

Overall Information

Table1- Overall Information

Vehicle plate number	33592 (32441)
CPK data logger number	LN: 001506, DN: 1927
Bus line	Number 2 (west to east bus line)
Bus Terminals	Khavaran Bus Terminal - Western Bus Terminal
Total path distance	19 km
DPF producer company	Tehag_02 (Catalyzed DPF)
Installation date	25/Jan/2016
Report period	-
K value - DPF upstream	1.60 [1/m]
K value – DPF downstream	0 [1/m]

Table 2- DPF Maintenance History

Filter maintenance date	
Dosing status	

Table 3- Fuel and Additive Consumption Information

Bus mileage (from DPF installation date)	3042 km
Bus mileage over the period	1017 km
Working days over the period	9 days
Stop days	5 days
Data logger working days	9 days
Working hours over the period	92 hours 37 minutes
Average working hours per day (including stop days)	6 hours 37 minutes
Bus average speed	11 km/hr
idle speed time to all working time ration	68.29 %
Total Bus fuel consumption over the period	641 lit
Fuel consumption per hour	6.93 lit/hr
Average fuel consumption	0.63 lit/km

Temperature, Pressure and Engine Speed Overview

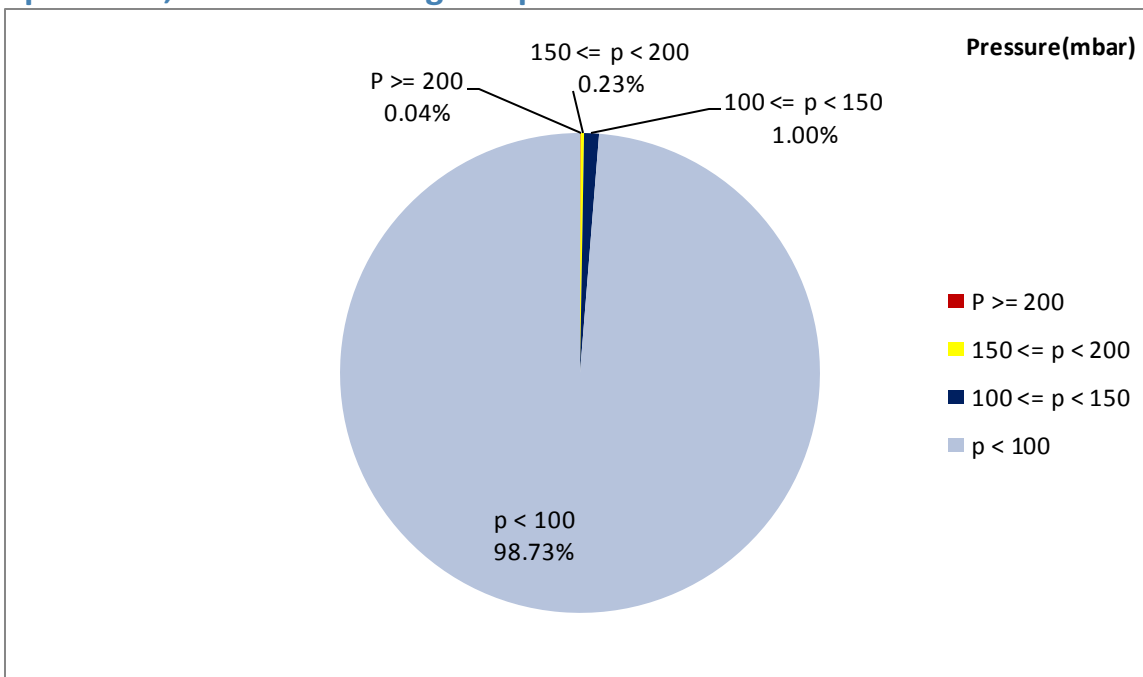


Figure 1- Pressure distribution over the working hours

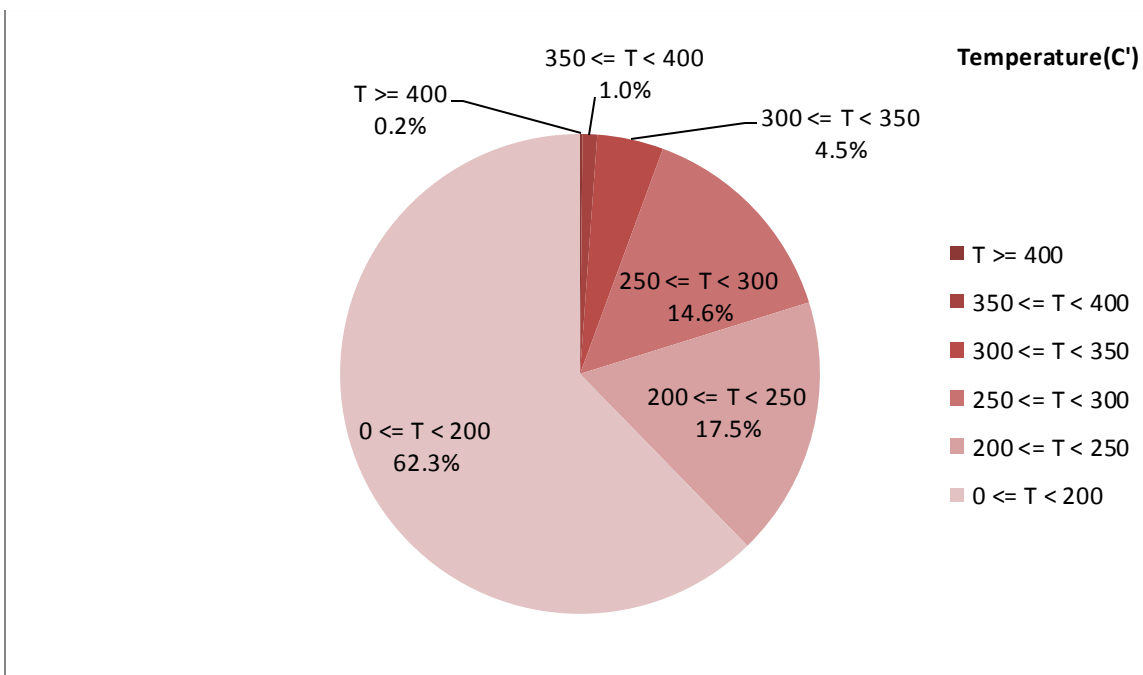


Figure 2-Temperature distribution over the working hours

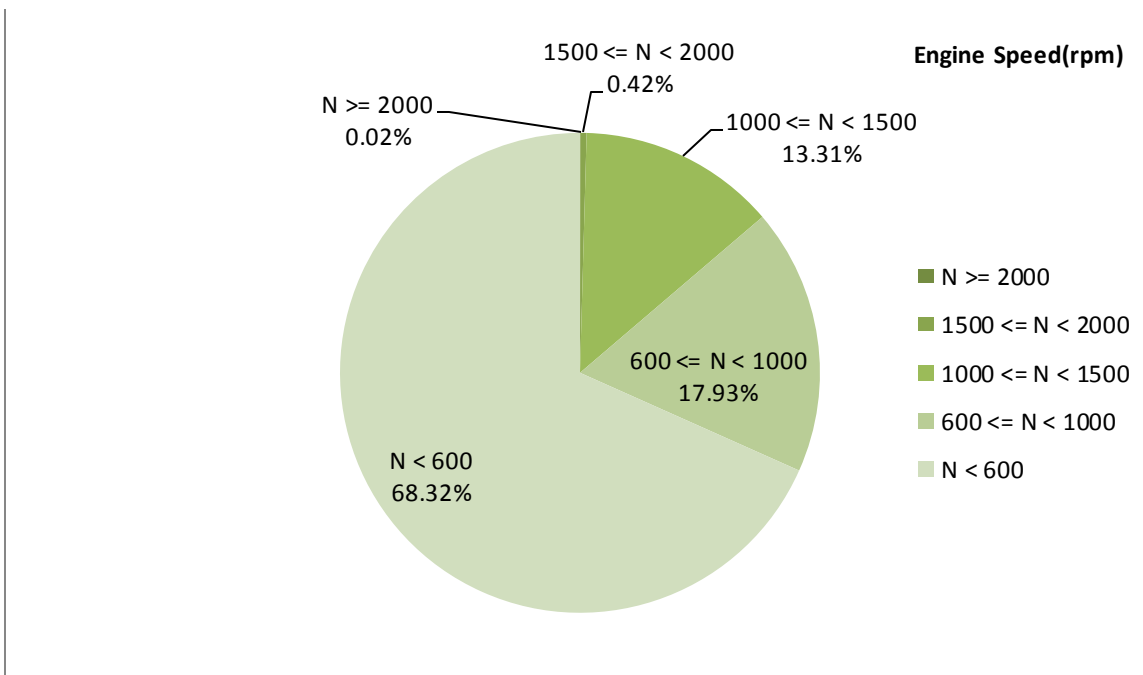


Figure 3- Engine speed distribution over the working hours

Table 4- Mean values

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
178.4	15.94	666

Table 5- Mean values without idling

Mean temperature (C)	Mean pressure(mbar)	Mean engine speed(rpm)
254.92	35.8	958

Table 6- Max-min values

Max-min temperature(C)	Max-min pressure(mbar)	Max-min engine speed(rpm)
486-50	270-0	2096-256

Detailed Pressure Analysis

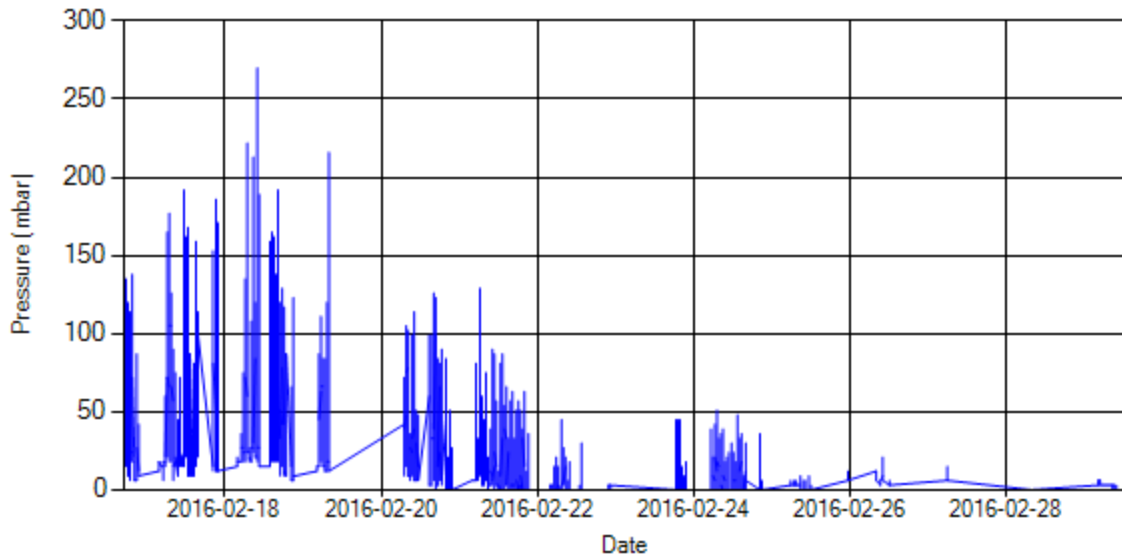


Figure 4- Pressure distribution over the period

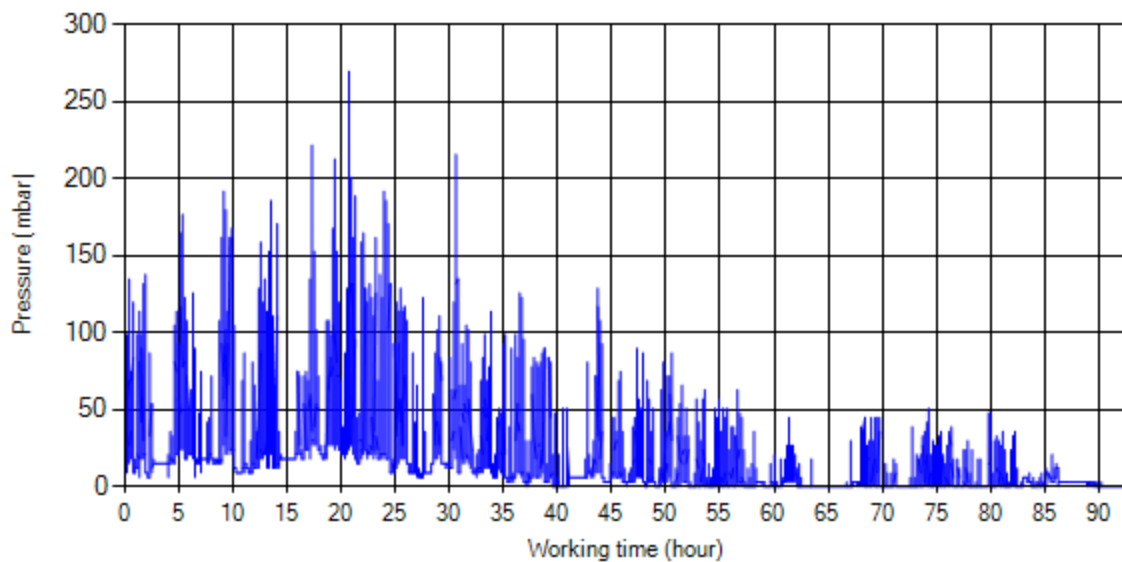


Figure 5- Pressure vs. working hours

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

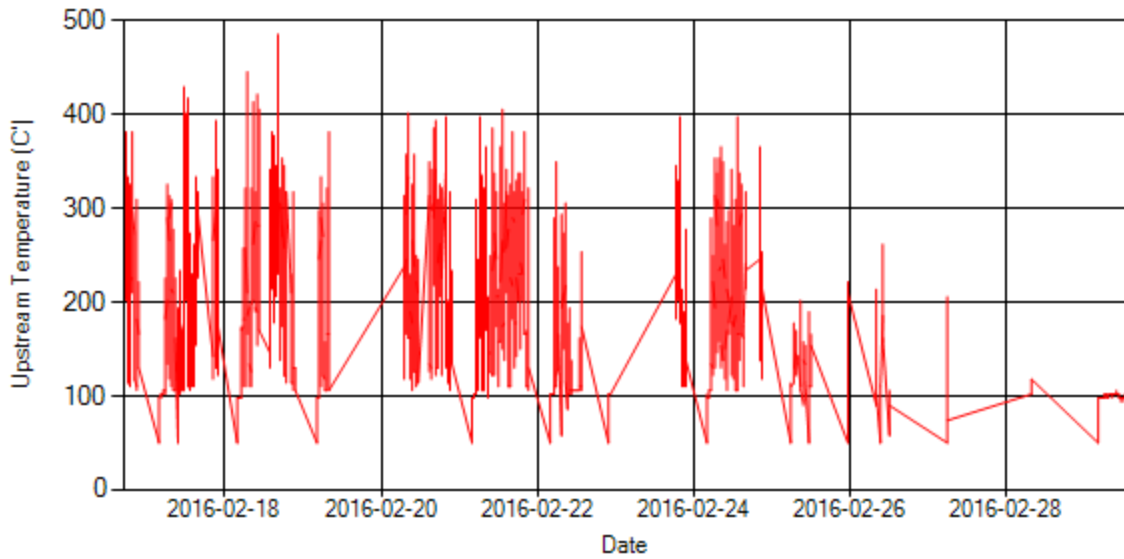


Figure 6- Temperature distribution over the period

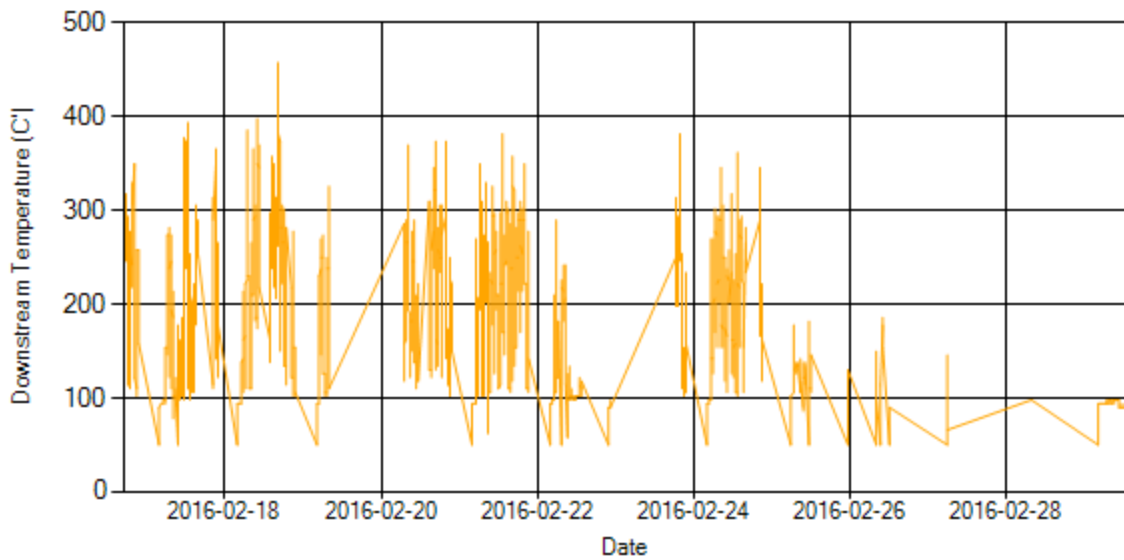


Figure 7- Temperature distribution over the period

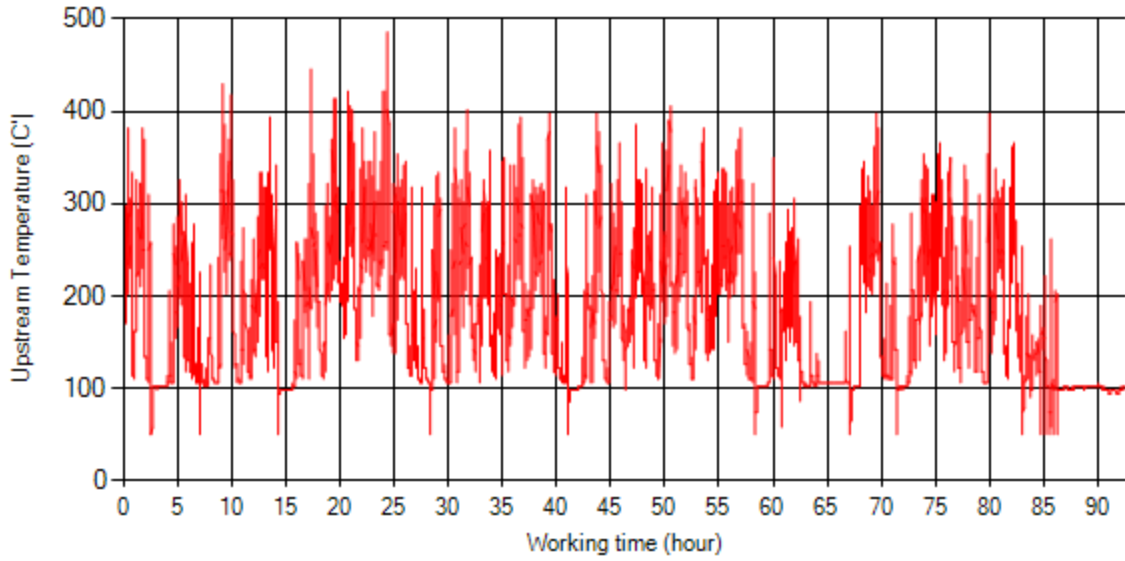


Figure 8- Temperature vs. working hours

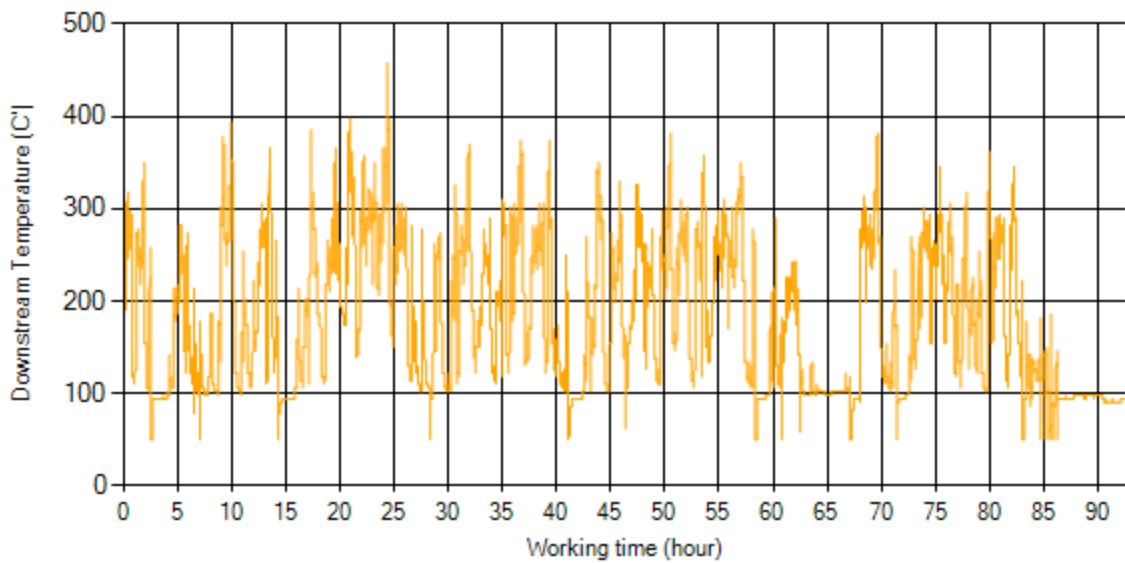


Figure 9- Temperature vs. working hours

Engine Speed Diagrams

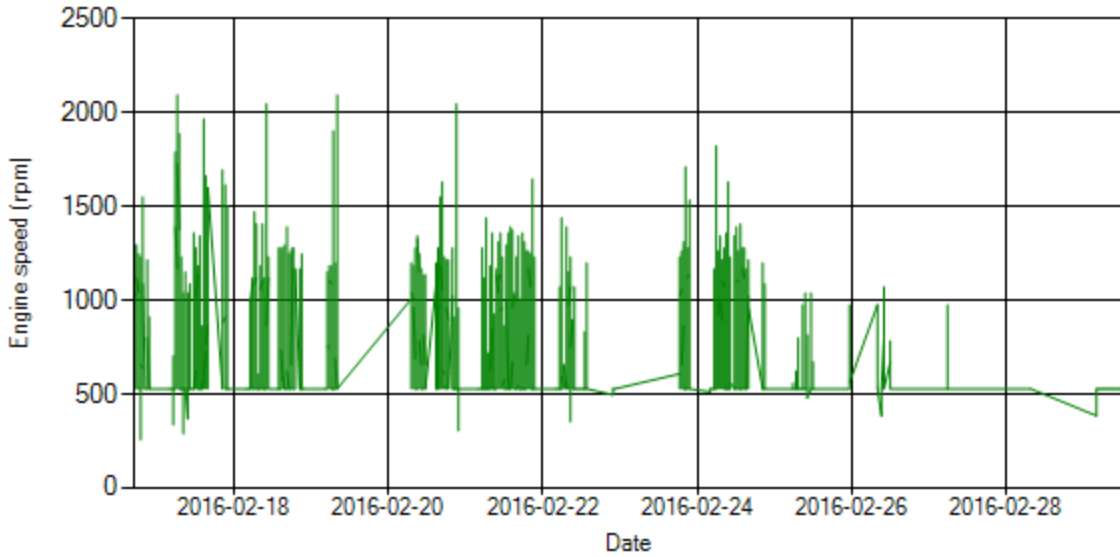


Figure 10- Engine speed distribution over the period

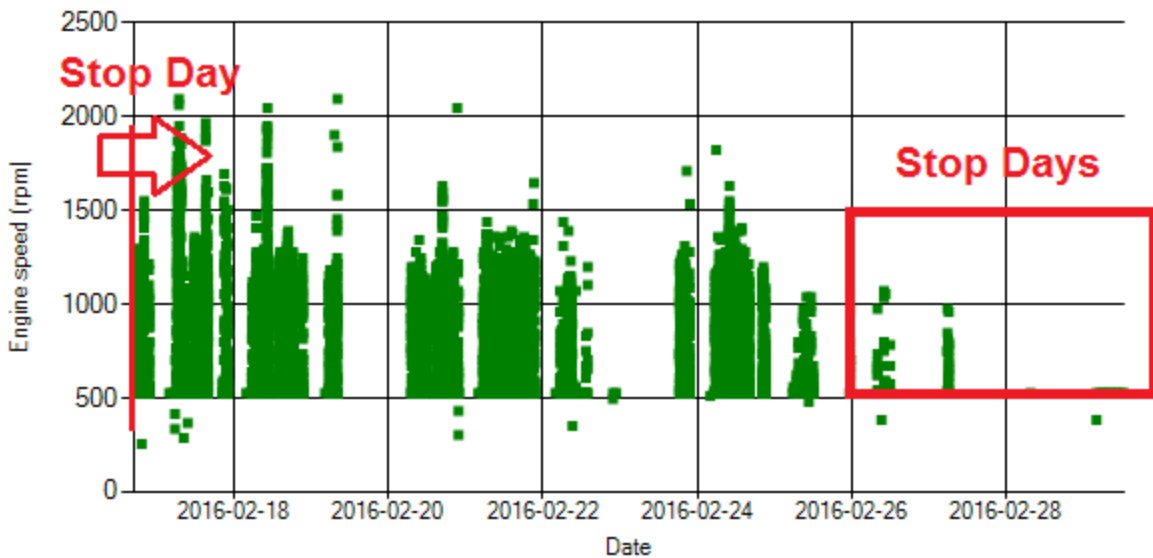


Figure 11- Engine speed diagram for calculating CPK's working days

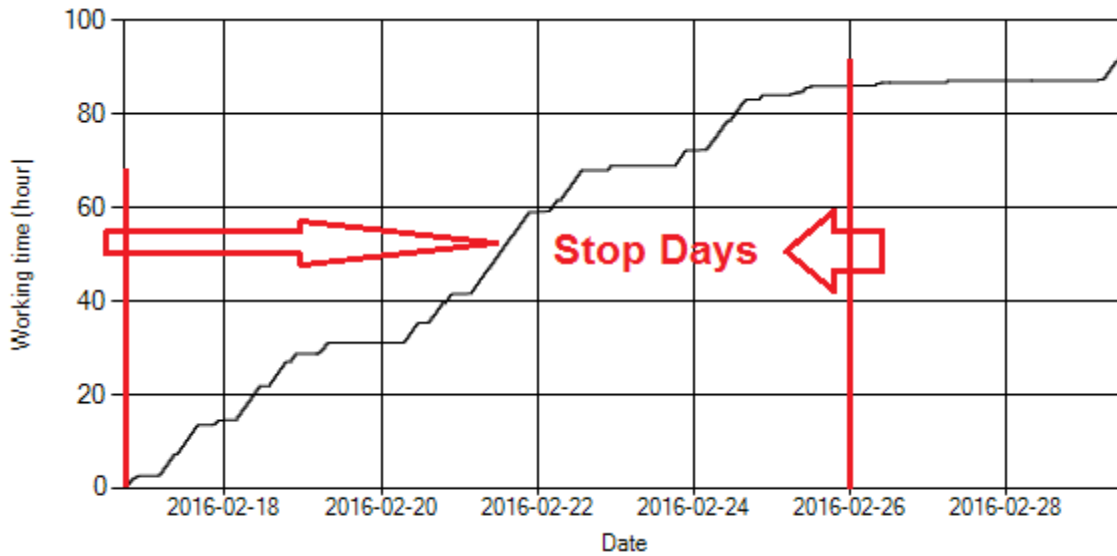


Figure 12- Time diagram for calculating CPK's working days

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, bus was stationary for 5 days during this period.

Pressure-Engine Speed diagrams

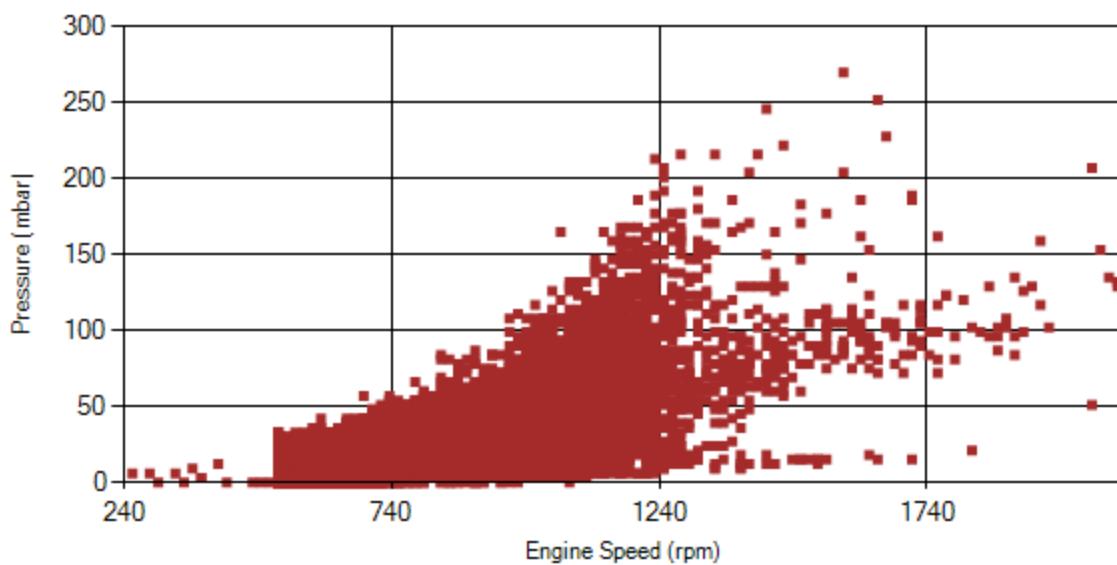


Figure 13- Pressure against engine speed

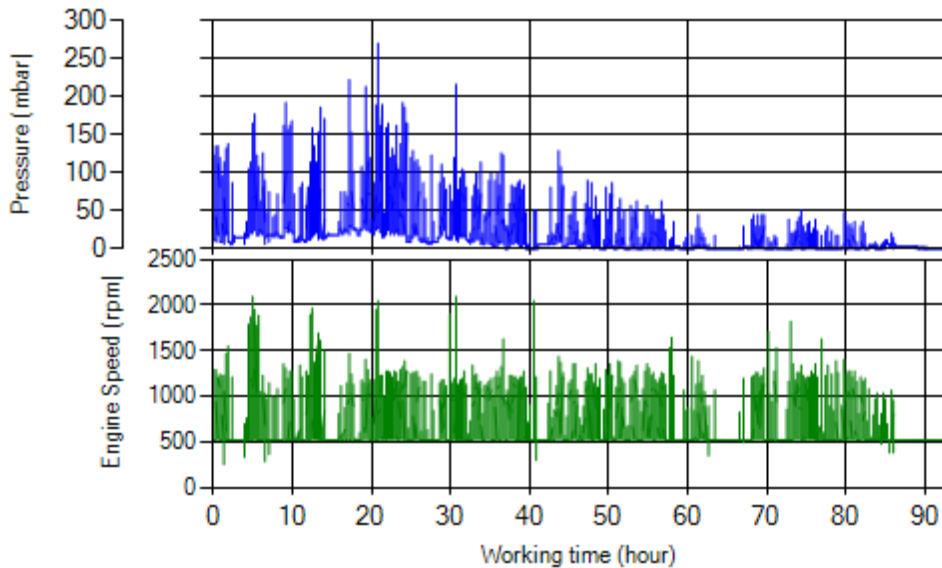


Figure 14- P, N distribution vs. working hours

Temperature-Engine Speed diagrams

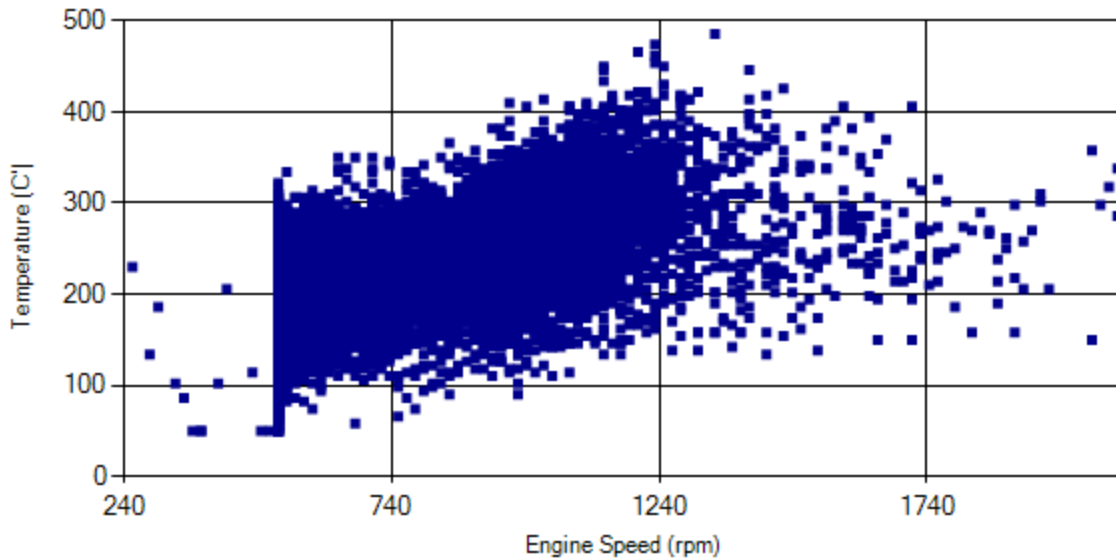


Figure 15- Temperature against engine speed

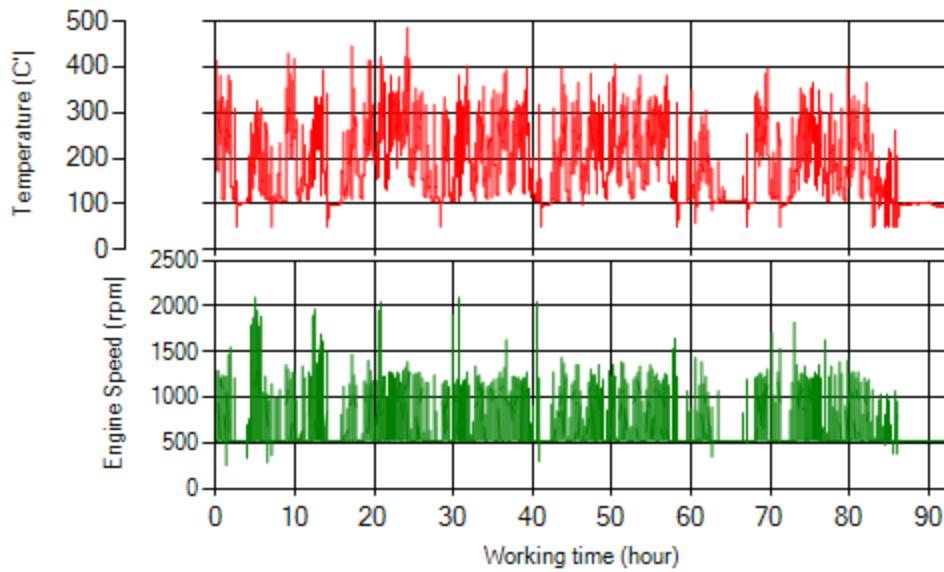


Figure 16- T, N distribution vs. working hours

Filter Operation Analysis

- As depicted in figure 1, only 0.04% of working time pressure was above 200 mbar and 0.27% above 150 mbar during this period.
- Figure 2, 17 display flow temperature distribution for DPF’s upstream. It can be obviously observed that 1.01% of total working-time temperature is above 350 °C and 18.67 % above 250°C.

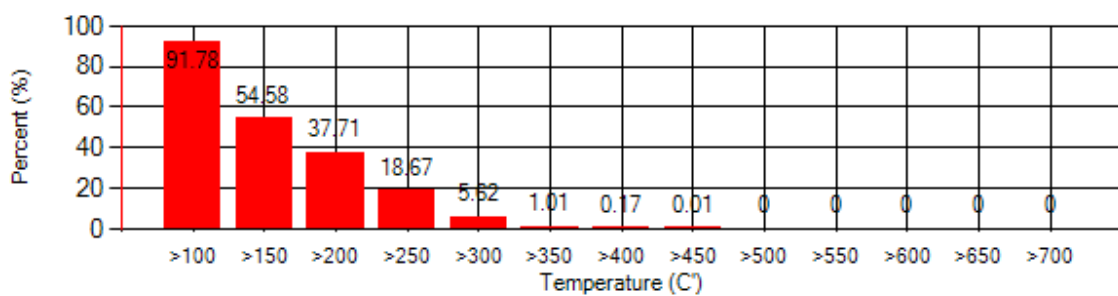


Figure 17. Cumulative diagram of exhaust gas temperature

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