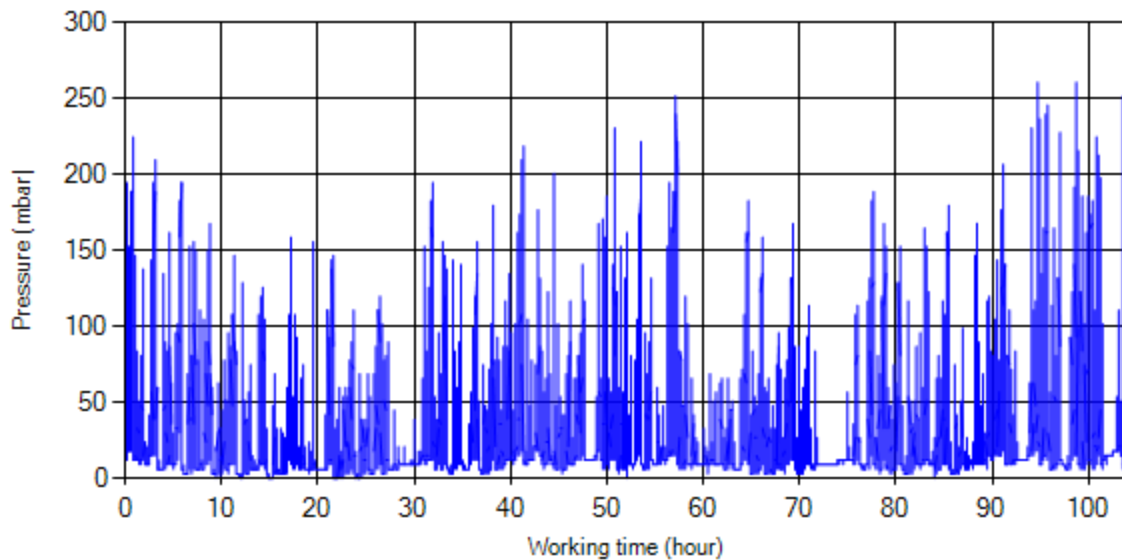


Figure 5- Pressure vs. working hours

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

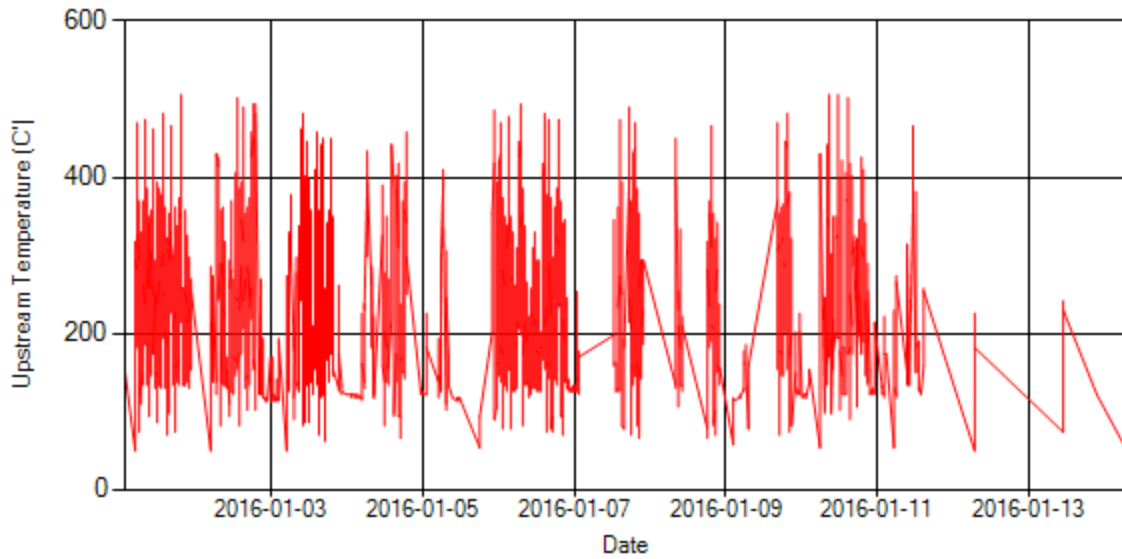


Figure 6- Temperature distribution over the period

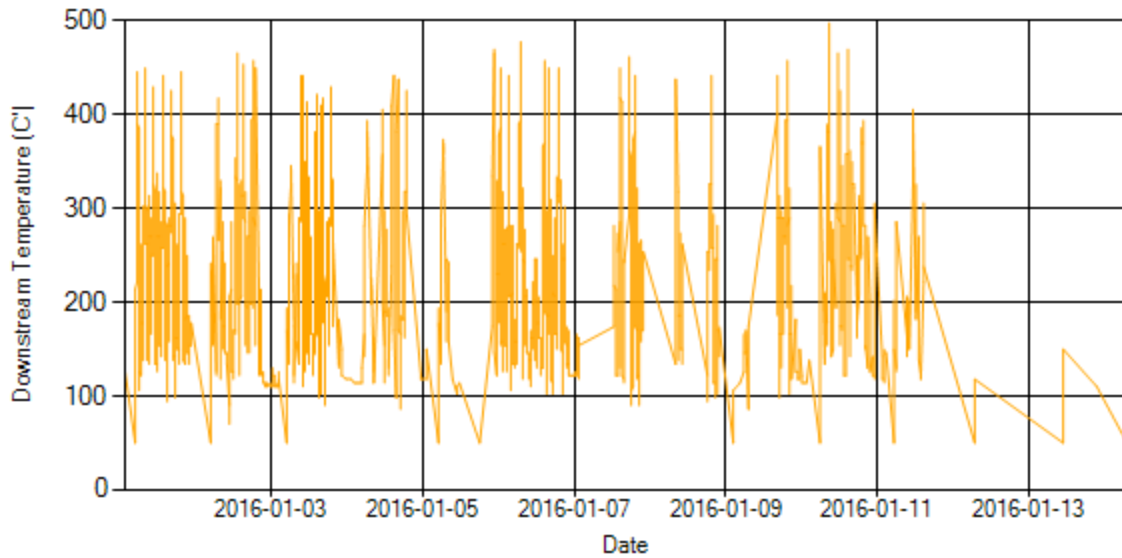


Figure 7- Temperature distribution over the period

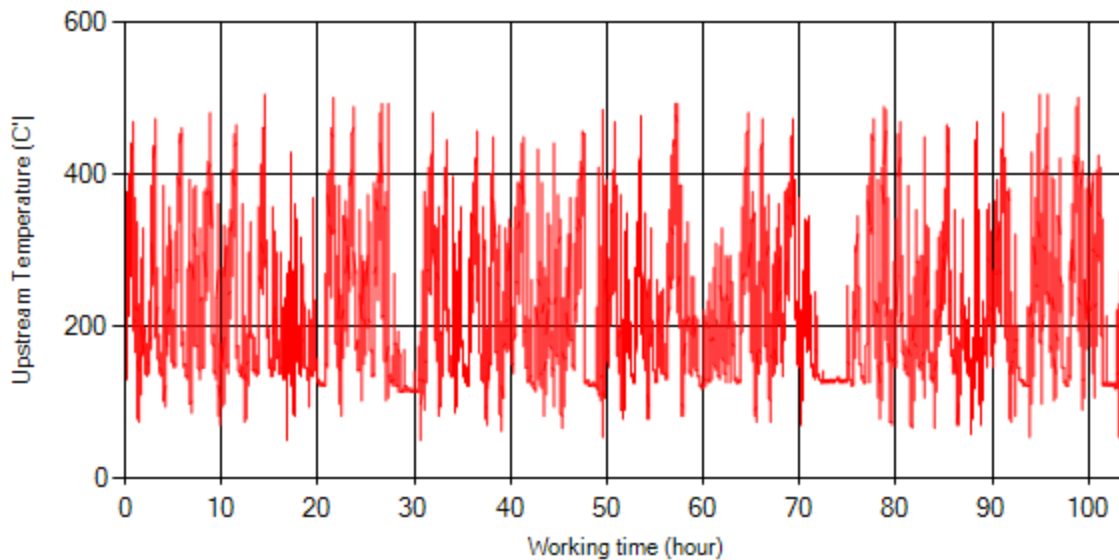


Figure 8- Temperature vs. working hours

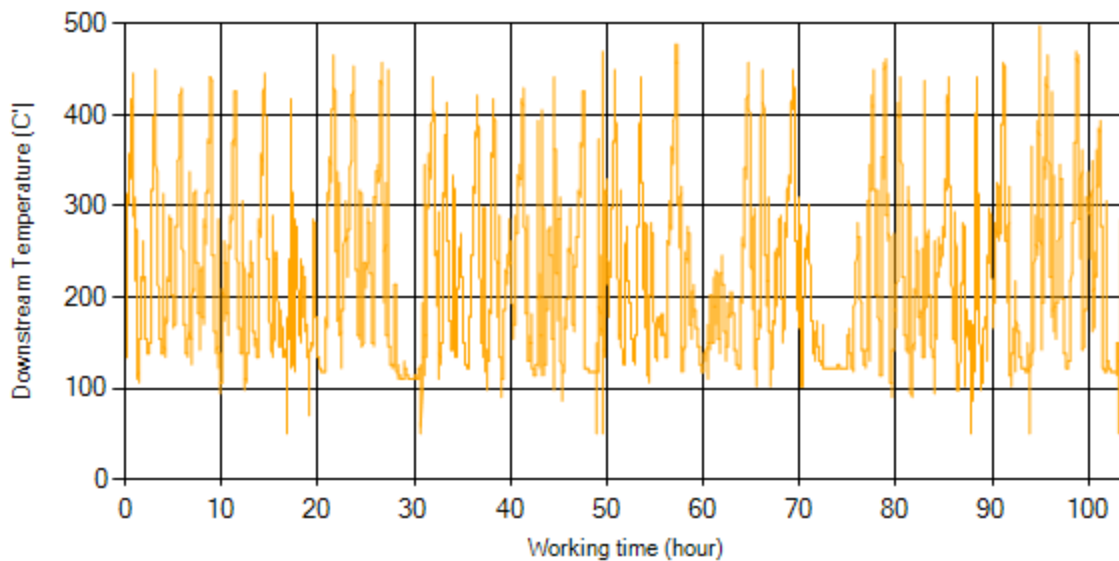


Figure 9- Temperature vs. working hours

Engine Speed Diagrams

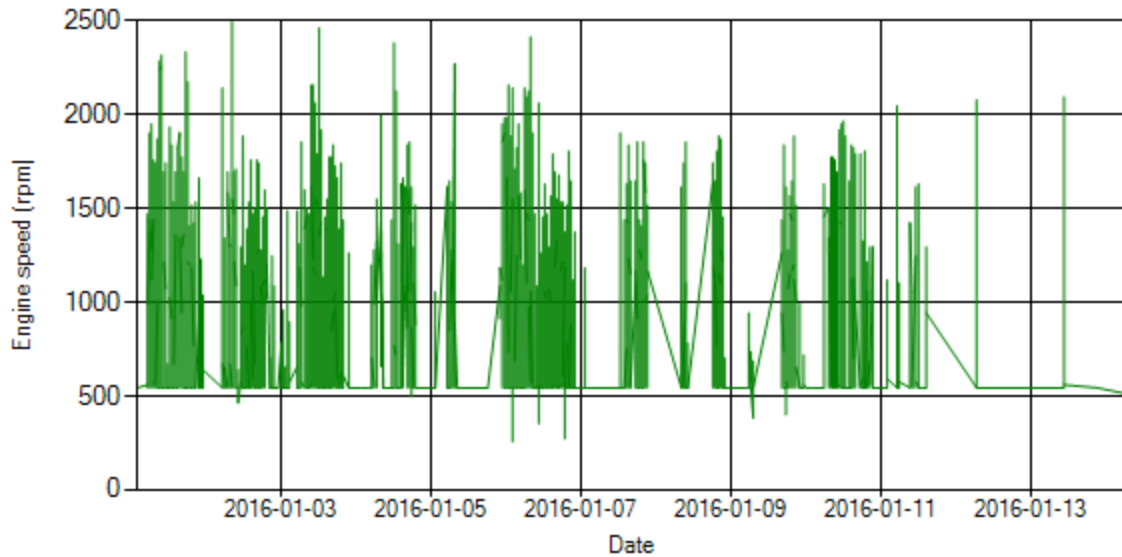


Figure 10- Engine speed distribution over the period

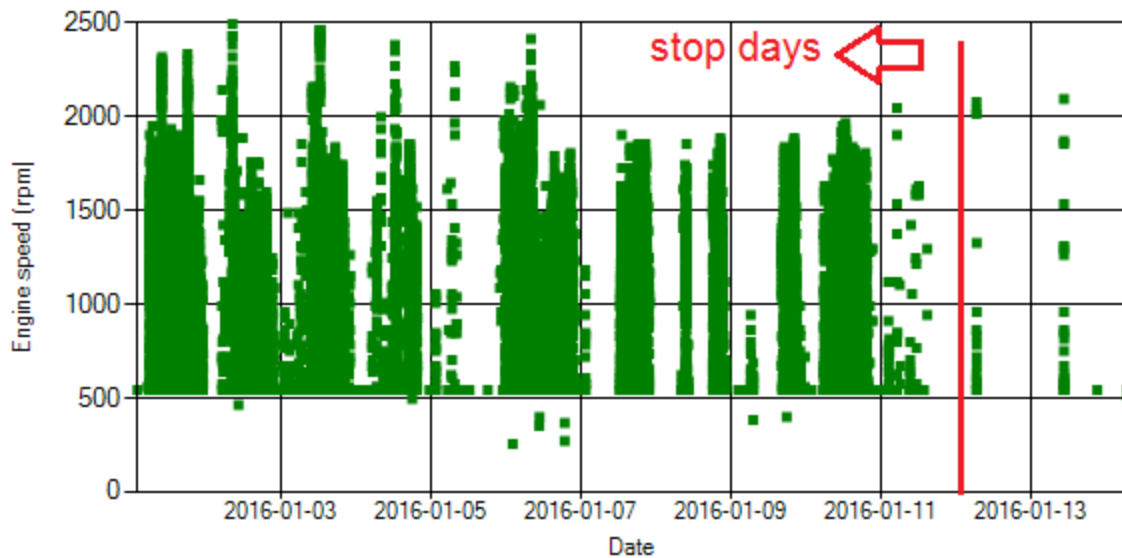


Figure 11- Engine speed diagram for calculating CPK's working days



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.

Pressure-Engine Speed diagrams

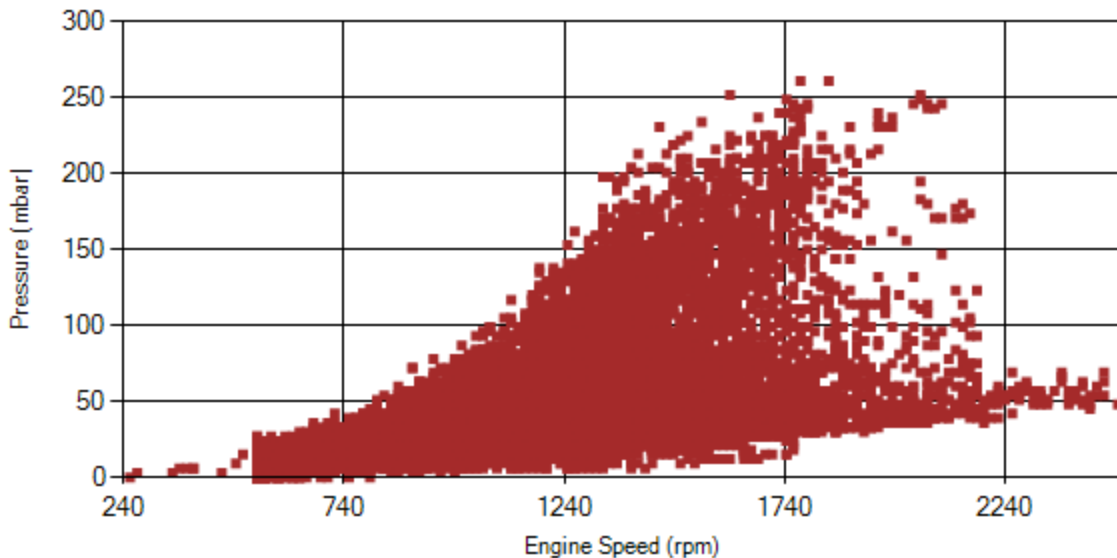


Figure 13- Pressure against engine speed

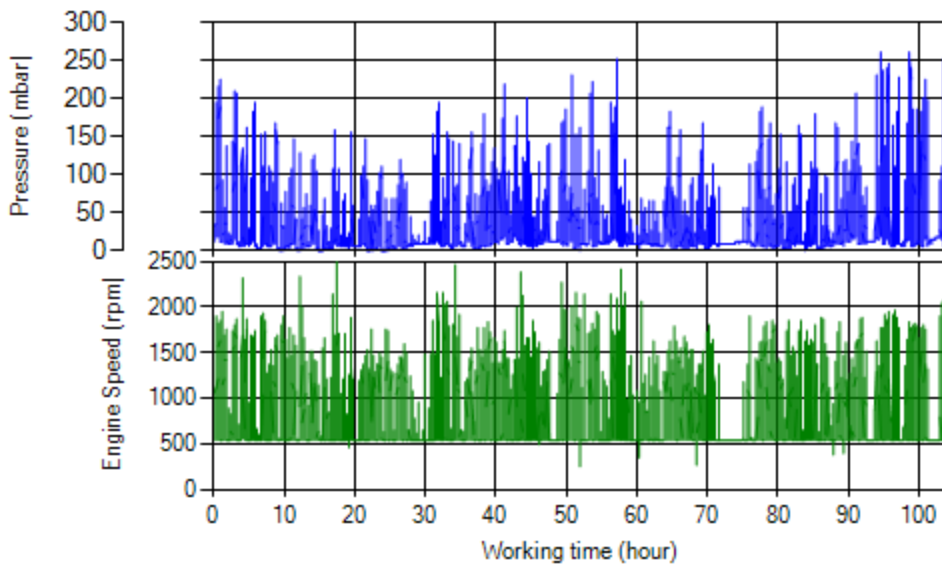


Figure 14- P, N distribution vs. working hours

Temperature-Engine Speed diagrams

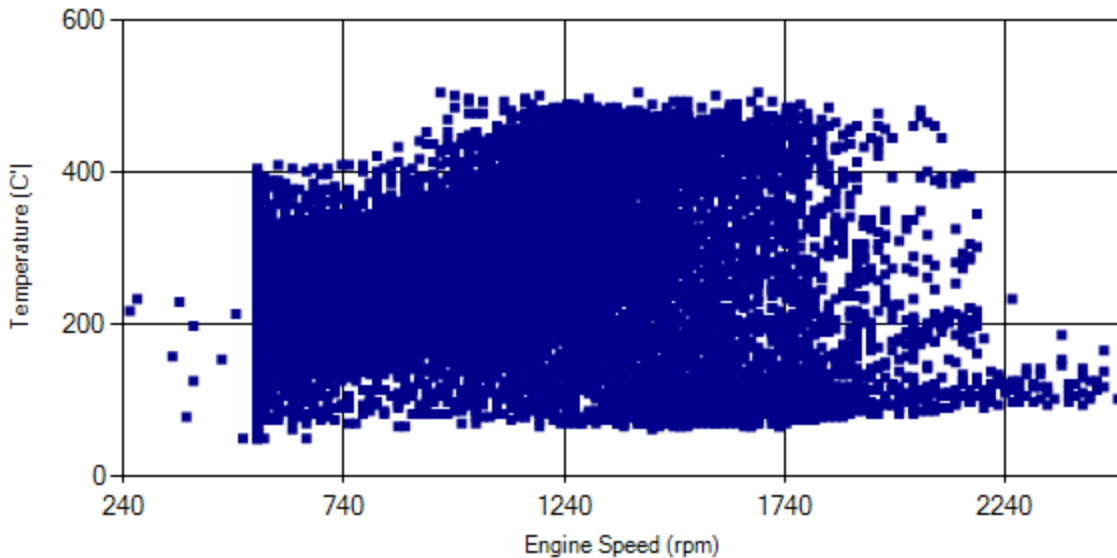


Figure 15- Temperature against engine speed

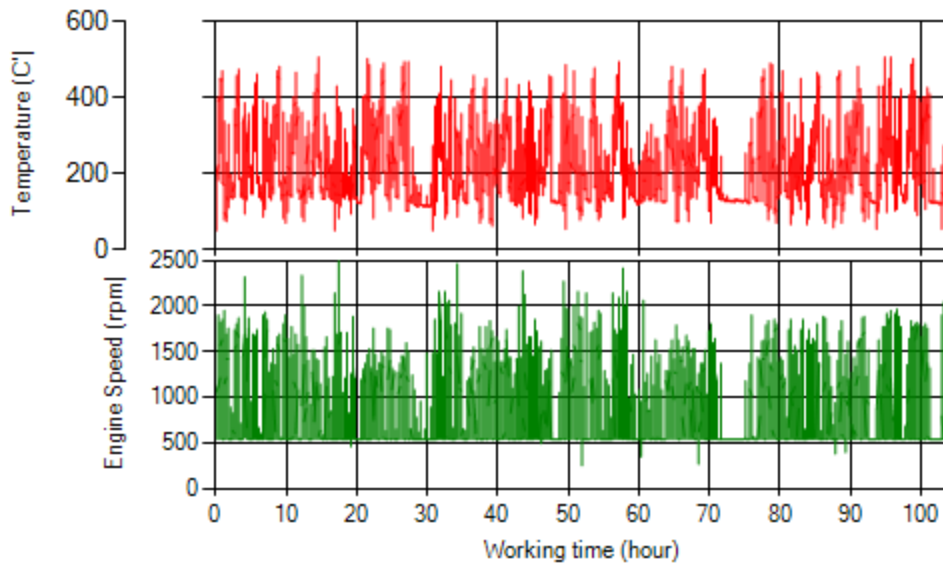


Figure 16- T, N distribution vs. working hours

Filter Operation Analysis

- As depicted in Figure 1, 0.39% of working time, pressure was above 200 mbar and 1.85% above 150 mbar.
- Figure 2 displays flow temperature before the DPF. It can be obviously observed that 5.7% of total working time temperature is above 400 °C and 10.9% above 350°C.

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

Notice: It is worth to mentioning bus had be stationary in the bus company from Jan 11th until end of the month because of accident with pedestrian.